IDEOLOGIES, IDEOLOGICAL ASYMMETRIES, AND THE PSYCHOLOGICAL ROOTS OF POLITICAL BEHAVIOR

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Summary

Since the 60s, political science research has consistently painted ordinary citizens' ideological beliefs in an unfavorable light, defending political views are unstable, uninformed, inconsistent, and lacking ideological content and coherence. This view, thought to be as true today as it was decades ago, has taken on the status of conventional wisdom among many scholars of political behavior in the United States and beyond. The persistence of this view is surprising in an increasingly polarized political environment wherein a growing share of the public support parties and candidates fervidly, and ideological ideas become progressively more embedded in citizens' lives and society's culture. In this thesis, we argue that (a) the long-held ideological innocence hypothesis does not fully capture the nature of public opinion in today's political landscape; (b) ordinary citizens are more ideologically committed than the published literature assumes. We propose that a more careful and nuanced inspection of ideological thinking—and its psychology—in the electorate can bring about novel insights into the role of ideology, its psychological roots, and how we understand the electorate's political convictions and behavior. In specific, we studied the role of individual differences in one's psychology, such as social dominance orientation, right-wing authoritarianism, justice sensitivity, conspiracy mentality, and system justification, shaping individuals' proclivities toward some ideologies—and not others. We also examined the ideological basis of political attitudes, such as anti-scientific, populist, and immigration attitudes. The thesis is organized into six chapters, each focusing on a specific aspect of ideology and its psychology. In Chapter 1, we provide an introduction to the study of ideology, its definitions, and a review of the various approaches that have been used to analyze it. We zero in on the quantitative approaches, focusing on comparing and contrasting the different epistemic and empirical foundations of the most prominent approaches in political science and social psychology. In Chapter 2, we show the political belief systems of ordinary citizens are coherently organized around support for versus opposition to both social and economic forms of inequality in capitalist societies. In Chapter 3, we show that supporters of Donald Trump in 2016, who had been seen by many pundits as motivated by a repudiation of the social and economic status quo, were, in fact, committed to a traditional social order, strongly justifying both economic and gender-based disparities in American society. In Chapter 4, we show that individuals' self- vs. other-oriented justice concerns undergird preferences for populist right-wing actors in the US and Germany. In Chapter 5, we show that anti-scientific attitudes are underpinned by ideology in the US (i.e., conservatism) and its psychological profile was uncovered. Finally, in Chapter 6, we show that—consistent with Hofstadter's account of the paranoid style in American politics—conservatives were not only more likely than liberals to endorse specific conspiracy theories, but they were also more likely to espouse conspiratorial worldviews in general. Together, these chapters contribute to the study of ideology by providing new insights into the origins and dynamics of ideological beliefs. Through the use of diverse methodological approaches and rich empirical data, these chapters shed light on the political and psychological factors that shape individuals' ideological attitudes and how these influence political behavior, preferences, and decision-making. The findings from this thesis—in line with the theory of political ideology as motivated social cognition—offer a psychologically-driven perspective on ideology in contemporary politics, demonstrating that one's psychology is pivotal to one's ideological dispositions and view of the socio-political world.

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Introduction

There are spheres of thought in which it is impossible to conceive of absolute truth existing independently of the values and position of the subject and unrelated to the social interest.
(Mannheim, 2013, p. 70-71)

The starting point of the critique of ideology has to be full acknowledgment of the fact that it is easily possible to lie in the guise of truth.
(Žižek, 2012, p. 8)

The power of an ideology to explain and justify discrepancies between the current social order and some alternative not only maintains support for the status quo, but also serves for its adherents the palliative function of alleviating dissonance or discomfort associated with the awareness of systematic injustice or inequality.
(Jost, Federico, et al., 2009, p. 326-327)

Ideology is among the few scientific constructs that is capable of crossing science's rigid boundaries. Ideology is not only ubiquitous in various distinct disciplines —from political science (Converse, 2006) to intellectual history (Skinner et al., 2002), from sociology (Boudon, 1989) to political theory (Freeden, 1996), from psychology (Jost et al., 2003b) to discourse analysis (Howarth et al., 2000)— but it also engendered sundry schools of thought within scientific fields (Maynard, 2017). In its interdisciplinary history, scholars devoted significant resources to the study of ideology, luring both qualitative and quantitative researchers, and theorists and methodologists alike (Maynard & Mildenberger, 2018). Academics have recently paid heightened attention to ideology —a surge in both scholarship and political life (Freeden, 2013)— as a response to an intellectual demand for comprehensive and far-ranging explanations for the momentous sociopolitical and economic developments of recent decades. A demand which ideology may be particularly suited to supply. As Festenstein and Kenny (2005)

noted, contemporary politics and polities have largely been determined by ideologies and ideological conflicts which "have profoundly shaped and reflected the turbulence, horror, and exhilaration of social and political change" (p. 1). Indeed, a return to an age of ideologies.

But what is ideology? Before attempting to answer one of the social sciences' perennial questions, it may be prudent to observe that defining ideology is a fool's errand. Not meant humorously, it genuinely represents a consensus in classical works on the topic. Heywood (2017, p. 11) described such endeavors as raising more questions than it answers, Eagleton (1991) considered the concept might be too ubiquitous to be meaningful. Freeden (2003) contended that seldom a term in social sciences "attracted such misunderstanding and opprobrium" (p. 3). Making matters worse, Converse (1964, p. 207) argued that ideology was "thoroughly muddied by diverse uses", Geertz (1964, p. 51) called it an egregiously loaded concept, McLellan (1986, p. 1) dubbed ideology as *the* most elusive concept in the social science lexicon, and Bell (1988, p. 331) considered the term as "an irretrievably fallen word". In reviewing swaths of the literature defining ideology, Gerring (1997) remarked that few concepts generated so much debate and disagreement:

> "One is struck not only by the cumulative number of different attributes that writers find essential, but by their more than occasional contradictions. To some, ideology is dogmatic, while to others it carries connotations of political sophistication; to some it refers to dominant modes of thought, and to others it refers primarily to those most alienated by the status quo (e.g., revolutionary movements and parties). To some it is based on concrete interests of a social class, while to others it is characterized by an absence of economic self-interest. One could continue, but the point is already apparent: not only is ideology far-flung, it also encompasses a good many definitional traits which are directly at odds with one another" (p. 957).

But how else to contribute if not by partaking in ideology's long tradition of semantic promiscuity? Ideology, despite its excesses and contradictions, remains a fundamental construct in both social sciences and humanities. In defiance of its varied meanings and symbolisms, ideologies serve as fodder for constructing social reality and attract people towards political causes and action, making of it the mainspring of well-functioning representative democracies. Even if ideology is the incarnation of an 'essentially contested concept', by swaying political leaders, shaping social movements, and persuading public opinion, ideologies have immense practical consequences that require investigation and understanding. And perhaps, the richness of interpretations and uses of ideology stems *precisely* of its ubiquity and pervasive influence. Similar to the images projected by a kaleidoscope, perceptions of ideology are contingent upon the angle and tilt with which one approaches it. Thus, following the steps of those who preceded, study ideology we must, decontest the essentially contestable we shall attempt. In the words of Humphrey (2005), to study ideology is to "struggle over the meaning of the struggle over meaning" (p. 225).

1.1 Scope

The works comprising the thesis' corpus —chapters 2 to 6— mostly focus on the importance of ideologies shaping attitudes and behavior of the mass public and the curious psychological regularities underlying ideological proclivities. The primary aim guiding the substantive and structural choices made in this introduction is to situate and contextualize the presented works of this thesis, to constructively and (hopefully) productively integrate the scholarship produced during my Ph.D. into the superordinate realm of ideological analysis. A good-faith effort is made to provide the backdrop against which the presented line of research unfolds. A task unremittingly regarded as crucial in countless essays but too often overlooked —to the detriment of the work's impact and the reader's edification. Hence, in addition to a typical overview, I hope to impart to the reader the significance of ideology's etiology and ideational content, as well as point out how structures and polities act synergetically on one another to mold and moderate its impact. I also touch upon ideology's functional and interpretative consequences and the critical approach to ideology. In doing so, I try to build bridges between individual- and societal-level insights. And so, while I cannot but engage in the inexorable act of decontesting the essentially contestable —a lost cause by definition— my ambition rests on providing a sensible, reasonably concise, and politically contextualized account of ideology. An account that is informative to the prolific scholarship on political attitudes and behavior and its psychological roots. Whenever possible, I will try to unveil the way in which ideology is congenial, intrinsic, and foundational to *who gets what, why, when, and how* (Lasswell, 1936; Lasswell & Kaplan, 1950; Lenski, 1966–2013). Hopefully, it can be a useful starting point from which to advance our thinking on the debated nature of ideology and its accompanying psychological affinities that will be the focus of most chapters that will follow.

1.2 Conceptualizing Ideology

1.2.1 Historical Tensions in the Study of Ideology

Since its creation, the *term* ideology gained a markedly pejorative connotation —a regularity that persists today. Almost no one would readily describe their beliefs as an ideology, or pertaining to one. Ideologies typically refer to ideas of somebody else's thoughts, not our own: "we have the truth, they have ideologies" (Van Dijk, 2011, p. 175). Eagleton (1991, p. 2) observed that "ideology, like halitosis, is what the other person has". As for the *label* 'ideological', it is used to describe political discourse and ideas of one's opponents or enemies, and not unusually conflated with derogatory labels such as dogmatic, extremist, and pathological (Wetherly, 2017).

When it comes to the label 'ideologue', its synonyms and antonyms can be quite elucidating for the general reticence felt toward the term ideology. On the one hand, almost all synonyms are derogatory and ascribe extremism and appeal to bias and narrow-mindedness, such as 'fanatics', 'zealots,' 'crusaders,' and 'devotees.' On the other hand, ideologue is an antonym of realist and pragmatist, which apparently describes what ideologues are not. Terms like 'dreamers', 'romantics', 'idealists', and 'utopians', all second-order synonyms highlight that, even when ideology is a pursuit of the mind, advocacy, defense, or advancement of a (progressive) cause, then the implied beliefs of the ideologue only make sense in an alternative,

unattainable reality. Thus, even the well-intentioned ideologue is portrayed as unconcerned —if not oblivious— to the vicissitudes and *real* nature of human beings and society. This is no coincidence, and many would argue, a quintessential manifestation of ideology itself.[1]

Like much else in the modern world, the *concept* of ideology originated in the Enlightenment. Antoine Destutt de Tracy (1754–1836) coined the term in his work entitled *Eléments d'idéologie*, and with it, founded a new discipline (*cf*. Barth and Bendix, 1976; Lichtheim, 1965; Seliger, 1976). The recently established field of inquiry had a salient and objective aspiration —i.e., the science of ideas— which, more than anything else, aimed to provide a rigorous footing and scientific credentials to how ideas had been studied up to that point by political philosophers (Cranston, 1979). In the words of the late philosopher and political scientist Gaus (2012, p. 2):

> "just as Newton showed the errors of Descartes, so too would a scientific study of social ideas show how traditional political doctrines were confused and mistaken; by correcting these mistakes we could be led to a better society. Right from the beginning, the study of ideology was seen not simply as an alternative —but also as a corrective— to philosophical speculation."

For de Tracy, the scientific study of 'ideas' would decipher society just as the natural sciences had deciphered nature (McLellan, 1986).

Similarly, the *concept* of ideology is no stranger to controversies and enduring debates. As history would have it, the scientific aspirations of ideology quickly turned on its creator. Soon after Bonaparte's disenchantment with the concept and de Tracy himself, Marx and Engels (1846–1970) wrote *The German Ideology*, bestowing upon the concept its familiar political bent and 'critical' significant (Drucker, 1974).[2] This tug of war persisted for more than two centuries, and, to a degree, is still alive today (*cf*. Bell, 1960; Johnson, 1968; Jost, 2006; S. M. Lipset, 1963; Shils, 1968). On the one hand, you have the descendants of the French scientific-rationalist view, first envisioned by de Tracy, and more recently reformed into a highly empiricist Anglo-Saxon stream of literature that became exceedingly affluent —and the norm in political science. On the other, grounded on the insights of its Germanic forefathers underlining ideology's functional and causal consequences, the so-called *critical* scholars not merely reject the idealist-positivist approach to the study of ideology —in which consciousness can be studied independently of social relations and history (Festenstein & Kenny, 2005, pp. 8)— but also dispute the value-neutral view of ideology as a "relatively benign organizing device" (Knight, 2006, p. 622). Ultimately, the difference between these camps boils down to their conceptualizations of *truth*. For the latter, consciousness cannot be decoupled from social relations or historical context. Ideologies are seen as a necessity —presumably rooted in one's psychology— providing inherently subjective interpretations of the sociopolitical world.

[1] There is much to be gained by dissecting the connotations and denotations of ideology, ideological, and ideologues in the public (and scholarly) parlance. It conveys which words co-occur, which streams of literature emphasize or downplay certain terms, and contextualizes how the writer or speaker perceive themselves and their opponents. These differences may be subtle, but they yield insights into the shades and gradations of ideology and help us gain a more nuanced and sophisticated perspective on its *meaning*.

[2] See Festenstein and Kenny (2005) and Stråth (2013) for a deeper account of ideology's conceptual history.

For positivists-idealists, however, decoupling is *conditio sine qua non*, and hence, ideologies' historical and functional links should be severed—permanently—in the name of scientific objectivity. The presumption here is that there is a one-to-one correspondence between truth on the one hand, and observation and reason on the other, such that all people of goodwill is able to recognize what is true by applying a methodology—assumed to be intrinsically impartial and neutral—to social phenomena (McLellan, 1986).

A number of critical scholars would argue the dissociation of the study of ideology from its sociopolitical and economic concomitants and repercussions—oftentimes with a veneer of principled and unbiased scientific scholarship—is as not merely a mistake, but an ideological one. Firstly, McLellan (1986, p. 81) explains that "to say that facts (particularly social ones) are simply there, whereas values are the subject of free choice, is itself an evaluative view." Secondly, "what makes this error specifically *ideological* is the particular relationship of the privilege that idealists give to ideas over the *real* driving forces in human history. Idealists invert the true order of things since they picture ideas as fundamental to the social and political life rather than as they really are, offshoots of underlying economic [and social and political] relationships" (Festenstein & Kenny, 2005, p. 7). Importantly, for critical theorists, "it is not just a question of seeing things (that is, social reality) as they 'really are', of throwing away the distorting spectacles of ideology; the main point is to see how the reality itself cannot reproduce itself without this so-called ideological mystification. The mask is not simply hiding the real state of things; the ideological distortion is written into its very essence" (Žižek, 2012, p. 196).

In sum, the last two centuries of scholarship on ideology have seen at least two major cleavages take shape. The first contrasts science with ideology, and it is mostly concerned with whether or not to extricate the latter from the former. The second contraposes the means through which ideology can be studied —i.e., value-neutral versus critical approaches. At heart, these historical tensions cut across the foundations of both philosophy of science and political philosophy and are invariably ontological and epistemological in essence, for their contentions are rooted in diverging conceptions of truth, and how to examine it. In the following sub-section, an illustration is provided about the upshot of adopting a critical —as opposed to value-neutral— approach to investigating ideology.

1.2.2 The Imperative of a Critical Approach

Unfolding against this backdrop, ideologies have been conceived as "false consciousness" in that they are thought to dispense a smokescreen preventing people from recognizing the fact of their exploitation (Marx & Engels, 1846–1970). Ideologies are seen as socially constructed entities whose impact resembles that of a cognitive or perceptual illusion, covertly effecting legitimacy to illegitimate social systems. Sometimes referred to as rationalizations, illusions, or distortions, they serve to uphold a certain social order by thwarting members of society from behaving as their self-interest would have otherwise dictated (Rosen, 2000). Marx (1867, p. 38) writes in his magnum opus *Die Kapital* "Sie wissen das nicht, aber sie tun es" —i.e., they do not know it, but they are doing it. Those subjected to the pull of ideology are unaware of their fate, oblivious to their captivity.

> "It is not the consciousness of men that determines their being, but, on the con-

> trary, their social being that determines their consciousness (Marx, 1859–1970, p. 11-12)."

Expanding on these ideas, Gramsci (1971) recognized the influence, pervasiveness, and power of the theories emanating from dominant and high-status societal factions. Elite ideologies not merely hinder social change but outright displace rival views thereupon upending the 'common sense' of the age (Heywood, 2017, pp. 7).[3] As Marx and Engels (1846–1970) observed more than a century ago, "the ideas of the ruling class are in every epoch the ruling ideas" (p. 64). Through these ideas, dominant groups assert intellectual hegemony —derived by the prestigious statuses and roles these groups play in a society (Gramsci, 1971)— causing the masses to consent to the general directions and conditions imposed on social life.

This paradox —i.e., "a tendency of the oppressed and exploited classes in society to believe in the justice of the social order that oppresses them" (Elster, 1982, p. 131)— is commonplace in social and political life. And ideologies play a part in explaining this phenomenon. Originally articulated during the French Renaissance by de la Boétie (1577–2012) in *Discours de la Servitude Volontaire*, it points to the existence of an arcane acceptance of subjugation: "c'est à ce patron, de droit divin, que je dois de manger et d'exister" (Elster, 1982, p. 131, 'it is to this patron, of a divine right, that I owe to eat and to exist'). The social psychologist Wilhelm Reich would decades later revisit the contradictions alluded by Marx and Engels in *The German Ideology* leading to the conceptualization of ideology as "false consciousness":

> "nicht, dass der Hungernde stiehlt oder dass der Ausgebeutete streikt, ist zu erklären, sondern warum die Mehrheit der Hungernden *nicht* stiehlt und die Mehrheit der Ausgebeuteten *nicht* streikt" (Reich, 1933–2019, p. 34).[4]

It is in this sense that ideology "is ineliminably a critical concept" (Rosen, 2000, p. 393). It is because ideologies inherently imply "a kind of basic, constitutive naivete: the misrecognition of its own presuppositions, of its own effective conditions, a distance, a divergence between so-called social reality and our distorted representation, our false consciousness of it" (Žižek, 2012, p. 312). Thus, the aim of critical thought is to "lead the naive ideological consciousness to a point at which it can recognize its own effective conditions, the social reality that it is distorting, and through this very act, dissolve itself" (Žižek, 1989, p. 28).

As we shall see, the idea that disadvantaged members of society consent to —or are, at least in part, invested in— the systems that keep them down is very much a symptom of contemporary capitalist societies (Jost & Hunyady, 2005; Jost, Langer, et al., 2017; Sandel, 2020). Let us take for example the case of the ideology of inequality. In an increasingly unequal world, there is a heightened demand for ideologies faulting the decreased means and quality of life for the majority. As inequality ideologies are constructed to shift the onus from society and its systems

[3] The Italian (neo-)Marxist philosopher Antonio Gramsci argued that instead of using force to maintain social order (given its control over the means of coercion), elites obtain or maintain consent for the capitalist order via the intellectual influence they exert (i.e., 'cultural hegemony') which is propagated through the institutions that form the superstructure Gramsci (1971).

[4] "What has to be explained is not the fact that the man who is hungry steals or the fact that the man who is exploited strikes, but why the majority of those who are hungry *don't* steal and why the majority of those who are exploited *don't* strike." (Reich, 1970, p. 48)

to the individual, those already sponsoring entrepreneurial, meritocratic, system-justifying beliefs would arguably find system-level explanations less attractive than individualizing ones. As a consequence, narratives charging subordinate groups for society's diminished (or lack of) access to health, education, and prosperity become more appealing than those narratives challenging the systems enforcing and perpetuating these inequities. The main conclusion of Piketty (2020)'s treatise *Capital and Ideology* is that the foundational ideas used in system-justifying ideologies such as 'the market and competition, profits and wages, capital and debt, skilled and unskilled workers, natives and aliens, tax havens and competitiveness' are not necessary conditions but rather the choices of political, legal, and fiscal systems. Inequality, then, "is neither economic nor technological: it is ideological and political" (Piketty, 2020, p. 7). It is in this sense that ideologies can foster a deceiving, distorted, or illusory interpretation of reality and social truth. Presumably, in a bid to bridge the gap between meritocratic discourse and societies' levels of inequality, ideologies of inequality may "serve primarily as a way for the winners in today's economy to justify any level of inequality whatsoever while peremptorily blaming the losers for lacking talent, virtue, and diligence" (Piketty, 2020, p. 2). The case of ideologies of inequality, to give one example, is a useful illustration of the imperative of a critical lens to fully appreciate the intricacies of social phenomena as congenial to economic ones.

1.2.3 Mapping the Study of Ideology

Moving away from the ontological and epistemological geneses of perennial debates pervading ideology's scholarship, and from now on focusing exclusively on contemporary research, the term 'approach' switches from its familiar science-ideology dichotomy to be re-signified as the methods through which students of ideology acquire, connect, and consolidate knowledge. This shift is only feasible to the extent there exist agreements across various fields studying ideology about what ideology *is*, and *is not*. At the risk of overgeneralizing, few icons of contemporary fields investigating ideology would find the above characterization of ideology uncompromising. Namely, that ideologies are ubiquitous, socially constructed, rooted in sociopolitical, economic, and psychological phenomena, and serving social functions contingent upon whose interests it aims to advance or overturn. Surely, as in any investigative endeavor, every approach to ideology is interested in distinct facets and handles the problem of essential contestability uniquely. Jost, Federico, et al. (2009, p. 4) offer a pedagogic analogy to the plurality of approaches —and their contributions— by alluding to the age-old Indian parable of the blind men and the elephant. As it goes, the blind men, having never come across an elephant, study and conceptualize '*what is an elephant*' while only being able to feel a uniquely different part of the elephant's body. As a result, each individual's conceptualization not only differs from one another but fails to capture what an elephant *is*.[5] Gerring (1997) concurs inasmuch as each approach sees ideology from its own vantage point; every working definition is incomplete. Hence, while disagreements are bound to exist, the existence of a single, standardized understanding of ideology is not merely unrealistic but unnecessary (Eagleton, 1991; Humphrey, 2005; Jost, Federico, et al., 2009; Maynard, 2013, 2017).

Research into ideology is, in many ways, a general sort of sociology of concepts and knowledge (Mannheim, 2013) characterized by a "set of ideas in which social and political power

[5] Plato's *Allegory of the Cave* would likely provide a comparably satisfactory analogy.

are used, often unscrupulously as well as unintentionally, to serve certain collective interests at the devastating expense of other" (Freeden, 2013, p. 116). Indeed, nearly all research-based conceptualizations of ideology would agree it is some form of "patterned and politically oriented belief system" (Maynard, 2013, p. 5).[6] In general, while not consensus, ideologies are thought to arise from the creation and adherence to a set of ideas whose goal is to carry claims about social reality and truth (Steger & James, 2010).[7] Ideologies are considered to be essential to —and naturally occurring in— human societies. Ideologies are both prescriptive and descriptive entities lending structure to shared principles, values, and narratives held by social groups (Wetherly, 2017). Ideologies suffuse human existence providing the moral and intellectual basis for social systems (e.g., political, economic, racial, legal) with its value-laden accounts of social reality (Jost, Fitzsimons, et al., 2004, pp. 265). Ideological beliefs —held consciously or unconsciously— reflect and shape understandings and misconceptions of the social and political world, and serve to endorse collective action aimed at preserving or challenging political practices and institutions (Freeden, 1998, pp. 3847). Political ideologies, in particular, are organized around a political tradition, featuring normatively-imbued systems of beliefs —i.e., containing both 'is' and 'ought' claims— aiming to explain, justify and maintain social arrangements in a society (Festenstein & Kenny, 2005).

The cumulative interdisciplinary body of ideological analysis can be thought of as being composed by three main approaches, a conceptual, a discursive, and a quantitative behavioral one (Maynard, 2013). These approaches map the field of ideological analyses insofar as —while there are copious theories, philosophies, perspectives, etc.— what can untangle them apart is the means and processes through which new knowledge is created. Hence, these three pillars are effectively "clusters of methodological practices rather than tight theoretical paradigms" (Maynard, 2013, p. 300), which students of ideology can use to organize the multitude of existing scholarship and situate their own in relation to others.

The first approach focuses on the etiology and ideational content of ideologies —e.g., Freeden (1996, 2013), Tully (1983)— aiming to drive the study of political ideology in an interpretive and analytic direction. As its name suggests, conceptual approaches are interested in understanding and teasing out the components of a political concept, defining and determining their boundaries in relation to other political constructs (Freeden, 1996, p. 75). Underlying its scholarship is the premise that concepts only have meaning in relation to one another (Sartori, 1984, p. 52), and that it is its location among "a number of idea-environments which bestow on it significant meaning" (Freeden, 1996, p. 67). This idea is not far-fetched to either social and political psychologists —who are well acquainted with a sibling term, that of 'nomological network' (Byrne, 1984)— nor to students of discursive approaches (*cf*. Laclau and Mouffe, 1985; Žižek, 1989). The conceptual approach sees an ideology as a combination of political concepts organized in a particular way (say, a political tradition), seeking to maximize their political determinacy. That is, ideologies possess agency in pursuing not merely to link specific manifestations of social concepts (e.g., human nature, social structure, justice, liberty, authority) but also compete with other ideologies in asserting what a concept is, what it means, and what is related to (Freeden, 1996, pp. 76). For this reason, central to the ideological analyses of the conceptual approach is to accord to ideological concepts a core, an adjacency, and a peripheral status (Gaus, 2012). Freeden (1996) explains that "an examination of observed liberalisms might establish that liberty is situated within their core,

[6] *cf*. Gerring (1997), Hamilton (1987), Knight (2006) for exceptionally authoritative works.
[7] Social reality is to be opposed to biological or (individual) cognitive reality.

that human rights, democracy, and equality are adjacent to liberty, and that nationalism is to be found on their periphery" (p. 77). In other words, under this approach, the very nature of the political process aspires to determine the meaning of political language through human thought-behavior, thereby construing the goal of ideologies as decontesting the meaning of political ideas by mapping its relationships with other concepts.

The second emphasizes the importance of the mediums through which ideology is expressed —i.e., discursive and communicative practices at society at large, the cultural symbolisms and its imagery, as well as institutional structures— like in the works of Van Dijk (2011), Laclau (2012), Mouffe (2018), Žižek (1989) and Žižek (2012). In comparison to the conceptual approach, discursive approaches are unsurprisingly less concerned with ideology's concepts and structural configurations —albeit not *un*concerned— and re-emphasize the critical and functional role of ideologies as a means to power and domination (Maynard, 2013). Both the discursive and conceptual approaches preserve the critical sense of ideology without appealing either to a dubious concept of science or a reductionist view of social processes (Freeden, 1996, pp. 81).[8] This is to be expected, seeing that a non-negligible share of discursive scholars are strongly influenced by post-Marxist thought. Maynard (2013, pp. 305) described the foundations of discursive approaches to ideology with a four-pronged summary which characterizes the concept 'discourse' as (a) both constitutive of, and conditioned by, society; (b) producing meanings and frameworks that influence social practices; (c) as being itself subject to the influences of various social structures, à la Žižek (2012); and (d) by qualifying it as being shaped by, and an expression of, power. For most scholars adopting the discursive approach, ideologies "lie in the guise of truth" (Žižek, 2012, p. 8). This is to say that while ideologies consist of lies (*voir* false consciousness), it is experienced as truth by the individual. As explained by Festenstein and Kenny (2005), ideologies are not thought of as illusions to conceal 'reality' —even if they are necessary illusions, or as Adorno (1971, p. 169) described, *notwendig falsches Bewußtsein* ("necessary false consciousness"). In this rendition, reality pure of ideology does not exist as such, "there is no reality behind this illusion with which to contrast it. Instead, ideology is characterized by the attempt to impose harmony over the inevitable trauma and dislocation of social life" (Festenstein & Kenny, 2005, p. 13).

The third and last approach is known as the quantitative approach (Maynard, 2013). It encompasses both the classical political science approach to the investigation of ideology in political elites and mass publics (Achen & Bartels, 2017; Converse, 1964; Kinder & Kalmoe, 2017; Lewis-Beck et al., 2008) as well as the social and political psychological approach examining the dispositional factors underlying ideological subscription (Altemeyer, 1981; Jost, 2017; Jost, Federico, et al., 2009; Jost et al., 2003b; Sidanius & Pratto, 2001). The quantitative approach focuses on ideological phenomena at the individual level —i.e., "taken as explicitly known to their its bearers" (Freeden, 2003, p. 39)— and mostly utilizes public and elite opinions polls or surveys, and social networks data, to draw insights about ideologies and their influence in social and political life. Both strands generally agree that ideologies refer to a system of ideas primarily functioning as organizational devices stitching together political views while displaying structural features (Gerring, 1997; Hall, 2017; Maynard & Mildenberger, 2018). Accordingly, both strands use statistical methods to explore the distribution of public opinions and their variation among several political and sociodemographic groups and

[8] The social and political psychological approach, sub-branches of the quantitative behavioral approach, similarly endorses a critical view of the study of ideology. For a cursory read, see McLeod et al. (2014), Jost, Kay, et al. (2009), and Jost and Sidanius (2004).

probe individual- and contextual-level factors moderating these processes. But aside from a sliver of conceptual intersection, little else can be said to unite these two strands. Indeed, it is not uncommon to describe these two quantitative strands as sitting at each other's polar opposite. In particular, they differ most vis-à-vis the epistemology of the investigation of ideology, and as a consequence, on the pervasiveness of ideological thinking in the mass public and whether or not meaningful psychological differences underline the endorsement of ideologies. And while there are countless positions between these two poles, the disagreements they engendered have shaped and guided the quantitative scholarship in ideology for nearly sixty years. In the next subsections, an explanation and discussion of the primary disagreements between these two strands examining ideology is provided.

1.2.3.1 Origins of Belief Systems

The classical political science approach to ideology endorses a demonstrably positivist and value-neutral view of science —if not value-free— in which the conclusions of its research program are objective, possessing the authority and legitimacy of scientific impartiality. Ideologies are seen as tantamount to political belief systems, "a configuration of ideas and attitudes in which the elements are bound together by some form of constraint or functional interdependence" (Converse, 1964, p. 214). It is noteworthy that Converse (1964) defines ideology as a system of *belief*, in that the term belief carries meaningful theoretical consequences (i.e., as opposed to a system of attitudes). Beliefs are thought to be unstable, subjected to context, availability, and cognitive biases, and can be patently false. Attitudes, on the other hand, are regarded as enduring, stable, varying in strength, and having affective, behavioral, cognitive, and motivational components (*e.g.*, Breckler, 1984; Crano and Gardikiotis, 2015; R. H. Fazio, 1990; Petty and Briñol, 2008; Thurstone, 1931). Since the '60s, this research program consistently finds the American public manifestly non-ideological (Achen & Bartels, 2017; Converse, 1975; Freeder et al., 2019; Kalmoe, 2020; Kinder, 1998; Kinder & Kalmoe, 2017; Lewis-Beck et al., 2008; Zaller, 1992; Zaller & Feldman, 1992).[9] The conventional wisdom in political science today is that most Americans, Converse (1964) first advanced, fall well short of exhibiting ideological thinking or behavior. He arrived at this conclusion by exploring three waves of the American National Election Studies (ANES) of 1956, 1958, and 1960 and using several analytical strategies (Kuklinski & Peyton, 2007). Converse qualitatively analyzed open-ended answers to questions about the likeability of 1956 Presidential candidates and their parties, finding that 2.5% of respondents showed a level of conceptualization akin to ideological thinking. In Converse (1964, p. 14)'s own words, those respondents "rely in some active way on a relatively abstract and far-reaching conceptual dimension as a yardstick against which political objects and their shifting policy significance over time were evaluated." Only this minuscule minority was able to articulate their political views in terms of left-right ideology. A generous view of Converse (1964) findings would indicate that an additional 9% of the sample displayed some understanding of ideological reflection and thus could be categorized as 'near-ideologues,' totaling 11,5% of the sample, representing 15,5% of voters due to the use of weights. So depending on researchers' criterion of Converse (1964, p. 17)'s conclusions, only 1 in 40 (or a little over 1 in 10) were deemed ideologues. These proportions alone portray a mass public that disregards the ideological character and idiosyncrasies

[9] The French and Swedish public were also found to be 'innocent' of ideology, see Converse and Pierce (1986) and Granberg and Holmberg (1996).

of political elites.[10] Notwithstanding, Converse (1964) continued by scrutinizing the interdependence or interrelatedness of responses to policy issues, which, borrowing from Garner (1962), was from then on defined as *constraint*. Converse (1964) considered constraint an essential precondition to holding meaningful ideological beliefs and described it as "the success we would have in predicting, given initial knowledge that an individual holds a specified attitude, that he holds certain further ideas and attitudes" (p. 3). So Converse (1964) proceeded to calculate the inter-item correlations among seven political issues —four questions on domestic politics, three on foreign policy— and found them to be only weakly associated (p. 33). Converse (1964) contextualized these vacillating associations and small magnitudes in the mass public with data from political elites, namely, the 1958 Congressional Candidates, who, perhaps unsurprisingly, showed they were far more coherent in their (professional) political beliefs. Lastly, Converse (1964) also measured the temporal stability of ideology with a handful of policy issues, finding little stability, except perhaps for racial issues like school segregation (p. 44-7).[11] Taking stock, Converse (1964) concludes that:

> "[T]here is an obvious relationship among the divisions of the common citizenry into relatively narrow and fragmented issue publics, the feeble levels of constraint registered among specific belief elements of any range, and the absence of recognition or understanding of overarching ideological frames of reference that served as our point of departure" (p. 53-4).

The American electorate was declared ideologically innocent, and ordinary citizens' political beliefs, opinions, values, and ideology were found to be meaningless and inconsequential for most (Achen & Bartels, 2017; Converse, 1970, 1975, 2000; Converse & Pierce, 1986; Converse, 2006; Converse & Markus, 1979; Freeder et al., 2019; Kalmoe, 2020; Kinder, 1983, 1998, 2003, 2006; Kinder & Kalmoe, 2017; Lewis-Beck et al., 2008).

1.2.3.2 The continued relevance of Converse (1964)

Converse's (1964) work was ahead of its time and has since shaped the study of ideology in political science, social psychology, sociology, and beyond. It has attracted sundry supporters and opponents, engendered formative debates, and as a consequence, produced a rich scholarship fraught with insights for the academic understanding of political attitudes and behavior. Lewis-Beck et al. (2008, p. 291) chronicle that "[i]t is no exaggeration to say that the essay is required reading for all who profess expertise in the fields of public opinion and political behavior".

Perhaps surprisingly given its advanced age, the observations and arguments in *The Nature of Belief Systems in Mass Publics* are still thought to be as current and pertinent in today's literature as it was almost sixty years ago. What's more, it is not uncommon for contemporary

[10] Converse also assessed the association between ideological labels (conservative and liberal) with a political party (Democrat and Republican), and for the 60% of the sample who provided an answer to both questions, participants were mostly successful in matching political parties to ideology.

[11] Converse and Markus (1979) revisited the stability of ideology, leveraging ANES panel study from 1972 to 1976, finding a coefficient of 0.56, which is high, especially considering the 4-year gap between the time points (Kuklinski & Peyton, 2007).

students of ideology to underscore that despite the drastic changes in the political landscape of the United States since the 1960s, the ideological innocence hypothesis not only remains accurate but might be even more relevant today:

> "Taken all around, the evidence on ideological identification presented here fits comfortably with the broad conclusion of ideological innocence. Based on these results, we see no reason to reopen the case. To the contrary, the results fortify the original verdict. By and large, Americans come to politics without ideology in mind. That's how things are today. That's how things have been. And that is how they are likely to be for some time to come" (Kinder & Kalmoe, 2017, p. 124-5).

> "[T]he political 'belief systems' of ordinary citizens are generally thin, disorganized, and ideologically incoherent. [...] Converse's argument is, if anything, even better supported a half-century later than it was when he wrote" (Achen & Bartels, 2017, p. 12).

> "The empirical results in this chapter are highly consistent with those reported in *The American Voter* (Campbell et al., 1960). [...] While the specific concepts and operational versions of the variables have changed somewhat over the years, the general thrust of the findings and conclusions [of (Converse, 1964)] has remained remarkably consistent" (Lewis-Beck et al., 2008, p. 301).

> "Parochial in interest, modest in intellect, and burdened by the demands and obligations of everyday life, most citizens lack the wherewithal and motivation to grasp political matters in a deep way. People are busy with more pressing things; politics is complicated and far away. Ideology is not for them" (Kalmoe, 2020, p. 3).

> "[W]hile ideology plays a key role in the organization of political discussion in the political system as a whole, its influence in the political lives of individual citizens depends heavily on how much they attend to elite cues and signals and how much information they acquire as a result" (Federico, 2019, p. 92).

> "Converse's original claim of ideological naivete stands up quite well, both to detailed reanalysis and to political change. Indeed, in some respects, the claim is strengthened. Despite the boisterous events and ideological debates that have occasionally visited U.S. politics since 1960, most citizens continue to glance at the political world bewildered by ideological concepts, lacking a consistent outlook on public policy, in possession of genuine opinions on only a few issues, and knowing precious little (Kinder, 2003, p. 16)."

> "Indeed, if one defines ideology as a consistent, stable network of related beliefs and attitudes about the social and political world, Converse's (1964) conclusion that most of the public is 'innocent of ideology' (while extreme in tone) would appear to remain more accurate than inaccurate (Federico & Malka, 2021, p. 52-3)."

> "The extravagant heterogeneity of information levels from top to bottom in the

> electorate should remind us to interpret research findings in terms of the layers of the electorate generating any particular body of data"(Converse, 2000, p. 335).
>
> "[P]opular levels of information about politics are, from the point of view of the informed observer, astonishingly low" (Converse, 1975, p. 79).

The main takeaway of these quotes is that most ordinary citizens —spanning from 1954 to 2016— are not able to associate ideological concepts with party and ideological labels and positions, display stable political views, and know much at all about politics. The label 'ideologically innocent' described the American public in the middle of the twentieth century, and that remains, by and large, true nowadays. However, there have been some noticeable —and important— modifications to the original claims set forth by Converse (1964).

Following in Hyman and Sheatsley (1947)'s and Berelson et al. (1954)'s footsteps, the more contemporary research program stresses the importance of political information —also known as political sophistication— and the need to differentiate between levels in the mass public when interpreting research findings.[12] Researchers advance that, as the population varies greatly in political information —which is hypothesized to organize, dictate, and evaluate political stimuli— analyzing ideological coherence at the population level is a theoretical and empirical mistake. Thus, it is contended that for valid inferences regarding the ideology of mass publics, researchers ought to split ordinary citizens into levels of ideological sophistication. *see* Achen and Bartels (2017, p. 12) argue that, for most people, what appears to be ideologically motivated behavior is really "a rather mechanical reflection of what their favorite group and party leaders have instructed them to think". The idea is that partisanship and identification with social groups matter much more than ideological considerations or positions on specific political issues. In explaining the increased theoretical importance of political sophistication, Lewis-Beck et al. (2008) posits that "[i]t is impossible to understand how citizens deal with the complexities of the political world without taking into account the rather extreme variability in ideological awareness and political sophistication that exists within the mass public" (p. 301). This evolution from the classic approach is also captured by Kalmoe (2020), who asserts that evaluating ideology is not about whether ordinary citizens are able to express ideological coherence in the aggregate but rather *how many* do, and if so, *how much*. Kalmoe (2020) further explains that "lack of political knowledge keeps most people from becoming ideological" (p. 5) and calls political psychologists —and presumably political and social scientists— to both grapple with the public's limitations and observe the intrinsic nature of a "stratified view of political ideology" (p. 2). Yet, another more recent directive is that of polar distributions (Kinder & Kalmoe, 2017). There is substantial reticence in accepting so-called middling (or centrist) scores as valid ideological responses, for they do not "occupy the ideological periphery" Kalmoe (2020, p. 7). In doing so, this research program finds that only 15-30% of the public reach the necessary information levels characteristic of

[12] Connolly (2015) documents that Converse's conceptualization of political sophistication was an empirical derivation, "ostensible defenders of the old religion have added confusion to the debate by focusing on the factual awareness of the citizen, apparently unaware that this was never part of the original formulation" (p. 555). Connolly (2015) goes on to remind us that Converse's justification for the importance of ideological levels of conceptualization lies on "the variation in constraint as a function of sophistication or involvement is extremely large: there are no other discriminating variables that begin to separate populations so cleanly and sharply as these measures" (Converse, 1964, p. 37).

ideological thinking (Achen & Bartels, 2017; Converse, 1964; Freeder et al., 2019; Kalmoe, 2020; Kinder & Kalmoe, 2017).

Put simply, in addition to the onerous demands set forth by Converse (1964) —i.e., stable, coherent, consistent, and predictable political attitudes— ordinary citizens must show proof their sociopolitical experience is suffused with political knowledge. They likewise should demonstrate their polarity credentials. But the burden of proof for ideological thought does not solely fall on participants. Researchers, too, must bear the weight of the evidence 'implied by the term ideology.'[13]

Taken together, the ideological innocence perspective holds that most voters do not display coherent, stable, interrelated, or meaningful political beliefs due to capacity and lack of interest. Already in 1942, economic theorist Joseph Schumpeter wrote that the typical citizen drops down to 'a lower level of mental performance as soon as they enter the political field' (Schumpeter, 1942). As the argument goes, whenever ordinary citizens appear to show a sliver of conceptual understanding of political and ideological matters, it is a facade ensuing from group-centrism and social identity phenomena. As Kinder and Dale-Riddle (2012, p. 15) writes,[14] there is a "deep human predisposition to divide the social world into in-groups and out-groups" so what we may observe empirically as meaningful, strongly held political beliefs is in actuality group attachments and antipathies (Achen & Bartels, 2017; Kalmoe, 2020; Lewis-Beck et al., 2008; L. Mason, 2018).

1.2.4 The Social Psychological Approach

The social psychological approach, in contrast with the ideological innocence perspective, argues for the broadening of epistemological frontiers presently controlling what can be considered scientific when studying ideological thinking and behavior. It posits that despite the documented variance in levels of political knowledge among the public, most ordinary citizens can manifest genuine political preferences and ideological inclinations, which themselves have a psychological basis (Jost, Federico, et al., 2009; Jost et al., 2003b; Jost, Kay, et al., 2009; Jost, Ledgerwood, et al., 2008; Jost, Nosek, et al., 2008).

The social psychological approach departs from the observation that (a) ideologies differ in terms of whether they are aimed at "justifying, contesting or changing the social and political arrangements" (Freeden, 2003, p. 32); and that (b) political discourse in many contemporary democratic societies cleaves around tradition and hierarchy on the one hand and progress and equality on the other (Bobbio, 1996; Cochrane, 2015; Francis, 1960; Freire, 2015; Inglehart, 1990; Jost, 2021; Lane, 1962; Laponce, 1981; S. M. Lipset, 1963; Mair, 2007; Noel & Therien, 2008; Sidanius, 1985; Tomkins, 1965; Tomkins, 1963; G. D. Wilson et al., 1973). These political and historical regularities point to an underlying origin, a *psychological* one.

The social psychological approach "seeks to explain how and why individuals and groups differ in terms of their support for —vs. opposition to— the existing structure of intergroup

[13] *see* Lewis-Beck et al. (2008, p. 290) as well as Kalmoe (2020, p. 19).
[14] also *see* Kinder and Kalmoe (2017, p. 137) as well as Kinder and Kam (2010).

relations and the social order as a whole" (Jost, 2021, p. 12).[15] The social psychological approach leverages theories and constructs —i.e., system justification, social dominance orientation, right-wing authoritarianism, justice sensitivity, conspiracy mentality, personality traits, collective narcissism, social identification, etc.— to untangle the cognitive, affective, and motivational structures underlying ordinary citizens' reactions to the socio-political world. It embeds psychological meaning into political attitudes and behavior, helping contextualize seemingly independent preferences and predilections and filling in explanatory gaps.[16] This approach adopts a functional perspective that maintains "people hold the attitudes they do because they resonate with underlying needs, interests, and goals" (Jost, 2021, p. 18).[17] Once more, Žižek (2012)'s writings are relevant, especially when he explains how ideologies become attractive to individuals in inconspicuous, insidious ways —away from consciousness and awareness (p. 312). The upshot of the functional perspective is the acknowledgment that belief systems form incrementally, as an interaction between the self —its psychological proclivities, needs, motivations, goals— and society (Lane, 1969, p. 2). In consonance, Jost (2021) writes that ordinary citizens...

> "[...] may be seduced by certain beliefs, opinions, and values because of social psychological forces that are not necessarily salient or obvious or even accessible to them. Psychological factors help to explain not only the presence of individual differences in the specific contents of ideological preferences (whether latent or manifest) but also why some people are more eager than others to acquire certain types of political experiences in the first place (p. 18)."

The question that needs an answer —from the vantage point of the social psychological approach— is how to reconcile the rich, documented plethora of social, motivational, and psychological differences with the view that ordinary citizens are innocent of ideology, driven by group attachments, and incapable of —and disinterested in— politics?

Social psychological researchers relax some of the imperatives mandated by the ideological innocence scholarship because they are thought to obscure psychological and motivational differences between ideological camps, disregard the psychological benefits of ideological attachment, and largely neglect ideologies' role in providing an interpretation to ordinary citizens of the evermore complex socio-political world (Azevedo et al., 2019; Jost, Federico, et al., 2009; Jost et al., 2003b; Knight, 2006; Lane, 1969; Maynard, 2013; Rosenberg, 1988).

In practice, and in brief, this means rejecting positivist and value-free approaches whilst adopting critical and intersectional lenses to investigate the role of ideology and its psychology on political behavior and attitudes. It also entails deemphasizing a forensic approach to political knowledge, information, and sophistication, especially as a *precondition* of scientific credibility. The social psychological approach likewise underscores the theoretical benefits of adopting a functional perspective to the examination of citizens' ideological thinking and behavior.

It is also vital to deconstruct methodological, survey, and measurement practices that serve

[15] also *see* Jost and Sidanius (2004, p. 1-17).

[16] also *see* Adorno et al. (1950), Altemeyer (1981), Bobbio (1996), Cochrane (2015), Jost (2020), Jost et al. (2003b), Robin (2018).

[17] also *see* Adorno et al. (1950), G. W. Allport (1954), Eagly and Chaiken (1993), A. C. Kay and Eibach (2013), Kelman (2017), Lane (1969), M. B. Smith et al. (1956), Tomkins (1965), Tomkins (1963).

to undermine and underestimate the capture of ideological thinking in the mass public. For example, ideological explanations of political attitudes and behavior have to pass strict litmus tests while partisanship and its effects are considered self-evident and ubiquitous. Another example is employing value-laden labels in measuring ideology. Surveys like the ANES —the field's standard dataset— use in its measure of symbolic ideology the qualifier 'extreme' in its polar labels, inhibiting its endorsement and measurement.[18] It should be transparent to social scientists that no one is keen to have their ideas associated with the label *extreme*, especially on an already loaded term such as ideology. Adding assault to injury, when it comes to the partisanship measure, its respective polar labels read *strong* instead of extreme, a positive label inviting endorsement.[19] Another point is that these same surveys make use of long-winded and expert-like policy preference questions as if to encourage people to self-reflect on their lack of political sophistication, assuming ordinary citizens' ideological preferences ensued from a desire to be an amateur political scientist. Yet another methodological practice minimizing levels of ideological thinking is the pessimism toward the use of middle-point responses —translating substantially into a centrist or moderate ideological position— and mandating consistent polar scores. This occurs due to a misapprehension of ideology for polarization. Similarly, it is paramount not to fall prey to unwarranted criticisms toward specialized statistical and psychometric methods designed to appropriately handle the idiosyncrasies of modeling latent constructs. And as ideology, political sophistication, and psychological constructs are latent in nature (as opposed to observable), properly modeling this kind of data is the scientifically correct procedure. The fact that there has been widespread suspicion of the so-called *miracle of aggregation* for decades in political behavior research is a testament to the doctrinaire state of the published scholarship. Finally, when interpreting the value of ideological constraint and stability, it is critical to evaluate, interpret, and contextualize the strength of a given effect size (e.g., cross-lagged coefficient, correlations between policy preferences, explained variance, etc.) in light of equivalent effects published across social sciences. This is of significance insofar as it is not uncommon for published research in political science to document empirical evidence supporting ideological thinking (e.g., on coherence, stability, polarization, predictive and explanatory value) while interpreting results as if they favored the innocence of ideology hypothesis. While it is unclear why this occurs, it is likely that perceived external pressures and literature norms, editorial gate-keeping, lack of training on latent variable statistical techniques, and unfamiliarity with different perspectives than that of Converse (1964) et al. might all play a role.

Taken together, the common practices in political science —whether epistemic, conceptual, methodological, or statistical— serve to uphold the conventional wisdom in political science. That is, citizens' ideological thinking is negligible, if not non-existent. The social psychological approach, instead, challenges these practices and seeks to bolster ideological and psychological explanations of political behavior and thinking. Without these efforts, the scholarship risks continuing to overlook the escalating levels of ideological thinking in the electorate and missing out on a more thorough and nuanced assessment which has tangible consequences for the scientific understanding of political behavior and thinking. This is summarized by Carmines

[18] the item text reads "Here is a 7-point scale on which the political views that people might hold are arranged from *extremely* liberal to *extremely* conservative. Where would you place yourself on this scale, or haven't you thought much about this?"

[19] the partisanship measure reads: Generally speaking, do you usually think of yourself as a Republican, a Democrat, an Independent, or what? (if Republican or Democrat) Would you call yourself a strong (Republican/Democrat) or a not very strong (Republican/Democrat)? (if Independent, Other/no preference) Do you think of yourself as closer to the Republican or Democratic party?

and D'Amico (2015, p. 206), who contends that conceptual and methodological...

> ... problem[s] have pervaded the research on the consequences of ideological thinking. If the basic measurement of ideology is flawed, it is likely that insights from research into both the ideological character of the public and the consequences of ideological thinking cannot be trusted. Without reliable measurement, the level of ideological thinking is likely to be underestimated, and the relationships between ideology and individual opinions are more complicated and contingent than they appear.

In other words, almost a decade ago, it was already clear there was a system of dogmas and practices hindering training and research programs on the importance of ideology as a key variable explaining political attitudes and behavior. The social psychological approach, in challenging and addressing some of these issues and practices, almost invariably finds expressive psychological differences between liberals and conservatives. Indeed, evidence of the significance of political distinctions —across time and space— abound. And if ordinary citizens were oblivious to politics, these asymmetries should not be observed. Indeed, the published literature largely supports ideological (and partisan) asymmetries with respect to public and private life, including personality (Carney et al., 2008; Xu et al., 2013), media diets (Rogers, 2020; Xu & Peterson, 2017), cognitive styles, proneness to conspiratorial mentality (Biddlestone et al., 2022; van der Linden et al., 2020), anti-scientific attitudes (Azevedo & Jost, 2021; Rothmund et al., 2022), animal welfare (Hoffarth et al., 2019), sensitivity to justice (Rothmund et al., 2020), motivational interests (Jost, Langer, et al., 2017), morality, values, social dominance orientation and authoritarianism (Womick et al., 2018), collective narcissism (Cichocka, Bocian, et al., 2022; Cichocka, Sengupta, et al., 2022; Marinthe et al., 2022), and physiological characteristics as well as food preferences, romantic interests (Eastwick et al., 2009), dating behavior (C. A. Klofstad et al., 2012), leisure activities (DellaPosta et al., 2015), buying and boycotting (Mutz & Rao, 2018), and more.[20]

In the chapters that follow, this thesis sets out to reinforce —if not reclaim— ideology as pivotal to the discipline of social and political psychology.

1.3 Goals

Setting the stage for the empirical chapters ahead (chapters 2-6), this introduction sought to contextualize the current landscape of ideological research by paying close attention to the multiplicity of possible semantic meanings, approaches, epistemologies, approaches, and forks in its scholarship.

In the empirical chapters that follow, different aspects of ideology are examined. The first goal of this dissertation is to empirically test the ideological innocence hypothesis, which has dominated political science discourse and research in the past decades. Only after having established whether ordinary citizens are completely innocent of ideology can one start to

[20] *for a review, see* Jost (2017, 2021), Jost, Sterling, et al. (2017), Jost, Stern, et al. (2017), Jost et al. (2018).

delve deeper into the psychological roots of political behavior and attitudes. Provided that individuals are indeed ideological, the second goal of this thesis is to explore how certain ideologies might be attractive to individuals depending on differences in their psychology.

The next section details the specific research goals of each chapter.

1.4 Outline of this thesis

Chapter 2 aims to enhance the critical social scientific understanding of the ideological character of contemporary neoliberal societies. Using public opinion data from four high-quality panels (three in the US and one in the UK), it investigates the conceptual and empirical connection between neoliberalism and social conservatism. Specifically, three major existing questions regarding public opinion in neoliberal societies are addressed.

First, the theory of ideological innocence, which holds that ordinary citizens are ignorant about political matters, and, as a consequence, *innocent* of ideological thinking (Converse, 1964; Kinder & Kalmoe, 2017), is empirically tested. As argued by Jost (2006), a major issue of this view is that it conflates ideology with political knowledge. In fact, citizens' public opinions may not need to be suffused with expert knowledge on political facts and biographies to be underlined by ideology. Indeed, studies consistently report replicable differences between liberals and conservatives, indicating the influence of ideology on attitudes, affect, cognition, and behavior.

Second, chapter 2 tackles another argument in political and psychological science, stating that, even if citizens may not be innocent of ideology, the uni-dimensional left-right approach to the study of ideology cannot account for the diversity in public opinions often found in society. Instead, it is argued that ideology should be studied through orthogonal dimensions that allow the complete distinction and separation between socio-cultural and economic attitudes. This line of thinking is usually supported by evidence showing that social and economic conservatives have different psychological needs (Feldman, 1988; Malka et al., 2019). For example, while authoritarianism and religiosity are defining characteristics of social conservatives, economic conservatives do not display such psychological traits (Johnston et al., 2017; Malka et al., 2014). In addition, the existence of Libertarians, who concomitantly endorse economic conservatism and social liberalism, is often used as an argument for the distinction of ideology along social and economic lines. So chapter 2 also investigates social and economic forms of conservatism in the U.S. and the U.K. are related or independent of one another.

