System Justification Theory and Epistemic Limitations

Understanding Student Teachers' Epistemic Resistance to Critical Topics

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Abstract

Students in teacher education programs are often faced with perceived threats to their epistemological heritages. According to System Justification Theory, when faced with these perceived threats, individuals may become more defensive, epistemically resistant, and cognitively rigid. More specifically, due to a palliative psychological need, students may become motivated to justify what they conceive of as the status quo, or system justifications, to defend their epistemological heritage and socializations. Students may face perceived threats to their social and epistemological heritages in courses which are critically focused, such as foundations of education courses, and courses where there are requirements for both dialogical and dialectical engagement. System Justification Theory offers the potential to be utilized as a way of understanding student teachers' epistemological resistance and epistemic vices while informing teacher educators' pedagogy.

Key Words: Teacher Education, System Justification Theory, Social Epistemology, Social Psychology, Epistemic Limitations

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Introduction

The goal of this article is to introduce System Justification Theory as a way for teacher educators to recognize the sociopsychological and socioepistemic difficulties of students when engaging in critical topics and to add to the dialogue of educational foundations. As members of society, and subject to ideologically laden ideas and motivations, students who enter teacher education programs bring with them potential epistemic limitations inculcated from years of socializations. Over time, those socializations may lead to epistemic limitations. Those epistemic limitations may inhibit student teachers' ability to engage in critical discussions within teacher education programs. Inculcated beliefs, ideologically laden preferences, implicit biases, and socialized understandings may come from family, friends, religious/faith-based groups, community associations, schooling, and social media. Students may have, in essence, an epistemic heritage manifesting various epistemic limitations and entrenchments. In addition, for many students, attending a college or university may be their first exposure to diverse peoples and perspectives, all of which represent socioepistemic, philosophical, and ideological challenges.

In conversations with fellow scholars and students at a mid-size, Midwestern university, there seems to be something missing in educator programs—understanding the social psychology and social epistemology of future teachers. This article is especially prescient for foundations of education faculty who are tasked with examining critical issues, while also encouraging students to recognize and come to terms with their potential epistemic limitations. In no way is this article meant to divorce itself from, nor ignore the critical work of a multitude of scholars who have written in our field and, while attempting to minimize the tendency to drift into saviorism, the hope is that this topic adds to our diverse field and presents itself as a potential way to examine the epistemic nuances that occur in teacher education courses. I utilize previous work in the fields of social psychology, political psychology, and social epistemology, and see those areas as a tool for teacher educators. In conjunction with System Justification Theory, this article highlights several epistemic limitations, which may contribute to the difficulty students face when discussing critical topics in educational foundations classrooms. System Justification Theory has the potential to be utilized as a tool in understanding why and how student teachers exhibit epistemic limitations when exposed to critical topics and ideas.

System Justification Theory

Epistemic limitations may be generally and specifically tied to one's epistemic heritage. In this instance, heritage is referring directly to a social phenomenon, which may extend beyond the defining lines of ethnicity, race, culture, and class. Epistemic heritage is the handing down of normative values and ideas from family members, religious organizations, community groups, friends, etc., and may result from the cycle of socialization (Harro, 2018). Epistemic heritages may include certain ideological persuasions. Ideology has different meanings for different people, groups, and entities, thus "ideology has been ascribed as one of the most elusive constructs in all of the social sciences largely because it has been enormously difficult for researchers to agree on a compact, yet comprehensive definition" (Thorisdottir et al., p. 4). One of the first mentions of the term can be seen in the work of Antoine Destutt de Tracy, a French Enlightenment philosopher in his *Éléments d'idéologie* (1818) whose first volume in this work, titled "Ideology Strictly Defined," defined ideology as a science of ideas. For this article, ideology is defined as a set of doctrines, beliefs, or rationalities, forming a body of ideas reflecting the social needs and aspirations of an individual, group, class, or culture, forming the basis of a political, economic, social, or other system (Gerring, 1997; Jost, 2006; Jost, Nosek, & Gosling, 2008; Jost, Frederico, & Napier, 2009). Individuals may embrace various political, sociocultural, economic, and religious ideologies. For example, an individual may be a Christian nationalist/fundamentalist and a neoliberal and/or neoconservative, broad ideologies encompassing various beliefs, dogmas, and rationalities. There are numerous political, social, religious, etc., ideologies that could be examined, but for the purpose of this paper, the examination will be limited to individuals/groups who, broadly speaking, are both socially and politically conservative, share a preferred political and social vision, or epistemic heritage, and often embrace system justifying beliefs in the institutionalized norms of society – the status quo (Hafer & Choma, 2009; Jost, 2020, 2021, Jost et al., 2007, 2008).