Third, chapter 2 explores whether the hallmarks of neoliberal ideology (i.e., laissez-fare capitalism and opposition to welfare) are associated with psychological characteristics often attributed to conservatives, such as authoritarianism, social dominance orientation, and system justification. To address these questions, participants (Sample 1: N = 1500; Sample 2: N = 2119; Sample 3: N = 3500; Sample 4: N = 3848) were surveyed between the years of 2014-2015 (sample 4) and in 2016 (samples 1-3), answering questions regarding symbolic and operational ideology, endorsement of neoliberal attitudes, right-wing authoritarianism, social dominance orientation, general, economic and gender-specific system justification, and political sophistication.

Results of chapter 2 help illuminate current discussions on (a) whether individuals can be considered ideologically innocent, (b) whether social and economic dimensions of ideology are structurally and functionally independent from each other, and (c) what the psychology underlying neoliberal ideology looks like. As such, the results of chapter 2 provide important insights into a better and more comprehensive social-scientific understanding of ideology, and in particular, of neoliberalism in contemporary societies.

One of the main contributions of chapter 2 is the empirical examination of the notion that ordinary citizens are ideologically innocent. The understanding of individuals as ideological begs the question of the psychological underpinnings of ideological endorsement. That is, it becomes imperative to further understand the psychology behind individuals' attraction to one ideology over another. This question is explored more in-depth in chapters 3 and 4 of this dissertation.

Chapter 3 focuses on the context of the 2016 American presidential elections and investigates some of the psychological factors underlying Trumpism and Trump's victory. To many, the surprising victory of Trump in 2016 embodied individuals' repudiation of the status quo. This interpretation, however, is not short of contradictions. How could Trump's voters revolt against capitalism and neoliberalism and simultaneously find solace in one of the nation's best-known capitalist and billionaire? Some have instead argued that the change that Trump's supporters longed for was a change towards the past, a rise in reactionarism, as represented by Trump's campaign slogan "Make America Great Again" (Chapman, 2016). Hence, Trump's election could be understood as a response against the too many changes imposed by capitalism and globalization. In chapter 3, these interpretations are put to the test. Specifically, we turn our attention to the concept of system justification and explore how the legitimization of social systems influenced support for Donald Trump and Hillary Clinton in the 2016 American elections.

The psychological motivations underlying the endorsement of the Tea Party, a right-wing movement that was also thought to challenge the status quo, were subject to similar scrutiny in the past. Hennes et al. (2012) showed that support for the Tea Party was associated with an ideological defense of the American system rather than with its criticism. More specifically, supporters of the Tea Party scored high on societal (general) and economic system justification (Hennes et al., 2012). Inspired by this work, chapter 3 extends this investigation to Trump supporters. To this end, in the months preceding the 2016 elections, a nationally representative sample of 1500 Americans was recruited and asked questions intended to measure economic, gender, and general system justification attitudes, as well as political and candidate preferences. Investigating different facets of system justification is important insofar as they tap into different societal systems that people may be capable of simultaneously criticizing and defending. For example, while Trump supporters were avid critics of the government — especially under the Obama administration — it is unlikely they were critical of the economic system or the traditional gender roles in society. Thus, it was hypothesized that Trump supporters were system challenging in some respects and system-justifiers in others. Results shed light on the psychological motivations of Trump supporters and how prone to challenging the system they really were.

Chapter 4 furthers the investigation of the psychology underlying individuals' ideological subscription. Specifically, it tries to elucidate the link between individuals' justice concerns

and preferences for populist radical-right candidates in both the United States (i.e., Donald Trump) and Germany (i.e., Alternative für Deutschland - AfD). Previous research has shown that individuals' justice concerns has consequences for their political attitudes and actions (Rothmund et al., 2016). For example, Pettigrew (2017) found that perceived injustice (e.g., feeling one has less than deserved) was an important driver of Trump's support in the 2016 US presidential elections.

The first goal of chapter 4 is to explore whether dispositional justice concerns —measured as justice sensitivity— predict populist radical-right voting preferences. Justice sensitivity is a multidimensional personality construct (Schmitt et al., 2010; Schmitt et al., 2005) reflecting concerns for justice for oneself (self-oriented victim perspective) and for others (other-oriented). While justice sensitivity from a victim perspective is associated with feelings of fear of being deprived or exploited (Gollwitzer et al., 2005), other-oriented justice concerns are often associated with empathy and social responsibility (Schmitt et al., 2005). Although these two notions of justice are correlated with each other (Baumert & Schmitt, 2016), it is hypothesized that they might influence preferences for voting for populist radical-right candidates in opposing ways: justice sensitivity towards oneself should increase voting preferences for populist radical-right parties and candidates whereas justice sensitivity towards others should decrease such preferences.

The second goal of chapter 4 is to examine whether the relationship between different facets of justice sensitivity and preferences for populist radical-right candidates is mediated by core components of a populist radical-right ideology, namely nativism, populism, and authoritarianism (Mudde, 2007). Although previous studies have established that these three attitude dimensions predict voting for populist radical-right parties (Akkerman et al., 2014; Cutts et al., 2011; Ford et al., 2012; Lubbers & Scheepers, 2000), it is less clear whether these attitude dimensions complement each others' predictive validity. Previous research has shown that individuals high in justice sensitivity towards themselves tend to distrust political elites (Agroskin et al., 2015), feel threatened by and anger towards outgroup members and migrants (Süssenbach & Gollwitzer, 2015), and be prone to experiencing social cues as threatening (Gollwitzer et al., 2012), whereas justice sensitivity towards others is a positive predictor of solidarity to disadvantaged groups (Rothmund et al., 2017). Based on this evidence, it is hypothesized that justice sensitivity towards oneself predicts populist, anti-immigration and authoritarian attitudes, which in turn, sways voting preferences toward radical-right populist candidates.

To achieve the goals of chapter 4, two large samples of Americans (N=1500) and Germans (N=848) were recruited in 2016. Participants answered questions assessing their justice concerns, populist, anti-immigration, and authoritarian attitudes and were asked to indicate which candidate best represented their views (US sample) or for which party they would vote (German sample). The investigation across two different political contexts (US and Germany) provides important insights into the generalizability of the link between perceived justice and preferences for populist radical-right candidates.

The investigation of the psychological underpinnings of ideological subscription is far from exhaustive in this dissertation. Nevertheless, insights gained from chapters 3 and 4 regarding how one's psychology motivates endorsement of certain ideologies further inspire the examination of the ideological bases of political attitudes. In addition, it begs the question

of whether the psychological demands of those on the left and right might generate asymmetries in political and social attitudes. Chapters 5 and 6 explore the ideological bases of anti-scientific attitudes and conspiratorial thinking as well as potential ideological asymmetries between liberals and conservatives.

Chapter 5 investigates the ideological bases of anti-scientific attitudes. Scientific distrust has been increasing in the US and worldwide. During the COVID-19 pandemic, for example, it was common to observe citizens questioning medical advice, such as the need for the use of masks and the prompt scientific development of vaccines. Likewise, many individuals still doubt that climate change is and that it is due to human actions. Understanding the role of psychology and ideology on scientific skepticism is important because individuals' attitudes towards science, as well as the endorsement of misinformation, can impact their behavior. For example, as shown in a recent meta-analysis, conspiracy theories about climate change negatively correlated with pro-environmental intentions and support for pro-climate policies (Biddlestone et al., 2022).

Crucially, not everyone is equally susceptible to scientific misinformation (Rothmund et al., 2022). Previous literature has shown that education and religiosity are important factors in determining acceptance of conspiracy theories (Schaeffer, 2020; M. Wilson & Rose, 2014) and the scientific method (B. T. Rutjens et al., 2018; B. Rutjens et al., 2018). But many other factors could play a role in making someone more or less susceptible to scientific skepticism. Chapter 5 extends previous research on scientific skepticism to investigate a more comprehensive range of factors that may explain individual differences in scientific acceptance and denial. In addition, these factors are pitched against one another to understand their predictive power with respect to anti-scientific attitudes and to identify which predictors might be the most important.

Anti-scientific attitudes seem to be especially prevalent in politically conservative circles. In fact, recent data has shown that trust in science has been declining among American conservatives but not among other groups (Gauchat, 2012). One of the reasons for this asymmetry between conservatives and liberals might be due to different epistemological needs. Liberals might be more inclined to change their positions in light of new scientific evidence (Pennycook et al., 2020; Price et al., 2015), whereas conservatives are more cognitively rigid (Jost, 2017). Thus, one could expect to observe meaningful differences in attitudes about science between liberals and conservatives. However, as noted earlier, some scholars argue that citizens are ideologically innocent (Kalmoe, 2020; Kinder & Kalmoe, 2017) and that what appears as ideologically motivated behavior might simply be individuals repeating what the political party they identify with believe in (Achen & Bartels, 2017). According to this line of thinking, one could expect political partisanship to trump ideology in determining attitudes about science. This assumption is tested in chapter 5. In addition, some social scientists emphasize the importance of distinguishing between the social and economic dimensions of conservatism (Feldman & Johnston, 2014) and argue that economic conservatives might be as scientifically literate as liberals (Carl et al., 2016). Thus, in chapter 5, the relationship between social and economic conservatives and attitudes toward science is also explored.

Furthermore, in chapter 5, the relationship between attitudes toward science and other psychological variables such as right-wing authoritarianism (RWA), social dominance orientation (SDO), and system justification is investigated. Some studies have already shown that RWA

and SDO are linked to denial of climate science, anti-environmental attitudes, and skepticism about global warming (Carrus et al., 2018; Milfont et al., 2018; S. Stanley & Wilson, 2019). However, it is unclear whether RWA and SDO are associated with antiscientific attitudes in general. With regards to system justification, while previous research has shown that general and economic system justification are linked to skepticism about climate change being caused by human actions (Feygina et al., 2010; Hennes et al., 2012; Hennes et al., 2016; Jylhä & Akrami, 2015), high system justifiers may not necessarily hold antiscientific attitudes insofar as the scientific establishment is a legitimate part of the social system in the U.S. Using an exploratory (N=1500) and a confirmatory survey (N=2019) with American respondents and employing a multivariate framework, the relationship between scientific attitudes and religiosity, education, partisanship, ideology, authoritarianism, social dominance, and system justification is probed. Results help illuminate the antecedents of scientific distrust, which may be relevant for policy-making insofar as a society ought to persuade its citizens to abide by scientific facts and advice as collective problems arise.

Following the results of chapter 5, which empirically illustrate the important role of ideology in determining anti-scientific attitudes, **Chapter 6** continues the investigation of the role of ideology and ideological asymmetries, but this time applied to conspiratorial thinking in the context of American politics. Conspiratorial thinking is characterized by persistent beliefs that powerful individuals, groups, and organizations are plotting to achieve sinister (and often political) objectives (Moscovici, 1987; van der Linden, 2013). With the development of social media, belief in conspiracy theories has become widespread in the United States, with more than 50% of Americans believing at least one conspiracy theory (Oliver & Wood, 2014). Thus, understanding the sociocognitive factors that underlie subscription to conspiracy theories is of utmost importance as conspiratorial thinking can lead to several negative societal outcomes such as lack of civic engagement (Jolley & Douglas, 2014) and increased scientific skepticism (Lewandowsky & Oberauer, 2016).

In previous literature, conspiratorial thinking has been associated with several factors such as paranoid thinking, narcissism, political extremism, lack of education, and analytical thinking (Brotherton et al., 2013; Cichocka et al., 2016; Prooijen et al., 2015; Swami et al., 2014; van Prooijen, 2017). More recently, social scientists have started to consider the role of political ideology in shaping conspiratorial thinking (Imhoff, 2015; Pasek et al., 2015; Prooijen et al., 2015). Although in contemporary American politics, many conspiracy theories are endorsed by conservative individuals, it is often believed that conspiracy theories exist across the ideological spectrum (Moore et al., 2014) and that ideological extremism on both the left and the right promotes conspiracy ideation (Bartlett & Miller, 2010; Imhoff, 2015; McClosky & Chong, 1985; Prooijen et al., 2015). Nevertheless, there are notable asymmetries in conspiracy endorsement between the ideological camps, suggesting that liberals and conservatives are not necessarily equally susceptible to conspiratorial thinking. For example, right-wing extremists are more likely to endorse ideologically congenial conspiracy theories (Miller et al., 2016), conservatives are more prone to have a conspiratorial mindset than liberals (Oliver & Wood, 2014; Prooijen et al., 2015), and conspiracy theories and misinformation seem to spread more quickly and extensively in the social networks of conservatives (versus liberals) (Benkler et al., 2017; Guess et al., 2019; Guess et al., 2020; Jost & Hunyady, 2018). Hence, although it has been suggested that conspiratorial thinking should be equally prevalent among conservatives and liberals, there are numerous empirical reasons to question this assumption. That is, the fact that conspiracy theories are not solely observed among conservatives does not necessarily entail that liberals and conservatives endorse conspiracy theories at the same

rate or intensity, nor that conspiracy theories on the left and right are equally harmful. Across four studies (study 1: $N = 1000$; study 2: $N = 430$; study 3: $N = 1500$; study 4: $N = 2119$) that employ national samples, chapter 6 aims to provide a comprehensive test of the role of political ideology in conspiratorial thinking in the U.S. In doing so, it also empirically tests the existence of ideological asymmetries in conspiratorial thinking and whether the effect of political ideology on the endorsement of conspiracies is mediated by paranoid ideation and distrust of officialdom.

Finally, **Chapter 7** provides an overview of the main findings of this thesis together with a discussion about implications for the study of ideology in social and political psychology.

2

Neoliberal Ideology and the Justification of Inequality in Capitalist Societies: Why Social and Economic Dimensions of Ideology Are Intertwined

This work was done in collaboration with John T. Jost, Tobias Rothmund and Joanna Sterling. This chapter is based on: Azevedo, Jost, Rothmund and Sterling (2019). Neoliberal ideology and the justification of inequality in capitalist societies: Why social and economic dimensions of ideology are intertwine. *Journal of Social Issues, 75*(1).

Abstract

In this article we analyze data from high-quality surveys conducted in the United States and the United Kingdom that included multiple symbolic and operational measures of political ideology and psychological orientations. Our overarching goal is to elucidate the nature of conceptual and empirical connections between neoliberalism and social conservatism. In so doing, we revisit three major questions about public opinion in neoliberal societies: (1) Are ordinary citizens "innocent" of ideology? (2) Are social and economic dimensions of ideology structurally and functionally independent? (3) Are support for laissez-faire capitalism and opposition to welfare—hallmarks of neoliberal ideology—unrelated or negatively related to authoritarianism? In contrast to previous investigations relying upon fewer and poorer measures, we found that ordinary citizens do indeed hold coherent political attitudes, and their attitudes about social and economic issues are closely aligned. For instance, we observed that for five previously published ideological instruments, social and economic attitudes were robustly correlated in two large U.S. samples (with *r*s ranging from .40 to .69) for respondents who were relatively low ($.31 \leq r \leq .60$) as well as high in political sophistication ($.50 \leq r \leq .77$). Contradicting prior claims, we found no evidence that support for the free market was negatively associated with authoritarianism for any group of respondents or any measure of authoritarianism. On the contrary, economic conservatism and the endorsement of neoliberal attitudes were strongly associated with right-wing authoritarianism, social dominance orientation, economic system justification, and gender-specific system justification (with rs ranging from .53 to.76). We conclude that the political belief systems of ordinary citizens are coherently organized around support for versus opposition to both social and economic forms of inequality in contemporary capitalist societies.

2.1 Introduction

The very design of neoliberal principles is a direct attack on democracy.
(Chomsky, 2010)

The ruling ideas of our epoch are best characterized as "neoliberal," a multifaceted and somewhat nebulous term that refers to "a theory of political economic practices that proposes that human well-being can best be advanced by liberating individual entrepreneurial freedoms and skills within an institutional framework characterized by strong private property rights, free markets, and free trade" (Harvey, 2005, p. 2). Neoliberalism, defined in this way, is conceptually related to more familiar constructs such as political-economic conservatism and support for laissez-faire capitalism. All three of these ideological forms project immense confidence in market forces to solve social as well as economic problems and reflect a deep suspicion of governmental efforts to regulate business and to provide for the welfare of its citizens.

Neoliberalism as an ideology originated in the early 20th century with the work of Ludwig von Mises, Carl Schmitt, Friedrich von Hayek, and Milton Friedman (Drolet, 2011), but its constituent elements have long been popular with political and economic conservatives (e.g., see Adorno et al., 1950). As a guiding principle of political economy, neoliberalism was not put into widespread practice until the 1980s, when it was embraced by Margaret Thatcher in the United Kingdom and Ronald Reagan in the United States. In Western societies today, neoliberalism is "the ideology that dominates our lives," as Monbiot (2016) has pointed out—a belief system that defends, bolsters, and justifies social and economic disparities under capitalism.

In this article, we analyze public opinion data from several sources to deepen our understanding of contemporary political ideology, focusing especially on neoliberal attitudes, in the United States and the United Kingdom. We seek to enhance the social-scientific understanding of neoliberal ideology in three ways. First, we link this concept to the research literature on political-economic conservatism by arguing that support for laissez-faire capitalism and opposition to welfare is at the core of neoliberal and conservative ways of thinking. In so doing, we offer a conceptual and empirical framework for investigating social and economic forms of conservatism in relation to neoliberal ideology. Second, we expand upon the theory of political ideology as motivated social cognition to address the psychological interests—including resistance to change and acceptance of inequality (Jost et al., 2003b)—served by support for laissez-faire capitalism and opposition to welfare. Doing so obliges us to debunk the persistent notion that ordinary citizens are entirely "innocent" of ideology (Kinder & Kalmoe, 2017). Third, and most importantly, we argue that support for laissez-faire capitalism and opposition to welfare, which are essential aspects of economic conservatism and neoliberal ideology, are linked to individual differences in authoritarianism, social conservatism, social dominance orientation, and system justification. We provide converging evidence for these theoretical proposals and consider their implications for a deeper and more critical social-scientific understanding of neoliberal ideology in contemporary capitalist societies.

2.1.1 The Contested Nature of Ideology and Its Role in Public Opinion

Social scientists have taken every conceivable position on the question of how ideology relates to public opinion. One prominent tradition in political science, which may be traced back to Converse (1964), holds that ordinary citizens are woefully ignorant about political matters and utterly unconcerned with them; as a result they are said to be "innocent" of ideological ways of thinking, with the consequence that public opinion is merely an "illusion" (Bishop, 2005). This skeptical position has been defended most recently and steadfastly by Kinder and Kalmoe (2017, p. 3-4), who concluded that:

> Converse found that most Americans were indifferent to or mystified by liberalism and conservatism as political ideas; that their opinions on government policy displayed little evidence of coherent organization along ideological lines; and that relatively modest proportions of the electorate were in possession of real opinions, even on matters of obvious national importance. In Converse's judgment, most Americans were innocent of ideology . . . . [W]hen all the evidence is considered and all the counter-arguments assessed, Converse's claim of ideological innocence, taken on its own terms, stands up.

Commitment to the doctrine of ideological innocence led Kinder and Kalmoe to embrace Fiorina et al.'s (2011) position that "the evidence of increasing polarization is negligible" (p. 128), despite the fact that many esteemed public opinion researchers have reached the opposite conclusion (Abramowitz & Saunders, 2008; Barber & McCarty, 2013; Grossmann & Hopkins, 2016; Hacker & Pierson, 2006; Hare & Poole, 2014). Abramowitz (2015, p.19), for instance, has stated unambiguously that the American electorate is indeed "strongly partisan and deeply divided along racial, ideological, and cultural lines," an assessment that is backed up by the Pew Research Center (2014).

2.1.1.1 Are Ordinary Citizens Truly "Innocent" of Ideology?

If it were true that ordinary citizens are entirely "innocent" of ideology, then there would be nothing of theoretical and practical significance for social scientists to say about ideological dynamics involving ordinary citizens living in neoliberal, capitalist societies. As Kinder and Kalmoe (2017) put it, "People are busy with more pressing things; politics is complicated and far away. Ideology is not for them" (p. 3). However, a major problem with this line of thinking—other than the fact that it disregards so much evidence of increasing liberal-conservative polarization in the United States—is that it equates ideology with political knowledge and sophistication Jost (2006). At the end of the day, Kinder and Kalmoe's (2017) argument is essentially that ordinary citizens are mistaken and confused about many political issues; they are often wrong about the facts. Ironically, this conclusion fits rather snugly with more critical—or, if you like, pejorative—accounts, which regard ideology as a form of distortion, mystification, or rationalization (Hall, 2017; Jost, Nosek, et al., 2008; Knight, 2006; Larrain, 1991).

Like a great many philosophers, social theorists, and, indeed, political scientists, we defend the position that—for better or worse—ideology plays a role in maintaining the legitimacy and

stability of social systems, including the global capitalist system, with its high levels of social and economic inequality, even if that ideology promotes false, confused, or mistaken beliefs (Bartels, 2008; Benabou, 2008; Habermas, 1989; Harvey, 2005; Larrain, 1991; Monbiot, 2016; Railton, 2003; Shayo, 2009; Trump, 2018). As Hall (2017) put it, "Ideology works best by suturing together contradictory lines of argument and emotional investments" (p. 326). From this perspective, ideology is much closer to "false consciousness" than "political expertise," and it is motivated not so much by logical considerations as psychological ones (Jost, 2006). People may well lack "forensic" ideology and a sophisticated understanding of political realities, but they do possess "latent" forms of ideology, as Lane (1962) pointed out long ago, and this is almost surely what counts when it comes to the *perceived* legitimacy of social systems.

We therefore join the many scholars who maintain that the left-right (or liberal-conservative) dimension is useful, and perhaps even indispensable, for understanding the beliefs, opinions, and values of ordinary citizens as well as political elites (e.g., Bartels, 2008; Benabou, 2008; Freeze & Montgomery, 2016; Goggin et al., 2019; Hibbing et al., 2014; Knight, 2006; Noel & Therien, 2008)—even if it is true that people are neither perfectly consistent nor loyal when it comes to their ideological preferences (Jost, 2006). As a general rule, however, conservatives and rightists are indeed more likely to value tradition, social order, authority, conformity, hierarchy, and social stability, whereas liberals and leftists are more likely to value progress, social change, and social, economic, and political forms of equality (e.g., Bobbio, 1996; Clifford et al., 2015; Erikson & Tedin, 2015; Jost et al., 2003b; Laponce, 1981; S. Lipset et al., 1962; Noel & Therien, 2008).

Twenty or so years of research in political psychology reveals that there are meaningful and replicable differences between self-identified liberals and self-identified conservatives in terms of personality traits (Caprara & Vecchione, 2017; Carney et al., 2008; Gerber et al., 2010; Jost, 2006; Mondak, 2010), cognitive-motivational and rhetorical styles (Amodio et al., 2007; Jost, 2017; Jost et al., 2003b; Tetlock, 2007; Zmigrod et al., 2018), and lifestyle choices and behaviors (Carney et al., 2008; DellaPosta et al., 2015; Eastwick et al., 2009; C. Klofstad et al., 2013; Xu et al., 2013; Xu & Peterson, 2017). Liberals are generally more open, tolerant, curious, creative, deliberative, and intellectually minded, whereas conservatives tend to be more orderly, conscientious, moralistic, intuitive, closed-minded, and duty bound. It is easy to assimilate these results with longstanding observations that people who gravitate toward politically conservative, rightist opinions are generally more dogmatic, rigid, authoritarian, and prejudiced than people who gravitate toward more liberal, leftist opinions (Adorno et al., 1950; Altemeyer, 1998; Brown, 1965; Duckitt, 2001; Jost et al., 2003b; Napier & Jost, 2008; Sidanius & Pratto, 2001; Womick et al., 2018). However, the notion that political ideology is totally irrelevant to most people—as Kinder and Kalmoe (2017) and others have argued—is hard to square with the fact that measures of ideology are systematically related to many aspects of people's lives, including their psychological characteristics.

2.1.1.2 Are Social and Economic Dimensions of Ideology Structurally and Functionally Independent?

There is another group of scholars who do not dispute that ideology matters to ordinary citizens, but they argue that a single left-right or liberal-conservative dimension cannot account

for the diversity of public opinion in society. They contend that at least two more or less orthogonal dimensions are required (Feldman & Johnston, 2014) and that sociocultural and economic attitudes should be treated as separate ideological clusters that are linked to very different types of psychological characteristics (e.g., Crowson, 2009; Johnston et al., 2017; Malka et al., 2014; Weeden & Kurzban, 2016). These authors set up a strong juxtaposition between social and economic dimensions of ideology, arguing that economic conservatism is qualitatively unlike—and in some respects even opposed to—social conservatism. For instance, Feldman and Johnston (2014) argue that "authoritarianism and religiosity have substantively large effects on social conservatism but no significant effect on economic conservatism . . . Those high on authoritarianism are very likely to be socially conservative, *but they are just as likely to be liberal on economic policy as conservative*" (p. 354, emphasis added).

Some researchers have gone even further to argue that—at least among citizens who are relatively low in political engagement and sophistication— authoritarian rigidity is associated with leftist—rather than rightist—economic views (Johnston et al., 2017; Malka et al., 2014). Thus, Malka and Soto (2015) claimed that "the rigidity of the right hypothesis . . . applies to attitudes in the sociocultural domain but not the . . . economic domain" (p. 139), allegedly because "many left-wing economic policies aim to provide people with economic stability and security, and this might be naturally need satisfying for" people who are high in needs for certainty and security (p. 138). In a similar vein, Johnston et al. (2017) analyzed data from the American National Election Studies (ANES) and concluded that "at low and medium levels of political engagement ... authoritarianism is associated with skepticism about the sufficiency of markets and with support for a greater government role in the economy" (p. 75). They declare strong support for the "reversal hypothesis," according to which authoritarianism is associated with economic conservatism for people who are high in political sophistication, but it is associated with liberal (or, more precisely, progressive) economic views for people who are low in sophistication.

The argument that social and economic dimensions of ideology are independent depends in part on the assumption that many citizens are either socially liberal but economically conservative or socially conservative but economically liberal (or progressive). Indeed, Feldman and Johnston (2014) claimed that: "Libertarians, who combine economic conservatism with social liberalism, are virtually as numerous as traditional conservatives" (p. 354).[1] Libertarianism, conceived of in this way, is often assumed to be either unrelated to authoritarian rigidity or *negatively* associated with it. For example, Johnston et al. (2017) argued that among those who are relatively low in political involvement "low authoritarians are more likely to believe that 'the free market can handle . . . problems without the government being involved'" (p. 75). Stenner and Haidt (2018) claimed that: "Laissez faire 'conservatives' are not conservative in any real sense. They typically self-identify as classic liberals or libertarians. They strongly

[1]This is not what we found in the present research program, at least with respect to ideological self-placement (or symbolic ideology). In Sample 1 (see details in the Method section), fewer than 9% of respondents identified themselves as socially liberal and economically conservative, as compared with 35% who identified themselves as both socially and economically conservative. Furthermore, only 3% identified themselves as socially conservative and economically liberal, as compared with 29% who identified themselves as both socially and economically liberal. Less than 10% of respondents selected the scale midpoint (neither liberal nor conservative) for both dimensions of ideological self-placement (cf. Kinder & Kalmoe, 2017). With respect to operational ideology, we found that the proportions of "socially liberal" and "economically conservative" respondents varied considerably as a function of the ideological instrument and method of classification.

favor the free market and are usually pro-business, seeking to thwart 'socialist' or 'left-wing' efforts to intervene in the economy and redistribute wealth. *Psychologically speaking, they have nothing in common with authoritarians*" (p. 181, emphasis added).

However, there are several limitations of the research used to back up these very strong claims. First, the research by Feldman and Johnston (2014) was based on responses to just three questions about social issues (abortion, gay adoption, and women's role in business and government) and four questions about economic issues (governmental spending on welfare, social services, health insurance, and federal assistance to the poor) in three waves of the ANES (2000, 2004, and 2006, with data from the last two years combined). The researchers noted that they excluded questions about race, immigration, and foreign policy, at least some of which would have tapped into *both* social and economic concerns, thereby increasing overall ideological structure and coherence. Nevertheless, even with these methodological exclusions (and inherent limitations arising from the use of very short ANES opinion scales, see Pietryka & Macintosh, 2017), Feldman and Johnston found that social and economic dimensions were significantly intercorrelated at .21 in 2000 and .36 in 2004/2006 (p. 343). Indeed, the two dimensions were significantly correlated even for those respondents who were classified as lowest in terms of political sophistication. In our judgment, this study hardly provides overwhelming evidence that social and economic attitudes are structurally independent of one another in general.

Second, the strong conclusions of Malka et al. (2014) about authoritarian rigidity are based on aggregate analyses involving respondents from 51 extremely heterogeneous countries, using ad hoc scales that were constructed from a panoply of items administered during the 2009 wave of the World Values Survey (WVS) that exhibited very poor psychometric properties. The authors noted that: "In the full sample, the five-item right-wing cultural attitudes scale had a Cronbach's alpha of .54 and mean interitem correlation of .19; the three-item right-wing economic attitudes scale had an alpha of only .17 and a mean interitem correlation of .06" (p. 1036). As a result, they reported "the results of analyses using both the attitude composites (for illustrative purposes) and individual attitude items as outcome variables" (p. 1036). Even more worrisome, Malka et al. estimated psychological "needs for certainty and security" (as an analogue of authoritarian rigidity) by taking five items (out of more than 50) from five different subscales of Schwartz's 1992 Value Priorities Scale, and this composite, too, exhibited very poor psycho metric properties: "These analyses yielded a five-item scale that contrasted motivations for security, tradition, and conformity with motivations for self-direction and stimulation. In the full sample, this scale had an alpha reliability of .56 and a mean interitem correlation of .20" (p. 1038). Thus, Malka and colleagues' conclusions were based purely on patterns of correlations involving several unreliable scales that were not designed for the purposes to which they put them (cf. Flake & Fried, 2019; Flake et al., 2017; Hussey & Hughes, 2018).

Third, the conclusions about authoritarianism reached by Johnston et al. (2017) are based entirely on analyses involving a four-item scale of childrearing values. Although some political scientists like this measure because it is thought to be devoid of political content (e.g., Feldman & Stenner, 1997; Johnston et al., 2017; Stenner, 2005), it has been criticized rather heavily on both methodological and substantive grounds (Hooper, 2017; MacWilliams, 2016). Among other things, scores on the childrearing scale have been found to yield insufficient internal reliability (Feldman & Stenner, 1997; Henry, 2011; Hetherington & Suhay, 2011), to be non-

invariant across race/ethnicity (Perez & Hetherington, 2014), and to exhibit weak associations with other established measures and known correlates of authoritarianism (Bizumic & Duckitt, 2018; Dunwoody & Funke, 2016). From a theoretical perspective, too, this scale captures very little of the rich conceptual and empirical detail of the authoritarian personality as described by Adorno et al. (1950), Altemeyer (1998), Brown (1965), Jost and Hunyady (2018), and others; in other words, it violates the presumed multidimensionality of the construct (Voicu, 2012). When it comes to investigating associations with economic conservatism, there is an additional methodological problem, which is that two of the four childrearing items mention "independence" and "self-reliance," and endorsement of these values is taken to indicate a *lack* of authoritarianism (Johnston et al., 2017, p.72). The problem is that independence and self-reliance—abstractions of the "free, possessive individual" (Hall, 2017, p. 318)—are hallmarks of neoliberal, pro-capitalist ideology (Harvey, 2005; Monbiot & Verso. Mondak, 2016), as in Margaret Thatcher's famous statement that "there's no such thing as society"—only "individual men and women." Given this historical and ideological context, it is understandable that at least some respondents in Johnston et al.'s study who were reticent about the values of independence and self-reliance preferred progressive economic policies that were supportive of social welfare and income redistribution.

In any case, we suspect that the tendency—even among social scientists—to treat social and economic dimensions of ideology as separate and distinct is itself the product of neoliberal ideology. Through the pervasive (but questionable) assumption that a philosophical commitment to the "free market" is nothing more than a pure and principled endorsement of values such as freedom and self- reliance, the *social* ramifications of global capitalism are effectively concealed. Ideological support for laissez-faire capitalism may be divorced, in the realm of ideas, from racism, sexism, and classism—aspects of traditional authoritarian prejudice—even as corporate hegemony perpetuates and perhaps even aggravates actual social divisions based on race, sex, and economic standing.[2] From our perspective, reasserting the connection between social and economic ideas (and realities) is a necessary first step in any attempt to understand and, indeed, confront the group-based injustices that persist in contemporary capitalist societies.

2.1.1.3 Is Support for Laissez-Faire Capitalism Unrelated or Negatively Related to Authoritarianism?

It is well worth recalling that earlier generations of social scientists saw important parallels between commitment to pro-capitalist ideology and the holding of authoritarian-conservative social attitudes. An entire chapter of *The Authoritarian Personality* written by Daniel Levinson was devoted to the fact that endorsement of political-economic conservatism, operationalized in terms of support for Big Business and laissez-faire capitalism and opposition to labor unions and social welfare, was positively and significantly correlated with authoritarianism, ethnocentrism, and racial and ethnic prejudice (Adorno et al. 1950, Chapter 5; see also Napier

[2]Furthermore, in terms of cognitive schemas and messaging cues pertaining to public opinion, we would argue that the partitioning of social versus economic issues is not only artificial and problematic but also improbable in light of extensive psychological evidence in nonpolitical domains that individuals very often reduce decision-making complexity by subjectively compressing multidimensional categorization frameworks into a single underlying dimension (Jost, Nam, et al., 2014, p. 24-26).

and Jost 2008). Similarly, social dominance theory holds that there are individual differences when it comes to generalized preferences for and against group-based inequality (Altemeyer, 1998; Jost et al., 2003b; Pratto et al., 1994). Coming from a social dominance perspective, Sidanius and Pratto (1993) provided evidence that in the United States and Sweden support for free-market capitalism was positively associated with anti-Black racism (rs = .25 and .38, respectively, $p < .001$). More recently, Weeden and Kurzban (2016) analyzed data from the United States. General Social Survey (GSS) from 1980 to 2014 and found that—although religious and economic attitudes were largely unrelated to one another—the overall correlation between economic conservatism and racial conservatism was .41. As Sidanius and Pratto (1993) pointed out, findings such as these are incompatible with the philosophical assumptions of the Austrian School of neoliberal economics, according to which (a) "free market competition and labor market ethnic discrimination are inherently incompatible" and (b) "in a truly competitive, capitalist market place, the stable equilibrium would not allow for ethnic or racial discrimination" (p. 382).

According to system justification theory, people are ideologically motivated (to varying degrees, depending upon situational and dispositional factors) to defend and justify existing social, economic, and political arrangements. In the context of contemporary capitalist societies, with their very high levels of inequality, this means that many citizens—especially those who are drawn to politically conservative ideas and opinions—are prone to use stereotypes and other social judgments to excuse and rationalize social and economic disparities within and between groups in society (Jost, Banaji, et al., 2004). According to Manstead (2018):

> The neoliberal ideology that has dominated political discourse in most Western, industrialized societies in the past three decades has influenced attitudes to such an extent that even supporters of left-of-centre political parties, such as the Labour Party in the United Kingdom, regard poverty as arising from individual factors and tend to hold negative beliefs about the level of welfare benefits for the unemployed. Such attitudes are shared to a perhaps surprising extent by working-class people . . . and, as we have seen, the research . . . suggests that working-class people endorse ideologies that endorse and preserve a social system that materially disadvantages them.

Thus, system justification theory provides another reason to expect that social and economic attitudes would be generally intertwined, insofar as the same social psychological processes that lead people to justify economic inequality under capitalism would also lead them to justify disparities based on race, ethnicity, nationality, immigration status, gender, and sexual orientation (see Jost, 2019).

As we have seen, there are a number of theoretical, methodological, and empirical reasons to question the conclusions drawn by other scholars that (1) ordinary citizens are "innocent" of ideology, (2) social and economic dimensions of ideology are structurally and functionally independent, and (3) support for laissez-faire capitalism is unrelated to—or even *negatively* associated with—authoritarianism, social dominance, and system justification. In the remainder of this article we argue that the theoretical approaches outlined above reflect fundamental misunderstandings of the role of social and economic ideology in neoliberal, capitalist societies. Although in some cases it might well make sense to distinguish between issues that are primarily about matters of social or cultural concern and others that are focused on economic

concerns, in many other cases a firm distinction between social and economic attitudes seems unwarranted and, indeed, untenable. After all, nearly every public policy issue pertaining to the redistribution of wealth and governmental spending on welfare, public education, health care, and other social services invariably has significant ramifications for the social sphere and taps into attitudes and beliefs about race, ethnicity, nationality, immigration status, gender, sexual orientation, and other social and cultural categories.

2.1.2 Social-Theoretical Critiques of Neoliberalism: Why Would Social and Economic Dimensions of Ideology Be Intertwined in Capitalist Societies?

There is a rich critical tradition of social theorizing about neoliberalism that brings these questions about the relationship between social and economic dimensions of ideology to the fore (e.g., Giroux, 2004; Hall, 2017; Harvey, 2005; Monbiot, 2016). Drolet (2011, pp. 93–95), for instance, provides a useful historical perspective on the development of neoliberal ideology. He writes that:

> Neoliberalism as an ideology itself emerged in the early 1970s as a pro-business challenge to what is commonly referred to as 'embedded liberalism,' i.e., the set of Keynesian policies, socio-political constraints and legal regulations that surrounded market processes and corporate activities and framed industrial and economic relations in Western liberal democracies during the post-war period. 'Embedded liberalism' was a class compromise between capital and labour. In the U.S., it grew in great part out of the New Deal and the tradition of 'welfare liberalism' . . .
>
> [Neoliberalism] aims at bringing all fields of human activity under the aegis of the market, and proposes that the state should create markets where they do not exist: health care, social security and education, for example . . . it favours a more laissez-faire approach that in practice has favoured the development of a monopolistic-oligopolistic form of capitalism.

From this perspective, neoliberalism is an ideology that is best understood as a laissez-faire, pro-market reaction against liberal-socialist policies that were implemented after the Second World War to mitigate the deleterious effects of social and economic inequality under capitalism. Following its adoption by Thatcher and Reagan in the 1980s, inequality in the United Kingdom and the United States—and, indeed, other capitalist countries—has risen dramatically (e.g., Pikkety, 2014), just as critics of neoliberalism feared it would.

Although neoliberal ideology enshrines personal liberty and freedom as core values, critics have often pointed out that by dismantling labor unions and social safety nets it makes the vast majority of workers less free—and far more dependent upon business corporations.[3]

[3]Adorno et al. (1950) saw this problem clearly 70 years ago, well before the term "neoliberal" was in common circulation: "This [economically conservative] way of thinking assumes that the individual has 'freedom' economically to the extent that there are no government restrictions on him; it

When Jorge Larrain (1991) analyzed the rise of neoliberal ideology under Thatcher, for instance, he noted that it was necessary for the Tories to emphasize conservative social issues such as "law and order" to deal with unemployment, crime, and other consequences of rising economic inequality that were made worse by governmental divestment from social welfare programs:

> Unemployment is treated as laziness and pricing yourself out of a job, workers' strikes are transformed into a problem of public order. Criminality and new forms of violence are treated as the result of lack of authority in the family, not enough law and order, lack of Victorian values, etc. Terrorism is successful because of the free press and the excessive leniency of the law. Divisions and forms of discrimination are partly blamed on immigration and partly conjured away by patriotism and jingoism. Thatcherite ideology thus tries systematically to displace and conceal the real origin of British problems. It totally transfers or confines the principles of freedom, equality and self-interest to the economic sphere of the market while it attacks them in the political sphere . . . The authoritarian features of Thatcherite ideology are not arbitrary and contingent, they are necessitated to deal with the results of the operation of the free market. (p. 25)

Even ostensibly libertarian concepts such as "economic freedom" have in fact been associated, historically speaking, with the enforcement of social order, hostility to organized labor, and the suppression of dissent (Giroux, 2004; Hall, 2017; Harvey, 2005; Monbiot, 2016). Class conflict, in other words, has often been suppressed through authoritarian means. Indeed, Hayek's neoliberalism grew out of "a conservative, authoritarian form" of political-economic theory developed by professors at Freiburg University in the late 1920s and early 1930s (Drolet, 2011, p. 94). Apparently, Hayek even praised Chile under the fascist dictatorship of Augusto Pinochet, presumably because the dictatorship served and protected capitalist institutions and interests (Monbiot, 2016).

Critics of neoliberalism point out that—far from opposing authoritarian, socially conservative points of view—neoliberal ideology legitimizes global exploitation and economic inequality under capitalism, and works in conjunction with—and may even require—authoritarian attitudes to insure the maintenance of social stability (Giroux, 2004; Hall, 2017). At best, neoliberal ideology fosters indifference to the plight of the poor—the "welfare queens," in Reagan's memorable phrase—much as socially conservative ideology fosters indifference to the plight of racial and ethnic minorities (Adorno et al., 1950). At worst, neoliberalism is a victim-blaming ideology that treats poor people as responsible for their own poverty and, in doing so, exonerates social, economic, and political institutions and arrangements under capitalism. In this sense, it is a system-justifying ideology *par excellence*. Monbiot (2016) writes: "The rich persuade themselves that they acquired their wealth through merit, ignoring the advantages—such as education, inheritance and class—that may have helped to secure it. The poor begin to blame themselves for their failures, even when they can do little to change their circumstances."

It follows from this theoretical critique of society that when contemporary political actors—the heirs of Reagan and Thatcher, economic conservatives like Paul Ryan and self-described

overlooks the fact that economic freedom for most people today is limited . . . by economic forces originating in business monopoly" (p. 156).

libertarians like Rand Paul—move to deepen tax cuts for wealthy individuals and corporations and cut back on public health care provisions or unemployment benefits or funding for public education they are not merely exhibiting confidence in the free market and defending individual freedom. In practice, they are determining which members of society are well-situated to thrive and which are not. Unfortunately, the problem is not confined to one or two countries, as the Chilean example would suggest. Harvey (2005) observed, for instance, that "neoliberalism in authoritarian states such as China and Singapore seems to be converging with the increasing authoritarianism evidence in neoliberal states such as the United States and Britain" (p. 81).

There are several empirical implications of this line of theoretical argumentation that we explore in the remainder of this article. First, we argue that the dissociation between social and economic dimensions of ideology has been exaggerated considerably in previous scholarship on public opinion (e.g., Crowson, 2009; Federico & Malka, 2018; Feldman & Johnston, 2014; Johnston et al., 2017; Malka & Soto, 2015; Weeden & Kurzban, 2016). A great many public policy issues—such as those pertaining to welfare spending, redistribution of wealth, public education, health care, affirmative action, military budgets, and law and order—involve *both* economic priorities and social concerns pertaining to race, ethnicity, nationality, immigration status, gender, and sexual orientation. Thus, we hypothesize that—when one samples a sufficiently wide range of public policy positions using previously published (and presumably validated, to differing degrees) ideological instruments—social and economic attitudes will indeed be positively intercorrelated, even among participants who are relatively low in terms of political sophistication, and both types of attitudes will be correlated with overall ideological self-placement. Second, we hypothesize that—in contrast to the results of previous research using limited numbers of ad hoc items and, in some cases, flawed methodological procedures—support for laissez-faire capitalism will be positively related (rather than unrelated or negatively related) to authoritarianism, social dominance, and various forms of system justification.

2.2 Methods

2.2.1 Sample 1 (SSI Nationally Representative Sample; N=*1,500)*

We hired Survey Sampling Incorporated (SSI; www.surveysampling.com), a market research firm that recruits participants from a panel of over 7 million U.S. citizens, to recruit a nationally representative sample of 1,500 Americans (50.7% women) in the weeks preceding the 2016 U.S. Presidential Election (from August 16 to September 9, 2016). The age distribution of our sample was as follows: 18–24 years (12.9%), 25–34 (17.6%), 35–44 (17.5%), 45–54 (19.5%), 55–65 (15.6%), and older than 65 (16.9%). The ethnic breakdown was: White/European American (82.5%), Black/ African American (7.7%), Latino (5.9%), and "Other" (4.0%). In terms of religion, 67.6% identified as Christian, 17.1% as religiously affiliated but not Christian, and 15.3% as Atheist/Agnostic. With respect to education 35.1% indicated "high school only or lower," 31.4 % indicated "some college," and 33.6% indicated having received a "Bachelor" or "Graduate" degree. The median income category was $50,000 to 74,999.

In addition to administering a much greater number and variety of political and psychological instruments (including full scales) than in other nationally representative surveys (such as ANES, GSS, and WVS), we took a number of steps to insure that the quality of the data would be especially high. These included following professional recommendations to minimize problems of careless responding and satisficing behavior in online survey studies. Specifically, we employed 10 random attention and consistency checks as well as time controls (on both page and survey submissions). Out of 1,885 respondents who finished the survey, 385 failed more than one attention check or finished the survey in under 22 minutes and were therefore excluded from the sample. (Participants who successfully finished the survey had a mean completion time of 67 minutes and a median of 51 minutes.) By administering several complete, previously validated scales designed to measure social and economic attitudes rather than a smattering of individual items, as in many other surveys, we were able to capitalize on positive psychometric properties of the scales and to generalize our results beyond just one or two operational instruments. We randomized the order in which the various scales were administered (across participants), but the order of items within each scale was kept constant and, whenever possible, the items were administered in the order in which they were listed in previous publications.

Symbolic ideology. Respondents completed three questions about symbolic ideological self-placement: (1) "Overall, where would you place yourself, on the following scale of liberalism-conservatism?" (2) "How about in terms of social and cultural issues? (e.g., abortion, separation of church and state, affirmative action)" and (3) "How about in terms of economic issues? (e.g., taxation, welfare, privatization of social security)." Responses were provided on Likert scales ranging from 1 (*Strongly liberal*) to9 (*Strongly conservative*).

Operational ideology. Issue-based ideological preferences were assessed using five different instruments: (1) the Core Domains of Social and Economic Conservatism Scale, which contains four items measuring economic conservatism and three items measuring social conservatism (Feldman & Johnston, 2014); (2) the Pew Research Center's "Core Issues in American Politics" scale, which is comprised of 12 items (e.g., "The government needs to do more to make health care affordable and accessible"; Zell and Bernstein 2014); (3) the Social and Economic Conservatism Scale, which includes five economic and seven socially conservative values (e.g., "Traditional values"; Everett 2013); (4) the Political Issue Statements, which is comprised of 10 items measuring political orientation in left-right ideological space (e.g., "A woman should have the right to choose what to do with her body, even if that means getting an abortion"; Inbar et al. 2009); and (5) an adapted 16-item version of Henningham's (1996, 1997) Social and Economic Conservatism scales, which are contemporary versions of the "classic" G. Wilson and Patterson (1968) scale for measuring liberalism-conservatism. Scale reliabilities we obtained for Samples 1 and 2 are listed in Table 2.1 (see Supplementary Materials for a full list of items).

Endorsement of neoliberal attitudes. Upon close inspection of the five scales used to measure operational ideology, we identified 23 items that, in our judgment, clearly reflected neoliberal economic attitudes, as characterized by several authors who have written extensively on the topic (e.g., Drolet, 2011; Giroux, 2004; Hall, 2017; Harvey, 2005; Larrain, 1991; Monbiot, 2016). These included support for the free market, business, corporations, profits, and tax cuts, as well as opposition to governmental spending, welfare, unemployment benefits, labor unions, minimum wage provisions, public health insurance, and environmental regulation of

business (complete items are listed below in Table 2.8). Approximately 92% of the items classified by researchers as economically conservative were used in our measure of neoliberal attitudes.

Table 2.1: Scale Reliabilities and Mean Interitem Correlations for Ideological Measures Administered to Samples in the United States (Samples 1 and 2)

Ideological measures	Number of items	Scale reliability (Cronbach's α)		Mean interitem correlation	
		Sample 1	Sample 2	Sample 1	Sample 2
Symbolic measures					
Ideological self-placement (social, economic, and overall combined)	3	0.79	0.80	.79	.80
Operational measures					
Everett (2013)	12	0.88	0.90	.38	.42
Feldman and Johnston (2014)	7	0.78	0.79	.34	.35
Henningham (1996, 1997)	16	0.87	0.87	.29	.30
Inbar et al. (2009)	10	0.78	0.80	.26	.29
Zell and Bernstein (2014)	12	0.85	0.86	.32	.34

Note. For Sample 1, N = 1,500, and for Sample 2, N = 2,119.

Right-wing authoritarianism. Participants completed a 12-item Right-Wing Authoritarianism scale (Funke, 2005) that facilitates the independent measurement of authoritarian submission (e.g., "Obedience and respect for authority are the most important values children should learn"), authoritarian aggression ("What our country really needs is a strong, determined President which will crush the evil and set us on our right way again"), and authoritarian conventionalism ("The withdrawal from tradition will turn out to be a fatal fault one day"). Responses were provided on a scale ranging from 1 (*very strongly disagree*) to 9 (*very strongly agree*).

Social dominance orientation. Participants completed the Social Dominance Orientation Scale-7 (Ho et al., 2015), which consists of two eight-item subscales, namely group-based dominance ("In getting what your group wants, it is sometimes necessary to use force against other groups") and opposition to equality ("We should strive to make incomes more equal," reverse coded). Responses were provided on a scale from 1 (*very strongly disagree*) to9 (*very strongly agree*).

General system justification. Participants completed the eight-item general system justification scale (A. Kay & Jost, 2003), which contains items such as these: "In general, the American political system operates as it should," and "American society needs to be radically restructured" (reverse-scored). Responses were provided on scales ranging from 1 (*Strongly Disagree*) to 9 (*Strongly Agree*), with a higher overall score indicating stronger system justification in gen-

eral.

Economic system justification. Participants also completed the 17-item economic system justification scale (Jost & Thompson, 2000), which includes items such as: "Laws of nature are responsible for differences in wealth in society," and "There are many reasons to think that the economic system is unfair" (reverse-scored). Responses were provided on scales ranging from 1 (*Strongly Disagree*) to 9 (*Strongly Agree*), with a higher overall score indicating stronger justification of the economic.

Gender-specific system justification. Participants completed the 8-item gender-specific system justification scale (Jost & Hunyady, 2005), which includes items such as: "In general, relations between men and women are fair." Responses were also provided on scales ranging from 1 (*Strongly Disagree*) to 9 (*Strongly Agree*), with a higher overall score indicating stronger justification of the gender-relations.

Political sophistication. Sophistication or knowledge about political issues was measured with the following items: (1) "Who is the current Speaker of the House?" Correct answer: Paul Ryan. (2) "Who is the current Senate Leader?" A: Mitch McConnell. (3) "How many electoral votes are needed to win the presidency?" A: 270. (4) "What fraction of votes is needed in Congress to override a Presidential veto?" A: 2/3. (5) "What state just became the second to have a larger Hispanic population than White population?" A: California. (6) "The Constitution requires an actual enumeration of the population every ...?" A: 10 years. (7) "Conservatives would tend to support all of the following EXCEPT ... ?" A: Affirmative action. (8–10) "Please select the current jobs of the following office holders in the answer boxes below. (8) Secretary of the Treasury?" A: Jack Lew. (9) "Secretary of Defense?" A: Ash Carter. (10) "Attorney General?" A: Loretta Lynch. For each respondent we summed the number of correct answers (integers ranging from 0 to 10). The sample mean was 5.96 (SD = 2.67). Respondents who scored above the median were classified as "high" in political sophistication (n = 688, group mean = 8.47, SD = 1.59), and those who scored at or below the median were classified as "low" in political sophistication (n = 812, group mean = 3.85, SD = 1.59).

2.2.2 Sample 2 (SSI Convenience Replication Sample; N= *2,119)*

Through SSI we also administered the same survey to a large convenience sample of 2,119 American adults (21.5% women), who completed study materials from August 20 to September 13, 2016. (Information about sampling and exclusion criteria is included in the Supplementary Materials). Age was distributed as follows: 18–24 (9.1%), 25–34 (13.8%), 35–44 (11.4%), 45–54 (2.7%), 55–65(3.6%), 65 and older (59.3%). The ethnic breakdown was: White/European American (85.9%), Black/African American (5.1%), Latino (4.1%), and "Other" (5.0%). In terms of religion, 70.7% identified as Christian, 15.7% as religiously affiliated but not Christian, and 13.7% as Atheist/Agnostic. With respect to educational status, 16.2% chose "high school or lower," 40.4% reported "some college" and 43.4% had attained a "Bachelor" or "Graduate" degree. The median income category was $50,000–$74,999. All variables were measured in the same way as in Sample 1. The sample mean for political sophistication was 6.56 (*SD* = 2.58). Once again, respondents who scored above the median were considered "high" in political sophistication (*n* = 1,154, group mean = 8.89, *SD* = .71), and those who scored at or below the median were considered "low" in political sophistication

(n = 965, group mean = 4.61, SD = 1.84).

2.2.3 Sample 3 (YouGov U.S. Sample; N = *3,500)*

We hired YouGov (a well-known international polling firm) to conduct a three- wave panel survey in the year prior to the U.S. presidential election. The first wave lasted from April 9 to May 1, 2016 (3,500 respondents), the second wave from September 9 to October 9 (2,635 respondents), and the third from October 25 to November 7 (2,628 respondents). Respondents were matched to a sampling frame based on gender, age, race, education, party identification, ideology, and political interest. The frame was constructed through stratified sampling from the full 2010 American Community Survey) sample with selection within strata by weighted sampling with replacements (using the person weights on the public use file). The total sample was 44% male, 75% White/Caucasian, the median age was 52 years old, and the median level of education (24%) reported was "some college."

Ideology. We measured (symbolic) ideological self-placement with a single item: "As shown on the scales below, some people in the United States tend to identify more with the political left, while others tend to identify more with the political right. And of course, some other people have opinions somewhere in between. Please place yourself on this scale." Responses were provided on a scale ranging from 0 (*Far Left*) to 100 (*Far Right*).

We also analyzed responses to two single-item measures of operational ideology.[4] With respect to the economic dimension, respondents were randomly assigned to answer one of the following two questions: "A progressive tax plan is one in which those with higher incomes pay a higher share in taxes than those with lower incomes. On the scales below, the midpoint represents the current U.S. tax system, the far left represents a less progressive system, and the far right represents a more progressive system than we have now"; or "Some people think the rich should pay much higher tax rates than they do now. Others think everyone should pay the exact same tax rate, and so we should lower the tax rates currently paid by wealthy Americans. And of course others have opinions in between, such as keeping tax rates the same as they are now." Responses were provided on a scale ranging from 0 (*Less Progressive Tax System*) to 100 (*More Progressive Tax System*) for the first item and ranging from 0 (*Raise tax rates on wealthy*) to 100 (*Lower tax rates on wealthy)* for the second. With respect to the social dimension, they read: "As shown on the scales below, some people think that the United States should deport all illegal immigrants and others think we should instead provide them with a path to citizenship. And of course others have opinions in between, such as allowing illegal immigrants to obtain guest worker status." Responses were provided on a scale ranging from 0 (*Deport all illegal immigrants*) to 100 (*Eventual path to citizenship*). Responses to these items were scored so that higher numbers indicated stronger endorsement of conservative

[4]We focused on two questions (about taxation and immigration) that were asked consistently across multiple waves using similar wordings and response scales in the United States (Sample 3) and the United Kingdom (Sample 4) and that were deemed politically relevant in both contexts. Other policy questions were administered and might have served as reasonable proxies for social or economic ideology, but they introduced other ambiguities. For instance, there was at least one question about abortion, but—in addition to bringing in issues of religion and gender identity—it was less clear to us that the issue had the same political resonance in the United States and the United Kingdom at the time of the survey.

viewpoints, and they were averaged across the three waves. We measured political sophistication with three items: (1) "Would you say that compared to 2008, average workers' earnings have increased, decreased, or stayed about the same?" *Correct answer: Increased*. (2) "As you probably know, Barack Obama was first elected president in November of 2008, and took office in January of 2009. Would you say that compared to 2008, the number of Americans without health insurance has increased, decreased, or stayed about the same?" *A: Decreased*. (3) "Would you say that compared to 2008, the number of immigrants illegally crossing the border from Mexico each year has increased, decreased, or stayed about the same?" *A: Decreased.*[5]. Political sophistication was measured in all three waves. Because there were missing responses, we calculated the proportion of correct answers out of all those attempted (across waves) and classified respondents as "high" in political sophistication if they scored above the median in terms of accuracy (n = 1,654, group mean = 0.46, SD = 0.16) and as "low" if they scored at or below the median (n = 1,845, group mean = 0.09, SD = 0.09).

A total of 3,353 participants completed the primary measures of interest, namely the ideological self-placement question and Kay and Jost's (2003) general system justification scale. In addition, respondents completed one of two measures of authoritarianism in split-sample fashion. Approximately half of the sample answered four right-wing authoritarianism items: "What our country really needs, instead of more 'civil rights,' is a good dose of law and order"; "Some of the worst people in our country nowadays are those who do not respect our flag, our leaders, and the normal way things are supposed to be done"; "We should treat protesters and radicals with open arms and open minds, since new ideas are the lifeblood of progressive change"; and "The situation in our country is getting so serious, the strongest methods would be justified if they eliminated the troublemakers and got us back on our true path." Responses were provided on a scale ranging from 1 (*Strongly Agree*) to 5 (*Strongly Disagree*). The other half of the sample completed Stenner's (2005) measure of childrearing values, which read as follows: "Talking about the qualities that children should have, I am going to mention several characteristics and I would like you to tell me which is more important for a child: Independence or Respect for elders; Self-reliance or Obedience; Considerate or Well-behaved; Curiosity or Good manners." Values of 1 (low authoritarianism) were assigned to the first response in each pair, and values of 2 (high authoritarianism) were assigned to the second response in each pair; if respondents chose "both" we assigned an intermediate value of 1.5.

2.2.4 Sample 4 (YouGov UK Sample; N = *3848)*

We also conducted a four-wave panel survey administered by YouGov in the United Kingdom (England, Scotland, Wales, and Northern Ireland). The four waves were collected between

[5]A fourth factual question was also administered, but—upon consulting various economic reports written by experts—we were unable to determine an unambiguously correct answer. The question was: "Would you say that compared to 2008, income inequality has increased, decreased, or stayed about the same?" It would appear that, at the time of writing, there is no consensually accepted general answer to the question of whether income inequality in the United States increased, decreased, or stayed the same between 2008 and 2016. According to one website (https://www.statista.com/statistics/219643/gini-coefficient-for-us-individuals-families-and-households/) the Gini coefficient rose slightly from .47 in 2008 to .48 in 2016, whereas another suggests that income inequality may have started to decline during President Obama's tenure (https://fivethirtyeight.com/ features/the-income-gap-began-to-narrow-under-obama/)

July 9, 2014 and June 17, 2015. This convenience sample was drawn from YouGov's panel on social media users (YouGov Social), which at the time of collection consisted of 14,000 respondents. Overall, there were 1,308 respondents retained for all four waves out of 3,846 who answered at least one wave of the survey. The sample was 55% male, 52% reported 15 years or more of education, the median age was 48 years, and household income was £34.200. Most respondents (84%) were from England, 5% were from Scotland, 9% were from Wales, and 1% were from Northern Ireland. A total of 1,853 participants completed the ideological self-placement question and a version of Kay and Jost's (2003b) eight-item general system justification scale that was modified slightly to fit the British context.

Ideology. As in the U.S. sample, we measured (symbolic) ideological self- placement with a single item: "As shown on the scale below, some people in Britain tend to identify more with the political left, while others tend to identify more with the political right. And of course, some other people have opinions somewhere in between. Please place yourself on this scale." Responses were provided on a scale ranging from 0 (*Far Left*) to 100 (*Far Right*). We also administered single item measures of operational ideology. With respect to the economic dimension, respondents read: "As shown on the scale below, some people think that social spending should be increased even if that means higher taxes. Others feel that taxes should be cut even if that means lower social spending. And of course, some other people have opinions somewhere in between." Responses were provided on a scale ranging from 0 (*Social spending should be increased even if that means higher taxes*) to 100 (*Taxes should be cut even if that means lower social spending*). With respect to the social dimension, they read: "As shown on the scale below, some people think that the number of legal immigrants to Britain should be greatly increased. Others feel that legal immigration to Britain should be greatly reduced. And of course, some other people have opinions somewhere in between." Responses were provided on a scale ranging from 0 (*Legal immigration to Britain should increase a lot*) to 100 (*Legal immigration to Britain should decrease a lot*). Operational ideology was measured in all four waves, so we took the mean of the four scores in both cases.

We measured political sophistication with four items: (1) "Compared to a year ago, do you think unemployment in Great Britain has increased, decreased, or stayed the same?" *Correct answer: Decreased.* (2) "Next we'd like to ask about some other things that have been in the news. The Islamic militant group known as ISIS currently controls territory in which of these countries–Syria, Kuwait, Morocco, or Pakistan?" *A: Syria.* (3) "Over the past 5 years, has the number of immigrants to the United Kingdom from other EU countries been: (Less than 100,000 per year, Between 100,000 and 300,000 per year, Between 300,000 and 500,000 per year, More than 500,000 per year, Don't Know)?" *A: Between 100,000 and 300,000 per year*. (4) "Which of the following parties won the Greek parliamentary elections in February 2015? (Golden Dawn, New Democracy, Syriza, The River, Don't Know)?" *A: Syriza.* The first three questions were surveyed in Waves 2 and 3, and the fourth in Wave 3 only. As in the U.S. case, we calculated the proportion of correct answers across waves and classified respondents as "high" in political sophistication if they scored above the median in terms of accuracy (n = 1,484, group mean = 0.95, SD = 0.08) and as "low" if they scored at or below the median (n = 1,823, group mean = 0.56, SD = 0.19).

2.3 Results and Discussion

Our first hypothesis was that in Western capitalist countries such as the United States and the United Kingdom social and economic dimensions of ideology would be intertwined, even for respondents who were relatively low in terms of political sophistication. We obtained very strong support for this hypothesis with respect to both symbolic and operational measures of ideology, that is, in terms of ideological self-placement and the expression of content-laden opinions. Social and economic dimensions of ideological self-placement were highly intercorrelated in Samples 1 ($r = .72$) and 2 ($r = .74$), and this was true of respondents who were low as well as high in terms of political sophistication (see Table 2.2). For respondents who were low in sophistication social and economic dimensions were correlated at .71 in both samples, and for respondents who were high in sophistication the correlations were .73 in Sample 1 and .76 in Sample 2. In other words, the percentage of shared variance between symbolic measures of social and economic conservatism was roughly 50%.

Table 2.2: Correlations between Social and Economic Dimensions of Ideology as a Function of Political Sophistication in the United States (Samples 1 and 2)

Ideological measures	Political sophistication	Pearson's correlations	
		Sample 1	Sample 2
Symbolic measures			
Ideological self-placement	Low	.71	.71
(social vs. economic)	High	.73	.76
	Total	.72	.74
Operational measures			
Everett (2013)	Low	.54	.60
	High	.70	.77
	Total	.62	.69
Feldman and Johnston (2014)	Low	.33	.31
	High	.50	.53
	Total	.40	.42
Henningham (1996, 1997)	Low	.38	.40
	High	.56	.67
	Total	.47	.54
Inbar et al. (2009)	Low	.39	.43
	High	.69	.72
	Total	.57	.61
Zell and Bernstein (2014)	Low	.42	.44
	High	.62	.71
	Total	.53	.59

Note. For Sample 1, $N = 1{,}500$, and for Sample 2, $N = 2{,}119$. All correlations in this table are statistically significant at $p < .001$.

We also investigated our first hypothesis with respect to operational measures of social and

economic conservatism.[6] For all five of the ideological instruments we administered, social and economic dimensions of ideology were strongly correlated in both samples (with *r*s ranging from .40 to .69). However they were measured, the two dimensions were significantly correlated in both samples for respondents who were low in terms of political sophistication (with *r*s ranging from .31 to .60) as well as high in sophistication (with *r*s ranging from .50 to .77). In other words, the percentage of shared variance between operational measures of social and economic conservatism varied from roughly 10% to 36% for respondents who were low in political sophistication and between 25% and 60% for respondents high in political sophistication. It is perhaps noteworthy that when we administered Feldman and Johnston's (2014) scale, we obtained correlations between social and economic dimensions that were substantially higher ($r = .40$ and .42 in Samples 1 and 2, respectively) than in the ANES data they analyzed. Of the 36 comparisons shown in Table 2.2, every single one was statistically significant at $p < .001$ and of at least moderate magnitude. There was no evidence that social and economic attitudes were unrelated for any group of respondents or for any of the five measures of operational ideology that we administered.

According to Kinder and Kalmoe (2017), ordinary citizens' ideological self-placements are nonideological and essentially meaningless forms of "tribal" identification. If this is the case, then ideological self-placements should be largely uncorrelated with scores on the five measures of operational ideology. But this is not what we found. As shown in Table 2.3, overall ideological self-placement was strongly correlated with scores on all five operational measures of ideology in both samples (with *r*s ranging from .64 to .76); economic ideological self-placement was strongly correlated with scores on all five operational measures of economic ideology (with *r*s ranging from .57 to .70); and social ideological self-placement was strongly correlated with scores on all five operational measures of social ideology (with *r*s ranging from .62 to .75). Furthermore, every measure of ideological self-placement was significantly correlated with every measure of operational ideology at $p < .001$.

In Samples 3 (United States) and 4 (United Kingdom), we observed that overall ideological self-placement scores were robustly correlated with single-item operational measures of social conservatism (support for the deportation of illegal immigrants) and economic conservatism (support for a less progressive taxation system), with *r*s ranging from .51 to .71 (see Tables 2.4 and 2.5). Ideological self-placement was significantly correlated with operational measures of social and economic conservatism among respondents who were relatively low in political sophistication (with *r*s ranging from .43 to .68) as well as high (with *r*s ranging from .47 to .72), as shown in Tables 2.6 and 2.7. In other words, the picture that emerges in our research program is hardly one of ideological incoherence, ignorance, or innocence.

[6] Whenever possible, we employed the classifications of "social" and "economic" items used by the original researchers who developed each of the scales; when this was unclear, we classified the items based on their contents in accordance with our understanding of the research literature.

Table 2.3: Correlations Between Symbolic and Operational Dimensions of Social and Economic Ideology in the United States (Samples 1 and 2)

	Measures of ideological self-placement (symbolic)						
	Overall		Economic		Social		Ideological measure (operational)
Sample	1	2	1	2	1	2	
Operational ideology	*0.72*	*0.76*	0.70	0.73	0.72	0.75	ZB
	0.72	*0.72*	0.68	0.68	0.71	0.72	IPB
	0.72	*0.73*	0.65	0.67	0.75	0.76	HC
	0.70	*0.70*	0.66	0.67	0.70	0.72	FJ
	0.64	*0.64*	0.61	0.61	0.65	0.62	EV
Operational economic ideology	0.59	0.70	*0.66*	*0.70*	0.54	0.62	ZB
	0.57	0.61	*0.59*	*0.60*	0.51	0.55	IPB
	0.52	0.61	*0.57*	*0.62*	0.48	0.55	HC
	0.60	0.64	*0.63*	*0.65*	0.53	0.57	FJ
	0.51	0.58	*0.58*	*0.61*	0.47	0.49	EV
Operational social ideology	0.67	0.67	0.57	0.59	*0.73*	*0.73*	ZB
	0.68	0.68	0.62	0.62	*0.71*	*0.71*	IPB
	0.68	0.67	0.57	0.58	*0.74*	*0.75*	HC
	0.58	0.53	0.46	0.46	*0.66*	*0.65*	FJ
	0.62	0.60	0.55	0.56	*0.65*	*0.62*	EV

Note. For Sample 1, N = 1,500, and for Sample 2, N = 2,119. All correlations in this table are statistically significant at $p < .001$. Correlations are italicized when symbolic and operational measures of ideology are matched in terms of domain specificity. EV = Everett (2013); FJ = Feldman and Johnston (2014); HC = Henningham (1997); IPB = Inbar et al. (2009); ZB = Zell and Bernstein (2014).

Table 2.4: Means, Standard Deviations, and Correlations Involving Symbolic and Operational Dimensions of Social and Economic Ideology and Other Political and Psychological Variables in the United States (Sample 3)

Variable	*M*	*SD*	1	2	3	4	5
1. Overall ideological self-placement (symbolic)	51.81	25.22					
	(3,490)						
2. Social conservatism (operational)	47.19	33.94	.51***				
	(3,489)		(3,480)				
3. Economic conservatism (operational)	37.75	30.35	.57***	.48***			
	(3,484)		(3,476)	(3,480)			
4. Political sophistication	0.27	0.22	−.32***	−.42***	−.32***		
	(3,499)		(3,489)	(3,488)	(3,483)		
5. General system justification	4.57	1.43	.25***	.05**	.25***	−.02	
	(3,363)		(3,353)	(3,353)	(3,348)	(3,362)	
6. Right-wing authoritarianism	3.12	0.84	.52***	.44***	.38***	−.28***	.20***
	(1,717)		(1,711)	(1,714)	(1,706)	(1,716)	(1,653)
7. Child-rearing values (authoritarianism)	1.54	0.15	.27***	.25***	0.16***	−.13***	.11***
	(1,761)		(1,757)	(1,754)	(1,757)	(1,761)	(1,691)

Note. Political sophistication was treated as a continuous variable in all correlations shown in this table. No respondents completed both the right-wing authoritarianism scale and the measure of child-rearing values. All correlations in this table except two are statistically significant at $p < .001$. Pairwise sample sizes *(ns)* are shown in parentheses below means and correlations. *$p < .05$; **$p < .01$; ***$p < .001$.

Table 2.5: Means, Standard Deviations, and Correlations Involving Symbolic and Operational Dimensions of Social and Economic Ideology and Other Political and Psychological Variables in the United Kingdom (Sample 4)

Variable	*M*	*SD*	1	2	3	4
1. Overall ideological self-placement (symbolic)	44.17	21.65				
	(2,582)					
2. Social conservatism (operational)	61.01	24.62	.58***			
	(3,702)		(2,575)			
3. Economic conservatism (operational)	42.46	26.00	.71***	.52***		
	(3,630)		(2,562)	(3,608)		
4. Political sophistication	0.73	0.25	.16***	−.02	.11***	
	(3,307)		(2,582)	(3,187)	(3,132)	
5. General system justification	4.42	1.43	.37***	.09***	.35***	.22***
	(2,507)		(1,853)	(2,400)	(2,362)	(2,500)

Note. Political sophistication was treated as a continuous variable in all correlations shown in this table. All correlations in this table except one are statistically significant at $p < .001$. Pairwise sample sizes *(ns)* are shown in parentheses below means and correlations. *$p < .05$; **$p < .01$; ***$p < .001$.

We also hypothesized that the endorsement of neoliberal attitudes in particular–including support for laissez-faire capitalism and opposition to social welfare programs– would be positively related (rather than unrelated or negatively related) to authoritarianism, social dominance orientation, and various forms of system justification. We obtained very strong support for these hypotheses in Samples 1 and 2. As shown in Table 2.8, responses to nearly every single item were positively and significantly correlated with right-wing authoritarianism, social dominance orientation, and general, economic, and gender-specific system justification. Out of 230 correlations (10 correlations for each of the 23 items) very few failed to attain statistical significance at $p < .001$. Mean scores on the composite measure of neoliberal attitudes, aggregated across all 23 items, were very strongly correlated with right-wing authoritarianism (*r*s = and .64 in Samples 1 and 2, respectively), social dominance orientation (*r*s = and .53), economic system justification (*r*s = .73 and .76), and gender-specific system justification (*r*s = .57 and .58). The endorsement of neoliberal attitudes was also correlated, albeit much more modestly, with general system justification (*r*s = .25 and .22). Furthermore, these patterns were observed among respondents who were low as well as high in political sophistication, as shown in Table 2.9.

Because it has been suggested that even people who identify themselves as left-of-center have embraced major tenets of neoliberal ideology (e.g., Manstead, 2018), we inspected mean scores on all 23 of the neoliberal attitude items as a function of ideological self-placement in the economic domain in the context of our nationally representative sample in the United States (Sample 1). Respondents who identified themselves as economically conservative (n = 728) endorsed nearly all of the neoliberal attitudes, exhibiting mean scores above the scale midpoint for 17 of the 23 items. However, respondents who identified themselves as economically moderate (neither liberal nor conservative, n = 256) scored above the scale mid-point for only 7 of the 23 items, and those who identified themselves as economically liberal (n = 516) scored above the scale midpoint for 5 of the 23 items. On average, members of all three groups, including economic liberals (or progressives), favorably evaluated the attitude objects of business, limited government, and fiscal responsibility, and they also agreed that "federal tax cuts have been worth it" and "the welfare system is too easy to abuse." Thus, we obtained some evidence that certain elements of neoliberal ideology have penetrated the political consciousness of economic progressives. At the same time, there are significant differences of opinion in terms of neoliberal attitudes taken as whole. As shown in Figure 2.1, self-identified conservatives endorsed neoliberal attitudes more strongly (group mean = 5.82, SD = 1.30) than self-identified moderates (group mean = 4.50, SD = 0.81) and self-identified liberals (group mean = 3.76, SD = 1.05), who scored well below the scale midpoint (all group comparisons were statistically significant at $p < .001$).

Table 2.6: Correlations Involving Symbolic and Operational Dimensions of Social and Economic Ideology and Other Political and Psychological Variables as a Function of Political Sophistication in the United States (Sample 3)

Variable	1	2	3	4	5	6
1. Overall ideological self-placement (symbolic)	–	.47***	.56***	.27***	.59***	.27***
		(1,646)	(1,644)	(1,588)	(795)	(855)
2. Social conservatism (operational)	.43***	–	.47***	.05	.42***	.27***
	(1,833)		(1,646)	(1,588)	(795)	(855)
3. Economic conservatism (operational)	.51***	.37***	–	.25***	.41***	.17***
	(1,831)	(1,833)		(1,586)	(792)	(856)
4. General system justification	.24***	.04	.26***	–	.24***	.15***
	(1,764)	(1,764)	(1,761)		(768)	(824)
5. Right-wing authoritarianism	.38***	.34***	.23***	.16***	–	–
	(915)	(918)	(913)	(884)		
6. Child-rearing values (authoritarianism)	.22***	.18***	.11***	.07*	–	–
	(902)	(899)	(901)	(867)		

Note. Correlations for respondents classified as "high" in political sophistication on the basis of a median split are above the diagonal (upper triangle), and correlations for respondents classified as "low" in political sophistication are below the diagonal (bottom triangle). No respondents completed both the right-wing authoritarianism scale and the measure of child-rearing values. All correlations in this table except three are statistically significant at $p < .001$. Pairwise sample sizes *(ns)* are shown in parentheses below correlations. *$p < .05$; **$p < .01$; ***$p < .001$.

Table 2.7: Correlations Involving Symbolic and Operational Dimensions of Social and Economic Ideology and Other Political and Psychological Variables as a Function of Political Sophistication in the United Kingdom (Sample 4)

Variable	1	2	3	4
1. Overall ideological self-placement (symbolic)	–	.57***	.72***	.38***
		(1,191)	(1,187)	(950)
2. Social conservatism (operational)	.59***	–	.49***	.12***
	(1,384)		(1,418)	(1,182)
3. Economic conservatism (operational)	.68***	.56***	–	.34***
	(1,375)	(1,703)		(1,170)
4. General system justification	.31***	−.06*	.32***	–
	(903)	(1,213)	(1,188)	

Note. Correlations for respondents classified as "high" in political sophistication on the basis of a median split are above the diagonal (upper triangle), and correlations for respondents classified as "low" in political sophistication are below the diagonal (bottom triangle). No respondents completed both the right-wing authoritarianism scale and the measure of child-rearing values. All correlations in this table except one are statistically significant at $p < .001$. Pairwise sample sizes *(ns)* are shown in parentheses below correlations. *$p < .05$; **$p < .01$; ***$p < .001$.

We also hypothesized that support for laissez-faire capitalism would be positively related to authoritarianism, social dominance, and system justification. As shown in Table 2.4, economic conservatism (measured in terms of support for a less progressive tax system) was positively and significantly correlated with right-wing authoritarianism ($r = .38$) as well as authoritarianism measured in terms of childrearing values ($r = .16$) in Sample 3, both $ps < .001$. We obtained no evidence of a "reversal" effect of the kind reported by Johnston et al. (2017). Even among respondents who were low in political sophistication, economic conservatism was positively and significantly associated with both measures of authoritarianism ($r = .23$ for right-wing authoritarianism and $r = .11$ for the childrearing measure), although it is true that these associations were stronger among respondents who were high in political sophistication ($rs = .41$ and .17, respectively; see Table 2.6). Economic conservatism was also positively and significantly associated with scores on general system justification in both the United States ($r = .25$) and the United Kingdom ($r = .35$), as shown in Tables 4 and 5. These patterns, too, were observed for respondents who were low as well as high in political sophistication, as shown in Tables 2.6 and 2.7.

Table 2.8: Items Used to Measure Neoliberal Attitudes and Their Correlations with RWA, SDO, and System Justification in the United States (Samples 1 and 2)

	RWA		SDO		GSJ		ESJ		Gender SJ	
Sample	1	2	1	2	1	2	1	2	1	2
Business	.31	.36	.21	.28	.27	.28	.37	.44	.35	.41
Limited government	.35	.41	.25	.28	.06	.08	.35	.43	.28	.36
Welfare benefits (R)	.35	.43	.40	.35	.11	.09	.48	.49	.35	.36
Fiscal responsibility	.26	.28	.09	.14	.16	.23	.26	.34	.26	.32
Government welfare (R)	.42	.49	.42	.40	.11	.10	.50	.53	.35	.36
Unemployment benefits (R)	.21	.33	.37	.38	.08	.07	.38	.38	.26	.26
Worker's unions (R)	.36	.43	.35	.38	.12	.07	.45	.49	.31	.37
Wealth tax (originally socialism) (R)	.29	.39	.39	.34	.20	.15	.53	.52	.41	.40
Minimum wage (originally the dole) (R)	.29	.38	.34	.38	.03	.05	.40	.45	.24	.32
The welfare system is too easy to abuse and does not give people enough incentive to find work.	.48	.52	.40	.35	.17	.18	.49	.54	.40	.40
Overall, labor unions tend to hurt the United States economy. (R)	.40	.42	.40	.37	.15	.08	.45	.45	.34	.34
Federal tax cuts have been worth it, because they have helped strengthen the economy by allowing Americans to keep more of their own money.	.23	.29	.17	.18	.20	.23	.30	.33	.28	.32
Government spending (R)	.41	.49	.43	.42	.14	.14	.49	.55	.39	.40
Medical insurance (R)	.39	.46	.41	.38	.21	.21	.54	.56	.41	.42

Table 2.8: Continued

	RWA		SDO		GSJ		ESJ		Gender SJ	
Sample	1	2	1	2	1	2	1	2	1	2
Guaranteed jobs (R)	.38	.42	.42	.39	.22	.22	.55	.60	.46	.43
Assistance to poor (R)	.40	.48	.42	.42	.16	.18	.54	.59	.40	.44
There need to be stricter laws and regulations to protect the environment. (R)	.36	.45	.40	.37	.14	.15	.50	.51	.40	.43
The government should help more needy people even if it means going deeper into debt. (R)	.35	.45	.40	.37	.16	.14	.54	.58	.42	.42
Business corporations make too much profit. (R)	.18	.23	.29	.28	.30	.28	.49	.50	.43	.41
The government needs to do more to make health care affordable and accessible. (R)	.25	.40	.40	.38	.17	.14	.48	.50	.37	.38
Government regulation of business usually does more harm than good.	.42	.50	.34	.37	.07	.03	.43	.46	.32	.33
Labor unions are necessary to protect the working person. (R)	.33	.38	.31	.30	.15	.11	.43	.46	.31	.34
Poor people have become too dependent on government assistance programs.	.52	.60	.46	.47	.18	.21	.56	.62	.44	.49
Overall score (mean responses, aggregating all 23 items)	**.55**	**.64**	**.56**	**.53**	**.25**	**.22**	**.73**	**.76**	**.57**	**.58**

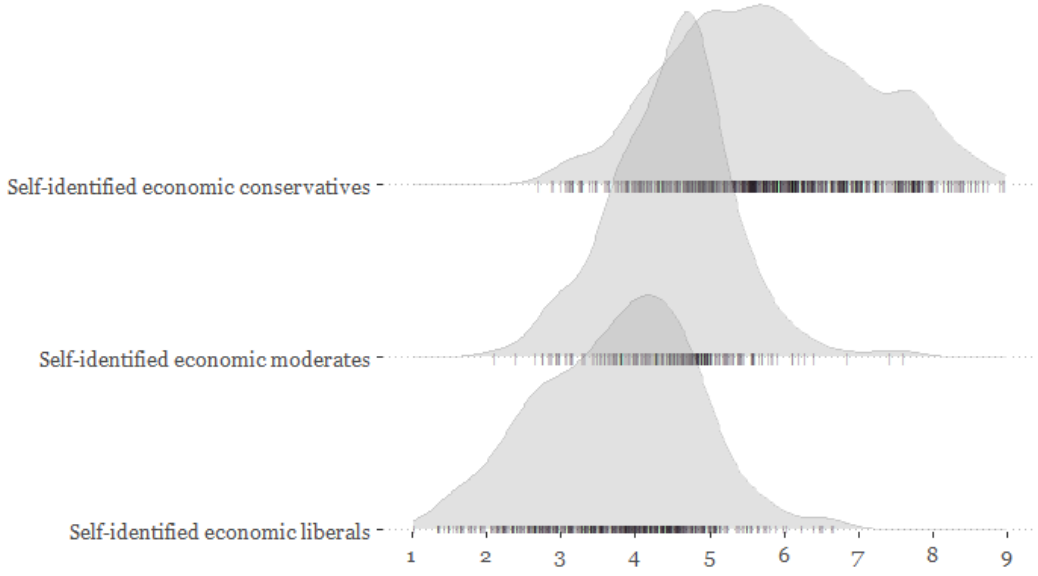
Note. For Sample 1, N = 1,500; for Sample 2, N = 2,119. All correlations in this table above r = .08 are statistically significant at $p < .001$. (R) = Responses to these items were reverse-scored, RWA = Right-wing authoritarianism, SDO = Social dominance orientation, GSJ = General system justification, ESJ = Economic system justification, Gender SJ = Gender-specific system justification.

Table 2.9: Correlations between Neoliberal Attitudes (composite measure) and RWA, SDO, and System Justification as a Function of Political Sophistication in the United States (Samples 1 and 2)

	RWA		SDO		GSJ		ESJ		Gender SJ	
Sample	1	2	1	2	1	2	1	2	1	2
Low sophistication	0.47	0.52	0.53	0.47	0.19	0.23	0.63	0.69	0.44	0.47
High sophistication	0.64	0.74	0.63	0.61	0.28	0.18	0.79	0.79	0.65	0.65
Total	0.55	0.64	0.56	0.53	0.25	0.22	0.73	0.76	0.57	0.58

Note. For Sample 1, Total $N = 1{,}500$ ($n = 812$ for low sophistication and $n = 688$ for high sophistication). For Sample 2, Total $N = 2{,}119$ ($n = 1{,}154$ for low sophistication and $n = 965$ for high sophistication). All correlations in the table are statistically significant at $p < .001$. RWA = Right-wing authoritarianism, SDO = Social dominance orientation, GSJ = General system justification, ESJ = Economic system justification, Gender SJ = Gender-specific system justification.

Figure 2.1: Distribution of neoliberal attitudes (composite scores) as a function of ideological self-placement on the economic dimension in the United States (Sample 1).



Note. These results are based on a nationally representative sample (Total N = 1,500). For self-identified economic conservatives, n = 728; for self-identified economic moderates (neither liberal nor conservative), n = 256; and for self-identified economic liberals, n = 516.

2.4 General Discussion

In a set of high quality, nationally representative surveys administering a much greater number and range of attitudinal instruments than in previous research, we demonstrated that social and economic dimensions of ideology (whether measured in symbolic or operational terms or both) were indeed highly correlated in the United States—even among respondents who were relatively low in terms of political sophistication. We also found that social and economic attitudes were highly correlated with overall ideological self-placement on liberal-conservative and left-right dimensions, suggesting that ideological identifications are much more than just arbitrary "tribal" symbols. Furthermore, we observed that the endorsement of pro-capitalist, neoliberal economic attitudes was associated with authoritarianism (whether measured in terms of childrearing values or scales of right-wing authoritarianism) as well as social dominance orientation and general, economic, and gender-specific forms of system justification. The upshot of these results is that, in our judgment, it would be gravely misleading to suggest that: ordinary citizens hold political attitudes that are trivial or meaningless (Kinder & Kalmoe, 2017); social and economic attitudes are unrelated to one another (Feldman & Johnston, 2014); or social and economic dimensions of ideology are linked to qualitatively different psychological concerns (Johnston et al., 2017; Malka & Soto, 2015; Stenner & Haidt, 2018).

The results of our research program, in which we administered complete versions of several different, previously validated attitude scales—rather than analyzing a handful or two of ANES, GSS, or WVS items, as in previous research—failed to substantiate Kinder and Kalmoe's (2017, p. 3) glib characterization of ordinary citizens:

> Parochial in interest, modest in intellect, and burdened by the demands and obligations of everyday life, most citizens lack the wherewithal and motivation to grasp political matters in a deep way. People are busy with more pressing things; politics is complicated and far away. Ideology is not for them.

On the contrary, we observed a remarkably high degree of ideological coherence when it comes to how social and economic attitudes of ordinary citizens are intertwined. In this respect, we obtained quite different results than in research programs by Feldman and Johnston (2014), Malka et al. (2014), and Johnston et al. (2017). Social and economic dimensions of ideology, whether measured symbolically or operationally, were in fact highly intercorrelated—even among respondents who were relatively low in political sophistication. Thus, we obtained strong support for Stuart Hall's (2017) observation that "the market/free enterprise/private property discourse persists cheek by jowl with older conservative attachments to nation, racial homogeneity, Empire, tradition" (p. 326). Of course, this does not mean that citizens' beliefs and opinions are correct or well-informed, only that they conform readily to an overarching left-right dimension that captures individual differences in advocacy versus resistance to social change and acceptance versus rejection of inequality, as underscored by the theory of political ideology as motivated social cognition (e.g., Jost, 2006; Jost et al., 2003b; Jost, Nam, et al., 2014; Jost, Nosek, et al., 2008).

We readily concede that there are limitations associated with any analysis of ideology that is based exclusively on the kind of explicit, self-report indicators that are used in research on public opinion, including the research we have presented here. Although we took several steps to insure that the data we analyzed were of unusually high quality, we cannot rule out the possibility that respondents were constructing responses to our prompts in an "online" manner rather than revealing pre-existing ideological commitments stored in memory (e.g., R. Fazio, 2007). It is also conceivable that some of the contents of "social" questions semantically primed or otherwise affected responses to "economic" questions, potentially inflating correlations between social and economic attitudes for artificial rather than genuine reasons. Presumably, the fact that we randomized the order in which scales were administered across respondents means that both of these potential biases were attenuated. But even if it were discovered that social issues primed economic issues (and vice versa), we would interpret such a discovery as a possible vindication of our main theoretical contention, which is that social and economic processes are in fact intertwined—both in contemporary capitalist society and in the minds of its citizens.

Taken in conjunction, our findings reveal that—in terms of general, symbolic identifications as well as specific, operational attitudes—ordinary citizens in the United States (and the United Kingdom, although our measures were much more limited in the latter context) exhibited ideological preferences in which social and economic concerns were closely intertwined. Perhaps this is because—in neoliberal societies—economic policies have enormous implications for the treatment of people belonging to various social categories based on race, ethnicity, religion, age, nationality, immigration status, gender, and sexual orientation. In terms of the

big picture, it seems to us that these findings strongly contradict common assumptions that (1) citizens hold political attitudes that are meaningless, unstructured, and nonideological (Kinder & Kalmoe, 2017), and (2) social and economic attitudes are structurally and functionally independent of and largely orthogonal to one another (Feldman & Stenner, 1997; Johnston et al., 2017; Malka & Soto, 2015; Stenner & Haidt, 2018).

Our findings also refute the claims that "Laissez faire 'conservatives' are not conservative in any real sense" and that "Psychologically speaking, they have nothing in common with authoritarians" (Stenner & Haidt, 2018, p. 181). In nationally representative samples from the United States, we observed that economic conservatism, whether measured in symbolic or operational terms, was in fact consistently and positively correlated with authoritarianism. Generally speaking, our findings are far more reminiscent of empirical observations made in previous decades about the relatively close connections between social and economic dimensions of ideology in general and support for laissez-faire capitalism and racial prejudice, intolerance, and ethnocentrism in particular (Adorno et al., 1950; Napier & Jost, 2008; Pratto et al., 1994; Sidanius & Pratto, 1993) than they are of more recent claims about structural and functional independence (Federico & Malka, 2018; Feldman & Johnston, 2014; Johnston et al., 2017; Stenner & Haidt, 2018).

We believe that it is impossible, from a scientific perspective, to understand and appreciate neoliberalism as an ideology—or, indeed, the realities of living under the neoliberal world order—without seeing clearly the connections between social and economic variables. We have argued that individuals differ considerably from one another as a function of left-right or liberal-conservative orientations when it comes to the tolerance of social *and* economic forms of inequality. At the same time, we also note the extent to which many citizens in the United States and the United Kingdom (whether "liberal" or "conservative") are willing to tolerate relatively high levels of economic inequality and let the system "off the hook," so to speak, when it comes to providing for social welfare, collective bargaining rights, and public investment in societal infrastructure. Far from indicating that ideology is meaningless in people's lives, these observations about the extent to which neoliberal attitudes have permeated public consciousness underscore the power of a system-justifying ideology to defend and bolster the societal status quo.

2.5 Concluding Remarks

When neoliberal political actors withdraw support for health care or unemployment benefits or public education, could it be that they are not merely expressing the value of individual freedom or a principled commitment to "small government"? We believe, especially in light of theoretical critiques of the role of ideology in neoliberal societies, it is unrealistic to assume that attitudinal support for tax cuts for the wealthy and austerity programs for the poor is unrelated to the social dimension of ideology. Given that neoliberal economic policies adversely affect some people more than others—including racial and ethnic minorities, poor people, and many others who are marginalized in society—it seems much more likely to us that social and economic attitudes are intertwined at least in part because both are linked to individual differences in support versus opposition to social and economic forms of inequality.

To be clear, our conception of ideology—both when it comes to individual and group processes of social, cognitive, and motivational organization and its role in capitalist societies—should not be confused with other conceptions that are popular among political scientists, such as those that emphasize political knowledge, sophistication, accuracy, and logic. Rather, we join Larrain (1991, p. 26) in conjecturing that there is something important and valuable about a theoretical analysis that makes some use of the critical, pejorative conception in which ideology is understood, at least in part, as an "attempt to mask, explain away or justify the greater unfreedom and inequality" that continues to unfold in contemporary neoliberal societies. It is indeed possible that, as Monbiot (2016) argued, neoliberalism is so pervasive "that we seldom even recognise it as an ideology," although we may unwittingly "internalise and reproduce its creeds" about, for instance, the wisdom of tax cuts for the wealthy, corporate hegemony, and the privatization of public institutions, and—more generally—the inherent superiority of market forces over governmental and other not-for-profit forms of collective organization and planning.

3

"Making America Great Again": System Justification in the U.S. Presidential Election of 2016

This work was done in collaboration with John T. Jost and Tobias Rothmund. This chapter is based on: Azevedo, Jost and Rothmund (2017). "Making America great again": System justification in the US presidential election of 2016. *Translational Issues in Psychological Science, 3*(3), 231-240.

Abstract

The U.S. presidential election of Donald Trump in 2016 was interpreted by many as a repudiation of the social and economic status quo. Others suggested that support for Trump reflected opposition to social change, as exemplified by the nostalgic slogan "Make America Great Again." We consider the possibility that many American voters were indeed frustrated by the consequences of global competition under capitalism but were unwilling or unable to criticize the capitalist system and the existing social order. Consistent with this notion, we observed—in a nationally representative sample of 1,500 American respondents who were surveyed shortly before the election—that economic and gender-specific system justification were positively associated with support for Trump, but after adjusting for these variables general system justification was negatively associated with support for Trump (and positively associated with support for Hillary Clinton). Trump supporters clearly rejected liberal governance under President Obama, which they may have perceived as threatening to the traditional social order, but they strongly justified economic and gender-based disparities in American society.

3.1 Introduction

"Let's make America great again."
—Campaign slogan, Ronald Reagan for President, 1980

The surprising election of Donald Trump as President of the United States of America in 2016 was interpreted by many as a revolt against the status quo. Throughout the campaign, Trump was widely perceived as an outsider, having never held any political office, attacking "business as usual" in Washington, and railing against the "failed" legacies of the Obama, Bush, and Clinton administrations with promises to "drain the swamp." Trump's most enthusiastic supporters seemed to be Republicans who were furious with the government (e.g., Bump, 2016; Guo, 2016).

The Democratic candidate, Hillary Clinton, meanwhile, was derided as the "establishment candidate." Trump's running mate, Mike Pence, for instance, referred to her as "Secretary of the Status Quo." Thus, on the morning after the election, the *Washington Post* concluded: "Donald Trump was elected the nation's 45th president in the stunning culmination of a campaign that defied expectations and conventions at every turn and galvanized legions of aggrieved Americans in a loud repudiation of the status quo" (Tumulty et al., 2016).

Pundits lined up to support this general interpretation. According to an opinion editorial in the *New York Times*, "Mr. Trump personified the vote against the status quo, one still not working out for [the White working class]," and that is why "many Trump supporters held a progressive outlook" (Kuhn, 2016). Likewise, Packer (2016) wrote,

> The great truth was that large numbers of Republican voters, especially less educated ones, weren't constitutional originalists, libertarian free-traders, members of the Federalist Society, or devout readers of the *Wall Street Journal* editorial page. They actually wanted government to do more things that benefitted *them* (as opposed to benefitting people they saw as undeserving) . . . The Republican Party hasn't been truly conservative for decades. Its most energized elements are not trying to restore stability or preserve the status quo. Rather, they are driven by a sense of violent opposition: against changes in color and culture that appear to be sweeping away the country they once knew; against globalization, which is as revolutionary and threatening as the political programs of the Jacobins and the anarchists once were.

No less an intellectual authority than Cornel West declared that Trump's election signaled the "end of neoliberalism," as practiced by Obama, Bush, and Clinton——all of whom ignored "Wall Street crimes," rejected home-owner bailouts, and presided over increasing economic inequality and "war crimes" abroad. According to West, it was a "lethal fusion of economic insecurity and cultural scapegoating" that "brought neoliberalism to its knees"——not in line with progressive populism, as Kuhn (2016) and Packer (2016) implied, but with a staunchly reactionary "neofascist bang."

Not quite everyone was convinced that the election of 2016 was a "change" election, however. Chapman (2016) argued that it "would be more accurate to say the outcome stemmed from

too much change"—and that the mood of the populace signified resistance to an "endless transformation [that] extends to the realms of culture, religion and family life" and that has provoked tremendous anxiety. Thus, Trump supporters were "voting for something old. 'Make America Great Again' is a cry of nostalgia." Indeed, Trump's favorite slogan was borrowed from the successful presidential campaign of Ronald Reagan, the revered conservative steward of American business and "family values" in the 1980s.

There is also something strange about the suggestion that working-class Whites' dissatisfaction with capitalism—and the "neoliberal global order"—pushed them into the arms of Donald Trump. After all, Trump has long been one of the nation's best-known *capitalists*-—-a billionaire real estate mogul who inherited much of his wealth and became especially famous as a star of "reality television." As Garrison Keillor remarked, "The disaffected white blue-collar workers elected a Fifth Avenue tycoon to rescue them from the elitists." Americans could have elected Bernie Sanders, who (as a democratic socialist) would have posed a genuine danger to the economic status quo; instead they chose a famous businessman, a country club owner, a successful maven of the financial elite.

So which is it? Was Trump's election fueled by an utter repudiation of the status quo, and a popular thirst for genuine change in America? Or was it a reaction against too many changes wrought by the forces of globalization and a desperate attempt to restore much-needed stability and order to American society? Similar questions were raised a few years earlier about the Tea Party, a right-wing movement that promised to "restore America's founding principles of fiscal responsibility, constitutionally limited government, and free markets" (www.teapartypatriots.org/ourvision). On a certain level, the Tea Party posed a challenge to the status quo, especially to the presidency of Barack Obama. On another level, however, the Tea Party represented an effort to defend "the American way" against threats directed at the prevailing social order that were perceived as coming from liberal governance.

3.2 General, Economic, and Gender-Specific System Justification

A study of attitudes toward the Tea Party was conducted by Hennes et al. (2012) under the auspices of system justification theory, which holds that people are motivated (often at a nonconscious level of awareness) to legitimize aspects of the societal status quo (Jost, Banaji, et al., 2004). Because the social systems on which human beings depend provide a sense of safety, security, familiarity, predictability, and solidarity, it is psychologically painful to regard them as irredeemably awful or unjust. To maintain some semblance of psychological equanimity, then, most people prefer to defend and justify the status quo than to tear it down literally or metaphorically (Jost & Hunyady, 2003, 2005; Jost, Ledgerwood, et al., 2008). Thus, Hennes et al. (2012) observed that support for the Tea Party was associated not with criticism of the American system but with a spirited ideological defense of it. Importantly, supporters (vs. detractors) of the Tea Party scored significantly higher on general (or diffuse, societal) system justification, endorsing statements such as these: "In general, the American system operates as it should," and "Most policies serve the greater good." They also scored higher on economic system justification, which is measured with items such as these: "Economic positions are legitimate reflections of people's achievements," and "Most people who

don't get ahead in our society should not blame the system; they have only themselves to blame."

From a system justification perspective, it can be difficult—-for psychological reasons—-for people to denounce the social systems and institutions on which their livelihoods depend, even if they are relatively disadvantaged by those very institutions, such as capitalism (Jost & Hunyady, 2003, 2005). For example, it may be the case that the economic interests of the working class would be best served by electing a democratic socialist like Bernie Sanders, and yet members of this group may find it psychologically aversive to support his policies. If this analysis is valid, it is easy to see how American workers could be enraged by the *results* or *consequences* of global competition under capitalism (and the "neoliberal world order") without actually criticizing or rejecting the capitalist system at an ideological level. That is, defensive motivational processes may inhibit people from diagnosing the economic causes of their dissatisfaction and lead them to direct their anger elsewhere, often at convenient scapegoats, such as immigrants, racial and ethnic minorities, liberals, feminists, atheists, activists, and so on (see also Adorno et al., 1950; Altemeyer, 2006; Lundskow, 2012). It may be counterintuitive, but it is consistent with a system justification perspective that people would suffer under the status quo and yet behave in such a way as to maintain important elements of it (e.g., Toorn et al., 2015).

In thinking about the dynamics of the presidential election of 2016, it is important to bear in mind that there is a multiplicity of "systems" that people are capable of criticizing or defending. In the research literature on system justification, a number of different scales have been developed to measure ideological support for American society in general, which includes the government (A. Kay & Jost, 2003), as well as the economic system (Jost & Thompson, 2000) and the system of gender relations between men and women, including the division of labor within the family (Jost & Kay, 2005). Although scores on these various scales are usually positively correlated with one another—-and all tend to be positively correlated with political conservatism (Cichocka & Jost, 2014; Jost, Nosek, et al., 2008), it is possible for people to be enthusiastic supporters of some systems (or aspects of the societal status quo) but not others.

In the case of Donald Trump's supporters, they appeared to be strong critics of the government, especially under President Obama, but it seems unlikely that they were especially critical of the capitalist system or of traditional gender roles in society. On the contrary, Trump represented for many the pinnacle of economic success under capitalism, and the attitudes he expressed about gender issues during the campaign would be characterized as fairly traditional and socially conservative, if not downright sexist (see also Wayne et al., 2016). It may be most reasonable, then, to posit that Trump supporters were system-challenging in a few respects but system- justifying in several others.

3.3 A Pre-Election Survey of American Public Opinion

In the months leading up to the 2016 presidential election, we hired a professional survey firm (SSI; www.surveysampling.com) to recruit a nationally representative sample of 1,500 Americans and to administer a variety of online questionnaires designed to measure social

and political attitudes, including general (A. Kay & Jost, 2003), economic (Jost & Thompson, 2000), and gender-specific system justification scales (Jost & Kay, 2005).[1] The demographic characteristics of the sample, which closely mirrored the population at large, are listed in Table 3.1. We also asked respondents for their evaluations and preferences with respect to the major presidential candidates, including Republicans Donald Trump, Ted Cruz, Jeb Bush and Rand Paul, as well as Democrats Hillary Clinton and Bernie Sanders. The results of the survey revealed clear patterns of correspondence between the holding of system-justifying attitudes and political preferences.

Consistent with past research (Jost, Hawkins, et al., 2014; Jost, Nosek, et al., 2008), people who identified themselves as rightist (vs. leftist), more socially and economically conservative (vs. liberal), and more (vs. less) religious scored significantly higher on measures of general, economic, and gender-specific system justification (see Table 3.2). As shown in Figure 3.1, Republicans also scored higher than Democrats on all three types of system justification, with Independents scoring in the middle on two of the three types.

At the same time, there were some interesting differences with respect to system justification in different domains. For one thing, Independents scored lower than Democrats on general (or diffuse) system justification. For another, people who were higher in general system justification tended to rate *both* Donald Trump and Hillary Clinton as slightly more likable (r's = .10 and .07, respectively, both p's $< .01$). However, those who endorsed economic and gender specific system justification judged Trump as significantly more likable (r's = .41 and .39, $p < .001$) and Clinton as significantly *less* likable (r's = -.39 and -.32, $p < .001$).

When we entered all three types of system justification (plus religiosity as an adjustment variable) in multiple regression models, we obtained even clearer results. Liking for Trump was positively associated with economic (β = 0.73, t [1,495)] = 8.41, $p < .001$) and gender-specific (β= 0.67, t [1495] = 8.90, $p < .001$) system justification, but it was negatively associated with general system justification (β = -0.47, t [1,495] = -7.15, $p < .001$). Liking for Clinton, on the other hand, was negatively associated with economic (β= -0.85, t [1495] = 10.61, $p < .001$) and gender-specific (β =-0.65, t [1,495) = -9.42, $p < .001$) system justification, but it was positively associated with general system justification (β = 0.90, t [1,495] = 14.65, $p < .001$).

In Figure 3.2, we have plotted general, economic, and gender-specific system justification scores as a function of specific candidate preferences. Results reveal that supporters of the conservative standard-bearer, Jeb Bush, exhibited high levels of system justification across the board, whereas supporters of the liberal/ progressive challenger, Bernie Sanders, exhibited low levels of system justification across the board. Consistent with the results for candidate evaluations, supporters of Hillary Clinton exhibited fairly high levels of general system justification and low levels of economic and gender-specific system justification. The opposite

[1]The survey was fielded from August 16 to September 16, 2016. Of the 2,424 participants directed to the survey, 1,885 finished the survey (attrition rate 22%). We followed recommendations to minimize the problem of careless responding in online studies (Meade & Craig, 2012). Specifically, we employed 10 attention questions and time controls to check for data quality. There were 385 participants who failed more than one attention check or finished the survey in under 22 min and were therefore excluded from the sample. For the 1,500 participants who successfully finished the survey, completion time was 67 min on average (MD: 51 min).

Table 3.1: Demographic Characteristics of Survey Respondents

	Data Frequencies	U.S. Census Frequencies	Data vs. Census	Data vs. Census in %
18–24 years	193	196	−3	−1.55
25–34 years	264	263	1	.38
35–44 years	263	263	0	.00
45–54 years	292	288	4	1.37
55–64 years	234	233	1	.43
65+	254	258	−4	−1.57
Subtotal Age	1,500	1,500	—	—
Female	760	738	22	2.89
Male	740	762	−22	−2.97
Subtotal Gender	1,500	1,500	—	—
Less than $15,000	178	195	−17	−9.55
$15,000-$24,999	180	180	0	.00
$25,000-$34,999	176	165	11	6.25
$35,000-$49,999	227	210	17	7.49
$50,000-$74,999	292	270	22	7.53
$75,000-$99,999	192	180	12	6.25
$100,000-$149,999	160	180	−20	−12.50
$150,000+	95	120	−25	−26.32
Subtotal Income	1,500	1,500	—	—
Less than High-school	51	210	−159	−311.76
High-school	475	435	40	8.42
Some college	471	435	36	7.64
Bachelor	310	270	40	12.90
Graduate	193	150	43	22.28
Subtotal Education	1,500	1,500	—	—
Democrat	747	750	−3	−.40
Republican	753	750	3	.40
Subtotal Party ID	1,500	1,500	—	—

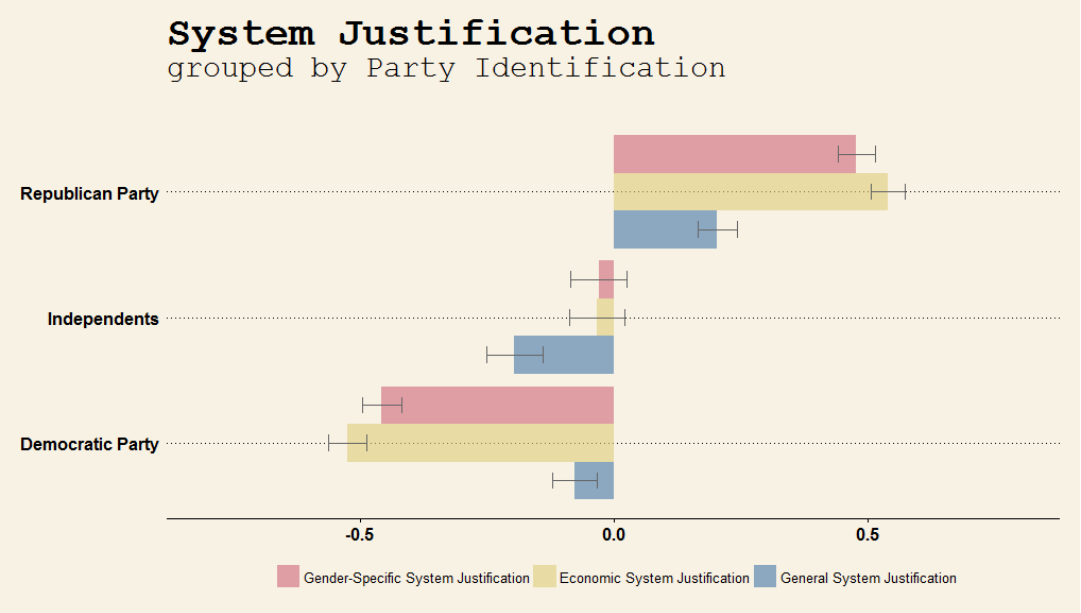
Note. Table 3.1 shows the distribution of responses in the collected data for each criterion (age, gender, income, education, and party identification). The first column displays the frequencies of collected data while the second reports on the expected frequencies based on the 2014 U.S. Census

Table 3.2: Descriptive Statistics, Including Correlations Among Social and Political Attitudes

	M	*SD*	1	2	3	4	5	6
1. Left/right ideology	5.31	2.45	—					
2. Social conservatism	4.93	2.76	.84	—				
3. Economic conservatism	5.48	2.63	.82	.72	—			
4. Religiosity	5.15	2.79	.46	.53	.35	—		
5. General SJ	5.06	1.32	.15	.10	.17	.11	—	
6. Economic SJ	4.93	1.10	.53	.48	.57	.20	.38	—
7. Gender-specific SJ	5.44	1.37	.46	.42	.45	.21	.52	.61

Note. We used Spearman's correlations, $p < .001$ ($N = 1{,}500$) for all cases. We adjusted for familywise error rate with Holm correction. All variables ranged from 1 to 9, with higher values reflecting more right-wing orientation, more conservatism, more religiosity, and higher scores on system justification.