Ideological and its accompanying epistemological entrenchment, epistemic vices, and system-justifying beliefs may result in an aversion to critical self- and system-examinations within teacher education. System Justification Theory (SJT) has potential as a tool in understanding why socially and politically conservative student teachers resist discussions and examinations of critical social issues (e.g., Critical Race Theory, Multiculturalism, Equity, Inclusion, LGBTQ rights, etc.). SJT may help faculty with the following two questions: (1) Why are many

student teachers resistant to discussions about social injustices and inequities from both a historical and contemporary perspective, and (2) Why are many student teachers so accepting of those injustices and inequities, to the point of defending those injustices and inequities? Since the early 1990s, SJT has been an ongoing theoretical project grounded primarily in the fields of social and political psychology and social epistemology. SJT was originally proposed to "explain why disadvantaged individuals and groups buy into negative stereotypes and evaluations of themselves" while also accepting "their lower rank in status hierarchies" (Jost, 2020, p. 9). SJT has the potential to generally answer the questions above and lay the initial work for specific studies in teacher education, primarily in undergraduate teacher preparation programs and foundations of education courses. Student teachers enter teacher education programs with certain ideological frameworks and epistemic limitations to new epistemological understandings, which include perceived notions of fairness, justice, the legitimacy of ideas, and judgments regarding their fellow citizens and social groups.

Antonio Gramsci (1971) "marveled at the 'spontaneous consent given by the great masses of the population to the general direction imposed on social life by the dominant fundamental group' and proposed that 'this consent is historically caused by the prestige (and consequent confidence), which the dominant group enjoys because of its position and function in the world of production" (Gramsci, 1971, p. 12; Jost, 2020, p. 2). Student teachers are susceptible to providing this same spontaneous consent described so well by Gramsci. As early as the 16th century, a French law student by the name Estienne de la Boétie produced an essay titled *Discourse of Voluntary Servitude* in which he asked the poignant question, "why do people tolerate, even embrace, their own subjugation when they are under no forcible compulsion to do so" (de la Boétie, 2008/1548)? Boétie outlined three major hypotheses to explain the politics of obedience and, according to the sociologist Steven Lukes (2011), these amount to (a) 'cultural inertia' or the 'force of custom and habit'; (b) 'manufactured consent,' that is, ideology and propaganda; and (c) 'patronage,' such that 'tyrants surround themselves with dependents, who in turn have their own dependents'" (Lukes, 2011, p. 20).

Some of those same ideas can be found in the work of Michel Foucault in his series of lectures (1978-1979) regarding *The Birth of Biopolitics*, and (1982-1983) on *The Government of Self and Others*, which pertain to how individuals can come to discipline themselves, thus reinforcing the dominant norms of society. This self-domination and voluntary servitude to dominant ideologies and epistemological frame-

works have significant connections with Marx and Engels' concepts of ideological hegemony and false consciousness (Lukes 2011; Marx & Engels, 1970; Rosen, 1996). Similar ideas are offered in Louis Althusser's (2014/1970) theories related to ideology, ideological apparatuses and the state and Pierre Bourdieu's (1986/1977) work to include his theories of habitus and social and symbolic capital. Throughout history, there have been extensive examinations of these phenomena, too much to further fluster the reader in this article. Regardless, what stands out in almost all the examinations are how and why "people submit willingly, even enthusiastically, to humiliations inflicted by the powerful," and why individuals often vehemently defend, or justify, the status quo (Jost 2020, p.2). Ultimately, it comes down to an individual's or group's "habit, ideology, and dependence" (Jost, 2020, p. 2). Additionally, people often, and for a myriad of reasons, "internalize the norms of the social order on which they depend even when they are disadvantaged by the social order," and in doing so develop "mental resistance to the fundamental flaws of their social order" (Jost 2020, p. 3; Fehr & Gintis, 2007). Ultimately, this leads to the framework for SJT defined below:

> A social psychological perspective that seeks to elucidate the individual-level and group-level mechanisms contributing to people's inability to see the true nature of the socioeconomic [and sociopolitical] system. In addition to people's blindness to their own oppression, a social system—any social system—can provide psychological benefits…. according to system justification theory, people are motivated—often at a nonconscious level of awareness—to defend, bolster, and justify the social, economic, and political institutions and arrangements on which they depend. (Jost, 2020, p. 3)