Figure 3.1: General, economic, and gender-specific system justification as a function of political partisanship.



combination was observed among supporters of the Republican candidates. Followers of Donald Trump, Ted Cruz, and especially Rand Paul were low in general system justification but high in terms of economic and gender-specific system justification.

As shown in Figures 3.3 and 3.4, these basic patterns cut across lines of social class. At every level of respondent income, Trump supporters were significantly higher than Clinton supporters in both economic and gender-specific system justification. Perhaps surprisingly, there were no differences (at any income level) between Trump and Clinton supporters with respect to general system justification.

We also conducted logistic regression analyses in which the three types of system justification were used to predict voting choices between Trump and Clinton. Once again, economic and gender-specific system justification were associated with an increase in the probability of voting for Trump, whereas general system justification was associated with a decrease in the probability of voting for him. Each unit increase in mean economic system justification increased the odds of voting for Trump by a factor of 2.95 (β = 1.08, Wald χ^2[1] = 10.10, $p < .001$), holding all other variables constant; and each unit increase in mean gender-specific system justification increased the odds of voting for Trump by a factor of 2.25 (β = 0.80, Wald χ^2[1] = 9.20, $p < .001$). Conversely, a one unit increase in the mean of general system justification decreased the odds of voting for Trump by a factor of 0.46 (β= 0.78, Wald χ^2[1] = -9.80, $p < .001$).

Figure 3.2: General, economic, and gender-specific system justification as a function of candidate preferences.

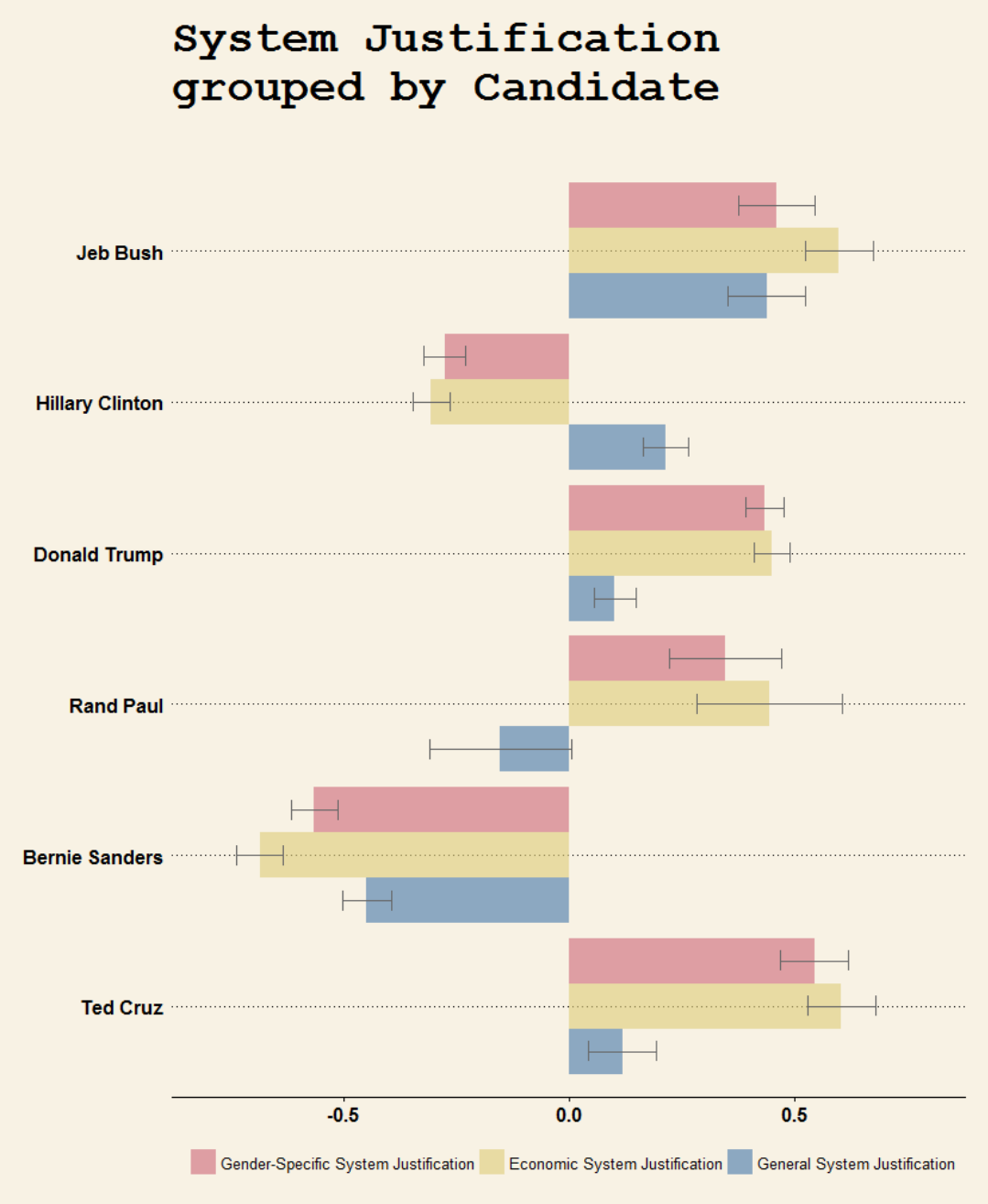
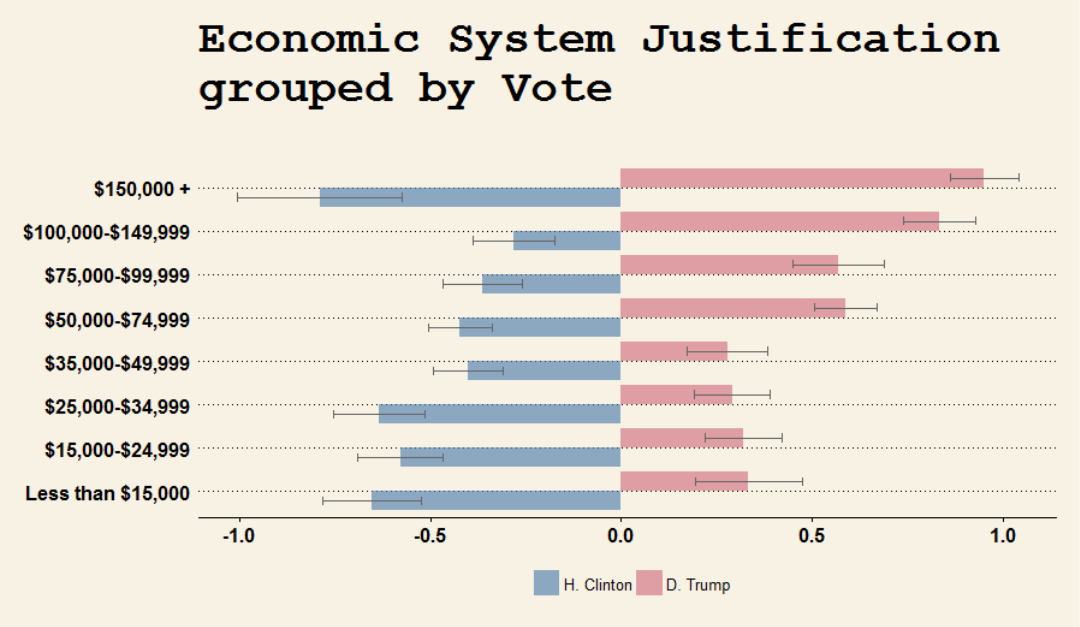
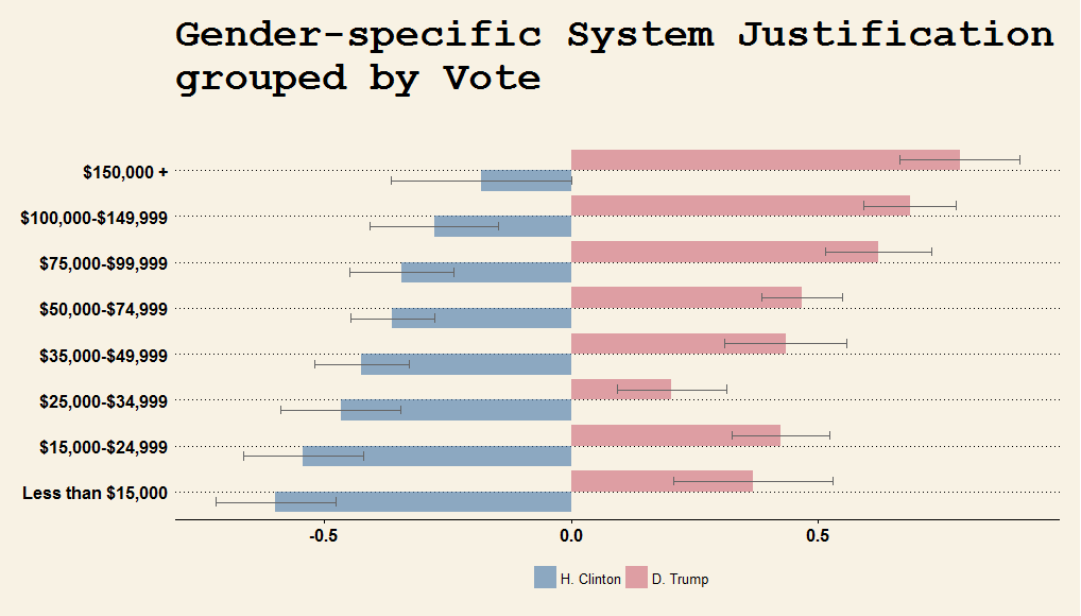


Figure 3.3: Economic system justification as a function of preferences for Trump versus Clinton at various levels of respondent income.



This study demonstrates that there are multiple meaningful dimensions (or domains) of system justification. That is, there is more than one sense in which someone may be said to accept or reject the societal status quo. The same person may be an enthusiastic defender of the capitalist economic system (or the gendered division of labor within the family) but not the federal government (or vice versa). Overall, we found strong support for the notion that these different forms of system justification make independent contributions to political preferences. In statistical terms, general, economic, and gender-specific system justification explained unique amounts of variance in voting intentions. Overall, by taking into account all three types of system justification, this model accurately classified candidate choices 77% of the time.

Figure 3.4: Gender-specific system justification as a function of preferences for Trump versus Clinton at various levels of respondent income.



3.4 Concluding Remarks

When (Blanchar, 2017) asked a sample of 503 Americans to try to explain why Donald Trump had won the recent presidential election, he discovered that the most popular answer was that "voters desired a change from the status quo." There is one rather limited sense in which our findings, which are based on a nationally representative sample of 1,500 Americans, are consistent with this explanation. Supporters of Donald Trump did score lower in general (or diffuse) system justification than supporters of Jeb Bush, and they scored as low on this measure as supporters of Hillary Clinton.

More to the point, when general, economic, and gender-specific forms of system justification were entered as simultaneous predictors of voting intentions, we observed that general system justification was positively associated with the likelihood of voting for Clinton over Trump. In a limited historical sense, then, it appears that Clinton was indeed regarded as the "status quo" candidate, and that this was seen as undesirable by a good number of voters. In retrospect, it is conceivable that the Clinton campaign may have overestimated the extent to which voters——especially potential Democratic voters——preferred social stability over social change.

After all, liberals and Democrats tend to score consistently lower on all types of system justification, in comparison with conservatives and Republicans (e.g., Jost, Nosek, et al., 2008). We replicated this result once again. And, despite the fact that Trump supporters exhibited less general system justification than supporters of Jeb Bush, they exhibited very high levels of economic and gender-specific system justification. When all three types of system justi-

fication were entered as simultaneous predictors of voting intentions, it was very clear that economic and gender-specific system justification were positively associated with the likelihood of voting for Trump over Clinton. Thus, Trump supporters did reject the status quo of liberal, Democratic governance under President Obama, which they may have perceived as threatening to mainstream cultural traditions (see also Hennes et al., 2012), but they certainly did not challenge the status quo in a more profound sense.

On the contrary, Trump supporters——like political conservatives in general——strongly justified economic and gender-based disparities in society. These findings cast doubt on the proposition that voting for Trump reflected anything like a self-conscious, ideological challenge to the neoliberal, "free market" system or to other extant institutions and social arrangements. Supporters of Donald Trump may well have been deeply frustrated by the economic consequences of the capitalist system in the United States, but——at this point at least——we see no evidence that they placed any blame upon the system that was the source of those frustrations.

4

Justice for the People? How Justice Sensitivity Can Foster and Impair Support for Populist Radical-Right Parties and Politicians in the United States and in Germany

This work was done in collaboration with Tobias Rothmund, and Laurits Bromme. This chapter is based on: Rothmund, Bromme and Azevedo (2020). Justice for the People? How Justice Sensitivity Can Foster and Impair Support for Populist Radical-Right Parties and Politicians in the United States and in Germany. *Political Psychology, 41*(3).

Abstract

Many people argue that support for populist radical-right political agents is motivated by people feeling "left behind" in globalized Western democracies. Empirical research supports this notion by showing that people who feel personally or collectively deprived are more likely to hold populist beliefs and anti-immigration attitudes. Our aim was to further investigate the psychological link between individuals' justice concerns and their preferences for populist radical-right political agents. We focused on stable individual differences in self-oriented and other-oriented justice concerns and argue that these should have opposing correlations with preferences for populist radical-right parties. We tested our hypotheses in two national samples, one from the United States (N = 1500) and one from Germany (N = 848). Sensitivity to injustice towards oneself enhanced the likelihood of preferring Trump (United States) and Alternative für Deutschland (AfD) (Germany) via increased anti-immigration attitudes and increased populist attitudes. Sensitivity to injustice towards others reduced the likelihood of preferring Trump and AfD via decreased anti-immigration attitudes. We discuss our findings in regard to how stable individual differences in the evaluation of fairness can motivate intra- and interpersonal political conflicts in modern western societies and how politics and mass media can fuel these conflicts.

4.1 Introduction

The rise of populist radical-right agents (parties and politicians) in Europe and the United States has inspired a considerable amount of research. A central aim of this research is to better under- stand why people are willing to vote for these politicians. Scholars generally distinguish between demand-side explanations and supply-side explanations as different perspectives on that question. Research on supply-side explanations is concerned with how structural features of party competition (e.g., electoral systems, political finance regulations, ballot access laws) or party communication (e.g., communication strategies) contribute to the rise of the populist right (see also Golder, 2016). Research on demand-side explanations focuses on whether and how political attitudes and psychological motivations in voters foster proclivities for populist radical-right agents. In the present article, we aim to contribute to the latter line of research from a social justice perspective.

Theoretically, it is reasonable to assume that social justice concerns can motivate voting for populist radical-right parties (e.g., Pettigrew, 2017). This idea is especially plausible given a growing inequality in the distribution of wealth in postindustrial economies. Pettigrew (2017) highlighted the importance of perceived injustice as a psychological motivation for supporting Trump in the U.S. Presidential Elections. He argues that "Trump adherents feel deprived relative to what they expected to possess at this point in their lives and relative to what they erroneously perceive other 'less deserving' groups have acquired" (p. 111). There is some evidence that the experience of deprivation relative to other social groups can foster populist sentiments (e.g., Elchardus & Spruyt, 2016; Spruyt et al., 2016) and anti-immigration attitudes (e.g., Ellemers, 2002; Jetten et al., 2015; Taylor, 2002). However, when it comes to understanding the psychological link between social justice concerns and preferences for populist radical-right political agents, two questions remain unanswered: *First, do dispositional justice concerns predict populist radical-right voting preferences?* There is research indicating that personality dispositions contribute to the explanation of individual differences in voting for populist radical-right parties and politicians (e.g., Aichholzer & Zandonella, 2016; Bakker et al., 2016; Fatke, 2019; Heiss & Matthes, 2017). We aim to complement this evidence from the perspective of social justice research by focusing on justice sensitivity—a measure of dispositional justice concerns. Research on justice sensitivity distinguishes between the sensitivity to experience injustice towards oneself (JS-Self) and the sensitivity to experience injustice towards others (JS-Others). To get a better understanding of how dispositional justice concerns impact populist radical-right voting preferences, we systematically differentiate between these two dispositional notions of justice. *Second, which components of a populist radical right ideology mediate the link between justice concerns and preferences for populist radical-right political agents?* Scholars have argued that nativism, populism and authoritarianism constitute a populist radical right belief system and that these three components reflect the ideological basis for voting for populist radical-right parties and politicians (e.g., Mudde, 2007). Previous research on the relation between social justice concerns and support for populist radical-right parties has focused on single ones of these components in isolation. To better understand the underlying psychological link, we investigate all three components in parallel. By doing so, we aim to test whether each component of this belief system accounts for independent psychological effects of justice concerns on preferences for populist radical-right political agents.

4.2 Social Justice Concerns and Justice Sensitivity

There is a fairly broad consensus in political science and psychology that justice notions reflect key elements of political attitudes and ideology and that they provide a strong motivation for political action (for an overview, see Rothmund et al., 2016). Importantly, the cognitive, emotional, and behavioral reactions to social injustice are not only predicted by boundary conditions of a given situation (e.g., the level of inequality) but also by stable individual differences (Baumert & Schmitt, 2016, for a review, see). Justice sensitivity has been introduced as a multidimensional personality construct (Schmitt et al., 2010; Schmitt et al., 2005) that taps into dispositional justice notions from four social perspectives, namely a self-oriented victim perspective (sensitivity to oneself being treated unfairly) and three other-oriented perspectives, namely an observer perspective (sensitivity to others being treated unfairly), a beneficiary perspective (sensitivity to benefiting from others being treated unfairly), and a perpetrator perspective (sensitivity to treating others unfairly). All four dimensions are linked to a specific social perspective in which social injustice can be perceived. Empirical research supports the usefulness of distinguishing between these dimensions. For example, justice sensitivity from each of these perspectives is highly stable over time (Schmitt et al., 2010; Schmitt et al., 2005), and correlations between the dimensions indicate a substantial amount of unique variance (Baumert & Schmitt, 2016). Even more importantly, different dimensions of justice sensitivity predict different kinds of psychological reactions and behaviors. The most fundamental difference has been established between the psychological functioning of the self-oriented justice sensitivity from a victim perspective compared to the other-oriented justice sensitivities from an observer, beneficiary, or perpetrator perspective. In the present article, we argue that these differences follow from different motivational underpinnings of self-oriented justice concerns and other-oriented concerns that are enlightening to better understand the political psychology of populist radical-right proclivities.

Self-oriented justice concerns reflect concerns about social justice for oneself or one's own social group and corresponding affective reactions (e.g., anger, fear of exploitation). In line with social-exchange theories, these kinds of justice concerns should be motivated by self-interest (for a review, see Tyler et al., 1997). In order to serve self-interest, it is highly functional to monitor the ratio of costs and benefits in social interactions. Self-oriented justice concerns should be triggered when people think that they deserve more than they received in terms of personal or group-based benefits. Relative deprivation theory (e.g., Walker & Smith, 2002) is based on this assumption. It describes situations in which people or groups feel deprived because they compare themselves with groups or individuals who are better off. High levels of self-deprivation are linked to personal or group-based anger that can translate into political opposition (H. Smith et al., 2012). Low levels of relative deprivation allow individuals to be less concerned about their own self-interest and to show more solidarity with others who are similarly deprived. Justice sensitivity from a victim perspective (JS-Self) can be considered as a dispositional tendency to experience relative deprivation. It involves individual tendencies to fear of being deprived or exploited (Gollwitzer et al., 2005), to feel anger about personal or group- based deprivation (e.g., Gollwitzer & Rothmund, 2011; Rothmund et al., 2017), and to retaliate when disadvantaged (e.g., Baumert et al., 2014).

Other-oriented justice concerns reflect concerns about social justice for other individuals or groups and corresponding affective reactions (e.g., outrage, compassion, guilt). These concerns can be considered as moral concerns that guide people's political thinking and behavior

independently of their individual or collective interests (Baumert et al., 2013). Although there is hardly a shared definition of morality, scholars generally assume that moral concerns "must bear on the interest or welfare either of society as a whole or at least of persons other than the judge or agent" (Gewirth, 1984, p. 978). Research indicates that justice sensitivity from other-oriented perspectives (JS-Others) is related to empathy and social responsibility (Schmitt et al., 2005) and that it predicts prosocial reactions to unequal allocations in the context of economic games (Baumert et al., 2014; Fetchenhauer & Huang, 2004; Lotz et al., 2011; Lotz et al., 2013). For example, persons high on JS-Others give a substantial share of their endowment to powerless other persons, even when they are tempted to act selfishly (Lotz et al., 2013).

It is important to note that JS-Self and JS-Others are correlated (Baumert & Schmitt, 2016, r = .22–.52) , which has been interpreted as evidence of a general justice motive that underlies both self-oriented and other-oriented justice concerns (for an overview, see Ellard et al., 2016). Despite this correlation, we argue that JS-Self and JS-Others provide opposing motivations when it comes to supporting populist radical-right parties and politicians: JS-Self should increase and JS-Others should decrease people's preferences to vote for populist radical-right parties and politicians. In the following paragraph, we hypothesize how these links are mediated by political attitudes that constitute a populist radical right ideology.

4.3 Populist Radical Right Ideology and Justice Sensitivity Towards Self Versus Others

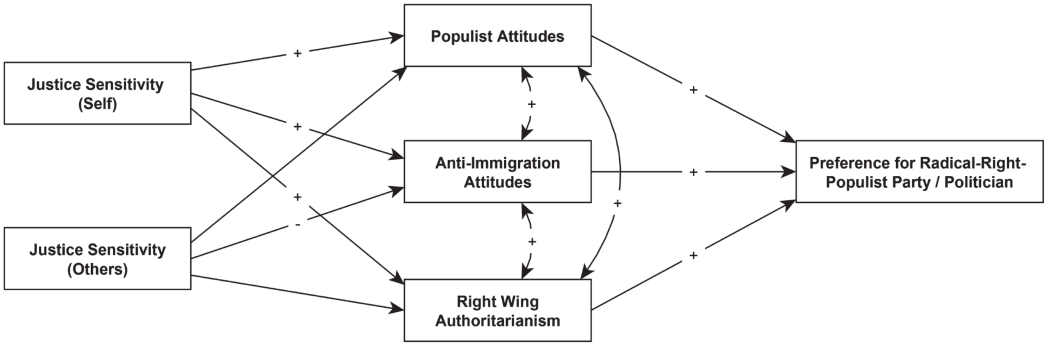
In what is now a seminal work, Mudde (2007) postulated three core elements of a populist radical-right ideology: nativism, populism, and authoritarianism, where *nativism* is considered the most central feature. It reflects the individual's belief "that states should be inhabited exclusively by members of the native group ('the nation') and that nonnative elements (persons and ideas) are fundamentally threatening to the homogenous nation-state" (p. 19). While the concept of nativism is essentially subjective upon who or what is (non-)native, it includes a combination of nationalism and xenophobia and is often expressed in anti-immigration sentiments. *Authoritarianism* reflects a belief in a strictly ordered society, in which conventions must be enforced and infringements of authority are to be punished severely (Mudde, 2007). The historical roots of this concept lie in the work of Adorno and colleagues (1969) who defined authoritarianism as "a general disposition to glorify, to be subservient to and remain uncritical toward authoritative figures of the ingroup and to take an attitude of punishing outgroup figures in the name of some moral authority" (p. 228). Continuing and extending this work, the concept of right-wing authoritarianism (RWA) has been defined by Altemeyer (1981) who postulated three constituent elements, namely submission to "strong" or charismatic leaders (authoritarian submission), aggression against deviants and "weak" scapegoats (authoritarian aggression), and the holding of traditional, conventional views about politics and morality (authoritarian conventionalism). Finally, *populism* is considered a unique set of ideas, in which politics is seen as a Manichean struggle between the will of the people and a conspiring elite (Hawkins, 2009). It is generally defined as a "a thin-centered ideology that considers society to be separated into two homogeneous and antagonistic groups, 'the pure people' versus 'the corrupt elite', and which argues that politics should be an expression of the volonté générale (general will) of the people" (Mudde, 2004,

p. 543). As a thin-centered ideology, populism can be combined with different host ideologies such as, for example, a radical-right political belief system (B. Stanley, 2008).

There is empirical evidence that each of these three attitude dimensions predicts the willingness of people to vote for populist radical-right parties. For example, scholars have demonstrated relations with nativist attitudes (e.g., Cutts et al., 2011; Ford et al., 2012; Ivarsflaten, 2008), authoritarian attitudes (e.g., Lubbers & Scheepers, 2000; D. Smith & Hanley, 2018), and populist attitudes (e.g., Akkerman et al., 2014; Ford et al., 2012). Only few studies have been conducted to test whether these attitude dimensions complement each other's predictive validity. For example, Hauwaert and Kessel (2018) provided evidence that populist attitudes, cultural conventionalism, and anti-immigration sentiments can serve as independent predictors of voting for populist radical-right parties in different European countries.

Following this line of research, we assume that populist attitudes, authoritarian attitudes, and nativist attitudes can serve as independent mediators between justice concerns and preferences for populist radical-right parties and politicians. In the subsequent paragraphs, we outline research that links social justice concerns to these components of populist radical-right ideology (see Figure 4.1 for an overview of our hypotheses).

Figure 4.1: Theoretical model.



Note: Arrows with "+" indicate an expected positive relation, arrows with "–" indicate an expected negative relation, and arrows with no symbol indicate no expected relation

4.3.1 Populist Attitudes

Globalization makes western societies change extremely fast. Many scholars have argued that these changes trigger psychological uncertainty, grievances, and frustrations, which in turn make populist thinking attractive (e.g., Golder, 2016; Mudde, 2007). Pettigrew (2017) linked this line of argumentation to *relative deprivation theory*. He argues that globalization makes some people feel as losers in the sense that they feel deprived of what they perceive themselves to be entitled to. But how can relative deprivation foster populist attitudes? When behavioral reactions to relative deprivation (e.g., collective action) is not possible or not successful, relative deprivation can motivate cognitive coping strategies such as blaming other individuals or outgroups (see H. Smith et al., 2012). A feeling of relative deprivation due to

societal change might translate into populist thinking and scapegoating of politicians. In two Belgian samples, Spruyt and colleagues showed that people who experienced group-based (Spruyt et al., 2016) or personal deprivation (Elchardus & Spruyt, 2016) were more inclined to report populist attitudes. The authors argue that blaming "the establishment" and "politics" for privileging others and for tolerating and covering up social injustice can serve as a psychological coping strategy for people who feel relatively deprived. We aim to complement and extend the work done by Spruyt and colleagues in three ways. First, we focus on the link between populist attitudes and stable individual differences in people's propensity to feel relatively deprived. By doing so, our research enhances the understanding of populist thinking from a personality perspective. We argue that JS-Self should foster populist thinking. There is some preliminary support for this assumption (Agroskin et al., 2015; Traut-Mattausch et al., 2011). For example, Agroskin et al. (2015) demonstrated that people high on JS-Self tended to oppose political reforms because they were more likely to distrust political elites and attribute sinister motives to political agents with opposing opinions. Second, we do not only assess populist attitudes but also party and candidate preferences. This allows us to test whether the link between justice concerns and populist attitudes translates into preferences for populist radical-right parties and politicians. Third, we investigate different attitude components of populist radical-right ideology in parallel. This allows us to test whether populist attitudes are a mediator of justice concerns on populist radical-right voting preferences even when we control for the effect of the other components.

> H1: Individual differences in JS-Self positively predict populist attitudes and, thus, preferences for populist radical-right political agents.

4.3.2 Nativist Attitudes

There is a compelling body of evidence linking relative deprivation and nativist attitudes, especially anti-immigration attitudes and prejudice against ethnical outgroups (for a meta-analysis, see H. Smith et al., 2012). The most well-documented effect is that collective deprivation experiences can foster anti-immigration sentiments (e.g., DellaPosta et al., 2015; Jetten et al., 2015; Taylor, 2002). For example, Jetten et al. (2015) used a hypothetical society paradigm and showed that people who perceived themselves to be deprived relative to other parts of society were more opposed towards immigrants than participants in a moderate wealth group condition. Consistent with this finding, political economy researchers have argued that attitudes towards immigrants are affected by the extent to which immigrants are perceived to threaten material self-interest (Mayda, 2006; Scheve & Slaughter, 2001). Similar findings have also been reported from an individual differences perspective. In the context of the German reunification and the introduction of a solidarity tax (an additional income tax aimed at alleviating the economic disparities between former East and West), JS-Self among the residents of former West Germany was positively related to the fear of a negative future and to the anger about the residents of former East Germany (Süssenbach & Gollwitzer, 2015, study 1). This effect extends to attitudes toward migrant groups, with Germans high on JS-Self being more likely to experience anger at migrant groups when these groups are presented as having exploitative motives (Süssenbach & Gollwitzer, 2015, study 2). Accordingly, we hypothesize that stable individual differences in people's sensitivity to feel personally or collectively deprived predict anti-immigration sentiments.

Recently, Anderson et al. (2015) provided evidence for a negative relation between other-oriented justice concerns and nativist attitudes. Using an Australian sample, they showed that preferences for social fairness predicted positive attitudes towards asylum seekers over and above social dominance orientation and RWA. Research on justice sensitivity also indicates that JS-Others is a positive predictor of higher solidarity with disadvantaged outgroups (Rothmund et al., 2017). During the Euro Crisis, Germans high on JS-Others were more likely to support solidarity with countries in need of financial support. These correlations were mediated by reduced resentments towards debtor countries and increased empathy towards the outgroup. An opposing pattern was found for JS-Self, which was negatively related to solidarity with debtor countries. The latter effect was mediated by increased nationalistic concerns and increased resentments towards debtor countries. Based on these findings, we hypothesize that JS-Self and JS-Others have opposing effects on nativist attitudes and, thus, on preferences to vote for populist radical-right parties and politicians.

> H2: Anti-immigration attitudes are positively predicted by JS-Self and negatively predicted by JS-Others. Opposing effects of JS-Self and JS-Others on preferences for populist radical-right political agents are mediated by anti-immigration attitudes.

4.3.3 Authoritarian Attitudes

Duckitt and Sibley (2010) proposed a theoretical model in which they argue that RWA reflects a way of coping with existential threat (see also Sibley et al., 2012). People high on JS-Self are especially sensitive to perceive and experience threatening social cues. For example, they rated faces with neutral expressions as less trustworthy and underestimated the cooperativeness of strangers of whom they saw only short video clips (Gollwitzer et al., 2012). Based on these findings, we expect a positive relation between JS-Self and RWA.

There have also been some attempts to investigate how RWA relates to fairness as a moral principle (Federico et al., 2013; Kugler et al., 2014). Both studies found substantial correlations between RWA and group-binding moral foundations (loyalty, authority, purity). Concerning relations with fairness, results are mixed. Whereas Kugler et al. (2014) found small to medium negative correlations of fairness with RWA, Federico et al. (2013) presented small positive correlations. Because these studies do not show a consistent pattern of relations between RWA and social justice concerns, we do not propose specific hypotheses on the relation between JS-Others and RWA.

> H3: Right-wing authoritarian attitudes are positively predicted by individual differences in JS- Self. Positive effects of JS-Self on preferences for populist radical-right political agents are in part mediated by RWA.

4.4 Data and Measures

We tested our hypotheses in two national samples, one in the United States and one in Germany. Both samples were recruited using quota sampling to represent the adult population of each country in regard to age, gender, and level of education. The U.S. data was collected during the 2016 presidential election campaign by a professional survey firm (SSI; www.surveysampling.com) between August 16 and September 9, 2016, yielding a total number of N = 1500 participants with valid cases. The German sample was recruited between October 21 and October 28, 2016 by the professional survey firm Respondi (www.respondi.com). The total number of valid cases was N = 848. Both samples show an adequate fit with the distribution of the quoted variables in the general public of the respective country (for an overview on the sampling procedure and the sample characteristics, see the online supporting information). The data of both studies, scripts and detailed information on the surveys can be freely accessed (https://osf.io/e2cmb/).

4.4.1 Measures

The exact wording of all items, descriptive analyses, and the estimates of reliability and intercorrelation of all scales in the United States and in Germany are reported in the online supporting information. *Preference for populist radical-right political agents* was measured differently in the United States and in Germany. In the United States, participants were asked which candidate of the 2016 presidential election best represented their views. Participants could choose from a list of eight candidates: Jeb Bush, Hillary Clinton, Ted Cruz, Gary Johnson, Rand Paul, Austin Petersen, Bernie Sanders, and Donald Trump.[1] In Germany's multiparty system, we asked participants which political party they were most likely to vote for if federal elections were held at that point in time. Eight options were proposed, namely CDU/CSU, SPD, Die Linke, Bündnis 90/Die Grünen, FDP, AfD, Piratenpartei, and NPD. We considered Donald Trump (the choice of 29.6% of the sample) and AfD (17.5%) as the populist radical-right vote choices. Despite these agents' different contexts and characteristics, both Trump and AfD share a political view characterized by the amalgamation of nativism, populism, and authoritarianism (Golder, 2016). Most prominently, Trump and AfD explore cultural cleavages to defend "the nation" from invading foreigners threatening the homogeneity of its people as well as its culture and traditions. As for the populist component, both agents frame their set of political ideas by juxtaposing a moralized version of "the people" and "the elite," with a marked preference for the former all the while invoking an interpretation of democratic processes that argues political decisions should be taken according to the will of the people. In addition, in terms of modus operandi, both agents are guided by anti-establishment, anti-muslim, anti-media, and anti-immigration rhetoric.

Justice sensitivity was assessed with an eight-item short scale by Baumert et al. (2014). In both samples, the two items indicating victim sensitivity were combined to measure justice

[1] In the U.S. election system, the relation between candidate preference and voting intention is different from the relation be- tween party preference and voting intention in the German election system. By measuring candidate preference (and not voting preference), we aimed to minimize the effect of party identification on the dependent variable. Although some of the candidates had already been out of the race at the time of our survey, we aimed to maximize the potential variance in candidate preference by including most prominent candidates in the list.

sensitivity towards the self (e.g., "It makes me angry when others are undeservingly better off than me"). The other six item (indicating observer sensitivity, beneficiary sensitivity, and perpetrator sensitivity) were combined to measure justice sensitivity towards others (e.g., "I am upset when someone is undeservingly worse off than others"; "I feel guilty when I am better off than others for no reason"; "I feel guilty when I enrich myself at the cost of others"). Validity of the German versions of the short scales has been reported by Baumert et al. (2014) and by Beierlein et al. (2013). Validity of the English versions has been provided using the 10-item original versions of the scales (e.g., Decety & Yoder, 2016; Yoder & Decety, 2014).

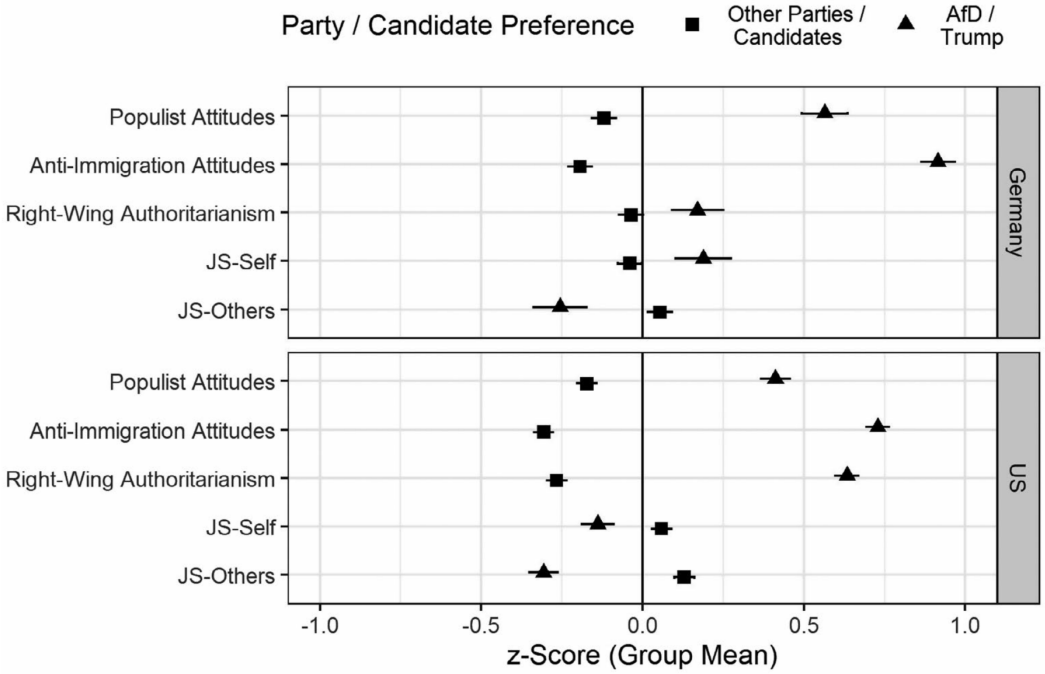
We assessed *populist attitudes* with the same six-item populist attitudes short scale (PASS-6) in both samples. The scale consisted of two items for each of three facets of populist thinking, namely antiestablishment sentiments, belief in the will of the people, and a Manichean worldview. Our scale provides strict measurement equivalence between both national samples. Information on the items, the item selection process, construct validity, and measurement invariance across the two countries are provided in the online supporting information. In the United States, we measured RWA with the 12-item scale by Funke (2005). In Germany, we used the nine-item KSA-3 scale by Beierlein et al. (2014). In both countries, we used the same two items to measure *anti-immigration attitudes* ("Borders should be closed for asylum seekers"; "Immigrants increase crime rates").

4.5 Results

We started our analyses by investigating the mean levels of attitude measures and justice sensitivity in participants with preferences for populist radical-right political agents compared to the rest of the sample. All variables were z-standardized. Mean levels are displayed in Figure 4.2. The results indicate that participants with a preference for Trump (United States) or AfD (Germany) reported higher means on populist attitudes, RWA, and anti-immigration attitudes compared to the rest of the sample. This pattern is in line with the general assumption that all three attitude dimensions provide a demand for populist radical-right parties and politicians. Focusing on the mean levels of justice sensitivity, the findings are not totally in line with our theoretical predictions. As expected, we do find that participants with a preference for Trump (United States) or AfD (Germany) reported lower means on JS-Others. The findings on JS-Self are mixed. Participants with a preference for AfD reported higher means on JS-Self compared to the rest of the German sample. However, participants with a preference for Trump reported lower means on JS-Self compared to the rest of the U.S. sample.

As noted before, we should keep in mind that JS-Self and JS-Others are substantially correlated ($r = .30$ in Germany, $r = .49$ in the United States; bivariate correlations between all variables are displayed in 4.1). Due to this correlation, opposing effects of JS-Others and JS-Self on populist radical-right voting preferences might be suppressed when we look at the mean differences only (see Paulhus et al. 2004, for a detailed analysis on how correlated personality predictors can create suppressor situations). We calculated logistic regression analyses to test this assumption directly.

Figure 4.2: *z*-transformed group means.



*Note:*Error bars indicate standard error of means.

Table 4.1: Intercorrelations Between Sociodemographic Variables and Scales

	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.
1. Age	–	.02	.01	.21**	−.24**	−.03	.08	−.11*	.11*	−.06
2. Sex	.20**	–	−.04	.12*	.02	−.21**	.02	.00	−.03	.04
3. Education	.21**	.09**	–	.27**	−.13**	−.07	−.28**	−.28**	−.19**	−.15**
4. Income	.23**	.09**	.48**	–	−.18**	−.11*	−.12*	−.10	.03	−.03
5. Justice sensitivity (Self)	−.31**	−.17**	−.13**	−.18**	–	.30**	.20**	.29**	.22**	.09
6. Justice sensitivity (Others)	−.22**	−.22**	−.11**	−.14**	.49**	–	.05	−.04	−.02	−.12*
7. Populist attitudes	.19**	.07*	−.10**	−.02	.06*	−.03	–	.52**	.34**	.26**
8. Anti-immigration attitudes	.17**	.09**	−.15**	−.01	.02	−.24**	.34**	–	.43**	.42**
9. Right-wing authoritarianism	.24**	.08**	−.10**	.00	−.13**	−.23**	.27**	.62**	–	.08
10. Preference for Trump/AfD	.23**	.13**	−.07*	.02	−.09**	−.20**	.27**	.47**	.41**	–

Obs.: Upper diagonal: Germany; Lower diagonal: United States; AfD = "Alternative für Deutschland"; Sex: Higher values indicate "male." *$p < .05$; **$p < .01$.

4.5.1 Effects of JS-Self and JS-Others on Voting Preferences

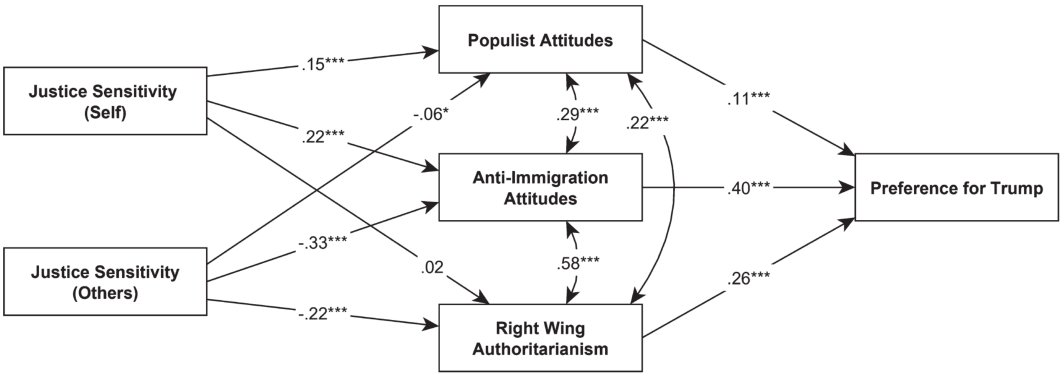
We regressed preference for Trump (and AfD, respectively) on JS-Self and JS-Others in two logistic regression models, including age, sex, income, and level of formal education as control variables. Justice sensitivity predicted preferences for populist radical-right political agents independent of the controls in the United States and in Germany. Focusing on the specific relations, we found the same pattern in both countries: JS-Self was a positive predictor of preferences for Trump in the United States ($b = 0.10$; $p = .039$; odds ratio [*OR*] = 1.11) and for AfD in Germany ($b = 0.20$; $p = .004$; $OR = 1.22$). In other words, for each unit increase in JS-Self, the odds of supporting Trump (AfD) compared to the other candidates (parties) increased by 11% (22%), holding all other variables constant. At the same time, JS-Others decreased the odds to vote for Trump ($b = -0.37$; $p < .001$; $OR = 0.69$) and AfD ($b = -0.45$; $p < .001$; $OR = 0.64$). In other words, for each unit increase in JS-Others, the odds of supporting Trump (AfD) compared to the other candidates (parties) decreased by 31% (36%), holding all other variables constant. In a second model, we added the interaction term of JS-Self and JS-Others as an additional predictor. Interaction effects were nonsignificant in both countries (see the online supporting information).

4.5.2 Effects of Populist Radical-Right Attitude Dimensions on Political Preferences

To test the indirect effects of justice sensitivity via attitude dimensions on political preferences, we specified and analyzed the same path model using the German and the U.S. dataset (see Figure 4.1). In line with previous research indicating that populist attitudes, anti-immigration attitudes, and RWA are correlated substantially (Rooduijn, 2014), we allowed for correlations between these variables in the statistical model. Control variables (age, sex, income, and level of formal education) were included as predictors in all paths leading to populist attitudes, anti-immigration attitudes, RWA, and preference for populist radical-right agents. We restricted direct effects of JS-Self and JS-Others on political preferences to zero. Models with direct effects can be found in the online supporting information. There are no meaningful differences in the parameters between the models with and without direct effects. We interpret this as evidence for the robustness of our model. Since our dependent variable is dichotomous, we used WLSMV estimation (cf. Beauducel & Herzberg, 2006). Both models showed a good fit (United States: $\chi^2(2) = 3.98$, $p = .14$; *RMSEA* = .026; *SRMR* = .004; *CFI* = .998; Germany: $\chi^2(2) = 10.00$, $p = .007$; *RMSEA* = .069; *SRMR* = .013; *CFI* = .980; cf. Hu and Bentler 1999). The path coefficients for both models are depicted in Figure 4.3 (U.S. model) and Figure 4.4 (German model). A complete report of parameter estimates can be found in the online supporting information.

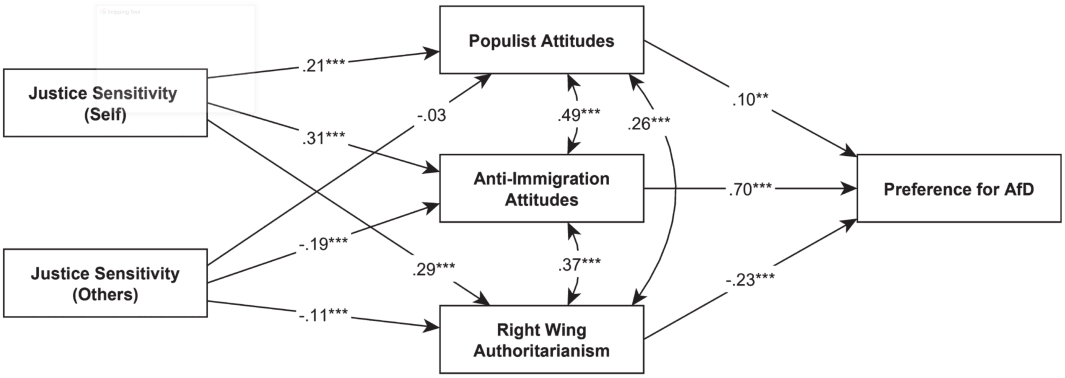
In the U.S. model, all three attitude dimensions of a populist radical-right ideology predicted preferences for Trump (see Figure 4.3). In other words, populist attitudes ($OR = 1.09$), anti-immigration attitudes ($OR = 1.20$), and RWA ($OR = 1.21$) increased the likelihood of preferring Trump over the other candidates independent of each other. In the German model, we found a slightly different pattern. Again, all three attitude dimensions predicted the likelihood to prefer AfD over other political parties (see Figure 4.4). As expected, populist attitudes ($OR = 1.07$) and anti-immigration attitudes ($OR = 1.31$) increased the likelihood of a preference for AfD. Contrary to our expectations, RWA was a negative predictor of preferences for the

Figure 4.3: Path model in the U.S. sample explaining preference for Donald Trump as presidential candidate.



Note: Coefficients are standardized estimates. *$p < .05$; **$p < .01$; ***$p < .001$.

Figure 4.4: Path model in the German sample explaining voting preference for the AfD (Alternative für Deutschland).



Note: Coefficients are standardized estimates. *$p < .05$; **$p < .01$; ***$p < .001$.

AfD in the German dataset ($OR = 0.74$). Keeping all other variables constant, increasing RWA reduced the likelihood that the participants in our sample preferred AfD over other political parties. We calculated tests for multicollinearity in order to rule out statistical explanations for this contra-intuitive effect. Since all variance inflation factors (VIF) are relatively low (all VIFs < 2, see the online supporting information) in comparison to the cutoffs that are discussed in the literature (cf. O'Brien, 2007), we do not assume multicollinearity to be problematic for the interpretation of our findings.

4.5.3 Indirect Effects of JS-Self on Voting Preferences

The path model indicates positive relations of JS-Self with populist attitudes and anti-immigration attitudes in the United States and in Germany (see Figures 4.3 and 4.4). We calculated indirect effects in order to assess whether and how JS-Self can translate into political preferences by means of enhancing these attitude dimensions. In the United States, we found indirect effects of JS-Self on preferences for Trump via anti-immigration attitudes (OR = 1.07) and populist attitudes (OR = 1.01). There was no significant indirect effect via RWA. Interpreting the odds ratio, we can say that—all other predictors held constant—increasing the JS-Self scale by one unit enhances the odds of preferring Trump over the other candidates by 1% via increased populist attitudes and by 7% via increased anti-immigration attitudes. In Germany, we found the same indirect effects of JS-Self on preferences for AfD via populist attitudes (OR = 1.01) and anti-immigration attitudes (OR = 1.16). Increasing the JS-Self scale by one unit enhances the odds of preferring AfD over the other candidates by 1% via increased populist attitudes and by 16% via increased anti-immigration attitudes. In Germany, RWA operated as an additional mediator, with higher values in JS-Self leading to higher RWA, which in turn inhibited preference for the AfD (OR = 0.96).

Summing up, we found support for our first and second hypotheses (H1, H2): Effects of JS-Self on preferences for Trump and the AfD were mediated by populist attitudes and anti-immigration sentiments. Our findings are not in line with the third hypothesis (H3): We find no evidence that self-oriented justice concerns foster preferences for populist radical-right parties or politicians via RWA.

4.5.4 Indirect Effects of JS-Others on Voting Preferences

We found negative relations of JS-Others with anti-immigration attitudes and RWA in Germany and the United States (see Figures 4.3 and 4.4). Indirect effect analyses revealed that JS-Others reduced the odds of preferring Trump over other candidates in the United States via lower anti-immigration attitudes (OR = 0.89) and lower RWA (OR = 0.95). Interpreting the odds ratio, we can say that— all other predictors held constant—increasing the JS-Others scale by one unit reduces the odds of preferring Trump over the other candidates by 11% via reduced anti-immigration attitudes and by 5% via lower RWA. In the German model, we found a negative indirect effect of JS-Others via anti-immigration attitudes (OR = 0.87) and a small positive effect via RWA (OR = 1.03). Increasing the JS-Others scale by one unit reduces the odds of preferring AfD over the other candidates by 13% via reduced anti-immigration attitudes and enhances the odds of preferring AfD over the other candidates by 3% via lower RWA.

On a general level, we gathered support for our second hypothesis in regard to JS-Others (H2): Negative relations between JS-Others and preferences for Trump and the AfD were mediated by anti-immigration sentiments in both samples.

4.6 Discussion

The primary aim of this article was to investigate the motivational antecedents of populist radical-right sentiments and voting preferences from the perspective of social justice research. Our studies complement previous research by focusing on relatively stable individual differences in justice sensitivity, a multidimensional personality concept that taps into how sensitive people are in experiencing and responding to injustice from different social perspectives (Baumert & Schmitt, 2016). We summarize our main findings and discuss how these speak to the research questions.

Do dispositional justice concerns predict populist radical-right voting preferences? Justice sensitivity predicts support for Donald Trump in the United States and for AfD in Germany. This finding complements existing research by showing that preferences for populist radical-right political agents are not only related to temporal states of perceived injustice (i.e., relative deprivation) but also to stable individual differences in how people evaluate social justice issues. In doing so, our research contributes to a current discussion whether personality measures can predict preferences for populist radical-right parties across different national contexts (see Rooduijn, 2018). It adds to a growing body of evidence linking personality and populist voting (e.g., Aichholzer & Zandonella, 2016; Bakker et al., 2016; Heiss & Matthes, 2017) . Whereas previous studies have primarily focused on relations with Big Five personality dispositions (e.g., Aichholzer & Zandonella, 2016; Bakker et al., 2016; Fatke, 2019; Heiss & Matthes, 2017), our study is the first to show that preferences for populist radical-right political agents can be linked to stable individual differences in how people perceive and evaluate fairness in the distribution of resources in society. Importantly, there is evidence that individual differences in justice sensitivity do not substantially overlap with Big Five facets (Schmitt et al., 2005).

The present findings indicate that dispositional justice concerns are conversely related to preferences for populist radical-right political agents. Self-oriented justice concerns were positive predictors of preferences for Trump (United States) and AfD (Germany). This finding supports and extends the notion that feelings of relative deprivation can foster populist radical-right voting preferences (Pettigrew, 2017). It indicates that having a dispositional tendency to feel deprived can motivate people to support populist radical-right political parties and politicians. Other-oriented justice concerns were negative predictors of preferences to vote for Trump (United States) and AfD (Germany). This finding can be interpreted as evidence that being genuinely concerned about social justice (not only for oneself but also for others) motivates people to oppose populist radical-right parties or politicians.

In our analyses, JS-Self and JS-Others did not interactively predict populist radical-right preferences—the effects of JS-Self are independent of the level of JS-Others within a given person and vice versa. We suggest we take this as preliminary evidence for two conclusions: First, the higher the levels of both, JS-Others and JS-Self within a given person, the more likely these people are experiencing an intrapersonal conflict about whether to support or to oppose populist radical-right political agents. Since both dimensions of justice sensitivity are correlated (r = .30 in Germany, r = .49 in the United States), these conflicts should occur in a substantial amount of justice-sensitive individuals. This perspective on intrapersonal justice conflicts preceding populist radical-right voting preferences complements existing literature arguing that new forms of interpersonal conflicts follow from globalization (e.g., Kriesi et al., 2012).

Second, whether individuals with high JS-Self and high JS-Others are inclined to support or to oppose populist radical-right political agents in a given context is likely to depend on the social perspective that is salient in the individual's social environment. This assumption is based on evidence that the effects of justice sensitivity on attitudes and behavior are generally conditional to situational cues (for an overview, see Baumert & Schmitt, 2016; Gollwitzer et al., 2013). In the case of preferences for populist radical-right parties and politicians, these contextual influences might result from a variety of different variables, such as individual development of socioeconomic status (e.g., employment, income), communication with friends and family, or mass media consumption.

Which components of a populist radical-right ideology mediate the relation between justice concerns and preferences for populist radical-right political agents? Empirical research from the demand-side perspective has aimed to identify a set of political attitudes that predicts voting for populist radical-right parties and politicians. Mudde (2007) proposed three candidates for such a populist radical-right ideology, namely nativism, populism, and authoritarianism. Our findings support this theoretical assumption for nativism and populism by showing that both ideological components contribute independently to the prediction of voting preferences for Donald Trump in the United States and for AfD in Germany. In both samples, anti-immigration sentiments had the highest unique explanatory power. This result is in line with the theoretical claim that nativism is at the heart of a populist radical-right ideology (Mudde, 2007).

In our analyses, anti-immigration attitudes mediate opposing effects of JS-Self and JS-Others. This finding suggests that nativism provides a "battleground" for justice conflicts in modern western societies (see Practical Implications). We also found evidence for indirect effects of self-oriented justice concerns via populist attitudes. This finding extends previous research in two important ways. First, it supports the notion of populism as a thin-centered attitude that is generally independent of right-wing political attitudes (e.g., Mudde, 2007). In other words, there are two independent psychological pathways for how self-oriented justice concerns promote preferences for populist radical-right parties and politicians: via nativism and via populism. Social justice research does provide some theoretical explanations for the latter link: For example, people high on JS-Self are more inclined to attribute sinister motives to political agents with opposing views (Agroskin et al., 2015). A different explanation is based on the assumption that blaming political elites provides a psychological coping strategy for people who experience personal or group-based relative deprivation (Elchardus & Spruyt, 2016). Second, our research indicates that populism accounts for a smaller mediation effect compared to nativism. This is not only due to a weaker link between populist attitudes and preferences for Trump or AfD. There is also a weaker link between JS-Self and populist sentiments compared to anti-immigration attitudes. This could indicate that populism is generally less powerful in translating self-oriented justice concerns into preferences for populist radical-right agents. However, we think that this interpretation should be made with caution because the absolute size of effects might also depend on narratives of populist radical-right parties and politicians that change over time.

Contrary to our expectations, RWA was a negative predictor of AfD preferences in Germany. We suggest a theoretical explanation for this finding. Recently, there has been some evidence that the link between RWA and radical-right political thinking varies and can even be reversed depending on the predominant cultural norm in the respective society. Roets et al. (2015) showed that in Singapore, where political authorities explicitly and relentlessly endorses di-

versity, RWA was positively related to support of multiculturalism. In a similar vein, there is a strong cultural norm in Germany that radical-right parties must not attain political power on a nation-wide level due to the historical experiences in Nazi-Germany. This norm is strongly endorsed by authorities and might explain why increasing RWA—keeping all other predictors constant—results in a reduced likelihood for preferring the AfD over other political parties. On a more general level, this interpretation opens up a novel and provocative perspective on the widely adopted postulate that authoritarianism is inevitably positively predictive of preferences for populist radical-right parties and politicians (see also Bilewicz et al., 2017).

4.6.1 Limitations

This research comes with some limitations. Importantly, our data is correlational. We believe that the causal pathways we tested are the most plausible ones. However, we cannot rule out that a different causal relation accounts for this pattern of findings. For example, political attitudes might translate into justice concerns and not vice versa. However, there is evidence that justice sensitivity is highly stable over time (e.g., Schmitt et al., 2010). This speaks against that interpretation. Another limitation can be seen in the fact that we used different measures of RWA in Germany and the United States. Although both scales have been validated and are widely accepted in their national contexts, we cannot rule out that they measure different notions of authoritarianism and that this is the reason for some of the unexpected findings related to RWA. We also measured the construct of nativism in a rather narrow sense. Anti-immigration sentiments are supposed to be a cornerstone of nativist thinking. However, there are potentially other components of nativism such as protectionist attitudes or nationalism that our measure did not reflect in an adequate manner (see Mudde, 2007).

4.6.2 Practical Implications

The present research has practical implications for political communication, conflict resolution, and political counseling. From the perspective of communication, our studies suggest that different ways of discussing migration politics (especially in regard to political refugees) are likely to trigger different justice notions in citizens. It is plausible to assume that the framing of immigration issues from either a national security perspective (self-oriented justice concerns) or a human rights perspective (other-oriented justice concerns) can emphasize different justice notions and, thus, be potentially impactful in influencing the political leanings of individuals and even societies.

Political attitudes in the general public are increasingly polarized, especially in the United States (Center, 2014). Political polarization is likely to come along with interpersonal and intergroup conflicts, and one of the pressing political questions is how to deal with these kinds of conflicts. Improving the psychological understanding of how different justice notions can fuel societal conflicts could provide a fruitful avenue. For example, Montada (2007) suggested that individual differences in justice notions must be qualified and put into perspective. By doing so, individuals are likely to understand how subjective evaluations of social justice differ based on social perspectives. This should foster mutual understanding in justice conflicts and decrease the likelihood that conflicts lead to aggression and violence.

From the perspective of political counseling, one way to deal with our findings could be to counteract self-oriented social justice concerns about immigration politics. This could be done by providing people and municipalities with additional resources to foster the wealth and social standing of those people who are directly or indirectly involved in the integration process. By doing so, politics might be able to buffer and counteract fears of deprivation and disadvantages that are triggered by immigration, especially in individuals with self-oriented justice concerns.

5

The Ideological Basis of Anti-Scientific Attitudes: Effects of Authoritarianism, Conservatism, Religiosity, Social Dominance, and System Justification

This work was done in collaboration with John T. Jost. This chapter is based on: Azevedo & Jost (2021). The Ideological Basis of Anti-Scientific Attitudes: Effects of Authoritarianism, Conservatism, Religiosity, Social Dominance, and System Justification. *Group Processes & Intergroup Relations, 24*(4).

Abstract

Serious concerns about public distrust of scientific experts and the spread of misinformation are growing in the U.S. and elsewhere. To gauge ideological and psychological variability in attitudes toward science, we conducted an extensive analysis of public opinion data based on a nationally representative survey of U.S. adults (N = 1,500) and a large replication sample (N = 2,119). We estimated the unique effects of partisanship, symbolic and operational forms of political ideology, right-wing authoritarianism (RWA), social dominance orientation (SDO), and general system justification (GSJ), after adjusting for demographic factors. Multiverse analyses revealed that: (a) conservatism and SDO were significant predictors of distrust in climate science in $>$ 99.9% of model specifications, with conservatism accounting for 80% of the total variance; (b) conservatism, RWA, religiosity, (male) sex, (low) education, (low) income, and distrust of climate science were significant predictors of skepticism about science (vs. faith) in $>$ 99.9% of model specifications; (c) conservatism, RWA, (low) education, and distrust in climate science were significant predictors of trust in ordinary people (over scientific experts) $>$ 99.9% of the time; and (d) GSJ was a significant predictor of trust in scientific experts (over ordinary people) 81% of the time, after adjusting for all other demographic and ideological factors. Implications for the role of science in democratic society are discussed.

5.1 Introduction

> "The future of democracy is allied with the spread of the scientific attitude. It is the sole guarantee against wholesale misleading by propaganda."
> (Dewey, 1939, p. 114)

The public's lack of knowledge about scientific matters – and the amount of misinformation that is shared through digital social networks – is increasingly viewed as problematic in American society (FORRT, 2019; Scheufele & Krause, 2019). Although ordinary citizens appear to be quite trusting of the scientific community in general (Funk et al., 2019), systematic analysis of online communication reveals that rumors, "fake news," and conspiracy theories about scientifically pertinent topics are commonplace (e.g., Lazer et al., 2018). To take just one example, 29% of American adults believe – falsely, the available evidence indicates – that the COVID-19 virus was created deliberately in a laboratory rather than developing naturally (Schaeffer, 2020).

There are other indications that distrust of scientific experts is a genuine problem in the U.S. (and presumably other countries as well). Only 40% of Americans accept that humans evolved over time through the process of natural selection (Pew Research Center, 2019). Likewise, many Americans still doubt that anthropogenic climate change is a significant problem, although the percentage of believers varies according to how the question is asked (Annenberg Public Policy Center of the University of Pennsylvania, 2019). Given the extent of scientific skepticism, it is important for social scientists to understand the political and psychological processes that lead citizens in a democracy to make reasonable, informed decisions about complex scientific questions such as those pertaining to climate change, childhood vaccination, and the handling of pandemic diseases, among many other topics.

Of course, some citizens are more susceptible to scientific misinformation than others. People who are less educated are, perhaps unsurprisingly, more prone to accept false explanations, including conspiracy theories (Schaeffer, 2020; van Prooijen, 2017). Highly religious people are much less likely than others to believe in evolution (Pew Research Center, 2019), and they may also discount other scientific approaches (Blank & Shaw, 2015; Pennycook et al., 2020; B. T. Rutjens et al., 2018; B. Rutjens et al., 2018), especially if they view scientific findings as inconsistent with religious doctrine. From the perspective of political psychology, there are several other important factors to consider in addition to education and religiosity, beginning with political partisanship and ideology.

5.1.1 Hypothesized Effects of Partisanship and Ideology

Anti-scientific attitudes, it turns out, are especially prevalent in politically conservative circles (e.g., Blank & Shaw, 2015; Carl et al., 2016; Hornsey et al., 2018; Jacquet et al., 2014; Lazer et al., 2018; Lewandowsky & Oberauer, 2016; MacCoun & Paletz, 2009; Mooney, 2005; Pennycook et al., 2020; Tullett et al., 2016; Van Liere & Dunlap, 1980). However, the reasons for this are not entirely clear or agreed upon. It has become clear in recent decades that skepticism about climate science has been "manufactured" by powerful financial interests, including gas and oil companies, and these interests overwhelmingly support and influence

pro-business conservatives in the Republican Party (Dunlap & McCright, 2011). The public relations offensive by contemporary oil companies is reminiscent of tobacco companies' efforts in previous decades to cast doubt on scientific claims linking smoking to lung cancer (Oreskes & Conway, 2011).

Indeed, conservatives in the U.S. are much more likely than liberals to doubt the scientific consensus pertaining to climate change (e.g., Gauchat, 2012; Hornsey et al., 2016; Jacquet et al., 2014; McCright & Dunlap, 2011). In fact, recent work by Rutjens, Sutton and van der Lee (2018) suggested that conservatism was consistently linked to attitudes about climate science but not attitudes about childhood vaccination or genetically modified food. However, other research shows that conservatives are indeed significantly more distrusting of the scientific community than liberals in general, and that conservative skepticism extends well beyond specific issues such as global warming (Blank & Shaw, 2015; Carl et al., 2016; MacCoun & Paletz, 2009; Tullett et al., 2016). For instance, Pennycook et al. (2020) found that conservatives were more likely than liberals to doubt scientific recommendations about modern medicine, stem cell research, childhood vaccination, genetically modified foods, the Big Bang, and the age of the earth.

According to historical analyses of trends in public opinion, trust in science has been declining steadily among American conservatives——but not other groups—since the 1970s (Gauchat, 2012). In response to this evidence, Cofnas et al. (2018) argued that conservatives distrust scientists only because of their allegedly biased advocacy of liberal policies, and that conservatives are not distrusting of the scientific process in general. These claims were strongly contested on several fronts by Larregue (2018). By investigating attitudes toward science as well as attitudes toward scientists, the present research program contributes new empirical evidence bearing on at least some of this debate.

Because of our focus on political ideology, it is important to point out that some social scientists doubt that ordinary citizens are motivated by specific ideological concerns at all. Instead, they claim that U.S. citizens are ideologically "innocent" or "ignorant" and that they simply parrot the opinions of political elites with whom they happen to identify (Kalmoe, 2020; Kinder & Kalmoe, 2017). For instance, Achen and Bartels (2017) argue that, for most people, what appears to be ideologically motivated behavior is really "a rather mechanical reflection of what their favorite group and party leaders have instructed them to think" (p. 12). The idea is that partisanship and identification with social groups such as "liberals" and "conservatives" (what political scientists refer to as "symbolic ideology") matters much more than the positions on specific political issues (what is referred to as "operational ideology"). Applying this logic to the case of scientific distrust, one would hypothesize that people who are strongly identified with the Republican Party and with conservatives as a social group would be more likely than others to pick up and act on skeptical cues from conservative elites and Republican leaders (see Tesler, 2018). According to some social scientists, then, political partisanship should trump ideology when it comes to attitudes about science.

Others, however, maintain that there are important differences between liberals and conservatives when it comes to beliefs, opinions, and values (e.g., Ellis & Stimson, 2012; Fowler, 2020; Goren, 2013; Jacquet et al., 2014; Jost, 2006; McCright & Dunlap, 2011). Furthermore, some scholars believe that ideological differences are themselves grounded in political and psychological processes that help to explain why certain people are drawn to liberal ways of thinking,

while others are drawn to conservative points of view (Caprara & Vecchione, 2017; Hibbing et al., 2014; Jost, 2017). From the perspective of political psychology, there are many reasons to hypothesize that there would be meaningful left-right or liberal-conservative differences when it comes to attitudes about science.

5.1.2 Ideological Asymmetries in Epistemic Motives and Abilities

Many psychological differences that have been observed between liberals and conservatives pertain to epistemic motives and abilities — and are therefore directly relevant to the question of whether there are meaningful asymmetries when it comes to attitudes about science. Qualitative and quantitative reviews consistently reveal that liberals score higher than conservatives on measures of need for cognition (or enjoyment of thinking), tolerance of ambiguity, integrative complexity, and cognitive reflection (Jost, 2017), as well as actively open-minded thinking, which involves a commitment to changing one's mind on the basis of new evidence (Pennycook et al., 2020; Price et al., 2015)). In addition, liberals perform better than conservatives on tests of cognitive ability and intelligence (Deary et al., 2008; Deppe et al., 2015; Heaven et al., 2011; Hodson & Busseri, 2012; Onraet et al., 2015; Saribay & Yilmaz, 2017). All of these factors would lead one to hypothesize that liberals would be especially interested in and open to the scientific process.

Conservatives, on the other hand, score higher than liberals on measures of dogmatism, cognitive and perceptual rigidity, and personal needs for order, structure, and closure (Jost, 2017). They also exhibit more self-deception (Jost et al., 2010; Wojcik et al., 2015) and, perhaps relatedly, an intuitive – rather than analytic – thinking style (Jost & Krochik, 2014; Talhelm et al., 2015). Conservatives, at least in the U.S., are more susceptible than liberals to paranoid, conspiratorial mindsets (van der Linden et al., 2020) as well as "bullshit," that is, meaningless but seemingly profound generalizations (Pennycook & Rand, 2017; Pfattheicher & Schindler, 2016; Sterling et al., 2016). Conservatives are also more likely to spread rumors, "fake news," and political misinformation in their online social networks (Allcott & Gentzkow, 2017; Benkler et al., 2017; Guess et al., 2019; Marwick & Lewis, 2017; Miller et al., 2016). For all of these reasons, then, we would expect that conservatives would be less likely than liberals to embrace the scientific enterprise – not only when it comes to climate change but more generally.

At the same time, some researchers draw a very strong distinction between social and economic dimensions of left/right ideology (Feldman & Johnston, 2014) and argue that, when it comes to differences in epistemic motives and abilities, the social dimension matters more than the economic one (Federico & Malka, 2018). Consistent with this idea, Nilsson et al. (2019) provided evidence from Sweden (not the U.S.) that social conservatism was consistently associated with a lack of cognitive reflection and receptivity to pseudoprofound "bullshit," whereas economic conservatism was not. Taking a more extreme position on this issue, Carl et al. (2016, p. 300) argued that economic conservatives were "as or more scientifically literate and optimistic about science" than economic liberals (or progressives). Although the focus of our investigation was not on scientific literacy per se, we were able to explore associations between social and economic dimensions of ideology, on one hand, and attitudes about science and scientists, on the other.

5.1.3 Right-Wing Authoritarianism, Social Dominance Orientation, and System Justification

There are other psychological reasons as well to suspect that scientific distrust would be greater on the political right than the left. In Western-style democracies, self-identified conservatives tend to score higher than liberals on various measures of authoritarianism (Nilsson & Jost, 2020). To the extent that authoritarian impulses are at odds with democratic forms of decision-making and the pursuit of free scientific inquiry, as John Dewey (1939), Kurt Lewin (1943–1999), and many others have argued, we would expect right-wing authoritarianism (RWA) to be associated with suspicion and rejection of scientific methods and evidence (Altemeyer, 2006). There is, in fact, much evidence linking RWA to the denial of climate science (e.g., Carrus et al., 2018; Häkkinen & Akrami, 2014; S. Stanley & Wilson, 2019). However, it is less clear whether RWA is associated with anti-scientific attitudes in general. Presumably, it depends upon the extent to which scientific authority is regarded as legitimate or illegitimate in society. As noted above, many right-wingers in the U.S. today reject scientific expertise as a basis for authority (e.g., Gauchat, 2012).

Likewise, people who score high on social dominance orientation (SDO) should be less open to persuasion on the basis of scientific facts, all other things being equal (Sidanius & Pratto, 2001). Presumably, this is because the assumption that "might makes right," which undergirds the ideology of the high SDO individual, is fundamentally anti-democratic and anti-scientific. Indeed, several studies confirm that SDO is a significant predictor of anti-environmental attitudes (Milfont et al., 2018) and skepticism about global warming (Carrus et al., 2018; Clarke et al., 2019; Jylhä & Akrami, 2015; Jylhä et al., 2016; S. Stanley & Wilson, 2019). It has been argued that this is because people who are high in SDO "may be more willing to exploit the environment in unsustainable ways because to do so aids the production and maintenance of hierarchical social structures" (Meleady et al., 2020, p. 1147). The extent to which SDO predicts anti-scientific attitudes in general has yet to be fully explored.

There is yet another psychological variable – namely system justification, defined as a motivational tendency to defend, bolster, and justify aspects of the societal status quo – that is typically correlated with conservative ideology (Jost, 2020). On one hand, previous research has found that system justification in general and with respect to the capitalist economic system in particular is linked to skepticism about anthropogenic climate change (Feygina et al., 2010; Hennes et al., 2012; Hennes et al., 2016; Jylhä & Akrami, 2015). This is consistent with the idea that scientific progress often comes at the expense of longstanding cultural traditions. The fact that science upends common sense and received wisdom means that it will frequently elicit motivated system-defensiveness and backlash against the scientific community whenever it forces a critical re-assessment of the status quo, as in the case of climate science. On the other hand, the scientific establishment is considered to be a legitimate part of the social system in the U.S., at least among certain segments of the population, including those who are more liberal and more highly educated. For this reason, high (vs. low) system-justifiers may not necessarily hold more anti-scientific attitudes across the board.

5.2 Overview of the Research Program

In the present research program, we sought to analyze the political and psychological bases of anti-scientific attitudes, focusing especially on ideological factors. By adopting a multivariate framework, we were able to tease apart the effects of Democratic vs. Republican partisanship, symbolic and operational forms of political ideology, religiosity, education, authoritarianism, social dominance, and system justification. The goal was to use these variables to account for as much statistical variability in attitudes toward science as possible and to identify which predictors were the most important. As described above, there are theoretical and empirical reasons to assume that all of these demographic and political psychological variables would play some role, but to our knowledge no systematic investigation has pitted them against one another or compared the magnitudes of their influences when it comes to explaining attitudes about science and scientists.

5.3 Method

We report results based on two datasets: (a) an exploratory, quota-based sample that was nationally representative in terms of age, education, income and sex, and (b) a confirmatory (replication) convenience sample from the same population that we analyzed to minimize the influence of false positives and to maximize the generalizability and robustness of our results. Both samples completed the same study materials in the same order and manner.

5.3.1 Participants

5.3.1.1 Sample 1

We hired Survey Sampling Incorporated (SSI; now called Dynata), a market research firm that recruits participants from a panel of over 7 million U.S. citizens, to recruit a nationally representative sample of 1,500 Americans (50.67% women) in the months preceding the 2016 U.S. Presidential Election (from August 16 to September 16, 2016). The quotas were designed to match the 2014 American Community Survey (ACS) from the U.S. Census Bureau with respect to age, income, education, and sex. The representativeness of the sample is addressed in the supplementary online appendix, which shows an average absolute deviation of 10.38% (*Mdn* = 6.67%) from the desired quotas, with age showing an average absolute deviation of 0.88% (*Mdn* = 0.91%), sex 2.94% (*Mdn* = 2.94%), and income 8.78% (*Mdn* = 8.12%). Overall, the sample achieved a moderate level of national representativeness. The biggest departure had to do with education, which showed an absolute deviation of 27% (*Mdn* = 12%); our sample included approximately 25% of the expected frequency associated with the category of "Less than high school/No high school diploma."

In addition to administering a much greater number and variety of political and psychological instruments (including complete scales) than in other nationally representative surveys (such as ANES, GSS, and WVS), we took a number of steps to insure that the quality of the data would be especially high. For one thing, we followed professional recommendations to

minimize the impact of careless responding and satisficing behavior in online survey studies (Meade & Craig, 2012). Specifically, we employed 11 random attention questions, as well as page-time, survey-total, and click count controls. A total of 2,424 participants were directed to the survey, and 1,885 of them finished the survey (resulting in an attrition rate of 22%). There were 385 (16%) participants who failed more than two attention checks or finished the survey in under 22 minutes and were therefore excluded. The final sample of 1,500, participants who successfully completed all study materials had a completion time of 69.29 minutes on average (*Mdn*: 51.28min).

The final age distribution of Sample 1 was as follows: 18–24 years (12.87%), 25–34 (17.6%), 35–44 (17.53%), 45–54 (19.47%), 55–65 (15.6%), and older than 65 (16.93%). The ethnic breakdown was: White (82.47%), Black/African American (7.67%), Latino (5.87%), Asian/Pacific Islander (1.93%), Native American (0.87%), and Middle Eastern (1.2%). In terms of religion, 67.6% identified as Christian, 0.6% as Muslim, 3.47% as Jewish, 15.33% as either atheist or agnostic, and 13% responded were unsure or declined to answer. With respect to education, 3.4% reported that their highest educational achievement to be less high school, 31.67% indicated they graduated from high school (or equivalency), 31.4% reported some college (including an associate degree), 20.67% indicated receiving a bachelor's degree, and finally, and 12.87% received a graduate or professional degree. The median income category was $35,000 to $49,999. The income distribution was as follows: less than $15,000 (11.87%), $15,000 to $24,999 (12%), $25,000 to $34,999 (11.73%), $35,000 to $49,999 (15.13%), $50,000 to $74,999 (19.47%), $75,000 to $99,999 (12.8%), $100,000 to $149,999 (10.67%), and $150,000 more (6.33%).

5.3.1.2 Sample 2

Also through SSI, we administered the same survey to a large convenience sample of 2,119 American adults (21.47% women) in the months preceding the 2016 U.S. Presidential Election (from August 20 to September 13, 2016). We applied the same quality-control criteria described above. A total of 3,425 participants were directed to the survey, and 2,662 of them finished the survey (for an attrition rate of 22%). There were 543 (16%) participants who failed more than two attention checks or finished the survey in under 22 minutes and were therefore excluded. The final sample of 2,119, participants who successfully completed all study materials had a completion time of 92.01 minutes on average (*Mdn*: 57.77 min).

The final age distribution of Sample 2 was as follows: 18–24 years (9.06%), 25–34 (13.83%), 35–44 (11.42%), 45–54 (2.74%), 55–65 (3.63%), and older than 65 (59.32%). The ethnic breakdown was: White (85.89%), Black/African American (5.05%), Latino (4.11%), Asian/Pacific Islander (2.17%), Native American (0.94%), and Middle Eastern (1.84%). In terms of religion, 70.65% identified as Christian, 0.52% as Muslim, 5.57% as Jewish, 13.69% as either atheist or agnostic, and 9.58% were unsure or declined to answer. With respect to education, 1.04% reported that they did not finish high school, 15.15% graduated high school (or equivalency), 40.4% attended some college (including associate degree), 23.88% completed a bachelor's degree, and 19.54% received a graduate or professional degree. The median income category was $50,000 to $74,999. The income distribution was as follows: Less $15,000 (10.15%), $15,000 to $24,999 (8.07%), $25,000 to $34,999 (11.09%), $35,000 to $49,999 (14.39%), $50,000 to $74,999 (21.24%), $75,000 to $99,999 (14.91%), $100,000

to $149,999 (11.89%), and $150,000 more (11.89%).

5.3.2 Measures

Partisan identification. We assessed political partisanship with the traditional two-part question from the American National Election Studies, which begins as follows: "Generally speaking, do you usually think of yourself as a Republican, a Democrat, an Independent, or what?" Response options were: "Democrat", "Independent", "Republican", "Don't know", "No preference", or "other." If participants chose either "Republican" or "Democrat," they were asked about strength of partisanship: "Would you call yourself a strong [Republican/Democrat] or not very strong?" If participants chose "Independent" or "other," they were asked "Do you think of yourself as closer to the Republican or Democratic party or no preference?" Participants then receive a score on a 7-Point Likert (1 = *Strong Democrat*, 7 = *Strong Republican*).

Political ideology. The construct of political ideology assessed using two types of measures: ideological self-placement (or symbolic ideology) and issue-based preferences (or operational ideology). With respect to the former, participants located themselves on bipolar scales of political orientation in general, with respect to economic issues, and with respect to social/cultural issues. In all three cases, the response scales ranged from 1 (*strongly liberal*) to 9 (*strongly conservative*). Responses to these three items were strongly intercorrelated, ranging from .73 to .83 with a mean of $r[3617] = 0.80$, $p < .001$, $\alpha = 0.92$).

Issue-based ideological preferences were assessed using 5 different instruments: (a) the Core Domains of Social and Economic Conservatism Scale, which contains seven items, four measuring economic conservatism and three items measuring social conservatism (Feldman & Johnston, 2014); (b) Core Issues in American Politics scale, which is comprised of 12 items (e.g., "The government needs to do more to make health care affordable and accessible"; Zell & Bernstein, 2014); (c) the Social and Economic Conservatism Scale, which includes five economic and seven socially conservative items (Everett, 2013); (d) the Political Issue Statements which is comprised of 10 items measuring political orientation on the left/right ideological space (e.g., "A woman should have the right to choose what to do with her body, even if that means getting an abortion"; Inbar et al., 2009); and (e) an adapted 16-item version of Henningham's 1996, 1997 Social and Economic Conservatism scales, which are contemporary versions of the "classic" G. Wilson and Patterson (1968) scale for measuring liberalism-conservatism (see Azevedo et al., 2019, for the full list of items).

Religiosity. We assessed religiosity with a single item: "How about in terms of religion, how would you consider yourself?" (1 = *not religious/agnostic*, 9 = *very religious*).

Right-Wing Authoritarianism. Participants completed Funke's 2005 12-item Right-Wing Authoritarianism (RWA) scale, which measures authoritarian submission (RWA-S, "Obedience and respect for authority are the most important values children should learn"); authoritarian aggression (RWA-A, "What our country really needs is a strong, determined President which will crush the evil and set us on our right way again"); and authoritarian conventionalism (RWA-C, "The withdrawal from tradition will turn out to be a fatal fault one day"). Responses were provided on a scale ranging from 1 (*very strongly disagree*) to 9 (*very strongly agree*).

Social Dominance Orientation. Participants completed the Social Dominance Orientation (SDO) Scale-7 (SDO7; Ho et al., 2015), which consists of two eight-item subscales that measure group-based dominance (SDO-D, "In getting what your group wants, it is sometimes necessary to use force against other groups") and opposition to equality (SDO-E, "We should strive to make incomes more equal," [reverse coded]). Responses were given on a scale from 1 (*very strongly disagree*) to 9 (*very strongly agree*).

General system justification. Participants completed the eight-item General System Justification Scale (A. Kay & Jost, 2003), which contains items such as these: "In general, the American political system operates as it should," and "American society needs to be radically restructured" (reverse-scored). Responses were provided on 9-point scales (1 = *strongly disagree*, 9 = *strongly agree*), with a higher overall score indicating stronger system justification in general.

Distrust of climate science. Five items were used to measure distrust of scientists and their work on the topic of climate change. Two items, which were also used in research by van der Linden et al. (2020), focus on conspiracy theories: "Climate scientists and their political allies are deliberately misleading the public about global warming"; and "Selfish interests are scheming to convince the public that global warming is a major threat". Response to these items, which were provided on 9-point response scales (1 = *strongly disagree*, 9 = *strongly agree*), were strongly inter-correlated ($r(3617) = 0.86$, $p < .001$). Three other items focused on beliefs about environment problems: "Claims about environmental threats are exaggerated"; "Humans are harmfully exploiting the environment" (reverse-scored); and "If things continue on their present course, we will soon experience a major ecological catastrophe" (reverse-scored). Responses were again provided on 9-point scales (1 = *strongly disagree*, 9 = *strongly agree*), with higher scores indicating greater skepticism about climate science. Altogether, the scale exhibited very good reliability ($\alpha = 0.88$, $M = 4.43$, $SD = 2.07$).

Skepticism about science (vs. faith). Two items were used to measure attitudes toward science in general: "We believe too often in science, and not enough in faith and feelings"; "When it comes to really important questions, scientific facts don't help very much." Responses to both items, which were provided on 9-point scales (1 = *strongly disagree*, 9 = *strongly agree*), were strongly intercorrelated $r(3617) = .50$, $p < .001$, with higher scores indicating more skepticism about science in general. Importantly, these items tap into attitudes about the scientific process – and not just the actions of scientists – so they are not subject to the critique by Cofnas et al. (2018).

Trust in ordinary people (vs. scientific experts). Two items were used to measure attitudes towards epistemic authorities, comparing trust in ordinary people vs. scientific and other experts: "I'd rather put my trust in the wisdom of ordinary people than the opinions of experts and intellectuals"; and "Ordinary people can really use the help of experts to understand complicated things like science and health" (reverse-scored). Responses to both items, which were provided on 9-point scales (1 = *strongly disagree*, 9 = *strongly agree*), were intercorrelated, $r(3617) = .24$, $p < .001$), with higher scores indicating more distrust of scientific experts relative to ordinary people.

5.4 Results

We conducted linear regression models with a large number of theoretically relevant variables (15) to comprehensively investigate the political psychological basis of attitudes about science while adjusting for demographic and other variables. Because several of the variables included in the multiple regressions were highly intercorrelated, there was a significant likelihood of encountering methodological problems associated with multicollinearity, variance inflation, and overfit, leading to violations of ordinary least squares (OLS) assumptions, high variability in coefficients, and sample error (Bruce et al., 2020; Hastie et al., 2009; James et al., 2013). As a means of avoiding overinflation and significant fluctuation in coefficients of correlated variables, we conducted a series of regularized regressions to identify a subset of predictors that exhibited the most robust effects via elastic nets (Zou & Hastie, 2005). We cross-validated these analyses using several other statistical techniques (backward, forward, and stepwise regression as well as k-fold cross-validation) to ensure that the results were not produced by idiosyncratic methodological choices (Bainter et al., 2020; de Rooij & Weeda, 2020).

For each model, we provide the variance inflation factor; none of these surpassed the threshold of 10 (O'Brien, 2007; Vittinghoff et al., 2011). We also conducted Multiverse Analyses for each dependent variable and across samples, so that we were able to assess how robust the conclusions are in relation to (perhaps arbitrary) analytical choices and idiosyncratic specifications (Simonsohn et al., 2019; Steegen et al., 2016). In addition to finding the most robust models according to specified fit criteria (i.e., Akaike's, Bayesian information criterion, and highest model R^2), we examined the proportion of times each predictor was selected, as well as the overall distribution of beta coefficients, thus providing information about which predictors reliably predicted the outcome, accounting for uncertainty in the other predictors in the model. The hope is that these analyses illuminate as much as possible the generalizability of the findings from this research program.[1]

5.4.1 Sample 1

Distrust of climate science. Consistent with previous research, we observed that Republicans and conservatives were more distrusting of climate science than Democrats and liberals. The correlation between partisan identification and distrust of climate science was, $r(1498) = .56$, $p < .001$, 95% CI [.55, .60]. The correlation between symbolic ideology (the composite of the three ideological self-placement items) and distrust of climate science was even higher, $r(3617) = .63$, $p < .001$, 95% CI [.61, .65], with no noticeable difference between social and economic dimensions of ideological self-placement. With respect to operational (issue-based) measures of ideology, correlations with distrust of climate science ranged from .55 to .74 ($p < .001$). Thus, conservatives were significantly more distrusting of climate science than liberals, regardless of how ideology was measured.

We also checked to see whether the association between political ideology (measured operationally) and distrust of climate science was linear or curvilinear. A visual summary is provided

[1] An online repository was created at the Open Science Framework (OSF; https://osf.io/d5vf3/) to host the reproducible reports of all analyses reported in this article (for both individual datasets and for datasets taken together, as well as the reproducible reports of the multiverse analyses).

in Figure 5.1 (panel A), and it shows that for the majority of operational instruments, the association seems to be linear. This leads us to conclude that linear regression is an appropriate statistical technique for modeling the data in this case, and that distrust of climate science was associated with political conservatism in particular and not ideological extremity in general.

Results of the regularized regression analysis revealed that seven of the 15 predictors (including demographic variables) were significantly related to distrust of climate science. They were: education, religiosity, symbolic ideology, scores on two of the operational measures of ideology (Inbar et al., 2009; Zell & Bernstein, 2014), RWA, and SDO. Model tuning parameters yielding the lowest root mean square error (RMSE) had an α = 0.65 and λ = 0.001, indicating a heavier lasso (vs. ridge) penalty. A visual summary of the saturated linear model can be seen in the supplement materials (Figure S1). To ensure that these results were not merely a consequence of a particular statistical technique, we applied four different statistical approaches (backward, forward, and stepwise regression, and K-fold cross-validation) and generally arrived at the same results.

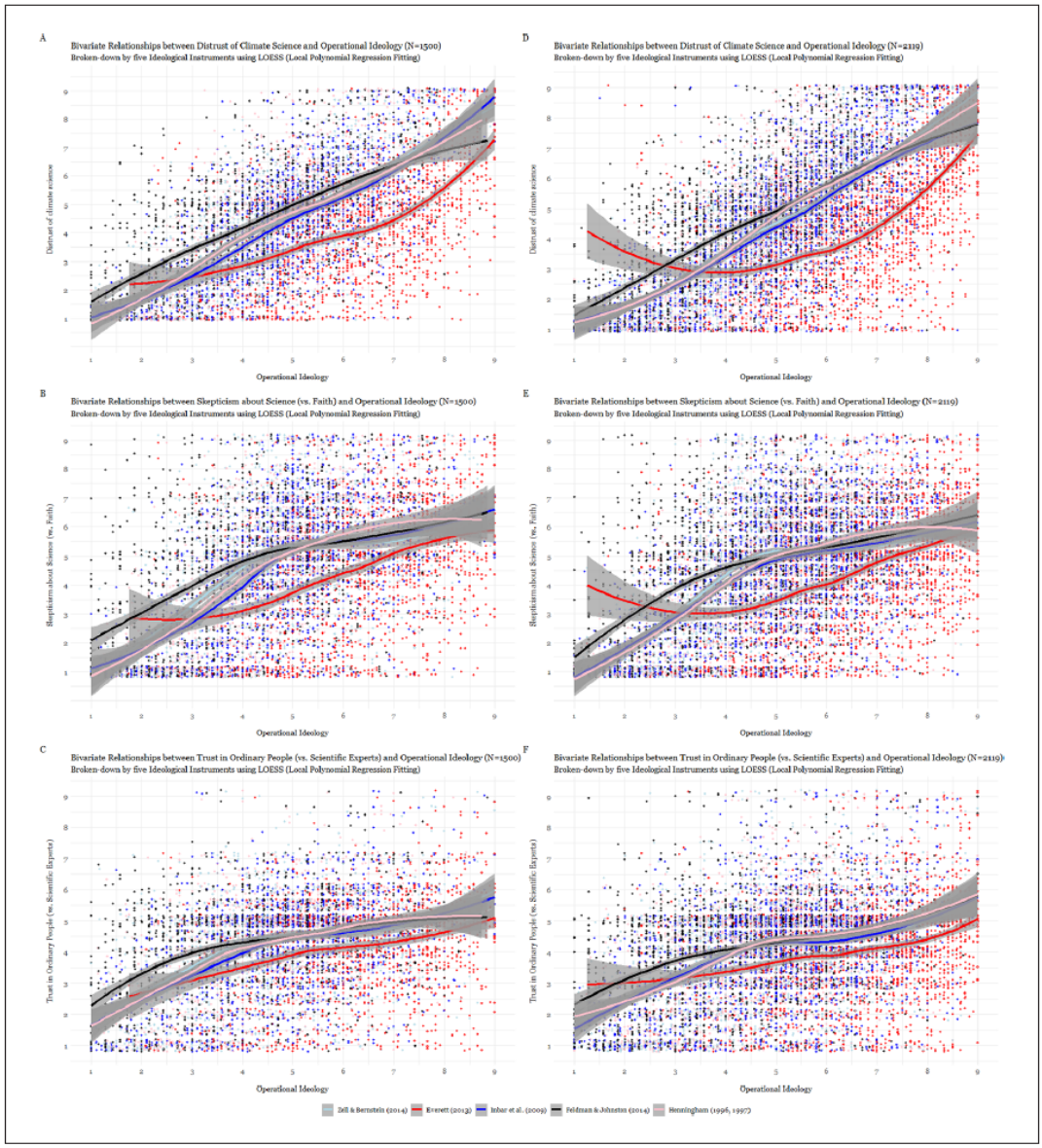
We then proceeded with fitting a linear regression model with the selected predictors (by elastic net) to the data and, as indicated in Table 5.1, the model was significant, $F(7, 1492) = 303.70$, $p < .001$, $R^2 = .59$, explaining 58.8% of the total variability in attitudes towards climate change. Only one demographic variable –education– was a significant predictor in Sample 1 ($t_{education}$ = -2.73, $p < .001$), indicating that people who were more educated were less distrusting of climate science. Symbolic ideology ($t_{symbolic}$ = 4.46, $p < .001$) and scores on two of the operational measures ($t_{Zell\ and\ Bernstein\ (2014)}$ = 14.94, $p < .001$; $t_{Inbar\ et\ al.\ (2009)}$ = 5.86, $p < .001$) were significant predictors, confirming that conservatism (as measured in these three ways) was positively associated with distrust of climate science.

Table 5.1: Multiple linear regression results with distrust of climate science as the criterion (N = 1,500).

		B		*beta*		
Predictor	*b*	95% CI [LL, UL]	*Beta*	95% CI [LL, UL]	*r*	Fit
(Intercept)	0.03	[-0.31, 0.36]				
Education	-0.09**	[-0.15, -0.02]	-0.05	[-0.08, -0.01]	-0.02	
Symbolic Ideology (Composite)	0.09**	[0.05, 0.13]	0.11	[0.06, 0.17]	.60**	
Zell & Bernstein (2014)	0.65**	[0.56, 0.73]	0.52	[0.45, 0.59]	.74**	
Inbar et al. (2009)	0.28**	[0.19, 0.37]	0.21	[0.14, 0.28]	.70**	
RWA	-0.10**	[-0.17, -0.02]	-0.07	[-0.13, -0.02]	.53**	
SDO	0.11**	[0.05, 0.17]	0.08	[0.04, 0.12]	.50**	
Religiosity	-0.05**	[-0.08, -0.02]	-0.06	[-0.10, -0.02]	.31**	
						*R2 = .588**
						95% CI[.56,.61]

Note. A significant *b*-weight indicates the beta-weight is also significant. b = unstandardized regression weights; β = standardized regression weights; r = zero-order correlation; LL and UL = lower and upper limits of a confidence interval, respectively. RWA = right-wing authoritarianism; SDO = social dominance orientation. *p<.05. **p<.01

Figure 5.1: Assessment of curvilinearity between dependent variables and ideology per sample



Furthermore, RWA and SDO were significant predictors of distrust in climate science (t_{RWA} = -2.60, $p < .05$; t_{SDO} = 3.85, $p < .001$) after adjusting for demographic variables and liberalism-conservatism. People who scored higher in SDO were more distrusting of climate science, consistent with previous studies (Jylhä & Akrami, 2015; S. Stanley & Wilson, 2019). Surprisingly, however, people who scored higher in RWA were less distrusting of climate science after adjusting for all of the other variables in the model, including multiple measures of conservatism. However, we did not replicate this effect in the multiverse analyses described below.[2]

We were also interested in estimating the relative importance of each of the predictors, in addition to estimating their magnitude and direction. Therefore, we followed recommendations by Grömping (2006) to partition model-explained variance (R^2) into its regressor components. Results, which are presented in Table 5.2, reveal that, as hypothesized, political ideology was not only the largest contributor with respect to effect size, but it occupied the first three positions in variance explained. This means that when we quantified the contributions of each individual predictor in the final multiple linear regression model, liberalism/conservatism was far and away the most important variable when it comes to explaining distrust of climate science. It was more important than political partisanship, education, and religiosity.

Skepticism about Science (vs. Faith). As expected, Republicans and conservatives were more skeptical about science in general than were Democrats and liberals. The correlation between partisan identification and skepticism about science was $r(1498) = .34$, $p < .001$, 95% CI [.31, .37]. The correlation between symbolic ideology and skepticism about science was even higher,$r(1498) = .45$, $p < .001$, 95% CI [.42, .47], with the correlation for social conservatism ($r = .50$) exceeding that for economic conservatism ($r = .31$).

With respect to operational measures of ideology, correlations with skepticism about science in general ranged from .41 to .57 ($p < .001$). Conservatives were significantly more skeptical about science across the board than liberals, regardless of how ideology was measured. Social attitudes were somewhat stronger predictors of attitudes about science in general (with *rs* ranging from .47 to .65) than were economic attitudes (with *rs* ranging from .16 to .37), although both were significant predictors.

[2]Although general system justification was correlated with skepticism about climate science it was nonsignificant in the multivariate model. One reviewer noted that in this sample general system justification was not as strongly correlated with political attitudes as is typically the case (e.g., see Jost, 2020). An in-depth analysis by Azevedo et al. (2017) suggest that this may be due to the fact that supporters of Donald Trump scored considerably lower on general system justification than supporters of other Republican candidates. We also administered Jost and Thompson (2000) economic system justification scale and found that, replicating previous research (Hennes et al., 2012; Hennes et al., 2016), it was strongly correlated with skepticism about climate science, $r(1,498) = .55$, $p < .001$). Economic system justification was more moderately correlated with two dependent variables, namely skepticism about science (vs. faith), $r(1,498) = .24$, $p < .001$) and trust in ordinary people (vs. scientific experts), $r(1,498) = .24$, $p < .001$). Gender-specific system justification, measured with Jost and Kay (2005) scale, was also more strongly correlated with skepticism about climate science, $r(1,498) = .44$, $p < .001$, than with skepticism about science (vs. faith), $r(1,498) = .22$, $p < .001$) and trust in ordinary people (vs. experts), $r(1,498) = .15$, $p < .001$). On the assumption that general system justification would be more relevant than economic or gender-specific system justification to attitudes about science in general, we included the former but not the latter in the multivariate regression models reported here.

Table 5.2: Estimation of the relative importance of predictors of distrust of climate science and the VIF for each (N = 1,500)

	Rank	Relative Importance	Cumulative Sum	Variance Inflation Factor
Zell & Bernstein (2014)	1	0.35	0.35	4.40
Inbar et al. (2009)	2	0.25	0.59	4.74
Ideological self-placement (composite)	3	0.16	0.75	2.39
Social Dominance Orientation	5	0.10	0.85	2.80
Right-Wing Authoritarianism	4	0.10	0.96	1.56
Religiosity	6	0.03	0.99	1.52
Education	7	0.01	1.00	1.06
Sum	-	1		

Note. VIF = variance inflation factor

We also checked to see whether the association between political ideology and trust in science (vs. faith) was linear or curvilinear. A visual summary is provided in Figure 5.1 (panel B). It suggests that the true association might be curvilinear, so for the sake of precision, we included quadratic terms in the regularized regressions.

Results of this analysis revealed that seven of the predictors were significantly related to skepticism about science in general. They were education, religiosity, partisanship, scores on three of the operational measures of ideology (Everett, 2013; Henningham, 1996, 1997; Zell & Bernstein, 2014), distrust of climate science, and RWA. Model tuning parameters yielding the lowest root mean square error (RMSE) yielded α = 0.10 and λ = 0.001, indicating a heavier ridge (vs. lasso) penalty. To ensure that the results were not merely a consequence of a particular statistical technique, we again applied four different statistical approaches (backward, forward, and stepwise regression as well as k-fold cross-validation) and generally arrived at the same conclusions.

We then proceeded to fit a regression model with the selected predictors (by elastic net) to the data and, as indicated in Table 5.3, which also adjusts for skepticism about climate science in particular, the model was significant, $F(8, 3517) = 179.8$, $p < .001$, $R^2 = .49$. The model explained 49% of the total variance in skepticism about science in general. Education was the only significant demographic predictor ($t_{education}$ = -8.58, $p < .001$), indicating people who were educated were less skeptical about science. As expected, people who were more religious were more skeptical about science ($t_{religiosity}$ = 11.15, $p < .001$).

Scores on three of the operational ideology instruments ($t_{Zell\ and\ Bernstein\ (2014)}$ = 4.25, $p < .001$; $t_{Everett\ (2013)}$ = 3.68, $p < .001$; $t_{Henningham\ (1996,\ 1997)}$ = 4.44, $p < .001$) were significant linear predictors. Political conservatism (measured in these ways) was positively associated with skepticism about science in general. The quadratic term was significant for one of the scales ($t_{Zell\ and\ Bernstein\ (2014)}$ = -6.14, $p < .001$). Inspection of Figure 5.1 (panel B) leads to the conclusion that the patterns with respect to ideological extremity are different for different scales.

After adjusting for ideology, partisanship was no longer a significant predictor of skepticism about science in general (t = -1.90, p = .057). RWA remained a strong predictor of skepticism (t_{RWA} = 9.48, $p < .001$), even after adjusting for demographic variables, liberalism-

Table 5.3: Multiple linear regression results with skepticism about science (vs. faith) as the criterion (N = 1,500).

Predictor	*b*	*B* 95% CI [LL, UL]	*Beta*	*beta* 95% CI [LL, UL]	*r*	Fit
(Intercept)	-0.13	[-0.76, 0.50]				
Education	-0.33**	[-0.41, -0.26]	-0.16	[-0.20, -0.13]	-.23**	
Zell & Bernstein (2014)	0.59**	[0.32, 0.86]	0.43	[0.23, 0.63]	.47**	
[Quadratic] Zell & Bernstein (2014)	-0.08**	[-0.10, -0.05]	-0.54	[-0.72, -0.37]	.42**	
Henningham (1996, 1997)	0.29**	[0.16, 0.41]	0.19	[0.11, 0.27]	.57**	
Everett (2013)	-0.16**	[-0.24, -0.07]	-0.11	[-0.16, -0.05]	.41**	
Distrust of climate science	0.23**	[0.18, 0.26]	0.21	[0.18, 0.25]	.47**	
Religiosity	0.20**	[0.17, 0.24]	0.26	[0.21, 0.30]	.51**	
Right-Wing Authoritarianism	0.47**	[0.38, 0.57]	0.31	[0.25, 0.38]	.60**	
						R^2 = .491** 95% CI [.46,.52]

Note. A significant *b*-weight indicates the beta-weight is also significant. b = unstandardized regression weights; β = standardized regression weights; r = zero-order correlation; LL and UL = lower and upper limits of a confidence interval, respectively. RWA = right-wing authoritarianism; SDO = social dominance orientation. *p<.05. **p<.01

conservatism, and skepticism about climate science in particular.

To understand the importance of various predictors, we summarize relative rankings in Table 5.4, following recommendations by Grömping (2006). Results revealed that RWA was the first, and largest contributor, followed by scores on the Zell and Bernstein (2014) conservatism scale, religiosity, scores on the Henningham (1996, 1997) scale, distrust of climate science, education, and scores on the Everett (2013) scale. Taken in conjunction, political ideology was the largest contributor, amounting to 0.41 of the variance explained. Thus, skepticism about science in general (vs. faith) was predicted more strongly by RWA and conservatism than by partisan identification, education, religiosity, or skepticism about climate change in particular.

Trust in Ordinary People (vs. Scientific Experts). Republicans and conservatives were more trusting in ordinary people than were Democrats and liberals. The correlation between partisan identification and trust in ordinary people (vs. experts) was $r(1498) = .25$, $p < .001$, 95% CI [.22, .28]. The correlation between symbolic ideology and trust in ordinary people was higher, at r (1498) = .34, $p < .001$, 95% CI [.31, .37], with the correlation for social conservatism ($r = .33$, $p < .001$) slightly exceeding that for economic conservatism ($r = .27$, $p < .001$).

With respect to operational measures of ideology, correlations with trust in ordinary people (vs. experts) ranged from .28 to .44 ($p < .001$). Thus, conservatives were significantly more trusting of ordinary people (and less trusting of experts) than liberals, regardless of how ideology was measured. Social conservatism was a slightly stronger predictor of attitudes about science (with *rs* ranging from .29 to .44) than economic conservatism (with *rs* ranging from .18 to .32), but both were clearly significant predictors.

Table 5.4: Estimation of the relative importance of predictors of skepticism about science (vs. faith) and the VIF for each (N = 1,500)

	Rank	Relative Importance	Cumulative Sum	Variance Inflation Factor
Right-Wing Authoritarianism	1	0.24	0.24	2.94
Zell & Bernstein (2014)	2	0.18	0.42	5.44
Religiosity	3	0.18	0.60	1.56
Henningham (1996, 1997)	4	0.17	0.77	5.28
Distrust of climate science	5	0.10	0.87	2.30
Education	6	0.08	0.99	1.07
Everett (2013)	7	0.06	1.00	2.49
Sum	-	1		

We also checked to see whether the association between ideology and trust in ordinary people was linear or curvilinear. A visual summary is provided in Figure 5.1 (panel C). It suggests that the association may be curvilinear, so we included quadratic terms in the regularized regressions via elastic net.

Results revealed that seven predictors were significantly related to trust in ordinary people (vs. experts). They were education, partisanship, scores on two of the operational measures of conservatism (Henningham, 1996, 1997; Zell & Bernstein, 2014), RWA, system justification, and distrust of climate science. Model tuning parameters yielding the lowest root mean square error (RMSE) had an α = 0.10 and λ = 0.01, indicating a much heavier ridge (vs. lasso) penalty. To ensure that these results were not the consequence of a particular statistical technique, we applied four different statistical approaches (backward, forward, and stepwise regression, as well as k-fold cross-validation) and once again, generally arrived at the same results.

We then proceeded with fitting a linear regression model with the selected predictors (via elastic net) to the data. As shown in Table 5.5, the model was significant $F(8, 1457) = 78.31$, $p < .001$, explaining 30.1% of the total variation in trust in ordinary people (vs. experts). Only one demographic variable, education, was a significant predictor ($t_{education}$ = -5.16, $p < .001$); people who were more educated were less distrusting of scientific experts. Scores on two of the operational measures ($t_{\textit{Zell and Bernstein (2014)}}$ = 4.09, $p < .001$; $t_{\textit{Henningham (1996, 1997)}}$ = 3.61, $p < .001$) were significant predictors, confirming that conservatism was positively associated with trusting ordinary people (vs. experts). Quadratic effects were observed for one of the measures of operational ideology ($t_{\textit{Zell and Bernstein (2014)}}$ = -4.89, $p < .001$), signifying that in this case the positive association between conservatism and scientific distrust levelled out at extreme values.

After adjusting for ideology, partisanship exerted a small but significant effect on trusting or-

Table 5.5: Multiple linear regression results with trust in ordinary people (vs. scientific experts) as the criterion (N = 1,500).

Predictor	*B*		*beta*			
	b	95% CI [LL, UL]	*Beta*	95% CI [LL, UL]	*r*	Fit
(Intercept)	1.47**	[0.93, 2.01]				
Education	-0.17**	[-0.23, -0.11]	-0.12	[-0.16, -0.07]	-.16**	
Zell & Bernstein (2014)	0.48**	[0.25, 0.72]	0.5	[0.26, 0.74]	.41**	
Henningham (1996, 1997)	0.19**	[0.09, 0.30]	0.18	[0.08, 0.28]	.44**	
[Quadratic] Zell & Bernstein (2014)	-0.05**	[-0.07, -0.03]	-0.51	[-0.72, -0.31]	.36**	
Distrust of climate science	0.27**	[0.22, 0.32]	0.34	[0.28, 0.41]	.46**	
Partisanship (ANES)	-0.09**	[-0.13, -0.05]	-0.13	[-0.19, -0.07]	.25**	
Right-Wing Authoritarianism	0.16**	[0.08, 0.23]	0.15	[0.08, 0.22]	.43**	
System Justification	-0.06*	[-0.11, -0.01]	-0.05	[-0.09, -0.00]	0.02	
						R^2 = .301**
						95% CI[.26,.33]

Note. A significant *b*-weight indicates the beta-weight is also significant. b = unstandardized regression weights; β = standardized regression weights; r = zero-order correlation; LL and UL = lower and upper limits of a confidence interval, respectively. ANES = American National Election Studies. *p<.05. **p<.01

dinary people over experts (t = -4.22, $p < .001$), but the effect was negative. This means that, after adjusting for all other demographic and ideological variables, Democrats were actually more trusting of ordinary people than Republicans. RWA and system justification were significant (and opposite) predictors of trust in ordinary people vs. experts (t_{RWA} = 4.06, $p < .001$; $t_{SystemJustification}$ = -2.17, $p < .05$), after adjusting for demographic variables, liberalism-conservatism, and attitudes about climate science. That is, people who scored higher on RWA trusted ordinary people more (and experts less), whereas people who scored higher on general system justification treated ordinary people less (and experts more).

To estimate the relative importance of predictors, we again rank-ordered the variables in 5.6. In this case, conservatism held the second and third ranks, explaining slightly less than half of the total variance. The largest contributor to trust in ordinary people (over experts) was distrust in climate science, and the fourth largest contributor was RWA. All of these variables accounted for more variance than education, partisanship, and other factors.

5.4.2 Sample 2

Distrust of climate science. With only a few exceptions (discussed below), we replicated the results summarized above in a second (confirmatory) sample. As before, Republicans were more distrusting of climate science than Democrats, $r(2117) = .58$, $p < .001$, 95% CI [.56, .60]. Based on the composite measure of symbolic ideology, people who identified as more conservative were more distrusting of climate science, $r(2117) = .65$, $p < .001$, 95% CI [.63,

Table 5.6: Estimation of the relative importance of predictors of ordinary people (vs. scientific experts) and the VIF for each (N = 1,500).

	Rank	Relative Importance	Cumulative Sum	Variance Inflation Factor
Distrust of climate science	1	0.29	0.29	2.3
Zell & Bernstein (2014)	2	0.25	0.54	5.67
Henningham (1996, 1997)	3	0.17	0.71	5.12
Right-Wing Authoritarianism	4	0.17	0.88	2.66
Education	5	0.07	0.95	1.07
Partisanship (ANES 7-points)	6	0.05	0.99	1.95
System Justification	7	0.01	1.00	1.08
Sum	-	1		

Note. ANES = American National Election Studies.

.66], with no noticeable difference between social and economic dimensions of ideology. In terms of operational ideology, people who endorsed conservative attitudes were also more distrusting of climate science, regardless of how operational ideology was measured ($.56 < r(2117) < .77$, $p < .001$). The differences between social attitudes (with *rs* ranging from .51 to .73) and economic attitudes (with *rs* ranging from .51 to .69) were negligible when it came to predicting climate skepticism. As in Sample 1, the association between ideology (measured operationally) and distrust of climate science was again largely linear, as shown in Figure 5.1 (panel D), with scores on the Everett (2013) scale being the exception.

Regularized regression analyses revealed that seven of the 15 predictors (including demographic variables) were significantly related to distrust of climate science. They were: age, education, religiosity, symbolic ideology, scores on two of the operational measures of ideology (Inbar et al., 2009; Zell & Bernstein, 2014), and SDO. Model tuning parameters yielding the lowest root mean square error (RMSE) had an $\alpha = 0.91$ and $\lambda = 0.02$, indicating a heavier lasso (vs. ridge) penalty. To ensure that these results were not merely a consequence of a particular statistical technique, we applied four different statistical approaches (backward, forward, and stepwise regression, as well as k-fold cross-validation) and arrived at very similar conclusions.

We proceeded to fit a linear regression model with the selected predictors (via elastic net) to the data and, as indicated in Table 5.7, the model was significant, $F(7, 2111) = 484.10$, $p < .001$, explaining 61.6% of the variability in attitudes towards climate change. Two demographic variables, age and education, were significant predictors (t_{age} = -3.25, $p < .01$; $t_{education}$ = -2.54, $p < .05$), indicating that people who were older and more educated were less distrusting of climate science. Symbolic ideology ($t_{symbolic} = 2.83$, $p < .01$) and scores on two of the operational measures ($t_{\textit{Zell and Bernstein (2014)}} = 20.18$, $p < .001$; $t_{\textit{Inbar et al. (2009)}} = 6.13$, $p < .001$) were significant predictors, confirming that conservatism (as measured in these three ways) was positively associated with distrust of climate science. As in Sample 1, and consistent with previous research (e.g., Carrus et al., 2018; Jylhä & Akrami, 2015; S. Stanley & Wilson, 2019), SDO was a significant predictor of distrust in climate science ($t_{SDO} = 2.94$,

$p < .001$), even after adjusting for demographic variables and liberalism-conservatism.

Table 5.7: Multiple linear regression results with distrust of climate science as the criterion.

		B		*beta*			
Predictor	*b*	95% CI [LL, UL]		*Beta*	95% CI [LL, UL]	*r*	Fit
(Intercept)	0.03	[-0.31, 0.36]					
Age	-0.06**	[-0.09, -0.02]		-0.05	[-0.08, -0.02]	.15**	
Education	-0.08*	[-0.14, -0.02]		-0.04	[-0.07, -0.01]	-0.01	
Symbolic Ideology (Composite)	0.05**	[0.02, 0.09]		0.06	[0.02, 0.10]	.63**	
Zell & Bernstein (2014)	0.78**	[0.70, 0.85]		0.61	[0.55, 0.67]	.77**	
Inbar et al. (2009)	0.22**	[0.15, 0.29]		0.16	[0.11, 0.22]	.71**	
SDO	0.07**	[0.02, 0.12]		0.05	[0.02, 0.08]	.48**	
Religiosity	-0.04**	[-0.07, -0.02]		-0.06	[-0.09, -0.03]	.37**	
							R^2 = .616**
							95% CI[.59,.64]

Note. A significant *b*-weight indicates the beta-weight is also significant. b = unstandardized regression weights; β = standardized regression weights; r = zero-order correlation; LL and UL = lower and upper limits of a confidence interval, respectively. SDO = Social Dominance Orientation. *p<.05. **p<.01

We again estimated the relative importance of each predictor, partitioning model-explained variance (R^2) into its regressor components. Results, which are presented in Table 5.8, reveal that political ideology was not only the largest contributor with respect to effect size, but it occupied the first three positions in variance explained, amounting to 84%. As in Sample 1, liberalism/conservatism was far and away the most important variable when it came to explaining distrust of climate science.

Table 5.8: Estimation of the relative importance of predictors of distrust in climate science and the VIF for each (N = 2,119)

	Rank	Relative Importance	Cumulative Sum	Variance Inflation Factor
Zell & Bernstein (2014)	1	0.39	0.39	4.96
Inbar et al. (2009)	2	0.27	0.66	3.91
Ideological self-placement (composite)	3	0.18	0.84	2.57
Social Dominance Orientation	5	0.10	0.93	1.51
Religiosity	4	0.05	0.99	1.43
Age	6	0.01	0.99	1.35
Education	7	0.00	1.00	1.24
Sum	-		1	

Skepticism about Science (vs. Faith). Republicans and conservatives were again more skeptical about science in general than were Democrats and liberals. The correlation between partisan identification and science skepticism was $r(2117) = .35$, $p < .001$, 95% CI [.33, .37]. The

correlation between symbolic ideology and science skepticism was even higher, at $r(2117) = .44$, $p < .001$, 95% CI .42, .46], with the correlation for social conservatism ($r = .50$) exceeding that for economic conservatism ($r = .32$, Table S4), although both were positive and significant.

With respect to operational measures of ideology, correlations with skepticism about science in general ranged from .42 to .56 ($p < .001$). Conservatives were significantly more skeptical about science across the board than liberals, regardless of how ideology was measured. Social attitudes were stronger predictors of attitudes about science (with *rs* ranging from .46 to .62) than were economic attitudes (with *rs* ranging from .22 to .36), but both were significant predictors. We also checked to see whether the association between political ideology and trust in science (vs. faith) was linear or curvilinear. A visual summary is provided in Figure 5.1 (panel E). It suggests that the association is likely to be curvilinear, so we included quadratic terms in the regularized regression to model the data.

Results of this analysis revealed that nine of the predictors were significantly related to skepticism about science in general. They were education, sex (male), income, religiosity, partisanship, scores on two of the operational measures of ideology (Henningham, 1996, 1997; Zell & Bernstein, 2014), distrust of climate science, and RWA. Model tuning parameters yielding the lowest root mean square error (RMSE) had an $\alpha = 0.34$ and $\lambda = 0.001$, indicating a heavier ridge (vs. lasso) penalty. To ensure that the results were not merely a consequence of a particular statistical technique, we again applied four different statistical approaches (backward, forward, and stepwise regression, as well as k-fold cross-validation) and obtained very similar results.

We then proceeded with fitting a regression model with the selected predictors (by elastic net) and found that the model, which also adjusts for skepticism about climate science in particular, was significant, $F(10, 2053) = 196$, $p < .001$, $R^2 = .49$ (see Table 5.9). The model explained 48.9% of the total variance in skepticism about science in general. Three demographic variables (income, sex, and education) were significant predictors ($t_{income} =$ -3.72, $p < .001$; $t_{male} =$ -3.32, $p < .001$; $t_{education} =$ -7.04, $p < .001$). People who were wealthier, male, and more educated were less skeptical about science. As expected, people who were more (vs. less) religious were more skeptical about science ($t_{religiosity} = 13.016$, $p < .001$).

Scores on three of the operational ideology instruments ($t_{\text{Zell and Bernstein (2014)}} = 5.15$, $p < .001$; $t_{\text{Everett (2013)}} = 3.17$, $p < .01$; $t_{\text{Henningham (1996, 1997)}} = 3.71$, $p < .001$) were significant predictors. Political conservatism (measured in these three ways) was positively associated with skepticism about science in general. The quadratic term was significant for two of the variables ($t_{\text{Zell and Bernstein (2014)}} = -7.43$, $p < .001$; $t_{\text{Henningham (1996, 1997)}} = 3.42$, $p < .001$). After adjusting for ideology, partisanship exerted a small but significant negative effect on skepticism about science ($t =$ -2.31, $p < .05$). RWA was also a significant predictor of skepticism in general ($t_{RWA} = 9.04$, $p < .001$) after adjusting for demographic variables, liberalism/conservatism, and skepticism about climate science in particular.

To understand the importance of the various predictors, we present relative rankings in Table 5.10, which reveal that political ideology was the largest contributor (Zell & Bernstein, 2014), occupying the first and fourth positions with respect to variance explained. RWA was

Table 5.9: Multiple linear regression results with skepticism about science (vs. faith) as the criterion (N = 2,119)

Predictor	*b*	*B* 95% CI [LL, UL]	*Beta*	*beta* 95% CI [LL, UL]	*r*	Fit
(Intercept)	-0.11	[-0.73, 0.50]				
Education	-0.28**	[-0.35, -0.20]	-0.13	[-0.17, -0.10]	-.23**	
Income	-0.29**	[-0.46, -0.12]	-0.06	[-0.09, -0.02]	-.05*	
Gender (Male)	-0.07**	[-0.11, -0.03]	-0.07	[-0.10, -0.03]	-.13**	
Zell & Bernstein (2014)	0.88**	[0.65, 1.12]	0.69	[0.51, 0.88]	.49**	
[Quadratic] Zell & Bernstein (2014)	-0.09**	[-0.11, -0.07]	-0.75	[-0.91, -0.59]	.44**	
Henningham (1996, 1997)	0.18**	[0.08, 0.29]	0.13	[0.05, 0.20]	.56**	
Distrust of climate science	0.23**	[0.18, 0.28]	0.23	[0.18, 0.28]	.48**	
Religiosity	0.20**	[0.17, 0.23]	0.25	[0.22, 0.29]	.50**	
Partisanship (ANES 7-points)	-0.05*	[-0.09, -0.01]	-0.05	[-0.10, -0.01]	.35**	
RWA	0.36**	[0.28, 0.44]	0.25	[0.19, 0.30]	.58**	
						R^2 = .488**
						95% CI[.46,.51]

Note. A significant *b*-weight indicates the beta-weight is also significant. b = unstandardized regression weights; β = standardized regression weights; r = zero-order correlation; LL and UL = lower and upper limits of a confidence interval, respectively. RWA = right wing authoritarianism; ANES = American Natrional Election Studies. *p<.05. **p<.01

the second largest contributor, and religiosity the third. Across various models estimated during a process of cross-validation, we observed that education and distrust in climate science were always significant predictors of skepticism about science in general, although they explained less variance than ideology, RWA, and religiosity. In summary, then, the holding of anti-scientific attitudes was better predicted by conservatism, RWA, and religiosity than by partisanship, education, or climate skepticism.

Trust in ordinary people (vs. scientific experts). Republicans and conservatives were more trusting in ordinary people (vs. scientific experts) than were Democrats and liberals. The correlation between partisan identification and trust in ordinary people was $r(2119) = .25$, $p < .001$, 95% CI [.22, .28] (see Table 5.1). The correlation between symbolic ideology and trust in ordinary people was again higher, at $r(2119) = .33$, $p < .001$, 95% CI [.30, .36], with the correlation for social conservatism ($r = .28$, $p < .001$) slightly exceeding that for economic conservatism ($r = .17$, $p < .001$).

With respect to operational measures of ideology, correlations with trust in ordinary people (vs. experts) ranged from .27 to .42 ($p < .001$). Thus, conservatives were significantly more trusting of ordinary people (and less trusting of experts) than liberals, regardless of how ideology was measured. Social conservatism was a stronger predictors of attitudes about science (with *rs* ranging from .28 to .42) than economic conservatism (with *rs* ranging from .17 to .30), but both were significant predictors. We also checked to see whether the association between ideology and trust in ordinary people was linear or curvilinear. A visual summary is provided in Figure 5.1 (panel F). It suggests that the association is somewhat curvilinear, so we included quadratic terms in the regularized regression.

Table 5.10: Estimation of the relative importance of predictors of skepticism about science (vs. science) and the VIF for each (N = 2,119)

	Rank	Relative Importance	Cumulative Sum	Variance Inflation Factor
Zell & Bernstein (2014)	1	0.21	0.21	6.54
Right-Wing Authoritarianism	1	0.20	0.41	2.91
Religiosity	3	0.17	0.58	1.54
Henningham (1996, 1997)	4	0.15	0.73	5.59
Distrust of climate science	5	0.12	0.85	2.52
Education	6	0.07	0.92	1.39
Partisanship (ANES 7-points)	7	0.04	0.96	2.09
Income	8	0.03	0.99	1.33
Gender (Male)	9	0.01	1.00	1.15
Sum	-	1		

Note. ANES = American National Election Studies.

Results revealed that seven predictors were significantly related to trust in ordinary people (vs. experts). They were education, partisanship, scores on two of the operational measures of ideology (Henningham, 1996, 1997; Zell & Bernstein, 2014), RWA, system justification, and distrust of climate science. Model tuning parameters yielding the lowest root mean square error (RMSE) had an α = 0.43 and λ = 0.001, indicating a much heavier ridge (vs. lasso) penalty. To ensure that these results were not the consequence of a particular statistical technique, we applied four different statistical approaches (backward, forward, and stepwise regression, as well as k-fold cross-validation) and again arrived at highly similar results.

We then proceeded with fitting a linear regression model to the data. As shown in Table 5.11, the model was significant, $F(8, 255) = 93.96$, $p < .001$, $R^2 = .27$, explaining 26.8% of the total variation in trust in ordinary people (vs. experts). Only one demographic variable, education, was a significant predictor ($t_{education}$ = -6.06, $p < .001$); people who were more educated were less distrusting of scientific experts. Scores on three of the operational measures ($t_{\textit{Zell and Bernstein (2014)}}$ = 4.15, $p < .001$; $t_{\textit{Henningham (1996, 1997)}}$ = 4.86, $p < .001$) were significant predictors, confirming that conservatism was positively associated with trusting ordinary people (vs. experts). Quadratic effects were observed for two measures ($t_{\textit{Zell and Bernstein (2014)}}$ = -4.53, $p < .001$), signifying that the positive association between conservatism and scientific distrust levelled out at extreme values.

After adjusting for ideology, partisanship exerted a small but significant effect on trusting ordinary people over experts (t = -3.38, $p < .001$), but the effect was negative. This means that, after adjusting for all of the other demographic and ideological variables, Democrats were actually more trusting of ordinary people than Republicans. RWA and system justification were significant (and opposite) predictors of trust in ordinary people vs. experts (t_{RWA} = 3.37, $p < .001$; $t_{SystemJustification}$ = -2.48, $p < .01$), after adjusting for demographic variables, liberalism-conservatism, and attitudes about climate science. That is, people who scored higher on RWA trusted ordinary people more (and experts less), whereas people who scored higher on general system justification trusted ordinary people less (and experts more).

To estimate the relative importance of predictors, we rank-ordered the variables in Table 5.12. In this case, ideology held the second and third ranks, explaining nearly half of the model's

variance. The largest contributor to trust in ordinary people (over experts) was distrust in climate science, and the fourth largest contributor was RWA. All of these variables accounted for more variance than education, partisanship, and other factors.

Table 5.11: Multiple linear regression results with trust in ordinary people (vs. scientific experts) as the criterion.

		B		*beta*			
Predictor	*b*	95% CI [LL, UL]	*Beta*	95% CI [LL, UL]	*r*	Fit
(Intercept)	1.59**	[1.05, 2.14]				
Education	-0.20**	[-0.26, -0.13]	0.01	[.00, .02]	-.18**	
Zell & Bernstein (2014)	0.46**	[0.24, 0.68]	0.01	[.00, .01]	.38**	
Henningham (1996, 1997)	0.23**	[0.14, 0.33]	0.01	[.00, .02]	.42**	
[Quadratic] Zell & Bernstein (2014)	-0.05**	[-0.07, -0.03]	0.01	[.00, .02]	.34**	
Distrust of climate science	0.25**	[0.21, 0.30]	0.04	[.03, .06]	.44**	
Partisanship (ANES)	-0.07**	[-0.10, -0.03]	0	[-.00, .01]	.25**	
Right-Wing Authoritarianism	0.12**	[0.05, 0.19]	0	[-.00, .01]	.40**	
System Justification	-0.06*	[-0.11, -0.01]	0	[-.00, .01]	0	
						R^2 = .268** 95% CI[.23,.30]

Note. A significant *b*-weight indicates the beta-weight is also significant. b = unstandardized regression weights; β = standardized regression weights; r = zero-order correlation; LL and UL = lower and upper limits of a confidence interval, respectively; ANES = American Natrional Election Studies. *p<.05. **p<.01

Table 5.12: Estimation of the relative importance of predictors of trust in ordinary people (vs. scientific experts) and the VIF for each (N = 2,119)

	Rank	Relative Importance	Cumulative Sum	Variance Inflation Factor
Distrust of climate science	1	0.28	0.28	2.49
Zell & Bernstein (2014)	2	0.24	0.51	6.34
Henningham (1996, 1997)	3	0.18	0.70	5.28
Right-Wing Authoritarianism	4	0.16	0.85	2.88
Education	5	0.09	0.94	1.13
Partisanship (ANES 7-points)	6	0.05	0.99	2.08
System Justification	7	0.01	1.00	1.08
Sum	-	1.00		

Note. ANES = American National Election Studies.

5.4.3 Consolidating Results: Multiverse Analyses

To a very high degree, we obtained similar results in two U.S. samples using different statistical techniques and various operationalizations of ideology and attitudes toward science. In particular, we observed strong and consistent evidence that liberals held more favorable attitudes toward science (and the community of scientists) than conservatives. However, there were some minor differences between the two samples, and it is useful to investigate the gen-

eralizability of results across various model specifications.[3] For this reason, we conducted a series of multiverse analyses.

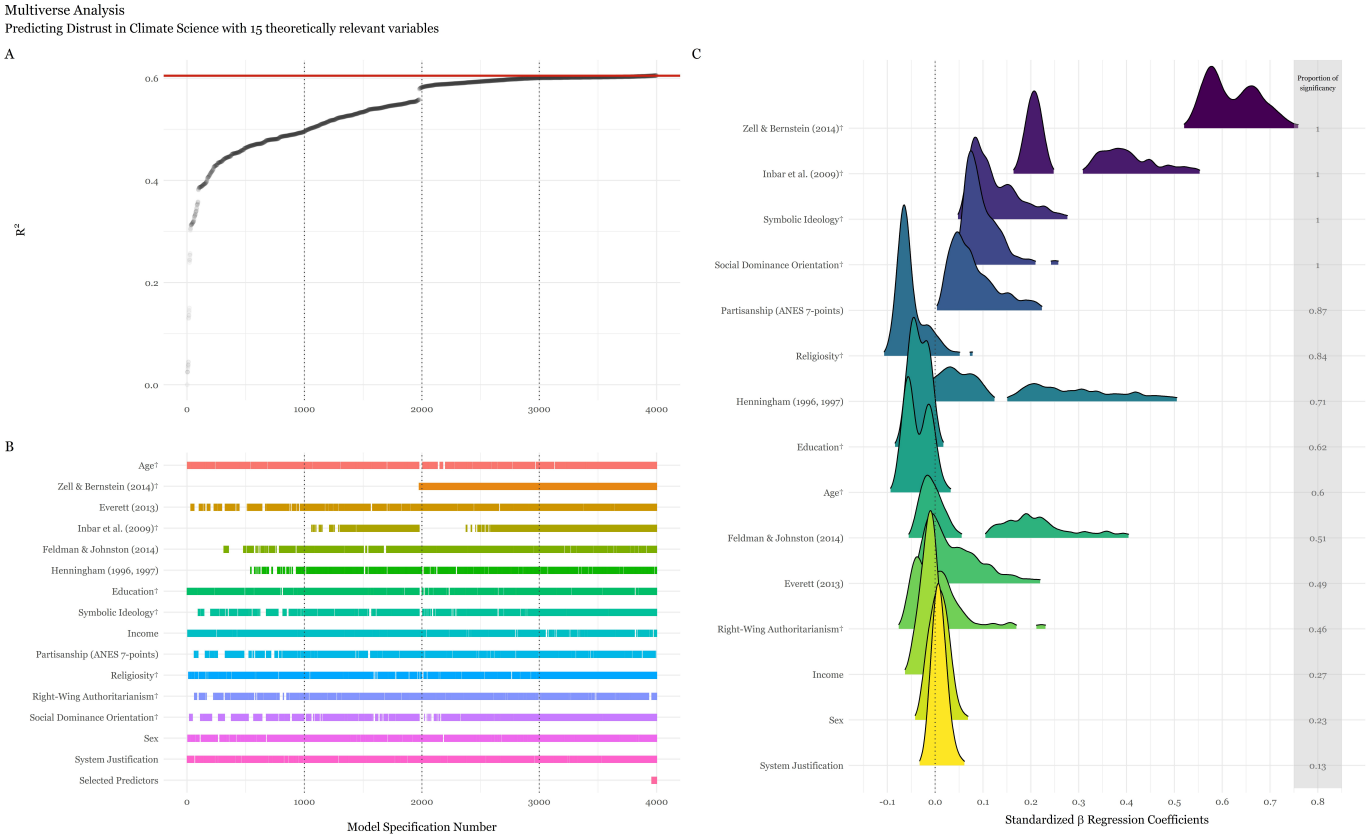
Taking all available data, we calculated 32,767 linear regression models ensuing from all possible combinations of model-variable specifications to show that (a) the set of variables identified through the regularized regression method described above explained as much variance in skepticism about climate science as the best models resulting from a literally exhaustive model search (multiverse analyses), as illustrated by the red line in panel A of Figure 5.2; (b) as the number of variables selected by elastic nets increases, so, too, does the amount of variance explained (R^2), as shown in the last line (selected predictors) of panel B; and (c) the variables that accounted for the most unique variance in our independent analyses of Samples 1 and 2 are the same variables that were most likely to be significant predictors in all universe models, as shown in panel C.

Three additional conclusions can be derived from an inspection of panel C of Figure 5.2, which displays the distribution of standardized regression coefficients across all multiverse models. The first is that political conservatism, whether measured symbolically or operationally, clearly reigns supreme as the most robust predictor of distrust in climate science, irrespective of model specifications; on average, it accounts for 80% of the explained variance. SDO is also a very robust predictor, but it only accounts for 10% of the variance. A second conclusion is that while partisanship is a robust predictor of distrust in climate science (significant in 87% of all possible models), it fails to explain unique variance in models that include symbolic and operational measures of ideology and SDO. A third conclusion is that different scales for measuring operational ideology behave quite differently from one another, at least when it comes to explaining variability in attitudes toward science.

With regard to skepticism about science (vs. faith), we calculated 2,057,151 linear regression models ensuing from all possible combinations of model-variable specifications and observed, again, that (a) the variables identified through the regularized regression method explained as much variance in attitudes about science in general as the best models resulting from the multiverse analyses, as illustrated by the red line in panel A of Figure 5.3 (b) as the number of variables selected by elastic nets increases, so, too, does the amount of variance explained, as shown in the last line of panel B; and (c) the same variables that accounted for the most unique variance in our independent analyses of Samples 1 and 2 were most likely to be significant predictors in universe models. We can also conclude from panel C that distrust of climate science, RWA, religiosity, education, income, (male) sex, and political conservatism as measured with the Henningham (1996, 1997) scale were significant predictors of skepticism about science in 99.9% of the multiverse analyses. Conservatism was also a significant predictor in at least 76% of the analyses when measured with the Zell and Bernstein (2014) or Inbar et al. (2009) scales. Partisanship was again a robust predictor of distrust in science (significant in 71% of all possible models), but it failed to explain unique variance in multivariate models that included ideology, RWA, religiosity, and climate skepticism.

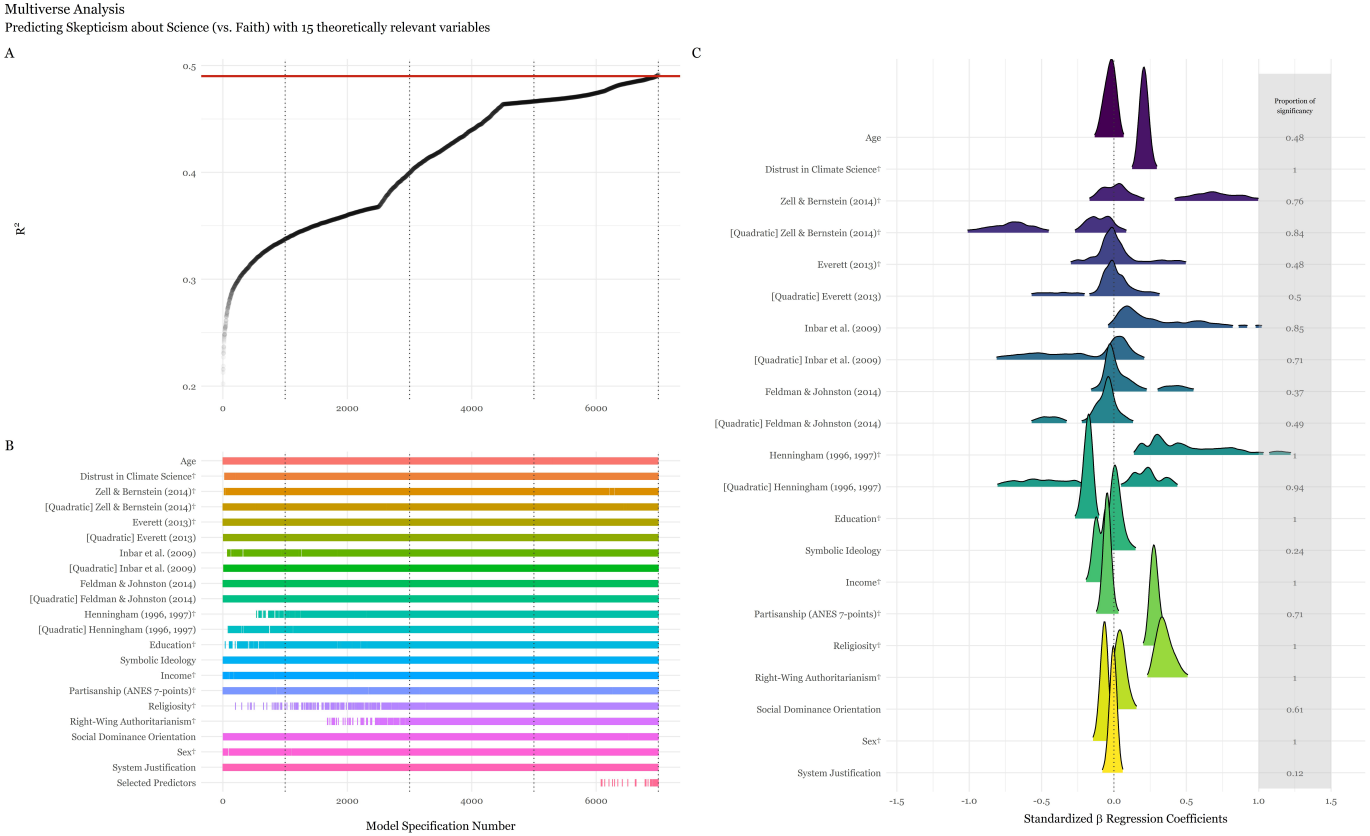
[3] We adopt the nomenclature of The Turing Way (Community et al., 2019), which offers an open-source, community-driven guide to generating reproducible, ethical, inclusive, and collaborative data science. Under their classification system, "robustness" is achieved when the same dataset is subjected to different analysis workflows with similar results, "replicability" is achieved when the same analysis performed on different datasets yields similar results, and "generalizability" results from the combination of robustness and replicability.

Figure 5.2: Multiverse analysis predicting distrust of climate science with 15 theoretically relevant variables.



Note. In Panel A, the red line indicates the R-squared of the selected model (via elastic net), indicating that it has achieved explanatory levels on a par with the best models in the multiverse analyses. In Panels B and C, the symbol †indicates the predictor was retained in the final model. Panels A and B display a selection of 4,000 (out of 32,767), such that the first 1,000 model specifications show the lowest R^2, the model specifications from 1,000 to 3,000 are a random selection of 2,000 model specifications of average explanatory levels, and the last 1,000 models have the highest R^2. Plotting all models would make the plot visually uninformative. Panel C displays the distribution of standardized regression coefficients across multiverse models. Two main conclusions can be derived. The first is that ideology reigns supreme as the most reliable predictor of distrust of climate science. The second is that liberalism/conservatism scales (measures of the same construct) appear to behave differentially.

Figure 5.3: Multiverse analysis predicting skepticism about science (vs. faith) with 15 theoretically relevant variables.



Note. In Panel A, the red line indicates the R-squared of the selected model (via elastic net), indicating that it has achieved explanatory levels on a par with the best models in the multiverse analyses. Panel A's last row, "Selected predictors," indicates that the combination of selected predictors is substantially more frequent in the highly explanatory models. In Panels B and C, the symbol †indicates the predictor was retained in the final model. Panels A and B display a selection of 7,000 (out of 2,097,151), such that the first 2,500 model specifications show the lowest R^2, the model specifications from 2,500 to 4,500 are a random selection of 2,000 model specifications of average explanatory levels, and the last 2,500 models have the highest R^2. Plotting all models would make the plot visually uninformative. Panel C displays the distribution of standardized regression coefficients across multiverse models.

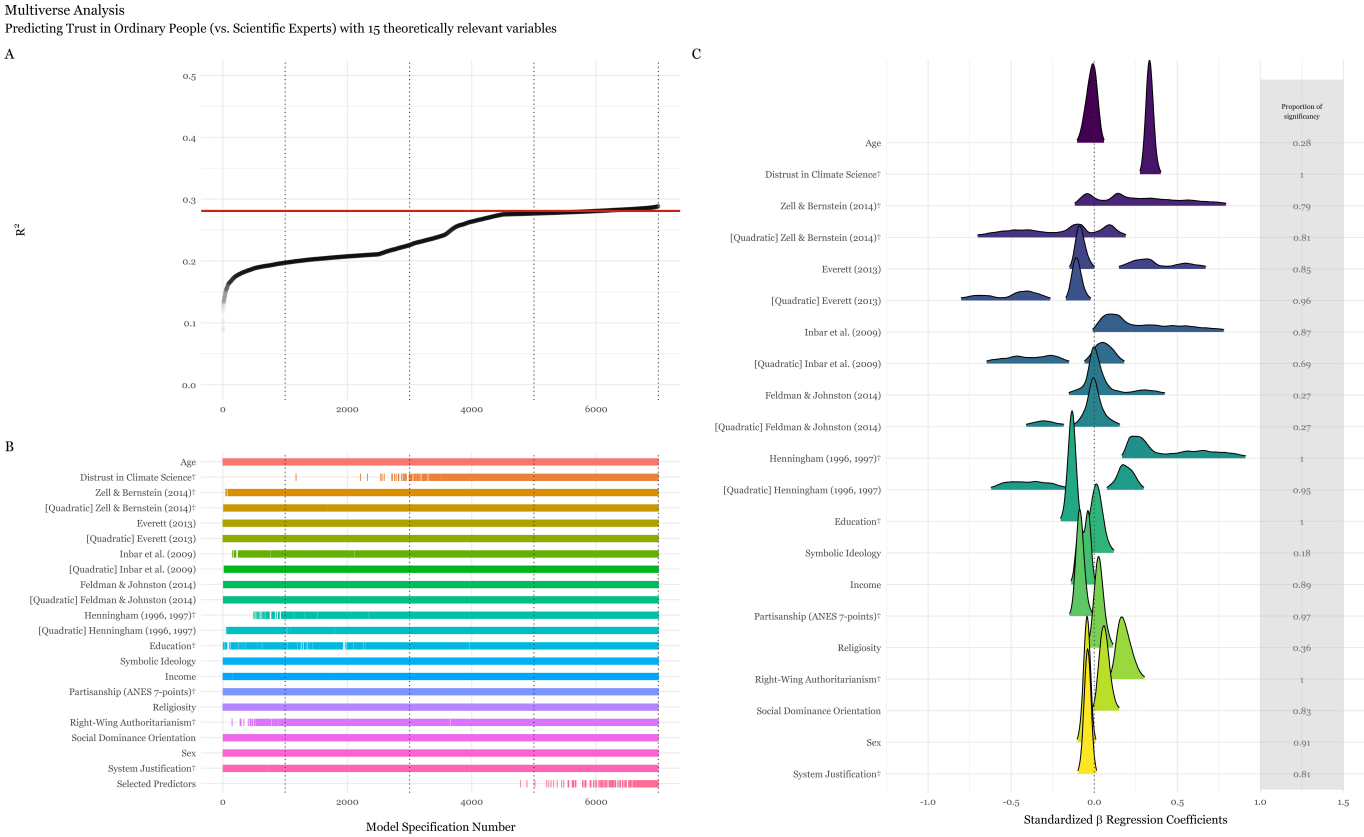
With regard to trust in ordinary people (vs. scientific experts), the multiverse analysis revealed that distrust of climate science, RWA, education, and political conservatism as measured with the Henningham (1996, 1997) scale were significant predictors 99.9% of the time (see Figure 5.4. In addition, conservatism was a significant predictor in at least 79% of the analyses when measured with the Everett (2013), Inbar et al. (2009), or Zell and Bernstein (2014) scales, and SDO was a significant predictor in 83% of the analyses. Interestingly, in multivariate models general system justification was a significant predictor of trust in scientific experts (over ordinary people) in 81% of the models. This suggests that scientific experts are indeed considered to be part of the established status quo, at least for many American adults.

5.5 General Discussion

A major goal of our investigation of attitudes about science and scientists was to tease apart the effects of political partisanship, symbolic and operational forms of political ideology, religiosity, education, authoritarianism, social dominance, and system justification. At a bivariate level of analysis, all of these variables were correlated with attitudes about science, as shown in Table 1. That is, Republicans, conservatives, religious people, those who were less educated, and individuals who scored higher on authoritarianism, social dominance, and system justification were more likely than others to express anti-scientific attitudes. These results are broadly consistent with previous findings in social science (e.g., Blank & Shaw, 2015; Feygina et al., 2010; Gauchat, 2012; Lewandowsky & Oberauer, 2016; MacCoun & Paletz, 2009; Mooney, 2005; B. Rutjens et al., 2018; S. Stanley & Wilson, 2019; Tullett et al., 2016), but the number and specificity of the measures we administered to a nationally representative sample (and a replication sample) adds richness, texture, detail, and confidence to the scientific analysis of the role of ideology in motivating skepticism about science.

When all of these variables were entered simultaneously into multiple regression models, however, it became very clear that the operational endorsement of politically conservative ideology was the dominant predictor. As hypothesized, conservatives expressed less favorable attitudes toward science, scientists, and their claims, in comparison with liberals. Other factors, including partisanship, education, and religiosity, were less important, in comparison with ideology. These findings are at odds with the claim that ideological beliefs, opinions, and values are meaningless for most U.S. citizens (Kalmoe, 2020; Kinder & Kalmoe, 2017). Given that operational ideology was a far more important predictor than both symbolic ideology and partisanship, our results contradict the assumption that people's attitudes about science are a "mechanical reflection of what their favorite group and party leaders have instructed them to think" (Achen & Bartels, 2017, p. 12).

Figure 5.4: Multiverse analysis predicting trust in ordinary people (vs. scientific experts) with 15 theoretically relevant variables.



Note. In Panel A, the red line indicates the R-squared of the selected model (via elastic net), indicating that it has achieved explanatory levels on a par with the best models in the multiverse analyses. Panel A's last row, "Selected predictors," indicates that the combination of selected predictors is substantially more frequent in the highly explanatory models. In Panels B and C, the symbol †indicates the predictor was retained in the final model. Panels A and B display a selection of 7,000 (out of 2,097,151), such that the first 2,500 model specifications show the lowest R^2, the model specifications from 2,500 to 4,500 are a random selection of 2,000 model specifications of average explanatory levels, and the last 2,500 models have the highest R^2. Plotting all models would make the plot visually uninformative. Panel C displays the distribution of standardized regression coefficients across multiverse models.

Furthermore, scientific skepticism among conservatives was not confined to the issue of climate change, as previous research by B. Rutjens et al. (2018) suggested. Nor was conservative skepticism focused exclusively on the political motives of scientists, as Cofnas et al. (2018) proposed. On the contrary, conservatism was a strong predictor of general skepticism about science (vs. faith) and trust in ordinary people (vs. experts), even after adjusting for distrust of climate science in particular. These findings are also hard to square with the claim that liberals and conservatives are equally indifferent to the kinds of epistemic norms and practices valued by the scientific community at large (Ditto et al., 2019; Washburn & Skitka, 2018). On the contrary, we observed — in the context of a nationally representative sample and a replication study – that liberals expressed more trust in the scientific method, as well as the community of scientific experts, than did conservatives.

Consistent with previous suggestions in the literature (Federico & Malka, 2018; Nilsson et al., 2019), social conservatism was a slightly more important factor than economic conservatism when it came to explaining some anti-scientific attitudes. In other cases, however, the effect sizes were not statistically different from one another. Furthermore, economic conservatism was significantly correlated with anti-scientific attitudes in every case, as shown in Table 2. There was no evidence that economically conservative individuals held attitudes that were more congenial to the scientific enterprise than economic liberals (or progressives), as proposed by Carl et al. (2016).

The clarity, consistency, robustness, replicability, and generalizability of our findings indicate that there are genuine and significant liberal-conservative differences in attitudes toward the scientific community and, by extension, the scientific process. These findings are consistent with a voluminous literature in political psychology, which demonstrates that, in comparison with conservatives, liberals exhibit epistemic motives and abilities that are more conducive to scientific inquiry, including need for cognition, tolerance of ambiguity, integrative complexity, cognitive reflection, intelligence, and actively open-minded thinking (e.g., Deary et al., 2008; Hodson & Busseri, 2012; Jost, 2017; Pennycook et al., 2020; Price et al., 2015). Broadly speaking, our findings are also consistent with evidence that conservatives are prone to accept and share messages – including messages about scientifically relevant topics – that are unduly suspicious, misleading, and false (Allcott & Gentzkow, 2017; Benkler et al., 2017; Guess et al., 2019; Marwick & Lewis, 2017; Miller et al., 2016; Pfattheicher & Schindler, 2016; Sterling et al., 2016; van der Linden et al., 2020). It remains to be seen whether a similar elective affinity exists between leftist (vs. rightist) political orientation and pro-scientific attitudes in Europe, Asia, and the Global South.

The fact that RWA and SDO were associated with anti-scientific attitudes in general extends previous work linking these variables to skepticism about climate science in the U.S., Europe, and Latin America (e.g., Carrus et al., 2018; Häkkinen & Akrami, 2014; Jylhä & Akrami, 2015; Jylhä et al., 2016; Milfont et al., 2018; S. Stanley & Wilson, 2019). Given that RWA and SDO are both positively correlated with political conservatism, these findings provide an additional, albeit related reason why liberals would hold more favorable attitudes toward science than conservatives, above and beyond differences in epistemic motivation and ability. At the same time, one can easily imagine a contemporary society in which scientific experts were treated as legitimate authorities. Under such circumstances it is quite possible that authoritarians and system-justifiers would be more — rather than less – deferential to the scientific community. Indeed, we observed in our multiverse analysis that system justification was positively associ-

ated with trust in scientific experts after adjusting for all other demographic and ideological factors.

Several potential limitations of our research should be noted. The first is that some of our dependent variables, namely skepticism about science (vs. faith) and trust in ordinary people (vs. scientific experts), were measured with only two items each, which raises reasonable concerns about construct validity. This situation is due to the fact that the survey administered in 2016 focused on political behavior, including voting intentions in the presidential election, rather than attitudes about science in particular. Future research would do well to replicate and extend our analyses using better measures of attitudes about science, including complete scales with strong psychometric properties. Another obvious limitation is that our analysis was confined to the U.S. Given that Democrats and Republicans clearly do disagree about matters of scientific policy, this focus is useful, but it is far from globally representative. In addition to investigating the role of ideology in attitudes about science in other geopolitical contexts, it would be valuable to consider whether experience with the COVID-19 pandemic has or has not altered the political landscape with respect to attitudes about science.

5.6 Concluding Remarks

Throughout the 20th century social scientists noted a great many conflicts between those who were motivated by traditional, authoritarian, and dominance-oriented concerns, on one hand, and those who were inspired by the democratically-oriented values of the scientific community, on the other (e.g., Dewey, 1939; Lewin, 1943–1999). It is no accident that the Enlightenment spawned not only a rejection of absolute religious authority and ancient forms of hegemonic stratification but also a spirit of secular humanism that gave rise, more or less simultaneously, to scientific rationality and democratic political forms (Shapiro, 2012). In our time, it is no exaggeration to suggest, as Dewey (1939) observed nearly a century ago, that the fate of our democracy is yoked to a socially shared capacity and willingness to understand and trust scientific evidence and expertise, not because it is infallible, but because it is vastly superior to the propagandistic alternatives at hand.

6

The Paranoid Style in American Politics Revisited: An Ideological Asymmetry in Conspiratorial Thinking

This work was done in collaboration with Sander van der Linden, Costas Panagopoulos, and John T. Jost. This chapter is based on: van der Linden, Panagopoulos, Azevedo and Jost (2021). The Paranoid Style in American Politics Revisited: An Ideological Asymmetry in Conspiratorial Thinking. *Political Psychology, 42*(1).

Abstract

It is often claimed that conspiracy theories are endorsed with the same level of intensity across the left-right ideological spectrum. But do liberals and conservatives in the United States embrace conspiratorial thinking to an equivalent degree? There are important historical, philosophical, and scientific reasons dating back to Richard Hofstadter's book The Paranoid Style in American Politics to doubt this claim. In four large studies of U.S. adults (total N = 5049)—including national samples—we investigated the relationship between political ideology, measured in both symbolic and operational terms, and conspiratorial thinking in general. Results reveal that conservatives in the United States were not only more likely than liberals to endorse specific conspiracy theories, but they were also more likely to espouse conspiratorial worldviews in general (r = 0.27, 95% CI: 0.24, 0.30). Importantly, extreme conservatives were significantly more likely to engage in conspiratorial thinking than extreme liberals (Hedges' g = .77, SE = .07, $p < .001$). The relationship between ideology and conspiratorial thinking was mediated by a strong distrust of officialdom and paranoid ideation, both of which were higher among conservatives, consistent with Hofstadter's account of the paranoid style in American politics.

6.1 Introduction

'Let us now abstract the basic elements in the paranoid style. The central image is that of a vast and sinister conspiracy, a gigantic and yet subtle machinery of influence set in motion to undermine and destroy a way of life.'
(Hofstadter, 1964, p. 29)

A conspiratorial mindset is characterized by a persistent belief that one or more individuals, groups, or organizations are plotting to accomplish menacing objectives (Moscovici, 1987; van der Linden, 2013). In the present era, in which fake news and misinformation are spread quickly and easily through social media platforms, belief in conspiracy theories is widespread; it is estimated that more than 50% of Americans endorse at least one conspiracy theory (Oliver & Wood, 2014). For society, there are many troubling consequences of conspiratorial thinking, including antisocial behavior, hostility against out-groups, rejection of science, decreased trust in government, and a lack of civic engagement (Einstein & Glick, 2015; Flynn et al., 2017; Jolley & Douglas, 2014; Lewandowsky & Oberauer, 2016; Swami, 2012; Uscinski & Parent, 2014; van der Linden, 2015).

For all of these reasons, it is important to understand the socio-cognitive factors that shape public belief in conspiracy theories. A number of studies suggest that conspiratorial thinking is associated with paranoia, narcissism, interpersonal distrust, feelings of powerlessness, lack of agency and control, uncertainty, low levels of education and intelligence, as well as "magical thinking," defined as the superstitious tendency to draw false inferences about causal relationships (Abalakina-Paap et al., 1999; Barron et al., 2014; Brotherton et al., 2013; Cichocka et al., 2016; Darwin et al., 2011; Lobato et al., 2014; Swami, 2012; Swami et al., 2014; van Prooijen, 2017; van Prooijen & Jostmann, 2013). Increasingly, researchers are coming to appreciate the role of political ideology—defined as the beliefs, opinions, and values about the way society is and how it should be (Jost, 2006)—in fostering conspiratorial thinking (Imhoff, 2015; Miller et al., 2016; Oliver & Wood, 2014; Pasek et al., 2015; Prooijen et al., 2015). Zeroing in on the effects of ideology is appropriate and necessary because a high proportion of conspiracy theories are political in nature (Sunstein & Vermeule, 2009). This is why recent formulations have conceptualized conspiratorial thinking as a generalized political attitude (Imhoff & Bruder, 2014) that is "intrinsically tied to the sociopolitical realm" (Imhoff & Lamberty, 2018).

There are historical, philosophical, and psychological reasons to suppose that political ideology plays a prominent role in conspiratorial thinking (Bennett, 1995; Jost, 2017; S. Lipset & Raab, 1978; Robin, 2004). In a major contribution to social history, Richard Hofstadter (1964) documented a long history of "paranoid" thinking that contributed to right-wing political movements in the United States throughout the 19th and 20th centuries, including nativistic, anti-Masonic, anti-Catholic, and anti-Mormon organizations; opposition to the income tax amendment to the U.S. Constitution and Franklin D. Roosevelt's "New Deal"; the John Birch Society and the "Red Scare" that motivated Senator Joseph McCarthy's anti-Communist purges; and the presidential campaigns of Robert Taft, Barry Goldwater, and George Wallace. Hofstadter described several ways in which "heated exaggeration, suspiciousness, and conspiratorial fantasy" contributed to a wide range of right-wing movements that—following Adorno et al. (1950)—he characterized as "pseudo-conservative" because they "believe themselves to be conservatives and usually employ the rhetoric of conservatism" but "have little

in common with the temperate and compromising spirit of true conservatism in the classical sense of the word" and "show signs of a serious and restless dissatisfaction with American life, traditions and institutions" (Hofstadter, 1954–1955, p. 3).

In contemporary American politics, many citizens on the right believe that evidence of anthropogenic climate change is merely the product of a vast conspiracy involving scientists, liberal politicians, and foreign governments (Polling, 2013). By the middle of 2017, Donald Trump had sent over 100 Twitter messages claiming that global warming is a hoax (Matthews, 2017). President Trump has also promulgated many other conspiracy theories over the years (Shear et al., 2019), including claims that Barack Obama is a Muslim who was born outside of the U.S. and that Supreme Court Justice Antonin Scalia was murdered (Habermas, 1989). Supporters of President Trump routinely push conspiracy theories about Democrats in order to deflect criticism over Russian involvement in the 2016 Presidential election, the impeachment case against Trump, and his administration's mishandling of the coronavirus pandemic in 2020 (Levin, 2020).

Yet, conspiratorial thinking is by no means confined to President Trump's inner circle. According to a YouGov poll, 70% of Republicans in 2019 believed that a secret "deep state" network was attempting to overthrow President Trump (Frankovic, 2019). In addition, paranoid reactions to gun control legislation that Hofstadter (1964, p. 5) described more than 50 years ago are eerily similar to sentiments expressed by supporters of the National Rifle Association (NRA) in recent years. Many self-identified conservatives are deeply distrusting not only of scientists but also of government officials and media journalists, whom they routinely accuse of "liberal bias" (Gauchat, 2012; Jones, 2004; Kraft et al., 2014; Lee, 2005; Pew Research Center, 2017).

Nevertheless, commentators are quick to point out that, "conspiracy theories aren't just for conservatives" (Moore et al., 2014). Some conspiracy theories are thought to be more popular on the left. In the U.S., these include the claims that President George W. Bush possessed advance knowledge of the terrorist attacks of 9/11 and chose not to intervene; that agricultural businesses are suppressing evidence of the harmful effects of genetically modified organisms (or GMOs); and that childhood vaccinations pushed by "Big Pharmaceutical Companies" cause autism and other serious health problems (Sunstein & Vermeule, 2009). With respect to anti-vaccination sentiment, at least, research by Rabinowitz et al. (2016) found that—contrary to many political stereotypes—U.S. liberals were significantly more likely than conservatives to endorse pro-vaccination statements and to regard them as "facts" rather than "beliefs."

There is some reason to suspect that ideological extremism—on the left and right—is associated with conspiracist ideation (Bartlett & Miller, 2010; Imhoff, 2015; McClosky & Chong, 1985; Prooijen et al., 2015). However, it does not follow from these or other research programs that those on the left and right are *equally* susceptible to conspiracy theorizing. For example, close inspection of results reported by Miller et al. (2016, p. 830) indicate that right-wing extremists in the U.S. were more likely than left-wing extremists to endorse ideologically congenial conspiracy theories. Moreover, even in studies that appear to provide evidence of ideological symmetry in general, there are often notable asymmetries, suggesting that conservative rightists are more conspiratorially minded than liberal leftists (e.g., see Prooijen et al. 2015, pp. 573-575, Figure 6.1 and Figure 6.3, and Oliver and Wood 2014,

p. 958, Figure 6.1). These asymmetries are consistent with an observation about cognitive-motivational style made by Jost et al. (2003b, p. 388), namely that: "In all cases graphically summarized by McClosky and Chong (1985, p. 350), ... the percentage of high scorers from the far right group (63% and 81% for intolerance of ambiguity in 1958 and 1976—1977, respectively, and 39% for rigidity) exceeds the percentage of high scorers from the far left (49%, 75%, and 33%, respectively)."

In an effort to integrate more than fifty years of theory and research on the social, cognitive, and motivational bases of left-right (or, in the U.S. context, liberal-conservative) differences, Jost et al. (2003a), Jost et al. (2003b) emphasized individual differences and contextual variability in epistemic needs to attain order, certainty, structure, and closure and existential needs to attain safety, security, and a sense of reassurance. The idea was that these needs would contribute to an an ideological preparedness for resistance to social change and the legitimation of social, economic, and political inequality. Consistent with this perspective, a meta-analytic review of 88 studies conducted in 12 countries over a 44-year period involving over 22,000 participants confirmed that intolerance of ambiguity, dogmatism, avoidance of uncertainty, cognitive simplicity, and personal needs for order, structure, and closure, as well as death anxiety and system-level threats, were positively related to the endorsement of conservative, right-wing ideology.

In an extension of this theoretical program, we posit there may well be an important and underappreciated ideological asymmetry when it comes to conspiratorial thinking in general, at least in the context of the United States. Such an asymmetry would be consistent with mounting evidence that, in comparison with liberals, conservatives in the U.S. and other Western countries score higher on measures of dogmatism, cognitive rigidity, intolerance of ambiguity and uncertainty, self-deception, and threat sensitivity—and lower on measures of need for cognition, integrative complexity, cognitive reflection, intelligence, and analytical reasoning (see Jost 2017). Conservatives are also more likely to adopt an "intuitive" cognitive style, which tends to be associated with conspiratorial thinking (Lobato et al., 2014; Swami et al., 2014).

American conservatives are also less interested in scientific forms of knowledge (Blank & Shaw, 2015; Carl et al., 2016; Lewandowsky & Oberauer, 2016; Tullett et al., 2016) and more likely to mistake political opinions for facts (Landreville & Niles, 2019). They appear to be more receptive to "fake news" (Pennycook & Rand, 2019; Roozenbeek & van der Linden, 2019) and pseudo-profound "bullshit" (Nilsson et al., 2019; Pennycook & Rand, 2019; Pfattheicher & Schindler, 2016; Sterling et al., 2016). Consistent with all of these psychological differences, research suggests that in the U.S., at least, rumors, misinformation, and conspiracy theories spread more rapidly and extensively in the social networks of conservatives, as compared with liberals (Benkler et al., 2017; Guess et al., 2019; Guess et al., 2020; Jost & Hunyady, 2018).Thus, although many perspective in social science would suggest that motivated reasoning, biased information processing, and conspiratorial thinking should be *equally* prevalent among leftists and rightists (Ditto et al., 2019; Kahan, 2016; McClosky & Chong, 1985; Moore et al., 2014; Oliver & Wood, 2014; Prooijen et al., 2015; Sunstein & Vermeule, 2009; Uscinski et al., 2016), there are ample empirical reasons to question this assumption (see also Baron & Jost, 2019). The fact that "conspiracy theories are not just for conservatives" (Moore et al., 2014) does not mean that conspiracies are endorsed at the same scale or level of intensity by liberals and conservatives or that conspiracy theories on the left

and right are equally fallacious or driven by paranoid ideation.

Several previous studies suggest that the tendency to endorse conspiracy theories is positively associated in linear fashion with authoritarianism and right-wing extremism (Abalakina-Paap et al., 1999; Bruder et al., 2013; Grzesiak-Feldman & Irzycka, 2009; Swami, 2012). Historically, it is conspicuous that conspiracy theories have so often been used against popular targets of right-wing prejudice, such as Jews, Blacks, leftists, feminists, and gays (Altemeyer, 1996; Grzesiak-Feldman, 2015; Krekó, 2015; Pasek et al., 2015; Swami, 2012). The question of whether an ideological asymmetry exists is therefore important, not only for research in political psychology, but also for a practical understanding of how, why, and when conspiratorial thinking may shape public consciousness—and how interventions might be designed to root it out.

6.2 Overview of the Present Research Program

In the present research program, we sought to provide a comprehensive assessment of the role of political ideology in conspiratorial thinking in the context of American politics. In four studies making use of large, national samples, we administered a variety of ideological measures, including (symbolic) self-placement items as well as (operational) issue-based and value-based scales. Because there are clearly content-specific reasons why leftists or rightists would be more motivated to embrace specific conspiracy theories, we elected not to follow the common methodological procedure of merely asking participants which individual conspiracy theories they subscribed to and drawing conclusions based on the total number of conspiracy theories they endorsed (Brotherton et al., 2013; Bruder et al., 2013). Instead, we included measures that directly tap into an individual's underlying tendency to engage in paranoid thinking and to adopt a conspiratorial mindset in general. We hypothesized that, after adjusting for the symmetrical effect of ideological extremity, conservatives in the U.S. would be more likely than liberals to exhibit a conspiratorial mindset.

According to Hofstadter (1964), high levels of distrust in scientific, governmental, and journalistic authorities is a hallmark of "the paranoid style of American politics." Thus, across studies we investigated the extent to which: (a) left-right (or liberal-conservative) political ideology would be associated with the adoption of a conspiratorial worldview in general, and (b) if so, whether this effect would be mediated by two of the most well-known correlates of conspiracy beliefs, namely "paranoid ideation" and "distrust of officialdom" (Abalakina-Paap et al., 1999; Goertzel, 1994; Jolley & Douglas, 2014; Miller et al., 2016; Sunstein & Vermeule, 2009). Because of its timely and, some would say, urgent significance for society, we also gauged endorsement of a well-established conspiracy theory that is currently popular on the right, namely the belief that "global warming is a hoax" (Lewandowsky et al., 2013; Uscinski et al., 2016; van der Linden, 2015). This enabled us to compare the effects of ideology when it comes to conspiratorial thinking in general and with respect to a specific conspiracy theory.

6.3 Study 1

In Study 1, we examined the relationship between political ideology and conspiratorial thinking in a large, nationally representative sample of American adults. In addition to investigating linear and quadratic effects of ideology—to probe asymmetrical and symmetrical effects—we explored one potentially important mediator of conspiratorial thinking, namely distrust of officialdom.

6.3.1 Method

Participants and procedure.

For Study 1, we obtained a nationally representative quota sample (N = 1,000) of American adults (18-91, 47% male, 53% female, 28% liberal, 35% moderate, 37% conservative, 39% college degree). The survey was fielded by YouGov using an online panel from February 21-23, 2018 with standard national quotas on gender, age, race, education, and region.

Political ideology.

Participants in this study completed a single measure of ideological self-placement: "In general, I think of myself as (1 = very liberal, 2 = somewhat liberal, 3 = moderate, 4 = somewhat conservative, 5 = very conservative," M = 3.12, SD = 1.21).

Conspiratorial thinking.

We adopted Bruder et al.'s (2013) generalized "conspiracy mentality" (CMS) scale. This scale, which has been cross-culturally validated, measures an individual's general tendency to engage in conspiratorial thinking without mentioning any specific conspiracies. The measure consists of 5 items (e.g., "I think that events which superficially seem to lack a connection are often the result of secret activities", 0 = definitely not true, 100 = definitely true). The CMS exhibited good reliability in our sample (M = 67.72, SD = 17.41, α = 0.80).

Belief in a global warming conspiracy.

A single-item was used to assess climate change conspiracy beliefs ("Climate change is a hoax", definitely not true = 0, definitely true = 100, M = 39.57, SD = 46.56).

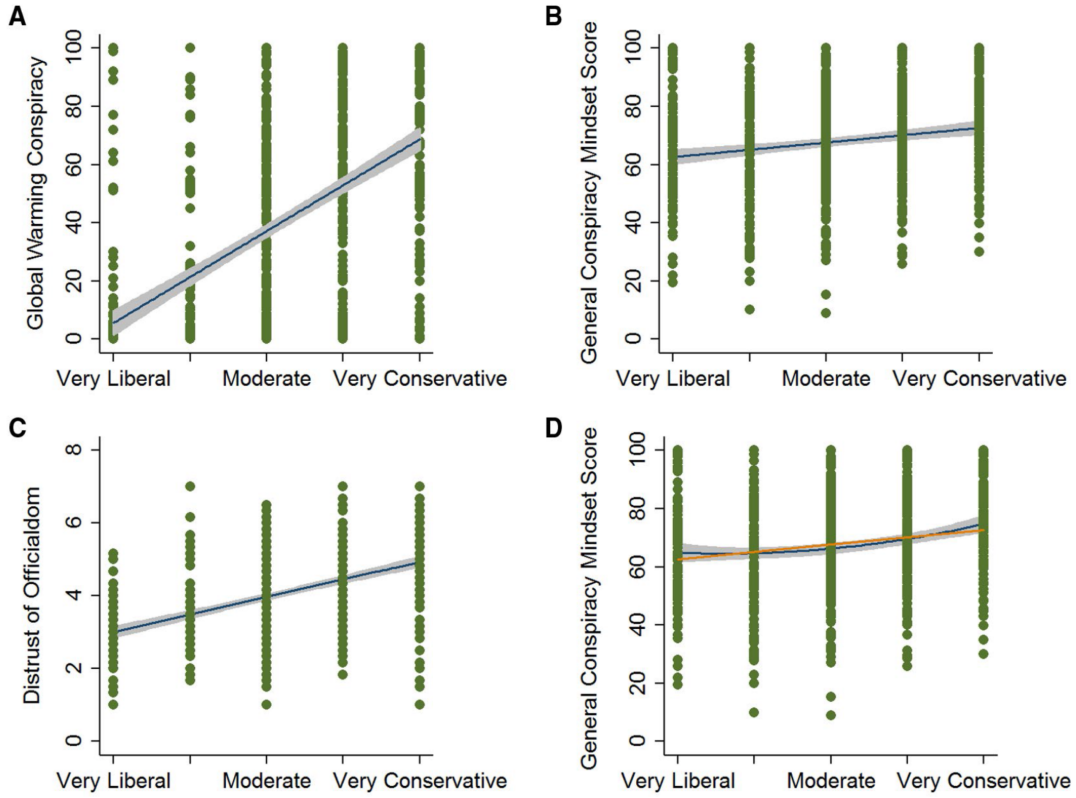
Distrust of officialdom.

Participants were asked to rate the trustworthiness of six sources of information (e.g., scientists, government, NGO's, the UN, and the mainstream news and media) on a 7-point scale (1 = extremely trustworthy, 7 = extremely untrustworthy M = 3.98, SD = 1.23, α = 0.85).

6.3.2 Results and Discussion

Consistent with previous research, we observed a strong positive correlation between self-reported political conservatism and belief in global warming conspiracies (r = 0.53, 95% CI: 0.48, 0.58, Fig. 6.1, panel A). Importantly, we also observed a positive and significant correlation between conservatism and the adoption of a conspiratorial mindset in general (r = 0.185, 95% CI: 0.12, 0.25, Fig. 6.1, panel B). To investigate the possibility of a curvilinear relationship, we also estimated a quadratic trend (Fig. 6.1, panel D). Although a slight U-curve can be fitted to the data, the trend was not statistically significant (p = 0.16), and the linear association was included in the confidence interval around the quadratic effect (panel D).

Figure 6.1: Bivariate linear associations (Study 1) between political conservatism and belief in global warming conspiracies (A), general conspiratorial thinking (B), distrust of officialdom (C), and a non-significant quadratic trend between ideological extremity and conspiratorial thinking (D).



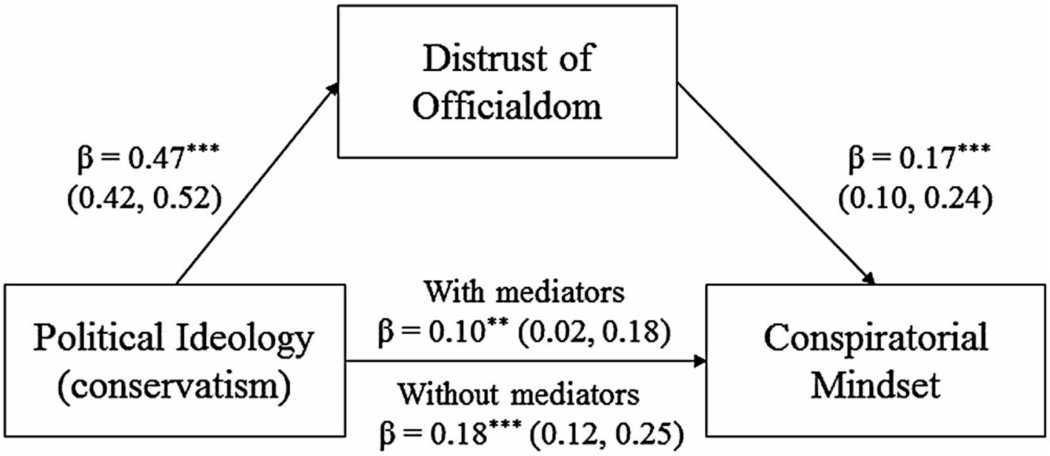
Note. Bands represent 95% confidence intervals.

A one-way ANOVA revealed that the linear effect was driven primarily by extreme conservatives (F [4, 829] = 8.81, $p < 0.001$, = 0.04), who differed significantly from all other groups when it came to conspiratorial thinking ($p < 0.01$). Comparing the raw scores of extreme liberals and extreme conservatives reveals a sizeable asymmetry of nearly 10 percentage points (M = 65.37, SE = 1.81, *vs.* M = 75.27, SE = 1.36, t [232] = 4.45, $p < 0.001$, Cohen's d =

0.58, 95% CI: 0.32, 0.85).

Conservatives were also significantly more distrustful of officialdom, in comparison with liberals (r = 0.47, 95% CI: 0.42, 0.52, Fig. 6.1, panel C). We observed that the relationship between conservatism and conspiratorial thinking was partially (45%) mediated by distrust of officialdom (with the direct effect dropping from β = 0.18 to β = 0.10, $p < 0.01$, see Figure 6.2). Therefore, in our first study we obtained unambiguous evidence that, in comparison with political liberals, conservatives were: (a) more likely to endorse a conspiracy theory about climate change; (b) more likely to adopt a conspiratorial mindset in general; (c) less trusting of scientists, government, NGOs, and the mainstream media. Furthermore, the relationship between conservatism and conspiratorial thinking was statistically mediated by distrust of these official sources.

Figure 6.2: Multiple mediation model (Study 1).



Note. Path coefficients are standardized and estimated using Full Information Maximum Likelihood (FIML). YouGov survey weights were applied and 95% confidence intervals are provided in parentheses based on robust standard errors.$p < 0.05$, ** $p < 0.01$, ***$p < 0.001$. N = 1,000.

6.4 Study 2

In Study 2, we sought to build on the findings from our first study by conducting a test of replication and incorporating an additional mediating variable, namely paranoid ideation. Previous studies suggest that paranoia is associated with the attribution of harmful intent to out-groups (Saalfeld et al., 2018) and—like distrust of officialdom—is a key correlate of conspiratorial thinking (Brotherton & Eser, 2015; Bruder et al., 2013; Darwin et al., 2011; Grzesiak-Feldman & Ejsmont, 2008; Imhoff & Lamberty, 2018). M. Wilson and Rose (2014) situated paranoid ideation in the context of Duckitt's (2001) dual-process model of ideology and prejudice and observed that increased paranoia was positively associated with ring-wing authoritarianism (RWA) and social dominance orientation (SDO). Thus, we investigated the hypothesis that there would be an asymmetrical effect of political ideology on conspiratorial

thinking and that the effect would be mediated by paranoid ideation as well as distrust of officialdom.

6.4.1 Method

Participants and procedure.

A diverse sample (N = 430) of American adults (18-65+, 45% male, 46% liberal) were recruited from Amazon Mechanical Turk (Mturk). The survey was administered online via Qualtrics and took approximately 10 minutes to complete. Participants were asked to participate in an online personality study and paid $0.50 for the task; their location was restricted to the United States. The study received ethical approval from Princeton University's Institutional Review Board.

Political ideology.

Political ideology was assessed using the same item as in Study 1: "In general, I think of myself as (1 = very liberal, 2 = somewhat liberal, 3 = moderate, 4 = somewhat conservative, 5= very conservative," M = 3.28, SD = 1.22).

Conspiracy mentality.

We administered the same "conspiracy mentality" scale (CMS) used in Study 1. The CMS again exhibited good reliability (M = 64.06, SD = 22.39, α = 0.85).

Global Warming Conspiracy (GWC) scale.

Rather than relying upon a single item, we administered 10 items tapping into popular global warming conspiracy theories (sample item: "Global warming is a hoax invented by the United Nations as part of a secret plot to advance a new world government," 1 = completely disagree, 7 = completely agree). The scale was highly reliable (M = 28.61, SD = 16.69, α = 0.96, see Supplement for factor analysis).

Distrust of officialdom.

Participants were again asked to rate the trustworthiness of six different sources of information (e.g. scientists, government, mainstream media) on the same 7-point scale used in Study 1 (1 = extremely trustworthy, 7 = extremely untrustworthy, M = 4.04, SD = 1.30, α = 0.96).

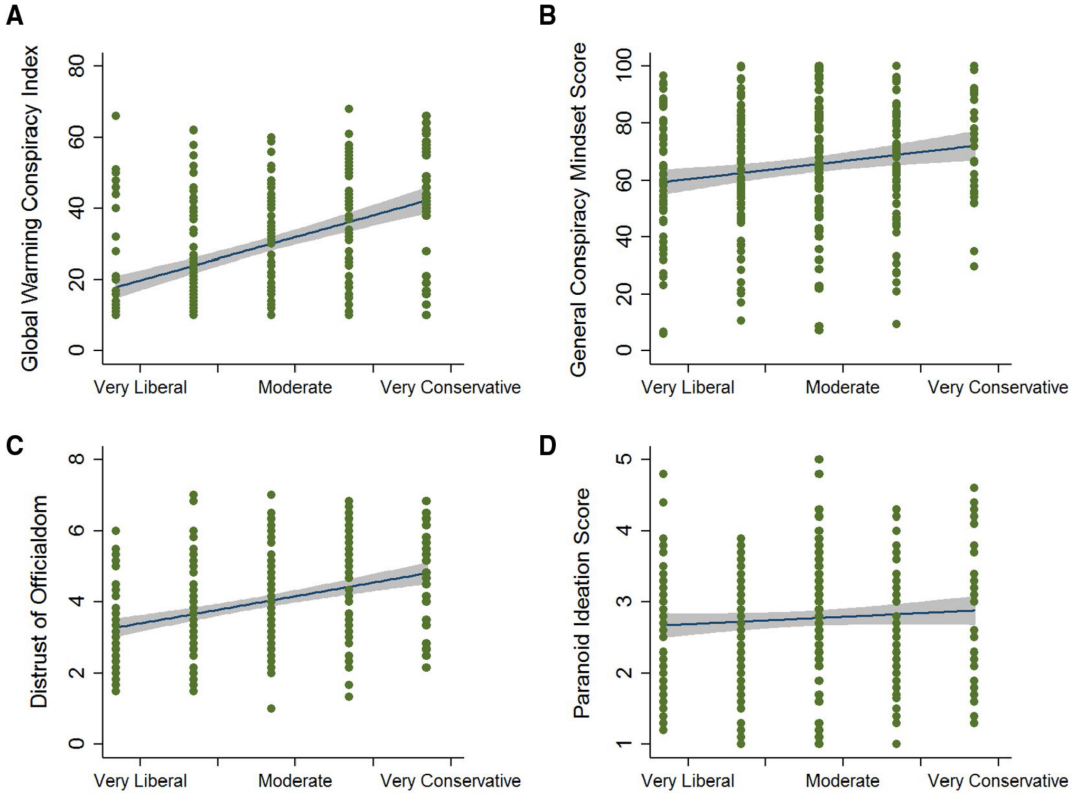
Paranoid ideation.

We assessed paranoid ideation by administering Fenigstein and Vanable's (1992) 10-item Paranoia Scale (sample item; "I often feel that strangers are looking at me critically," 1 = not at all true, 5 = very true, M = 2.77, SD = 0.83, α = 0.96).

6.4.2 Results and Discussion

As in Study 1, we observed a strong positive correlation between political conservatism and belief in global warming conspiracies ($r = 0.46$, 95% CI: 0.37, 0.55, Figure 6.3, panel A). Once again, we also observed a significant positive correlation between conservatism and conspiratorial thinking in general ($r = 0.18$, 95% CI: 0.07, 0.29, Figure 6.3, panel B). We explored the possibility of a curvilinear relationship, but the quadratic term was not significant ($p = 0.86$). Comparing the raw conspiracy scores of extreme liberals and extreme conservatives revealed the existence of a large asymmetry of nearly 15 points ($M = 59.91$, SE = 2.30, *vs.* $M = 74.66$, SE = 3.06, t [114] = 3.68, $p < 0.001$, Cohen's $d = 0.73$, 95% CI: 0.33, 1.14).

Figure 6.3: Linear associations (Study 2) between political conservatism and belief in global warming conspiracies (A), a conspiratorial mindset in general (B), distrust of officialdom (C), and paranoid ideation (D).

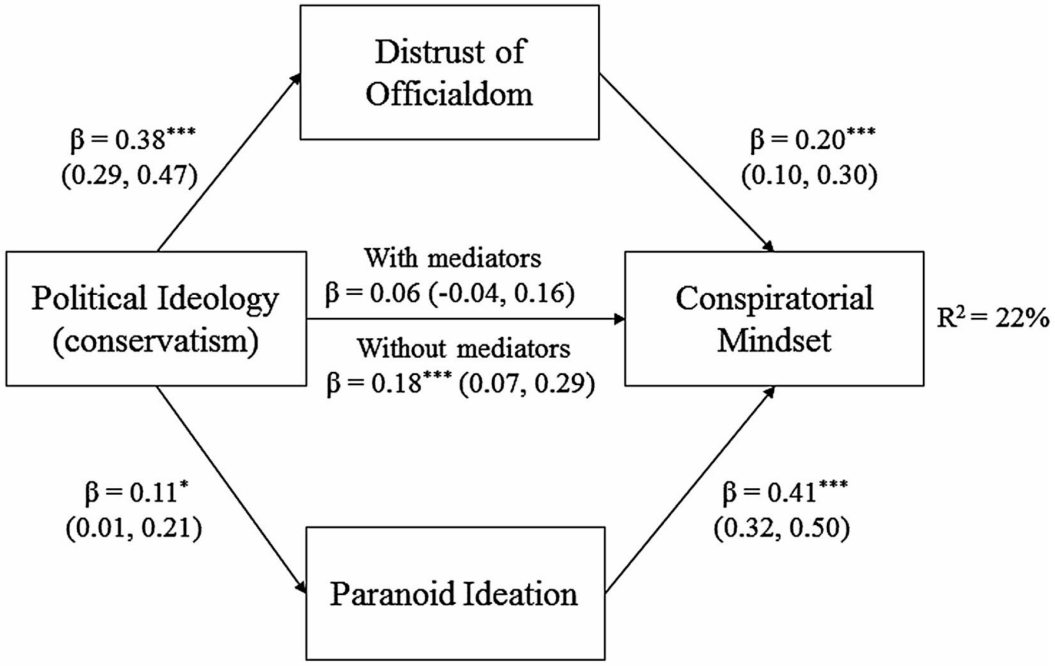


Note. Bands represent 95% confidence intervals.

Conservatives were again significantly and substantially more distrustful of officialdom than liberals ($r = 0.38$, 95% CI: 0.29, 0.47, Figure 6.3, panel C). A relatively small but positive correlation was observed between the endorsement of conservative ideology and paranoid ideation ($r = 0.11$, 95% CI: 0.01, 0.21, Figure 6.3, panel D). As expected, paranoia ($r = 0.44$, 95% CI: 0.35, 0.53) and distrust of officialdom ($r = 0.28$, 95% CI: 0.18, 0.38) were both significantly correlated with conspiratorial thinking in general. The association between political conservatism and conspiratorial thinking was fully mediated by paranoid ideation

and distrust of officialdom (see Figure 6.4).

Figure 6.4: Multiple parallel mediation model (Study 2).



*Note.*Path coefficients are standardized and estimated with Full Information Maximum Likelihood (FIML). Bootstrapped (1,000 samples) 95% confidence intervals are provided in parentheses. Model covariates include gender, age, and education.* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$. $N = 430$.

6.5 Study 3

Although the Mturk platform generally provides high quality data on psychological aspects of political ideology (Clifford et al., 2015), we sought to enhance the robustness of our findings by reproducing our analyses using larger and more diverse samples and considering a broader array of conceptually related but distinctive independent, dependent, and mediating variables. Therefore, in Study 3 we administered to a large, nationally representative sample of American adults a wide range of measures gauging political ideology, including general, social, and economic forms of conservatism. We again measured participants' general tendencies to engage in conspiratorial thinking, their levels of distrust, paranoia, and endorsement of conspiracies pertaining to climate change as well as the 2016 U.S. presidential election.

6.5.1 Method

Participants and procedure.

We retained a professional survey company (SSI; Survey Sampling International) to recruit a nationally representative sample of 1,500 Americans (18-65+, 51% female, 50% Republican) to complete the study during the American general election season (August 16 to September 9, 2016). The survey used interlocked quotas for gender, age, education, and income to reflect proportions of the 2014 U.S. Census.[1] The survey was administered online via Qualtrics in line with German ethical guidelines, which do not require separate IRB approval for anonymous data.

In total, 2,424 participants were directed to the survey, 1,885 of whom finished the survey (attrition rate 22%). We followed recommendations to minimize the problem of careless responding in online studies (Meade & Craig, 2012). Specifically, the survey allowed us to employ 10 attention check questions and time controls to ensure data quality. There were 385 participants who failed more than one attention check or finished the survey in under 22 minutes and were therefore excluded from the final sample by the survey company. We only paid for data that included the 1,500 participants who successfully finished the survey.

Measures.

Participants responded to all survey items using 9-point Likert scales. The specific items used for each of the variables measured in Study 3 are listed in Table 6.1.

Political ideology.

Ideology was assessed using two types of measures: ideological self-placement (or symbolic ideology) and issue-based preferences (or operational ideology). In terms of ideological self-placements, participants located themselves on bipolar scales of political orientation in general, with respect to economic issues, and with respect to social/cultural issues. In all three cases, the response scales ranged from 1 (strongly liberal) to 9 (strongly conservative).

Issue-based ideological preferences were assessed using 5 different instruments: (a) the Core Domains of Social and Economic Conservatism Scale, which contains 7 items measuring economic conservatism and 3 items measuring social conservatism (Feldman & Johnston, 2014); (b) the Pew Research Center's (2012) "Core Issues in American Politics" scale, which is comprised of 12-items (e.g., "The government needs to do more to make health care affordable and accessible"; Zell and Bernstein 2014); (c) the Social and Economic Conservatism Scale, which includes 5 economic and 7 socially conservative values (e.g., "Traditional values"; Everett 2013); (d) the Political Issue Statements which is comprised of 10-items measuring political orientation on the left-right ideological space (e.g., "A woman should have the right to choose what to do with her body, even if that means getting an abortion"; Inbar et al. 2009); and (e) an adapted 16-item version of Henningham's (1996, 1997) Social and Economic Conservatism scales, which are contemporary versions of the "classic" G. Wilson and Patterson (1968) scale for measuring liberalism-conservatism (see supplement for a full list of all items).

Conspiratorial thinking.

[1] Detailed information about the sample and sampling method is provided in the supplementary materials.

Table 6.1: Constructs and Wording of Individual Items

Construct	Item Number	Item Text
Conspiratorial thinking	1	Some political and social events are debated (for example, 09/11 attacks, the death of Lady Diana, the assassination of John F. Kennedy). It is suggested that the "official version" of these events could be an attempt to hide the truth to the public. This "official version" could mask the fact that these events have been planned and secretly prepared by a covert alliance of powerful individuals or organizations (for example, secret services or government). What do you think? I think that the official version of the events given by the authorities very often hides the truth.
	2	I think the 2016 US Presidential elections will be rigged.
	3	Media coverage of the 2016 US Presidential elections has been controlled by vested interests behind one side of the debate.
Ideological self-placement	1	Overall, where would you place yourself, on the following scale of liberalism-conservatism?
	2	How about in terms of social and cultural issues (e.g., abortion, separation of church and state, affirmative action)?
	3	How about in terms of economic issues (e.g., taxation, welfare, privatization of social security)?
Belief in climate-change conspiracies	1	Climate scientists and their political allies are deliberately misleading the public about global warming.
	2	Selfish interests are scheming to convince the public that global warming is a major threat.
Paranoid ideation	1	Every day, our society becomes more lawless and bestial, a person's chances of being robbed, assaulted and even murdered go up and up.
	2	Although it may appear that things are constantly getting more dangerous and chaotic, it really isn't so. Every era has its problems, and a person's chances of living a safe, untroubled life are better today than ever before (reverse coded).
Distrust of officialdom	1	I'd rather put my trust in the wisdom of ordinary people than the opinions of experts and intellectuals.
	2	When it comes to really important questions, scientific facts don't help very much.
	3	We believe too often in science, and not enough in faith and feelings.

We administered Lantian et al.'s (2016) general measure of conspiracy belief and two additional items adapted from Uscinski and Parent (2014) to apply to the 2016 U.S. presidential election. A composite measure was created to estimate individual differences in the tendency to embrace conspiracy theories in general (e.g., "Some political and social events are debated, for example the 9/11 attacks, the death of Lady Diana, the assassination of John F. Kennedy. It is suggested that the 'official version' of these events could be an attempt to hide the truth to the public. What do you think? I think that the official version of the events given by the authorities very often hides the truth"). Participants responded to all items on a 9-point scale ranging from 1 ("definitely false") to 9 ("definitely true"). Our composite measure of conspiratorial thinking exhibited good reliability (M = 5.65, SD = 1.93, α = 0.79).

Belief in conspiracies about climate change.

Two items were used to measure beliefs in denialist climate change conspiracies. One item accuses climate scientists ("Climate scientists and their political allies are deliberately misleading the public about global warming"), whereas the second refers to an unspecified target that

is allegedly involved in fear-mongering ("Selfish interests are scheming to convince the public that global warming is a major threat"). Responses to both items, which were strongly inter-correlated (r [1498] = 0.87, p $<$ .001), were provided on 9-point response scales ranging from 1 (strongly disagree) to 9 (strongly agree).

Distrust of officialdom.

Three items were used to measure the lack of trustworthiness of traditional sources of information (e.g., "I'd rather put my trust in the wisdom of ordinary people than the opinions of experts and intellectuals"). The distrust of officialdom scale exhibited adequate reliability (M = 4.97, SD = 1.89, α = 0.69).

Paranoid ideation.

Two items were used to measure paranoid ideation (e.g., "Every day, our society becomes more lawless and bestial, a person's chances of being robbed, assaulted and even murdered go up and up"). Responses to both items, which were inter-correlated (r [1498] = 0.45, p $<$ .001, were provided on 9-point scales ranging from 1 (strongly disagree) to 9 (strongly agree).

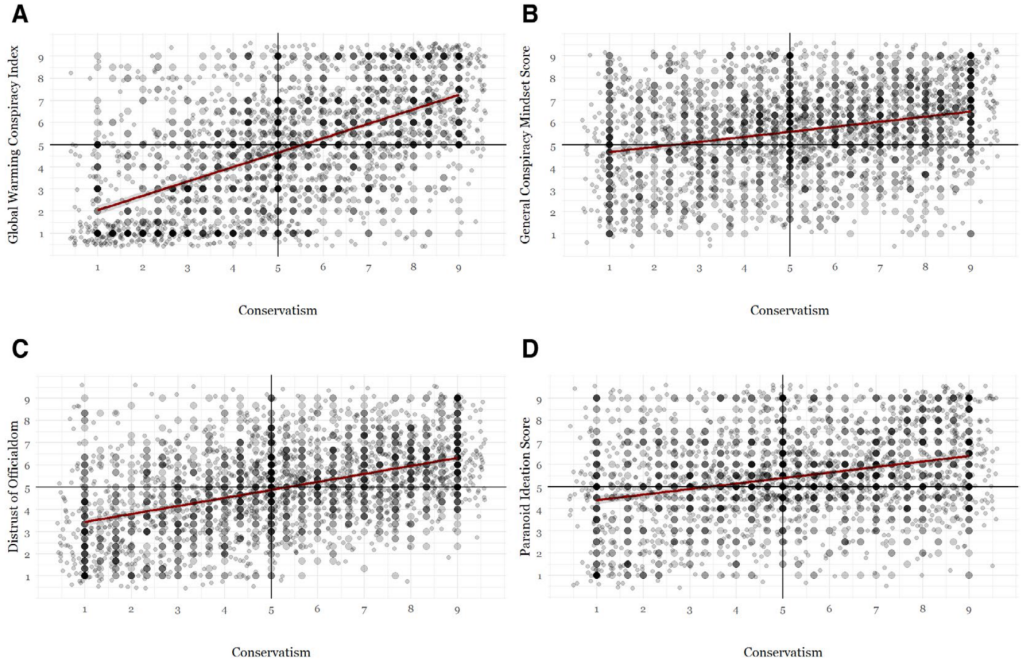
6.5.2 Results and Discussion

In all cases—whether we measured political orientation in terms of ideological self-placement or issue-based preferences on social or economic dimensions—we observed that political conservatism was strongly and positively associated with belief in climate change conspiracies (with correlations ranging from r = 0.53 to r = 0.67, see Figure 6.5, panel A and Tables 6.2 and 6.3) and with conspiratorial thinking in general (with correlations ranging from r = 0.20 to r = 0.35, see Figure 6.5, panel B and Tables 6.2 and 6.3). These associations, which were remarkably consistent and robust, were linear (Figure 6.5) and significant at the p $<$ .01 level. We also investigated curvilinear (or quadratic) relationships in the context of a regression framework. Formal testing was performed for all 8 measures of political orientation in relation to conspiratorial thinking and belief in climate change conspiracies. Due to the large sample size, very small effect sizes were flagged as statistically significant. In general, however, we found that the quadratic coefficients were small in magnitude and directionally inconsistent. Thus, we consider the relationship between ideology and conspiratorial thinking to be linear in general.

We also observed that conspiratorial thinking in general was associated with belief in climate change conspiracies (r = 0.49, 95% CI: 0.45, 0.53), providing further evidence that these two phenomena are linked. As in the preceding studies, there was a clear asymmetry in conspiratorial thinking in general, such that extreme conservatives (M = 6.50, SD = 1.75) scored significantly higher than extreme liberals (M = 4.75, SD = 2.13, t [386] = 9.63, p $<$ .001, Cohen's d = 0.90).

Conservatives were once again significantly more distrusting of official sources (r = 0.36, 95% CI: 0.33, 0.40, Figure 6.5, panel C) and more likely to engage in paranoid ideation (r = 0.25,

Figure 6.5: Bivariate linear associations (Study 3) between political conservatism (average ideological self-placement score) and Global Warming Conspiracy Index (A), General Conspiratorial Mindset Score (B), Distrust of Officialdom (C), and Paranoid Ideation Score (D).



95% CI: 0.21, 0.29, Figure 6.5, panel D), in comparison with liberals. Distrust of officialdom (r = 0.44, 95% CI: 0.39, 0.49) and paranoid ideation (r = 0.19, 95% CI: 0.14, 0.23) were both significantly associated with conspiratorial thinking in general. Replicating the results of Study 2, the association between conservatism and conspiratorial thinking was fully mediated by distrust of officialdom and paranoid ideation (see Figure 6.6).

Even if some of the associations were fairly modest in terms of the magnitude of effect sizes, we see that there was a meaningful ideological asymmetry that was remarkably stable across our first three studies. The pattern is similar for belief in climate change conspiracies and conspiratorial thinking in general, and it holds for three measures of ideological self-placement as well as five issue-based measures and one value-based measure of political conservatism, in the context of a national representative sample of American adults.[2] When we compare the average magnitude of effect sizes between conservatism and belief in conspiracies about climate change to that between conservatism and conspiratorial thinking in general, we find that the former relationship is consistently stronger. This finding suggests that the association between conservatism and conspiratorial thinking is present in general, but it is magnified when the conspiracy theory in question is ideologically congenial.

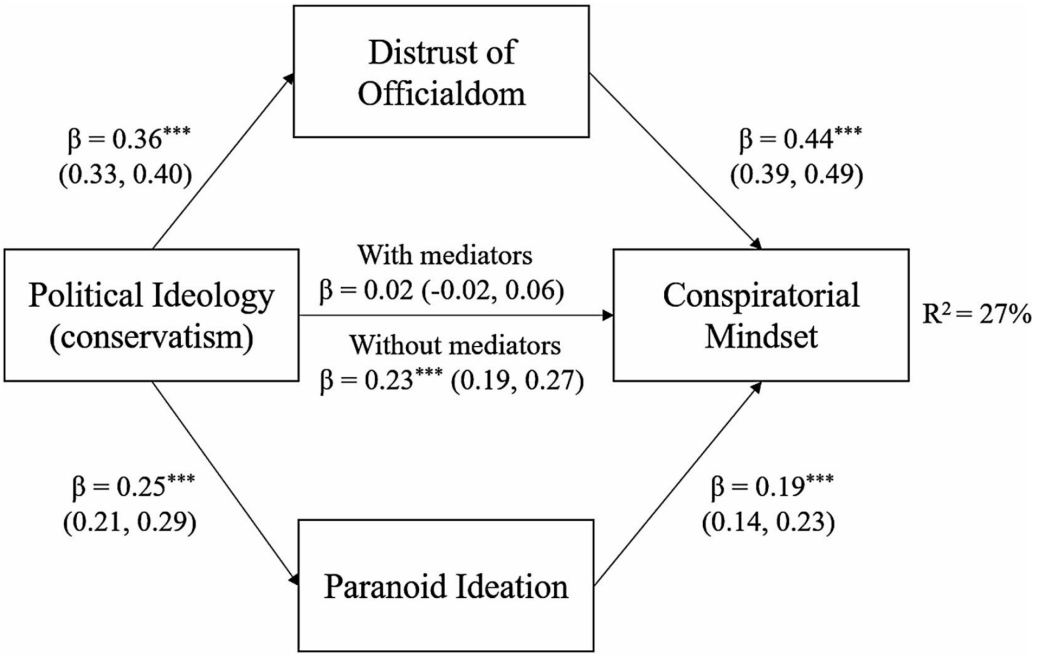
[2] As reported in the supplementary materials, we also investigated the role of party identification, prospective voting intentions, and perceptions of candidate likeability (see Table S4). Results confirm that stronger partisan attachment among Republicans, intentions to vote for Donald Trump, and greater liking of Donald Trump and disliking of Hilary Clinton were all positively associated with belief in climate change conspiracies and conspiratorial thinking in general.

Table 6.2: Means, standard deviations, and correlations with confidence intervals

Variable	*M*	*SD*	1	2	3	4	5	6
1. Conspiratorial thinking	5.65	1.93						
2. Belief in climate-change conspiracies	4.81	2.59	.49** [.45, .53]					
3. Paranoid ideation	5.45	1.96	.38** [.33, .42]	.35** [.30, .39]				
4. Distrust of officialdom	4.97	1.89	.52** [.48, .56]	.57** [.54, .61]	.42** [.38, .46]			
5. General conservatism	5.31	2.45	.28** [.24, .33]	.59** [.55, .62]	.32** [.27, .36]	.46** [.42, .50]		
6. Economic conservatism	5.48	2.63	.21** [.16, .25]	.54** [.51, .58]	.22** [.18, .27]	.35** [.31, .40]	.82** [.80, .83]	
7. Social conservatism	4.93	2.76	.30** [.26, .35]	.56** [.53, .60]	.32** [.27, .36]	.47** [.43, .51]	.84** [.82, .85]	.72** [.69, .74]

Note. *M* and *SD* are used to represent mean and standard deviation, respectively. Values in square brackets indicate the 95% confidence interval for each correlation. ** indicates $p < 0.01$.

Figure 6.6: Multiple parallel mediation model (Study 3).



Note: * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$. $N = 1500$. Path coefficients are standardized. Bootstrapped (10,000 samples) 95% confidence intervals are provided in parentheses. Model covariates include gender, age, and education.

Table 6.3: Means, standard deviations, and correlations with confidence intervals

Variable	*M*	*SD*	1	2	3	4	5	6	7	8
1. Conspiratorial thinking	5.7	1.9								
2. Belief in climate-change conspiracies	4.8	2.6	.49** [.45, .53]							
3. Paranoid ideation	5.5	2.0	.38** [.33, .42]	.35** [.30, .39]						
4. Distrust of officialdom	5.0	1.9	.52** [.48, .56]	.57** [.54, .61]	.42** [.38, .46]					
5. Core issues	4.7	1.6	.27** [.22, .32]	.66** [.63, .69]	.34** [.29, .38]	.48** [.44, .52]				
6. Political issue statements	4.9	1.5	.35** [.30, .39]	.67** [.64, .70]	.41** [.37, .45]	.56** [.52, .59]	.85** [.83, .86]			
7. Social and economic conservatism	4.7	1.5	.32** [.27, .36]	.63** [.60, .66]	.40** [.36, .44]	.54** [.50, .57]	.86** [.85, .87]	.85** [.83, .86]		
8. Core domains	4.2	1.7	.25** [.20, .29]	.58** [.55, .62]	.27** [.23, .32]	.44** [.40, .48]	.85** [.83, .86]	.79** [.77, .81]	.81** [.79, .83]	
9. SECS	6.4	1.5	.20** [.15, .25]	.53** [.49, .57]	.32** [.27, .36]	.41** [.37, .45]	.72** [.70, .75]	.72** [.70, .74]	.71** [.68, .73]	.65** [.62, .68]

Note. *M* and *SD* are used to represent mean and standard deviation, respectively. Values in square brackets indicate the 95% confidence interval for each correlation. ** indicates $p < 0.01$.

6.6 Study 4

In a fourth and final study, we sought to replicate the multiplicity of effects observed in Study 3 in another large and diverse sample of American adults (N = 2,119). Thus, we administered the very same measures used in Study 3, including ideological self-placement for (symbolic) general, social, and economic conservatism; the same issue-based and value-based measures of operational conservatism; belief in climate change conspiracies; the tendency to engage in conspiratorial thinking in general; two items measuring paranoid ideation; and three items measuring distrust of officialdom.

6.6.1 Method

Participants and procedure.

We used a professional survey firm (SSI; Survey Sampling International) to recruit a large sample of 2,119 American adults (22% women). The age distribution was as follows: 18–24 (9%), 25–34 (14%), 35–44 (11%), 45–54 (3%), 55–65(4%), 65 and older (59%). The ethnic breakdown was White/European American (86%), Black/ African American (5%), Latino (4%), and "Other" (5%). In terms of religion, 70% identified as Christian, 16% as religiously affiliated but not Christian, and 14% as Atheist/Agnostic. With respect to educational status, 16% reported "high school or lower," 41% reported "some college," and 43% had attained a "Bachelors" or "graduate" degree. The median income category was US $50,000–74,999. The survey was administered online via Qualtrics according to German ethical guidelines.

Measures.

Because Study 4 was a direct replication of Study 3, participants responded to the same survey items using 9-point Likert scales. The wording of all items listed in Table 6.1 (and the supplementary materials) were the same. For the sake of simplicity—and because means, standard deviations, and internal consistencies were nearly identical to those reported in Study 3—we omit the reporting of descriptive results and move directly to the reporting of inferential statistics.

6.6.2 Results and Discussion

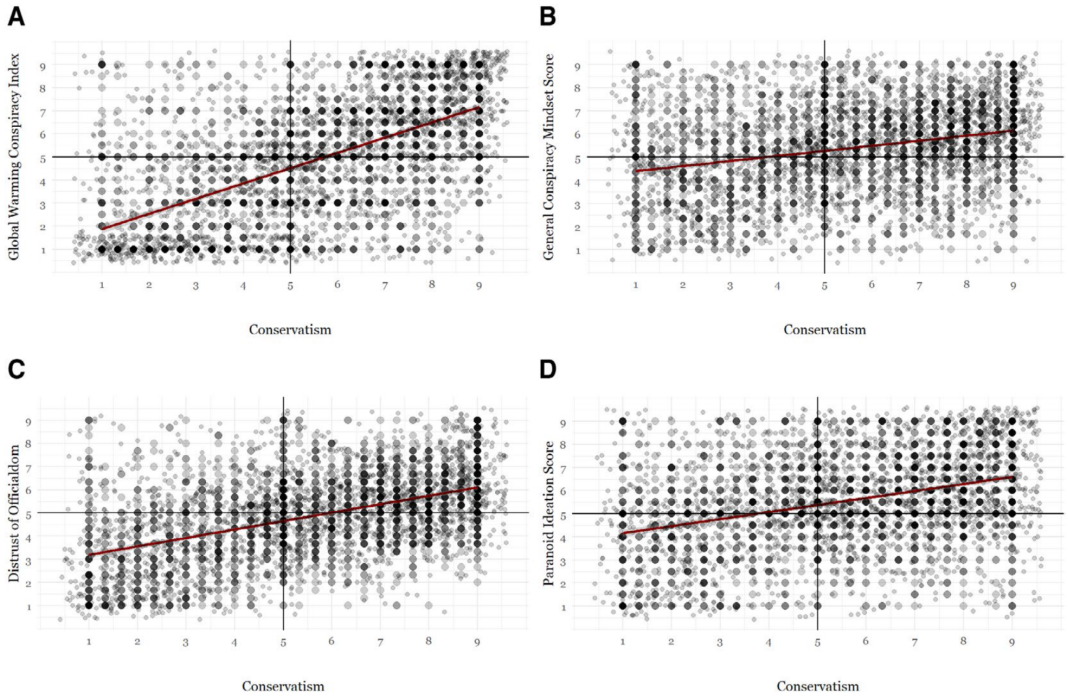
The results of Study 4 replicate those of our first three studies almost perfectly. Whether we measured political orientation in terms of ideological self-placement or issue-based preferences on social or economic dimensions, political conservatism was strongly and positively associated with belief in climate change conspiracies (with correlations ranging from $r = 0.54$ to $r = 0.69$, see Figure 6.7, panel A and Tables 6.4 and 6.5) and with conspiratorial thinking in general (with correlations ranging from $r = 0.22$ to $r = 0.37$, see Figure 6.7, panel B and Tables 6.4 and 6.5). These associations were once again linear and robust (see Figure 6.7) and significant at the $p < .01$ level.[3] Conspiratorial thinking in general was again strongly

[3] As in Study 3, we explored curvilinear relationships in the context of a regression framework and—in light of the small and directionally inconsistent effect sizes observed for quadratic coefficients—we

associated with belief in climate change conspiracies (r = 0.51, 95% CI: 0.48, 0.54). And, as in all of the preceding studies, there was a clear asymmetry in conspiratorial thinking in general such that extreme conservatives (M = 6.10, SD = 1.65) scored significantly higher than extreme liberals (M = 4.70, SD = 2.19, t[413]= 8.97, $p < .001$, Cohen's d = 0.72).

As in the previous studies, political conservatives were significantly more distrusting of official sources (r = 0.36, 95% CI: 0.34, 0.39, Figure 6.7, panel C) and more likely to engage in paranoid ideation (r = 0.30, 95% CI: 0.27, 0.30, Figure 6.7, panel D), in comparison with liberals. Distrust of officialdom (r = 0.43, 95% CI: 0.39, 0.47) and paranoid ideation (r = 0.20, 95% CI: 0.16, 0.23) were significantly associated with conspiratorial thinking in general. As shown in Figure 6.8, the association between conservatism and conspiratorial thinking was again mediated by distrust of officialdom and paranoid ideation. Thus, the results of Study 4 strongly and unambiguously replicate the results of Study 3 and provide further evidence of an ideological asymmetry in the psychological tendency to engage in conspiratorial thinking in general.

Figure 6.7: Bivariate linear associations (Study 4) between political conservatism (average ideological self-placement score) and Global Warming Conspiracy Index (A), General Conspiratorial Mindset Score (B), Distrust of Officialdom (C), and Paranoid Ideation Score (D).



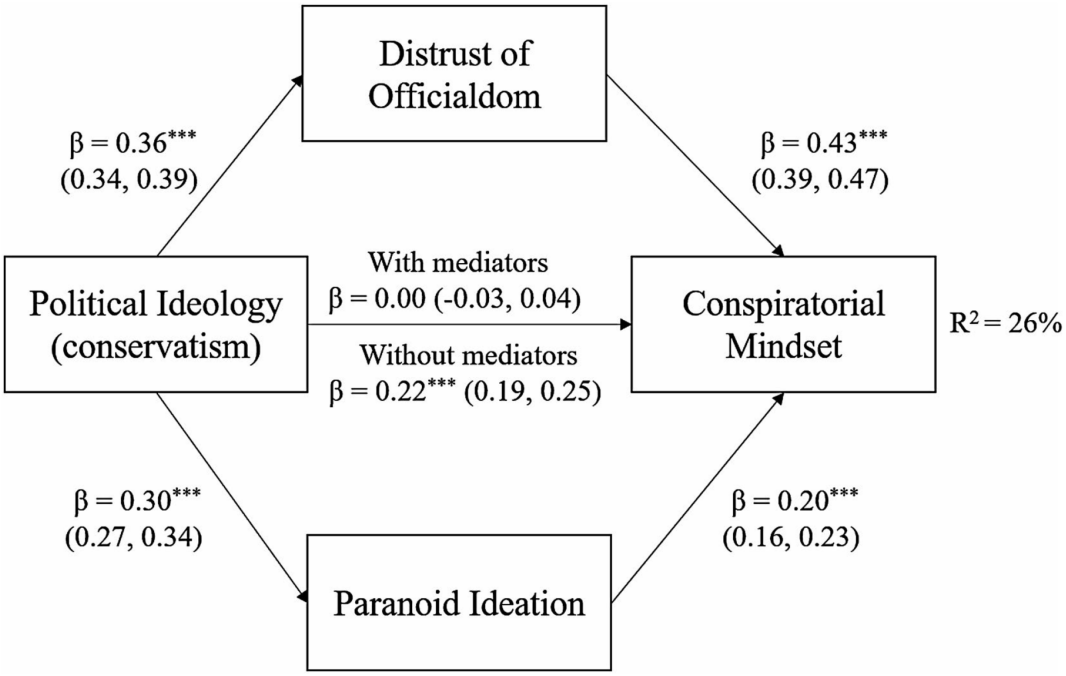
concluded once again that the relationship between ideology and conspiratorial thinking was linear in general.

Table 6.4: Means, standard deviations, and correlations with confidence intervals

Variable	*M*	*SD*	1	2	3	4	5	6
1. Conspiratorial mindset	5.40	1.93						
2. Climate-change conspiracies	4.91	2.63	.51** [.48, .54]					
3. Paranoid ideation	5.56	2.04	.39** [.35, .42]	.37** [.34, .41]				
4. Distrust of officialdom	4.86	1.84	.50** [.47, .53]	.62** [.59, .64]	.43** [.39, .46]			
5. General conservatism	5.62	2.44	.26** [.22, .30]	.58** [.56, .61]	.34** [.30, .38]	.45** [.42, .48]		
6. Economic conservatism	5.85	2.60	.22** [.18, .26]	.54** [.51, .57]	.30** [.26, .34]	.38** [.34, .42]	.84** [.82, .85]	
7. Social conservatism	5.27	2.78	.29** [.25, .33]	.58** [.55, .61]	.37** [.33, .40]	.50** [.47, .53]	.83** [.82, .84]	.74** [.72, .76]

Note. *M* and *SD* are used to represent mean and standard deviation, respectively. Values in square brackets indicate the 95% confidence interval for each correlation. ** indicates $p < 0.01$.

Figure 6.8: Multiple parallel mediation model (Study 4).



Note: $^{*}p < 0.05$, $^{**}p < 0.01$, $^{***}p < 0.001$. N = 2119. Path coefficients are standardized. Bootstrapped (10,000 samples) 95% confidence intervals are provided in parentheses. Model covariates include gender, age, and education.

Table 6.5: Means, standard deviations, and correlations with confidence intervals

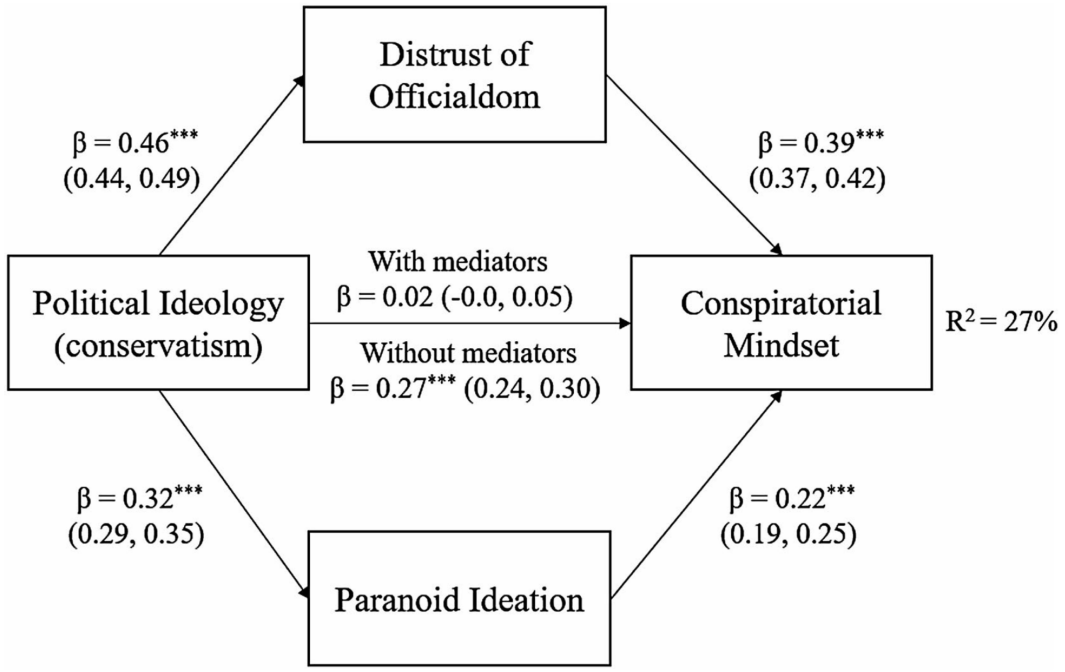
Variable	*M*	*SD*	1	2	3	4	5	6	7	8
1. Conspiratorial mindset	5.4	1.9								
2. Climate-change conspiracies	4.9	2.6	.51** [.48, .54]							
3. Paranoid ideation	5.6	2.0	.39** [.35, .42]	.37** [.34, .41]						
4. Distrust officialdom	4.9	1.8	.50** [.47, .53]	.62** [.59, .64]	.43** [.39, .46]					
5. Core issues	5.0	1.7	.30** [.26, .33]	.69** [.67, .71]	.39** [.35, .42]	.52** [.49, .55]				
6. Political issue statements	5.1	1.6	.37** [.33, .41]	.69** [.66, .71]	.43** [.40, .47]	.56** [.53, .59]	.85** [.83, .86]			
7. Social and economic conservatism	4.8	1.5	.33** [.29, .37]	.66** [.64, .69]	.43** [.40, .47]	.57** [.55, .60]	.87** [.86, .88]	.83** [.82, .85]		
8. Core domains	4.5	1.7	.28** [.24, .32]	.62** [.60, .65]	.34** [.30, .38]	.48** [.44, .51]	.86** [.85, .87]	.80** [.78, .81]	.82** [.81, .84]	
9. SECS	6.6	1.5	.23** [.18, .27]	.54** [.51, .57]	.35** [.31, .38]	.42** [.38, .45]	.74** [.72, .76]	.69** [.67, .71]	.71** [.68, .73]	.68** [.65, .70]

Note. *M* and *SD* are used to represent mean and standard deviation, respectively. Values in square brackets indicate the 95% confidence interval for each correlation. ** indicates $p < 0.01$.

6.7 Quantitative Synthesis of Results

With the goals of providing a formal synthesis of effect sizes and working towards cumulative social science (Mischel, 2009), we aggregated the associations observed in each of the four studies and calculated their overall magnitude and direction (Table 6.6). We also conducted an analysis on the pooled data (see Webster et al., 2017). Similar to integrative data analysis (IDA: Curran & Hussong, 2009), this procedure offers two advantages over traditional meta-analysis for studies with similar constructs in situations in which researchers have access to the raw data. First, it makes fewer methodological assumptions than meta-analysis, and, second, it maximizes statistical power by combining individual-level data from each study. Accordingly, we conducted a parallel mediation analysis on the pooled data; results are displayed in Figure 6.9. We reach two major conclusions: (a) the association between political conservatism and general conspiratorial thinking is linear, positive, robust, and replicable (r = 0.27, 95%CI: 0.24, 0.30); and (b) the association between conservatism and conspiratorial thinking is fully mediated by distrust of officialdom and paranoid ideation.[4]

Figure 6.9: Pooled multiple parallel mediation model (N = 4,930).



Note: Path coefficients are standardized. Bootstrapped (10,000 samples) 95% confidence intervals are provided in parentheses.$^{*}p < 0.05$, $^{**}p < 0.01$, $^{***}p < 0.001$.

In addition, we sought to quantify the overall evidence pertaining to the average ideological asymmetry in conspiratorial thinking. For this analysis, we conducted a random effects meta-analysis on the standardized mean differences between ideological extremes across the four

[4] The association between political conservatism and conspiratorial thinking is robust with respect to both symbolic and operational measures of ideology, prospective voting intentions, retrospective voting behavior, and perceptions of candidate likeability.

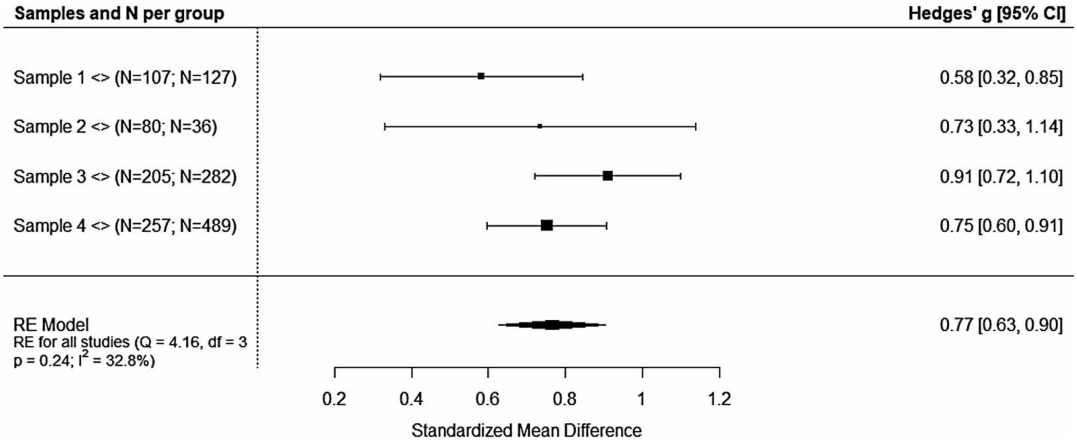
Table 6.6: Aggregated Spearman's Correlations across Studies

Study	*N*	Ideology & Distrust	Ideology & Paranoid Ideation	Conspiracy Mindset & Distrust	Conspiracy Mindset & Paranoid Ideation	Ideology & Conspiracy Mindset
U.S. convenience sample	2119	.47	.35	.49	.36	.28
Mturk sample	311	.36	.07	.29	.40	.18
National sample	1500	.45	.28	.50	.36	.28
National sample	1000	.50	–	.22	–	.17
Aggregated correlations	4930	.46	.30	.43	.36	.25

Note. Spearman's rank correlations coefficients using pairwise complete observations.

studies. As shown in Figure 6.10, we obtained an effect size estimate for the standardized mean difference of Hedges' $g = .77$, SE $= .07$, $p < .001$.[5] We interpret this as providing very strong evidence (aggregating across four different samples) that a significant and substantial ideological asymmetry exists in conspiratorial thinking between liberals and conservatives in the U.S., even at the extremes.

Figure 6.10: Random effects meta-analysis synthesizing the evidence for an ideological asymmetry in conspiratorial thinking between liberals and conservatives.



6.8 General Discussion

Although it may be reasonable to suggest that liberals and conservatives both may be susceptible to conspiratorial forms of thinking under certain circumstances (Moore et al., 2014), the results of our investigation point to meaningful psychological differences, at least in the context of American politics. Although previous accounts have suggested that conspiratorial thinking should be equally prevalent among ideological extremists on the left and right (e.g.,

[5] Hedges g is an unbiased variation of Cohen's d (Hedges & Olkin, 1985).

Kahan, 2016; McClosky & Chong, 1985; Oliver & Wood, 2014; Prooijen et al., 2015), this is not what we have found. Consistent with Hofstadter's (1964) historical observations about "the paranoid style in American politics" and the theory of political conservatism as motivated social cognition (Jost, 2006, 2017; Jost et al., 2003b; Jost & Hunyady, 2018), we observed a robust, replicable ideological asymmetry when it comes to the adoption of a conspiratorial mindset. Overall, the relationship between conservatism and conspiratorial thinking in general was positive, linear, and statistically robust ($r = 0.27$, 95% CI: 0.24, 0.30). These findings are broadly consistent with President Barack Obama's observation—in light of ongoing developments under the presidency of Donald Trump—on September 7, 2018 that "the politics of division and resentment and paranoia has unfortunately found a home in the Republican Party."

To begin with, we observed a strong, linear relationship between political conservatism and the belief that "global warming is a hoax"—a position that maintains the socio-economic status quo and obviates the need for social change aimed at improving the natural environment (Hennes et al., 2016; Jolley et al., 2018). More surprisingly, at least from the standpoint of several perspectives in social science, we observe the very same pattern when it comes to *generalized* conspiratorial mindsets. In four studies based on diverse (and in two cases, nationally representative) samples and a broad constellation of measures of political ideology and conspiratorial thinking, we found that conservatives in the U.S. were significantly and substantially more likely than liberals to embrace conspiratorial ways of thinking. These findings are consistent with independent lines of research indicating that (a) political conservatism is associated with heightened epistemic, existential, and relational needs to reduce uncertainty, threat, and social deviance (Jost, 2017; Jost & Hunyady, 2018), and (b) heightened epistemic, existential, and relational needs are associated with conspiratorial thinking (Douglas et al., 2017; Garrett & Weeks, 2017; A. Kay et al., 2009; Krekó, 2015; Whitson et al., 2015).

In contrast to the suppositions of van Prooijen and colleagues (2015), we found little or no evidence of a curvilinear (or quadratic) relationship between ideological extremity and conspiratorial thinking in the U.S. context. Extreme liberals were *not* as likely as extreme conservatives to adopt a conspiratorial mindset, although it is possible that extreme liberals would be more motivated than moderate liberals to embrace certain conspiracy theories. We observed that extreme conservatives scored significantly higher on conspiratorial thinking than extreme liberals, aggregating across all four studies (Hedges' $g = .77$, SE = .07, $p < .001$). Importantly, this pattern of ideological asymmetry applied to conspiratorial thinking in general as well as belief in an ideologically congenial conspiracy theory, namely, the conspiracy theory that global warming is a hoax.

It is perhaps worth noting that we obtained very similar results with respect to social and economic dimensions of ideology. That is, in Studies 3 and 4 economic conservatism was positively and significantly associated with conspiratorial ways of thinking in general, endorsement of conspiracy theories about global warming in particular, paranoid ideation, and distrust of officialdom—much as social conservatism was. These findings may give pause to those who have concluded that the psychological underpinnings of economic conservatism are vastly different from those of social (or cultural) conservatism and, in particular, that needs for certainty and security are applicable to the social domain but not to the economic domain (Feldman & Johnston, 2014; Johnston et al., 2017; Malka & Soto, 2015).

Of course, we readily note several limitations of our research program, including the fact that we have relied upon cross-sectional, correlational analyses of data. Clearly, it is impossible to draw causal inferences about the relationship between political ideology and conspiratorial worldviews on the basis of these studies. Some readers might suggest that belief in conspiracy theories could, in certain media environments, lead people to embrace political conservatism. If this is true, it would not necessarily contradict the theory of political ideology as motivated social cognition, which stresses the existence of "elective affinities" arising from a reciprocal combination of "top-down," elite-driven communication processes and "bottom-up" psychological needs and interests (Jost, Federico, et al., 2009). We decided not to conduct mediation models in which the order of variables was reversed, because this approach has been criticized sharply on methodological grounds (Lemmer & Gollwitzer, 2017). Instead, we cite a number of theoretical reasons why statistically equivalent models would be less plausible than the model we have developed in the present research program (Pieters, 2017).

First, political ideology is generally understood to be a reasonably stable disposition that remains highly consistent throughout the lifespan of an adult (Sears & Funk, 1999), whereas conspiratorial thinking is probably not. Second, there is a good deal of evidence linking political conservatism in particular to epistemic, existential, and relational needs (Jost, 2017, 2019; Jost, Federico, et al., 2009; Jost et al., 2003b) which, as noted above, are themselves linked to the endorsement of conspiracy theories (Douglas et al., 2017; A. Kay et al., 2009; Whitson et al., 2015). Third, although there are alternative theoretical accounts emphasizing ideological symmetry, which would suggest that conspiratorial thinking should be equally prevalent on the left and right (Kahan, 2016; McClosky & Chong, 1985; Prooijen et al., 2015; Uscinski et al., 2016), we know of no theories in social science that would make the opposite prediction, namely that liberals would be *more* prone to conspiratorial thinking than conservatives. Nor are we aware of any patterns of data that show an asymmetry in the direction opposite to the one we have observed.

It is conceivable that—as suggested by an anonymous reviewer—conservatives may be more likely than liberals to *admit* to thinking in conspiratorial terms, but that both groups actually engage in such thinking to an approximately equivalent degree. To the extent that conspiracy theorizing is considered to be socially undesirable in American society, however, this is not the pattern that one would expect on the basis of other psychological evidence indicating that conservatives tend to score higher rather than lower than liberals on measures of socially desirable responding (Jost et al., 2010; Wojcik et al., 2015). It is possible that social norms differ among liberals and conservatives with respect to conspiratorial thinking and other epistemic practices, and this would be a fruitful direction for future research. At the same time, if it is in fact true that conservatives feel that conspiratorial thinking is more socially appropriate than liberals do, this difference in social norms would also seem to require explanation in social psychological terms, along the lines of what we have attempted in this article.

Another clear limitation is that we are focusing in particular on the United States shortly before and during the era of Donald Trump. This could be important, because cross-national studies suggest that the link between political conservatism and skepticism about global warming, for instance, is stronger in the U.S. than in other countries (Hornsey et al., 2018). It is worth recounting that Hofstadter's (1964) observations about the "paranoid style" of conservative (or pseudo-conservative) thinking were confined to the American context—although he was describing a decidedly different historical period.

In any case, we suspect that our findings might also have resonance in other countries where right-wing authoritarianism is in the ascendancy, such as Hungary, Austria, Poland, Turkey, Israel, and Brazil. To take just a few examples, right-wing conspiracy theories blaming liberals, Jews, immigrants, foreigners, journalists, academics, and other secret cabals for all of their country's problems—including plans for an alleged "replacement" of the White Christian population with non-White Muslims—have gained political currency throughout Europe (e.g., Davies, 2016; Faragó et al., 2020; Feffer, 2019). Conspiracy theories involving George Soros, a liberal Jewish businessman and philanthropist, have been extremely popular among rightists not only in his native country of Hungary (where government-sponsored billboards spread misinformation about him) but also in Russia, Poland, Ukraine, Romania, Slovakia, Turkey, Malaysia, Canada, and the U.S. (Baram, 2018; Holmes, 2019). In future research, it would be important—for theoretical and practical reasons—to determine the extent to which left-right ideological asymmetries operate in contexts outside of the United States.

In the meantime, our findings, which are clearly focused on the context of American politics, provide strong support for the notion that conspiratorial ideation—and the related phenomenon of science denial—are forms of motivated reasoning that resonate more with politically conservative than liberal or progressive audiences (see also Dieguez et al., 2015; Fessler et al., 2017; Jolley et al., 2018; Kraft et al., 2014; Lewandowsky et al., 2013; Miller et al., 2016; Mooney, 2012). Conspiracy theories—like many other types of rumors—provide relatively simple causal explanations for events that are otherwise experienced as complex, uncertain, ambiguous, and potentially troubling or threatening (G. Allport & Postman, 1946; A. Kay et al., 2009). It is important, then, to bear in mind that psychological needs to reduce uncertainty and threat are correlated not with ideological extremity in general, but with right-wing conservatism in particular (Jost, 2006, 2017).

6.9 Concluding Remarks

In the present research program, we administered a variety of psychological and political instruments to large national samples of American adults and observed that political conservatives were significantly more likely than liberals to exhibit "paranoid ideation," to be more distrustful of "officialdom," and to espouse conspiratorial thinking in general and in particular (with respect to scientific evidence of climate change). As noted above, these observations are remarkably consistent with Hofstadter's (1964) historical analysis of the "paranoid style in American politics"—as well as previous research indicating that paranoia is positively associated with right-wing authoritarianism and social dominance orientation (M. Wilson & Rose, 2014).

The fact that conservatives—or perhaps "pseudo-conservatives"—are especially distrustful of scientists, governmental representatives, and the mainstream media as sources of information presumably makes them more susceptible to conspiratorial thinking. Likewise, conspiratorial thinking is likely to increase distrust of conventional epistemic authorities. In conclusion, then, we have provided new and robust evidence that a meaningful ideological asymmetry exist when it comes to the adoption of conspiratorial mindsets. As (Hofstadter, 1964) pointed out, there are some troubling implications of the paranoid style for the stable functioning of liberal-democratic societies—insofar as some level of political trust is required for citizens to

share power with and consent to being governed by others with whom they disagree (see also Morisi et al., 2019). These normative implications are beyond the scope of the present article, but they are well worth returning to at some other point in time.

7

General Discussion

Ideology, for the quantitative approach, is a system (or network) of political beliefs, attitudes, values, and principles that congeal together in a politically meaningful way—i.e., organized around a political tradition such as conservatism, libertarianism, populism, anarchism, socialism, etc. Ideologies help explain and justify social and economic arrangements in a society, thereby shaping an individual's —and group's— perceptions, actions, and decisions. It can influence how people view social, political, and economic issues, as well as how they interact with others (e.g., group dynamics and intergroup relations). Research on ideology can be consequential to societally-relevant topics insofar as it helps illuminate our explanations of everyday attitudes and behaviors of both individuals and groups, providing insights on the factors contributing to social, economic, and political conflicts and identifying ways to address these to promote greater cooperation. To this end, ideology is a powerful tool at social scientists' disposal to study and predict political behavior and attitudes. Overall, exploring the influence of ideology on ordinary citizens, and the psychological basis that undergirds it, can equip us with a more realistic and comprehensive understanding of human thought and behavior in the political arena.

Despite its relevance, ideology is still a generally poorly understood concept. Ironically, this is especially the case in Political Science approaches to political attitudes and behavior. As hopefully it became clear from chapter 1, the myriad of ways in which ideology can be defined, measured, and studied can oftentimes contribute to making ideology a contentious topic. Further contributing to the underappreciation of ideology and its impact on social, political, and economic issues, is the classical quantitative political science approach to ideology, which contends that ordinary citizens are almost completely naive about politics. They are portrayed as unsophisticated and hypocritical, and their ideological beliefs, opinions, and values are thought to be meaningless for most. This view is widely accepted in political science but also has a strong representation in sociological and social-psychological literature (*e.g.*, Achen and Bartels, 2017; Bell, 1960; Campbell et al., 1960; Converse, 1964; Federico, 2019; Federico and Malka, 2018).

Across five empirical chapters that focus on different aspects of ideology, this dissertation attempts to upend the published record and reclaim the central role of ideology in the dis-

ciplines of social and political psychology. The first goal of this thesis was to put the theory of ideological innocence to the test. In doing so, we found that ordinary citizens can —and indeed do—hold meaningful political beliefs, and, importantly, people are attracted to an ideology based on their psychology. (chapter 2). After having established that, the second and third aims of this thesis were to investigate the psychological traits and motivations underlying individuals' attraction to certain ideologies (chapters 3 and 4) and the ideological bases of political attitudes (chapters 5 and 6). The upshot of the presented works is that ideology matters.

This general discussion provides an overview of the findings presented in the empirical chapters, discusses their implications and contributions, and suggests fruitful directions for future research on ideology.

7.1 Main findings of Empirical Chapters, Implications, and Contributions

In **chapter 2**, we attempted to advance the critical scientific understanding of ideology in the United States and the United Kingdom. Specifically, we aimed to test (a) whether individuals can be considered ideologically innocent, (b) whether social and economic dimensions of ideology are structurally and functionally independent from each other, and (c) probe the relationships between neoliberal ideology and its underlying psychology. To this end, we employed a set of four high-quality nationally representative samples (in both the United States and the United Kingdom), which included a wider range of political attitudes instruments than those used in previous research. Participants answered questions regarding symbolic and operational ideology, endorsement of neoliberal attitudes, right-wing authoritarianism, social dominance orientation, general, economic, and gender-specific system justification, and political sophistication. Across all four samples, ideological self-placement strongly and significantly correlated with scores in all measures of operational ideology. Such high correlations were observed for both respondents with low and high levels of political sophistication. If ordinary citizens' ideological self-placement were non-ideological, as proposed by Converse (1964), Kalmoe (2020), Kinder and Kalmoe (2017), then one should expect to observe a gap between how individuals self-identify politically and which political opinions they hold. Instead, the picture that emerged from this chapter was one of ideological coherence for both individuals high and low in political sophistication. To be sure, there is a difference of magnitude between low and high sophisticates, as there might be other sociodemographic factors (e.g., education, socioeconomic status, etc.). This is not, however, to say that we observe what is described in the literature as ideological innocence, which finds, "[w]ith generous classification, 20-30% fit the bill" of ideological coherence (Kalmoe, 2020, p. 3). Furthermore, we found that social and economic dimensions of ideology were largely intertwined. That is, we observed strong and significant correlations between social and economic ideology both when using ideological self-placement measures and operational measures of ideology. Again, this result was true for both respondents low as well as high in political sophistication. This finding refutes the notion that social and economic ideology are separate domains with qualitatively different psychological concerns (Feldman & Johnston, 2014; Johnston et al., 2017; Malka & Soto, 2015; Stenner & Haidt, 2018). We argue that the observed overlap between social and economic ideology might be a characteristic of neoliberal societies, where economic

policies have important implications for several minority groups based on race, ethnicity, immigration status, gender, and sexual orientation. Put differently, the study of ideology is not immune to ideology itself, which manifests itself often through the veneer of methodological and contextual issues. For example, theorizing and empirically treating social and economic dimensions of ideology as separate might not only be artificial but also a product of neoliberal ideology. Still in chapter 2, we also found that, in line with our hypotheses, endorsement of neoliberal attitudes such as laissez-fare capitalism and opposition to social welfare were significantly and positively related to right-wing authoritarianism, social dominance orientation, and economic and gender-specific system justification. The endorsement of neoliberal attitudes was also positively correlated with general system justification, although correlations were fairly modest in magnitude. Importantly, these results hold for both respondents who were low and high in political sophistication. In addition, despite finding evidence that some aspects of neoliberal ideology (i.e., business, limited government, and fiscal responsibility) are endorsed across the ideological spectrum, support for neoliberal attitudes as a whole was much stronger for self-identified economic conservatives than self-identified economic moderates and liberals. Finally, we found that economic conservatism (measured as support for laissez-faire capitalism, opposition to welfare, and a less progressive tax system, all of which are hallmarks of neoliberalism) was positively and significantly correlated with authoritarianism (both measured as right-wing authoritarianism and child-rearing values). Significant and positive correlations were also found between economic conservatism and general system justification, both in the United States and the United Kingdom samples. All of these patterns were observed both for respondents who scored low and high in political sophistication. Overall, the findings of chapter 2 provide converging evidence against common assumptions that individuals hold non-ideological political attitudes, that social and economic attitudes are independent of each other, and that economic conservatives are psychologically different than social conservatives. While these results do not aim to suggest that citizens' beliefs and opinions are correct and well-informed, they do provide evidence that such beliefs and opinions conform to an overarching left-right dimension of ideology.

Chapter 3 investigates some of the psychological motivations underlying support for Donald Trump in the 2016 American Elections. Contrary to the lay and elites' belief that Trump's victory represented a revolt against the status quo, we found that while preferences for Donald Trump were weakly and negatively associated only with general (societal) system justification, they were strongly and positively associated with both economic and gender system-justification. Preferences for Hillary Clinton showed the opposite pattern: liking Clinton was negatively associated with economic and gender system justification while positively associated with general system justification. These results cut across social classes. That is, for every level of income, Trump supporters were higher in economic and system justification than Clinton supporters, whereas no statistical differences were observed between Trump and Clinton supporters regarding general system justification. When considering the predictive power of the three types of system justification, we found that economic and gender system justification were associated with an increase in the probability of voting for Trump, whereas higher rates of general system justification were associated with decreased odds of voting for Trump. More generally, we replicated previous findings on the association between symbolic ideology, party identification, and system justification (Jost, Hawkins, et al., 2014; Jost, Nosek, et al., 2008). Specifically, we found that (social and economic) conservatives as well as Republicans scored higher in all three measures of economic system justification than liberals and Democrats. The results of chapter 3 have several implications. First, they indicate how nuanced system justification can be, with individuals being more psychologically motivated to justify some aspects

of society than others. Second, because general system justification was associated with an increased likelihood of voting for Clinton (over Trump), it may seem that Clinton was indeed regarded as a representative of the establishment and rejected for it in the 2016 elections. Third, the findings suggest that while Trump supporters might have rejected the status quo of liberal, democratic governance (of Barack Obama), they did not challenge the status quo more broadly, as they were still prone to justify the economic system as well as the traditional societal gender roles.

Chapter 4 examined the psychological antecedents of populist preferences from the perspective of social justice research. Across two large representative samples (in the U.S. and Germany), results show that justice concerns predict voting for Donald Trump in the United States and for AfD in Germany. In line with our hypotheses, we found that different facets of justice sensitivity differentially predict support for populist radical-right candidates: self-oriented justice concerns were positively associated with voting preferences for both Donald Trump and the AfD, whereas other-oriented justice concerns negatively predicted preferences to vote for such populist candidates and parties. In addition, the results of chapter 4 shed light on which components of a populist radical-right ideology mediate the relationship between justice concerns and preferences for populist candidates and parties. We found that self-oriented justice concerns affect voting intentions for populist candidates and parties indirectly by increasing anti-immigration and populist attitudes in both samples. In the German sample, we found that RWA was an additional mediator, with higher values of self-oriented justice leading to higher RWA, decreasing preferences for the AfD. Other-oriented justice concerns negatively influenced the odds of preferring Trump (versus other candidates in the U.S.) by reducing anti-immigration attitudes and RWA. Conversely, in Germany, we found that other-oriented justice concerns decreased the odds of voting preferences for AfD (versus other parties) via a decrease in anti-immigration attitudes but increased the odds of voting for AfD via lower RWA. Results of chapter 4 complement previous research linking personality and populist voting (Aichholzer & Zandonella, 2016; Bakker et al., 2016; Heiss & Matthes, 2017) and show that stable individual differences in justice concerns can also account for political and voting preferences. Furthermore, in both samples, anti-immigration attitudes had the highest unique explanatory power, reinforcing the key role of nativism in populist radical-right ideology (Mudde, 2007). It is worth noting there were meaningful differences across the two investigated samples. RWA was a positive predictor of voting for Trump in the U.S. but a negative predictor of AfD votes in Germany. While this result is surprising, we consider that the effect of RWA on voting for AfD may have been accounted for with the variables present in the model, likely suggesting that in Germany, RWA is intertwined with justice perceptions and nativism. Furthermore, recent research has put forward evidence that the link between RWA attitudes and populist radical-right political preferences can depend on the society's prevalent cultural norms (Roets et al., 2015). Future studies are needed to elucidate if this relationship can be best explained by statistical artifacts or the cultural-specific role of RWA in preferences for populist radical-right actors. Regarding implications, our investigation across two different countries and political systems and contexts provides important insights into the potential generalizability of the role of justice sensitivity and populist ideological thinking in predicting the rise to power of populist radical-right candidates and parties. Altogether, the results of chapter 4 improve the current understanding of the psychological motivations of populist radical-right voting and call for further methodologically advanced and cross-cultural studies investigating the role of justice perceptions on political behavior.

In **chapter 5**, we explored the ideological and political psychological bases of scientific atti-

tudes leveraging an exploratory quota-based nationally representative sample and a confirmatory convenience sample. We operationalized anti-scientific attitudes in three different ways, distrust in climate science, scientific skepticism, and trust in ordinary people. The study was conducted in 2016, before COVID-19 and the global pandemic. In general, results showed that conservatives, Republicans, religious and less educated individuals, as well as those high in authoritarianism, social dominance, and system justification, were more likely to express anti-scientific attitudes. The results of the confirmatory sample largely replicated the findings from the representative sample. As the weight of these factors varied when determining different anti-scientific attitudes, a series of multiverse analyses were conducted to explore the generalizability of results across various model specifications for each of the three dependent variables. This set of analyses is also suitable for assessing variable importance and robustness comparatively in predicting the outcome. Results indicate that —contrasting the notion that ideological beliefs are meaningless for most U.S. citizens (Converse, 1964; Kalmoe, 2020; Kinder & Kalmoe, 2017)— ideology was the strongest predictor of distrust in climate science, accounting for approximately 80% of the explained variance. These results are irrespective of how ideology (or political conservatism) was measured, as we used 5 different measures of operational ideology plus symbolic ideology. Social Dominance Orientation (SDO) was also an important predictor of distrust in climate science but accounted for substantially less variance. Although partisanship was a significant predictor of distrust in climate science in most models, it failed to explain unique variance in models that included symbolic and operational ideology as well as SDO. Regarding scientific skepticism, RWA and political conservatism were the most important predictors. Likewise, although partisanship was a significant predictor of skepticism about science in 71% of the models, it failed to reach significance after controlling for ideology and RWA. For trust in ordinary people (versus science experts), the largest predictor was distrust in climate science, followed by political conservatism, which explained nearly half of the total variance, and RWA. After adjusting for ideology, partisanship exerted a small but significant effect on trusting ordinary people over experts, but the negative effect suggested that Democrats were more trusting of ordinary people than Republicans. In addition, while authoritarianism predicted greater trust in ordinary people, higher scores on system justification predicted higher trust in scientific experts, suggesting science experts might be considered part of the established status quo. While no noticeable differences between the social and economic dimensions of ideological self-placement were observed for distrust of climate science, consistent with previous literature (Federico & Malka, 2018; Nilsson et al., 2019), social conservatism was a stronger predictor of skepticism about science and trust in ordinary people than economic conservatism. Note, however, that despite these differences, economic conservatism was always correlated with anti-scientific attitudes, contradicting previous accounts that economic conservatives would hold as favorable attitudes towards science as liberals (Carl et al., 2016). Chapter 5 aimed at re-contextualizing and extending the literature on anti-scientific attitudes by enabling a more comprehensive understanding of how such attitudes are related to a wide range of political and psychological constructs. Using a nationally representative sample, confirmatory sample, and multiverse analyses speaks to the robustness and consistency of the findings. Overall, results suggest consequential liberal-conservative asymmetries in scientific attitudes. Political conservatives were not only distrustful of climate change, as previously suggested by B. Rutjens et al. (2018), but also more skeptical about science in general and more inclined to trust ordinary people than liberals. Similarly, results expand previous studies showing that RWA and SDO are related to skepticism about climate science (Jylhä & Akrami, 2015; Jylhä et al., 2016; Milfont et al., 2018; S. Stanley & Wilson, 2019) and suggest these constructs are linked to attitudes towards science more generally speaking. Taken together, the results of chapter 5 hold important implications

for how we measure ideology —admittedly a methodological concern— and for policy-making and governmental and regulatory agencies. Regarding the measurement of ideology, it was observed that different scales measuring operational ideology behaved quite differently from one another regarding their association with anti-scientific attitudes. The implication is that to measure ideology with one particular scale (or idiosyncratic selection of survey items) and draw conclusions about ideology, in general, might be a premise that needs to be tested rather than presumed true. If further studies reveal that different ideological instruments behave differently, that is, that substantive results *can* indeed change as a function of the instrument used, the consequences are significant insofar as it poses a threat to the replicability, comparability, and generalizability of findings about the ideology of mass publics. For policy-making, trust and reliance on scientific knowledge and expertise will become increasingly important in the face of the many challenges with which humanity will need to deal in the next decades (i.e., global pandemics, vaccination, global warming, and the curriculum of secondary and higher education. Indeed, as the political right continues its efforts at the politicization of these issues, polarization across the left-right political spectrum is to be expected, and thus, it becomes vital to understand better how certain ideologies, and their associated psychological profiles, might influence public perceptions of the role of science, scientists, and educators in our society.

Chapter 6 addresses the debate on whether there are ideological asymmetries in the endorsement of conspiracies and ideological thinking. Specifically, the chapter explored the question of whether liberals and conservatives are equally likely to engage in conspiratorial thinking, as it has been previously suggested (Imhoff et al., 2022; Kahan, 2016; McClosky & Chong, 1985; Moore et al., 2014; Oliver & Wood, 2014; Prooijen et al., 2015). Results of four studies employing large samples of American adults show considerable evidence of ideological asymmetry in conspiratorial endorsement and thinking, such that political conservatives were more likely than liberals to endorse a conspiracy theory and to adopt a conspiratorial mindset in general. In addition, as expected by the presented results of chapter 5, we found that conservatives were more likely than liberals to distrust scientists, governmental representatives, and the mainstream media as reliable information sources. In addition, conservatives were also more prone to engage in paranoid ideation than liberals, and the association between political conservatism and conspiratorial thinking was mediated by both distrust of officialdom and paranoid ideation. In contrast to previous suggestions (Imhoff et al., 2022; Prooijen et al., 2015), we found no evidence of a quadratic relationship between political ideology and conspiratorial thinking, indicating that extreme liberals were not as likely as extreme conservatives to adopt a conspiratorial mindset.[1] Across the four studies presented in chapter 6, we

[1]It is necessary to contextualize this claim. First, statistically, linear and quadratic terms —such as those used to assert a linear vs. curvilinear relationships— correlate with one another, introduce endogeneity, and increase power to encounter a significant quadratic coefficient, especially in large sample sizes. The question, then, to a statistically informed analysis, is not whether one can fit a curve or spline and find significant coefficients, but rather whether there are macro-level pressures and micro-level empirical evidence that such claims make sense theoretically and, most importantly, contextually. A significant p-value on a sample size of thousands should not be sufficient. The statistical naivety of the linear vs. quadratic debate is similar to the premature imposition of replicability cross-culturally of political phenomena (which is intrinsically contingent to the political system, institutions, political history, etc.), for a given effect to be considered truly 'psychological' in nature. Similarly, Malka et al. (2019) argue that social and economic conservatism are not positively correlated across several nations. It should be clear that without political environment activation, there should not be an a priori relationship between these (artificial) components of ideology, and it is

adopted measures that tapped into a general tendency to engage in conspiratorial thinking rather than mentioning specific conspiracies. While it is still possible that some conspiracies are more appealing to liberals than to conservatives, results suggest that, in general, conservatives are more prone to engage in conspiratorial thinking than liberals, presumably due to their different epistemic needs (Jost et al., 2003b). Similar to findings in chapters 2, 3, and 5, it is also worth noting that studies 3 and 4 showed evidence that the association between political conservatism and conspiratorial thinking is robust regardless of how conservatism is measured, that is, whether symbolic or operational measures of conservatism are used (albeit some differences in magnitude). Results remained constant for both economic and social dimensions of conservatism, contesting previous suggestions that the psychology of economic conservatism is vastly different from that of social conservatism (Feldman & Johnston, 2014). Altogether, the results of chapter 6 provide new and robust evidence that meaningful ideological asymmetries exist in the United States when it comes to conspiratorial thinking. As shown in a recent study, conservatives are more prone to reject evidence and rely more strongly on feelings and intuition than liberals (Young et al., 2022). Such epistemic motivations account for the link between political conservatism and endorsement of misinformation in the context of the COVID-19 pandemic (Young et al., 2022) and could as well contribute to the greater predisposition of conservatives to engage in conspiratorial thinking. These results have important implications for policy-making targeting conspiracy theories and dis- and misinformation. Devising policies that attend to conservatives' needs for certainty, security, and reassurance could prove useful in reducing conspiratorial thinking among this group.

7.2 Limitations and Future Research

In **chapter 2**, the analysis of neoliberal ideology was based exclusively on explicit and self-reported measures. Thus, although unlikely, it is impossible to rule out that responses were online constructed rather than representing individuals' pre-existing ideological beliefs and opinions. Our results are somewhat time-bound. It is possible that the times samples completed our questionnaire (e.g., Brexit, D. Trump election) were of particular political significance, heightening attention to politics and re-enforcing relationships. Furthermore, while neoliberalism may be so ubiquitous in western societies that it is no longer recognized as an ideology (Monbiot, 2016), we argue that the study of neoliberalism as an ideology is of extreme relevance, insofar as its endorsement contribute to the justification of so many inequalities that continue to plague our contemporary societies under the ruling of laissez-faire capitalism. Future studies could attempt to extend and replicate our findings in other neoliberal societies (and perhaps, also non-neoliberal societies). We also note that some of the items

even more difficult to consider the validity of these results as in many of the explored countries, this economic vs. social/cultural distinction makes little to no sense to their local politics. As social and political psychologists gain access to market research companies —expanding the availability of participants beyond the global north and western, educated, industrialized, rich, and developed countries— and utilize large-scale cooperative data collection initiatives like the GSS, ANES, ESS, and WVS, it would be fruitful to incorporate politically-contextualized research questions and insights from cross-cultural and comparative politics literature. In the words of Krosnick (2002), we all must make "a self-conscious attempt to contribute to psychological theory by paying careful attention to political context" (p. 84). This is of utmost importance insofar as combinations of beliefs and attitudes of the public are highly influenced by the unique discourse of each society (*e.g.*, Berger Peter and Luckmann, 1966; Cooley, 2017; Fiske et al., 1998; Malka and Lelkes, 2010).

in the social ideology domain might have primed or affected individuals' responses to items on economic ideology in chapter 2 and vice versa. While items were randomized to prevent such methodological issues, the fact that items in one domain could have primed responses to items in the other domain would actually be further proof that economic and social processes are, in fact, intertwined. In addition, following previous research (Carmines et al., 2012; Feldman & Johnston, 2014), items to compose the social or economic domains of ideology in chapter 2 were selected by the researchers. Although we have sampled items from a considerably higher number of operational ideology scales than previous studies, this idiosyncratic selection of items might still be considered a limitation of our study and, more broadly speaking, of the study of the structure of ideology in political science. Future studies should attempt to estimate the dimensionality of public opinion using appropriate psychometric techniques to identify better which items should compose the social and economic categories of ideology.

Chapter 3 provides evidence of the role of system justification in influencing candidate preferences and voting decisions in the 2016 American elections and revealing their underlying psychological factors. While this result advances the understanding of the psychological underpinnings of political decisions and ideological subscription, many other psychological motivations remain to be studied in relation to Trump's support, even after so many years of being in the leadership of the Republican party. Future studies could further examine, consolidate and review the psychological basis of Trumpism and the similarities and differences to the psychology of conservatism (*e.g.*, Womick et al., 2018). Another scholarly generative possibility would be to investigate whether Trump supporters justify other systems, such as race relations, but also institutions like the supreme court, health care system, etc. In addition, it could be fruitful to investigate whether results were specific to the context of the 2016 elections or whether similar patterns could be observed in the 2020 elections and beyond. Lastly, while we used full measures of all constructs, the results of this paper relied on only two samples, limiting its potential generalizability.

Chapter 4 investigates the psychological link between individuals' justice concerns and preferences for populist radical-right candidates across two national samples. Results pointed to meaningful similarities between the U.S. and Germany regarding the role of justice sensitivity in determining preference for populist actors. Yet, different results were obtained regarding the role of RWA as a mediator of this relationship in the U.S. and Germany. While this unanticipated result might be attributed to modeling choices and cultural differences in the political landscape of the two countries (Roets et al., 2015), it cannot be ruled out that it is due to the use of different RWA measures in both samples, which could be tapping into distinct notions of authoritarianism. Future studies are needed to explore the possible cross-cultural role of authoritarianism in preferences for populist candidates and parties, preferentially using similar scales and items. Speaking of these, it is important to test if, in other samples, these items remain invariant. In our work, these were tested and found to be invariant across Germany and the US, but given the numerous other populist instruments and poor measurement practices in the discipline (*e.g.*, Hauwaert and Kessel, 2018; Van Hauwaert et al., 2020), it could be helpful to compare the performance of PAS-6 against other scales across countries and groups. Furthermore, as in the other chapters in this thesis, chapter 4 is correlational. While we cannot rule out that different causal relations might account for the results (e.g., political attitudes translating into justice concerns), we chose to investigate the more theoretically plausible model, given previous research showing high stability of justice sensitivity across time (Schmitt et al., 2010). Results of chapter 4 encourage the extension of the investigation of justice concerns to a range of other relevant political behaviors and attitudes, such

as endorsement of other ideologies (e.g., neoliberalism, conservatism, and libertarianism), belief in conspiracy theories, scientific denial, pro-environmental attitudes, and engagement in progressive and reactionary collective action for social change.

Chapter 5 provided a much-needed overview of multiple political and psychological predicting attitudes towards science in the U.S. population. In particular, it revealed the significance of ideology in determining scientific skepticism and trust in scientists above—beyond climate change issues. The two studies, however, were incomplete in surveying the full scope of possible key predictors of anti-scientific attitudes. Future studies should remedy limitations by testing these predictors against the predictive power of epistemic beliefs, trust in institutions, science, scientists, higher-education and secondary-education teachers (as well as stereotypes about these), worldview-motivated and politically-motivated rejection of science, conspiracy mentality, political sophistication, and social distance. Future investigations should also expand on this work and investigate whether similar results can be found in countries with different geopolitical contexts and where political polarization might be lower. In addition, it would be beneficial to investigate whether and how individuals' experiences with the COVID-19 pandemic and the ongoing discussions about climate change alter attitudes towards science in the U.S. and worldwide. Lastly, political conservatism in the U.S. may be indeed the single, most important source of the growth of anti-scientific attitudes, but there certainly are other ideologies with beliefs that might be incongruent with science (e.g., populism, libertarianism, neoliberalism, nativism, racism, and the wellness belief system). Future investigations casting a wide net when it comes to ideologies (plural) would likely generate interesting research programs.

Chapter 6 presents further evidence of ideological asymmetries in the domain of conspiratorial thinking. Results are, however, limited to the context of politics in the United States at the onset of Donald Trump's presidency. This is relevant insofar as during his campaign and presidency, he and the right-wing political establishment used social media to propagate conspiracy theories (e.g., election fraud, climate change being a hoax, Barack Obama being a Muslim born in another country, among others). At the time of writing, Trump is still the *de facto* leader of the Republican party, but it would be interesting to follow up this research in the years after the end of Trump's grip on the GOP withered, to investigate the stability of ideological asymmetries in conspiratorial thinking across different US governments. Likewise, it would also be fruitful to attempt to replicate and extend the findings of chapter 6 across different countries (having in mind their political contexts). Another limitation of chapter 6 is that, due to the correlational nature of the studies presented there, it is not possible to draw causal inferences regarding the relationship between political ideology and conspiratorial thinking. As such, it is possible, although theoretically unlikely—as argued in chapter 6—that belief in conspiracy theories could lead people to become political conservatives. Lastly, we cannot rule out that, in the investigated samples, conservatives were more likely to admit engaging in conspiratorial thinking than liberals. While the measures of conspiratorial thinking employed throughout chapter 6 should have reduced effects on social desirability by not specifically mentioning any conspiracy theories, future studies investigating possible ideological asymmetries in social norms around conspiratorial thinking would be especially valued.

7.3 Concluding remarks

There currently is little appreciation for how much ideologies are intrinsic and widespread in ordinary citizens.

In this dissertation, the aim was to investigate the ideological coherence of ordinary citizens, the psychology underlying ideological proclivities, and the ideological bases of political attitudes such as conspiratorial thinking and anti-scientific attitudes. Taken together, results suggest that (1) citizens hold meaningful, interconnected, and coherent ideological beliefs; (2) psychological traits such as social dominance orientation, system justification (e.g., general, economic, gender), justice concerns, and right-wing authoritarianism undergird proclivities for political conservatism; and (3) there are important ideological differences between conservatives and liberals in proneness to conspiratorial mentality and negative attitudes towards science and scientists—even before COVID-19 and the global pandemic. Despite the many limitations of this thesis, and the works therein, it is hoped it may inspire future research to explore the importance and impact of ideology on ordinary citizens' political beliefs, behavior, decision-making, and action.

To move the scholarship forward, a few recommendations can be suggested. Key (1961) is right about the indomitable difficulty in studying people's political beliefs accurately, "to speak with precision of public opinion is a task not unlike coming to grips with the Holy Ghost" (p. 8). Echoing Key's (1961) observations about the intractability of investigating ideology quantitatively and the gap between what one would ideally want to measure vs. what one actually measures, Converse (1964) noted more than half a century ago, "belief systems have never surrendered easily to empirical study or quantification. [Ideologies] have often served as primary exhibits for the doctrine that what is important to study cannot be measured and that what can be measured is not important to study" (p. 1). Indeed, symbolic and operational measures of ideology traditionally only tap into the tip of the ideology iceberg —its entire whole is beneath an untapped surface, its influence unrevealed by our limitations. As already mentioned in the introduction to this thesis, Carmines and D'Amico (2015, p. 206) encapsulated these ideas by noting that "conceptual and measurement problems have pervaded the research on the consequences of ideological thinking. If the basic measurement of ideology is flawed, it is likely that insights from research into both the ideological character of the public and the consequences of ideological thinking cannot be trusted. Without reliable measurement, the level of ideological thinking is likely being underestimated". Thus, the future of quantitative approaches to ideology rests in improving —if not revolutionizing— its measurement. A reconceptualization of ideology —conceivably plural conceptualizations— accompanied by guidance on its measurement is the principal way forward. And as the first step to overcoming a problem is to diagnose it correctly, potential steps forward are: a review of measurement practices in ideological research (Azevedo & Bolesta, *in preparation*), a thorough assessment of dimensionality of ideology in the mass public (Warnecke & Azevedo, *in preparation*), an evaluation of the replicability of existing theories in social psychology and political science using different existing ideological measures (Azevedo, *in preparation*), and the qualitative assessment of psychological traits and ideological thinking (J. Mason et al., *in preparation*). Similarly, for better or worse, no single stream of literature can capture the complexity and multifaceted nature of ideology. Students of ideology wishing to progress long-standing debates can only do so by profiting from —and engaging with— its interdisciplinarity in both quantitative and qualitative realms. Lastly, and by no means less important,

future research ought to explore the intersectional and critical character of ideology in probing the myriad of routes ideology can impact individuals' lives in insidious and meaningful ways.

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Appendix A: Supplementary Material for Chapters

Since all chapters in this thesis are published, the appendices can be found online, in their respective journal pages and in their OSF pages.

Chapter 2.: Neoliberal Ideology and the Justification of Inequality in Capitalist Societies: Why Social and Economic Dimensions of Ideology Are Intertwined.

- https://doi.org/10.1111/josi.12310
- https://osf.io/mzt2k/

Chapter 3.: "Making America Great Again": System Justification in the U.S. Presidential Election of 2016.

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- https://osf.io/hbvja

Chapter 4.: Justice for the People? How Justice Sensitivity Can Foster and Impair Support for Populist Radical-Right Parties and Politicians in the United States and in Germany.

- https://doi.org/10.1111/pops.12632
- https://osf.io/5ghqp/

Chapter 5.: The Ideological Basis of Anti-Scientific Attitudes: Effects of Authoritarianism, Conservatism, Religiosity, Social Dominance, and System Justification.

- https://doi.org/10.1177/1368430221990104
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Chapter 6.: The Paranoid Style in American Politics Revisited: An Ideological Asymmetry in Conspiratorial Thinking.

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doi.org/10.1038/s41562-021-01173-x. [Data, Supplementary Materials, Preprint] Contributorship: Methodology; Project administration; Resources; Writing, review, and editing.

Contributorship

Each chapter of this cumulative dissertation is based on a published peer-reviewed article conducted in collaboration with co-authors. In this section, I describe my contributions using an adapted version of the CRediT taxonomy and *tenzing* (Allen et al., 2014; Holcombe et al., 2020).[1] This approach helps shed light on the myriad of roles authors play in the research process, which are often obscured by distinct field-specific authorship practices, and sometimes go unrecognized due to hierarchy-enhancing academic conventions determining authorship-worthy contributions.

In the below table, for each chapter of this thesis, my contributions are described using the CRediT taxonomy and summarized using *tenzing*. The table has been adapted to reflect contributions of several works for one author (rather than for its typical use, single publication with multiple authors). Furthermore, the category *Software* was removed as none of the chapters involved software development. *Supervision* is omitted for evident reasons given the educational nature and mentorship associated with the process of obtaining Ph.D. In my view, CRediT taxonomy incorporates both *Supervision* and *Project Administration* for this reason. Also note that I do not report other authors contributions in such detail because I believe it is not my role to characterize the contributions of others, despite the fact I have sought and obtained agreement for the presented contributions from the supervisors of the works presented in this thesis. Finally, the descriptions of what each contribution entails according to the CRediT taxonomy are as follows:

- *Conceptualization* relates to ideas, formulation, or evolution of overarching research goals and aims.
- *Data Curation* comprises management activities to annotate or produce metadata, scrub data, maintain research data (including software code, where necessary for interpreting the data itself) for initial use and later re-use.
- *Formal Analysis* entails the application of statistical, mathematical, computational, or other formal techniques to analyze or synthesize study data.
- *Funding Acquisition* involves acquisition of the financial support for the project leading to the publication.
- *Investigation* includes conducting the research and investigation process, specifically performing the experiments, or data (evidence) collection.
- *Methodology* encompasses development or design of the methodology and creation of models.
- *Project Administration* incorporates management and coordination responsibilities for

[1] *See* marton-balazs-kovacs.github.io/tenzing/

the research activity, planning, and execution.

- *Resources* has to do with provision of study materials, reagents, materials, patients, laboratory samples, animals, instrumentation, computing resources, or other analysis tools.

- *Validation* entails verification, whether as a part of the activity or separate, of the overall replication, reproducibility of results, experiments and other research outputs.

- *Visualization* involves the preparation, creation or presentation of the published work, specifically regarding visualization or data presentation.

- *Writing (Original Draft Preparation)* has to do with the preparation, creation or presentation of the published work, specifically writing the initial draft.

- *Writing - (Review & Editing)* encompasses the preparation, creation or presentation of the published work by those from the original research group, specifically critical review, commentary or revision, including pre- or post-publication stages.

Chapter 2 is based on an article co-authored with Professor Dr. John T. Jost, Professor Dr. Tobias Rothmund, and Dr. Joanna Sterling entitled "Neoliberal Ideology and the Justification of Inequality in Capitalist Societies: Why Social and Economic Dimensions of Ideology Are Intertwined" published at the Journal of Social Issues. I contributed to Conceptualization, Data Curation, Formal Analysis, Funding Acquisition, Investigation, Methodology, Project Administration, Resources, Supervision, Validation, Visualization, Writing (Original Draft Preparation), and Writing (Review & Editing).

Chapter 3 is based on an article co-authored with Professor Dr. John T. Jost and Professor Dr. Tobias Rothmund entitled "Making America great again: System justification in the U.S. presidential election of 2016" published at the Translational Issues in Psychological Science. I contributed to Conceptualization, Data Curation, Formal Analysis, Funding Acquisition, Investigation, Methodology, Project Administration, Resources, Validation, Visualization, Writing (Original Draft Preparation), and Writing (Review & Editing).

Chapter 4 is based on an article co-authored with Professor Dr. Tobias Rothmund and Dr. Laurits Bromme entitled "Justice for the People? How Justice Sensitivity Can Foster and Impair Support for Populist Radical-Right Parties and Politicians in the United States and in Germany" published at Political Psychology. I contributed to Conceptualization, Data Curation, Funding Acquisition, Investigation, Methodology, Validation, Visualization, and Writing (Review & Editing).

Chapter 5 is based on an article co-authored with Professor Dr. John T. Jost entitled "The Ideological Basis of Antiscientific Attitudes: Effects of Authoritarianism, Conservatism, Religiosity, Social Dominance, and System Justification" published at Group Processes & Intergroup Relations. It was prepared for a special issue on "A Group Processes Approach to Antiscience Beliefs and Endorsement of Alternative Facts", which was guest edited by Bastiaan Rutjens, Sander van der Linden, and Romy van der Lee. I contributed to Conceptualization, Data Curation,

Formal Analysis, Funding Acquisition, Investigation, Methodology, Project Administration, Resources, Validation, Visualization, Writing (Original Draft Preparation), and Writing (Review & Editing).

Chapter 6 is based on an article co-authored with Professor Dr. Sander van der Linden, Professor Dr. Costas Panagopoulos, and Professor Dr. John T. Jost entitled "The paranoid Style in American politics revisited: an Ideological Asymmetry in Conspiratorial Thinking" published at Political Psychology. I contributed to Conceptualization, Data Curation, Formal Analysis, Funding Acquisition, Investigation, Methodology, Resources, Validation, Visualization, and Writing (Review & Editing).

Publication	Order in Publication	Conceptualization	Data Curation	Formal Analysis	Funding Acquisition	Investigation	Methodology	Project Administration	Resources	Validation	Visualization	Writing - Original Draft Preparation	Writing - Review & Editing
Neoliberal Ideology and the Justification of Inequality in Capitalist Societies: Why Social and Economic Dimensions of Ideology Are Intertwined	1	☑	☑	☑	☑	☑	☑	☑	☑	☑	☑	☑	☑
"Making America Great Again": System Justification in the U.S. Presidential Election of 2016	1	☑	☑	☑	☑	☑	☑	☑	☑	☑	☑	☑	☑
The Ideological Basis of Antiscientific Attitudes: Effects of Authoritarianism, Conservatism, Religiosity, Social Dominance, and System Justification	1	☑	☑	☑	☑	☑	☑	☑	☑	☑	☑	☑	☑
The Paranoid Style in American Politics Revisited: an Ideological Asymmetry in Conspiratorial Thinking	3	☑	☑	☑	☑	☑	☑	☐	☑	☑	☑	☑	☑
Justice for the People? How Justice Sensitivity Can Foster and Impair Support for Populist Radical-Right Parties and Politicians in the United States and in Germany	3	☑	☑	☐	☑	☑	☑	☐	☐	☑	☑	☐	☑

Note. The descriptions of what each contribution entails are as follows: *Conceptualization* relates to ideas, formulation, or evolution of overarching research goals and aims. *Data Curation* comprises management activities to annotate or produce metadata, scrub data, maintain research data (including software code, where necessary for interpreting the data itself) for initial use and later re-use. *Formal Analysis* entails the application of statistical, mathematical, computational, or other formal techniques to analyze or synthesize study data. *Funding Acquisition* involves acquisition of the financial support for the project leading to the publication. *Investigation* includes conducting the research and investigation process, specifically performing the experiments, or data (evidence) collection. *Methodology* encompasses development or design of the methodology and creation of models. *Project Administration* incorporates management and coordination responsibilities for the research activity, planning, and execution. *Resources* has to do with provision of study materials, reagents, materials, patients, laboratory samples, animals, instrumentation, computing resources, or other analysis tools. *Validation* entails verification, whether as a part of the activity or separate, of the overall replication, reproducibility of results, experiments and other research outputs. *Visualization* involves the preparation, creation or presentation of the published work, specifically regarding visualization or data presentation. *Writing (Original Draft Preparation)* has to do with the preparation, creation or presentation of the published work, specifically writing the initial draft (including substantive translation). *Writing - (Review & Editing)* encompasses the preparation, creation or presentation of the published work by those from the original research group, specifically critical review, commentary or revision, including pre- or post-publication stages.

Authorship Declaration
Eidesstattliche Erklärung nach § 6 der Promotionsordnung vom 16. Januar 2008

“Hiermit erkläre ich an Eides statt, dass ich die vorgelegte Arbeit ohne Hilfe Dritter und ohne Benutzung anderer als der angegebenen Hilfsmittel angefertigt habe. Die aus anderen Quellen direkt oder indirekt übernommenen Aussagen, Daten und Konzepte sind unter Angabe der Quelle gekennzeichnet. Bei der Auswahl und Auswertung folgenden Materials haben mir die nachstehend aufgeführten Personen in der jeweils beschriebenen Weise entgeltlich/ unentgeltlich geholfen: Weitere Personen – neben den in der Einleitung der Arbeit aufgeführten Koautorinnen und Koautoren - waren an der inhaltlich-materiellen Erstellung der vorliegenden Arbeit nicht beteiligt. Insbesondere habe ich hierfür nicht die entgeltliche Hilfe von Vermittlungs- bzw. Beratungsdiensten in Anspruch genommen. Niemand hat von mir unmittelbar oder mittelbar geldwerte Leistungen für Arbeiten erhalten, die im Zusammenhang mit dem Inhalt der vorgelegten Dissertation stehen. Die Arbeit wurde bisher weder im In- noch im Ausland in gleicher oder ähnlicher Form einer anderen Prüfungsbehörde vorgelegt. Ich versichere, dass ich nach bestem Wissen die reine Wahrheit gesagt und nichts verschwiegen habe.”

Unterschrift:

Flavio is a senior researcher at the University of Cambridge's Social Decision-Making Lab, and together with Professor Sander van der Linden and colleagues, he focuses on uncovering the ideological basis and underlying psychology of anti-scientific attitudes and conspiratorial thinking. With this dissertation, Flavio has completed his Ph.D. in Political Science at the Center for Comparative Politics, at Cologne University, a German Excellence Center. During his Ph.D., Flavio became a Fulbright fellow at New York University, and together with Professor John T. Jost, studied political ideologies in the US, their psychology and role in justifying social and economic injustices. Flavio co-founded and directs FORRT —the Framework for Open and Reproducible Research Training (forrt.org)— an interdisciplinary community of 650+ early career scholars integrating open science principles into higher education as well as to advance research transparency, reproducibility, rigor, and ethics through pedagogical reform. Flavio won several international awards for his work on political psychology and FORRT, but perhaps most notably, he was named as one of the 100 most influential early career Portuguese via the "Global Shapers" initiative by the World Economic Forum, and his "success story" was recently recounted in an interview by NASA where he talked about Open Science practices and equitable science for all. Visit his personal webpage at flavioazevedo.com or follow him on Twitter: @Flavio_Azevedo_.

Ideologies, Ideological Asymmetries, and the Psychological Roots of Political Behavior. This dissertation is an attempt to upend the published record and argue for a greater appreciation of the ideological character of contemporary political attitudes and behavior as well as of their psychological roots. In five empirical studies, we investigated the ideological coherence of ordinary citizens, the psychology underlying ideological proclivities, and ideological asymmetries in political attitudes such as conspiratorial thinking and anti-scientific attitudes. Taken together, results suggest that (1) citizens hold meaningful, interconnected, and coherent ideological beliefs; (2) psychological motivations such as social dominance orientation, system justification, justice concerns, and right-wing authoritarianism undergirds ideological proclivities; (3) there are substantial ideological differences between conservatives and liberals in proneness to conspiratorial mentality and negative attitudes towards science and scientists---even before COVID-19 and the global pandemic; and (4) contrary to extant literature, ideology—not partisanship—was the most robust predictor of political attitudes. Despite the many limitations of this thesis, it is hoped it may inspire future research to explore the importance and impact of ideology on ordinary citizens' political beliefs, behavior, decision-making, and action, as well as probe the myriad of routes ideology can impact individuals' lives in insidious and meaningful ways.

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