System justification lies in a psychological need for certainty and comfort. "People who are either chronically, or temporarily, concerned with epistemic, existential, and relational needs to attain certainty, security, and social belongingness are especially likely to embrace system-justifying ways of thinking (Jost, 2020, p. 6). Our motivation to justify the existing system, including many of the ideas, beliefs, and ideological positions within that system, may not be beneficial to us, and often "perpetuate our suffering, and in that sense, they do not serve our objective interests" (Jost, 2020, p. 6). In that instance, as Boétie (2008/1548) noted, individuals often choose the "security of living wretchedly" over "the uncertain hope of living as [one] pleases" and our student teachers are no different (p. 44). Examples of embracing system-justifying ways of thinking include pledging the allegiance to the flag, attending religious services, engaging in shared group activities with like-minded individuals, remaining affiliated with a particular political party because of family tradition, dominant perspectives

on race, gender, sexual identity, ability, socioeconomic status, etc., all pursued to satisfy the need of a sense of order, meaning, and belongingness, in one's life even if it is only temporary.

System justification works to avoid stresses caused by epistemic chaos and epistemic exhaustion, thus leading individuals and groups toward epistemic resistance and epistemic vices. SJT helps "explain how and why people tolerate, accept, and often vindicate, all of the things they do (and the things that are done to them and on behalf of them) in a wide variety of social, economic, and political contexts" (Jost 2020, pp. 9-10). To this point, there have been over three thousand articles utilizing system justification in sociology and psychology publications (Jost, 2018; Osborne et al., 2019).

In 2009, Jost and colleagues, edited a seminal publication that examined how SJT may be utilized to explain epistemic limitations and ideologies to include its relation to the social and psychological bases of ideology (Jost et al., 2009; Thorisdottir et al., 2009; Uhlman et al., 2009; Ferguson, et al., 2009); the psychological power of the status quo on individuals and groups, including such things as belief in a just world and fairness (Eidelman & Crandall, 2009; Hafer & Choma, 2009; Kay & Zanna, 2009; Mitchell & Tetlock, 2009); epistemic and existential motives to deal with uncertainty management and to change (Anson, et al., 2009; van den Bos, 2009; Willer, 2009); individual and group motivations regarding social cognitions and ideological attitudes (Duckitt & Sibley, 2009; Federico & Goren, 2009; Nosek et al., 2009; Rentfrow et al., 2009); perspectives on justice, morality, and perceived social decline (Eibach and Libby, 2009; Feygina & Tyler, 2009; Haidt, & Graham, 2009); and the implications of SJT for self, group, and society (Cikara, et al., 2009; Nosek, et al., 2009; O'Brien & Major, 2009; Starzyk, et al., 2009). Jost's (2020) culminating work, *A Theory of System Justification*, adds to this body of knowledge and all are potential theoretical tools to inform education faculty's understandings of the epistemic limitations and system-justifying beliefs student teachers adhere to while attending colleges of education, and their epistemic resistance, epistemic vices, and cognitive rigidity when discussing critical issues. From a sociopolitical perspective, Jost (2021) published *Left & Right: The Psychological Significance of a Political Distinction*, which further utilizes SJT to discern the differences between adherents of political conservatism versus political liberalism, supplementing the knowledge professors may find valuable in examining student teachers' epistemic limitations in relation to the sociopolitics of education.

When teaching critical social justice issues in teacher education, the resistance to change and the resistance to critical examinations of the status quo can be explained by the palliative nature of system jus-

tification. There are nine major postulates of SJT which may be of use in understanding potential epistemic vices among student teachers:

1. "People are motivated (often unconsciously) to defend, justify, and bolster aspects of the status quo including existing social, economic, and political institutions and arrangements" (Jost, 2020, p. 62; Jost & van der Toorn, 2012). Members of society may legitimize the status quo regardless of the evidence of inequalities and social justices. Our students, whether they come from advantaged or disadvantaged backgrounds, will often internalize rather than reject existing institutionalized and system norms to which advantaged groups adhere.

2. "As is the case with all other motives in human psychology, the strength of system justification motivation and its expression are expected to vary according to situational (contextual) and dispositional (individual differences) factors" (Jost, 2020, p.62). When there is heightened social, cultural, and political conflict, individuals may be more inclined to exhibit and express system justifying beliefs; for student teachers, this may come from societal issues or threats to their implicit beliefs while in their teacher education programs.

3. "System justification motivation is activated or increased when (a) the system is criticized, challenged, or threatened; (b) the system is perceived as inevitable or inescapable; (c) the system is perceived as traditional or longstanding; or (d) the individual feels powerless or dependent on the system (and its authorities)" (Jost, 2020, p. 64). When there are potential threats to a student's ideological and epistemic heritage, the resulting epistemic chaos engages a psychological need to justify what they have always known.

4. "System justification addresses basic epistemic motives to reduce uncertainty, existential motives to reduce threat, and relational motives to reduce social discord. Situational and dispositional variability in these underlying needs will affect the strength of system justification motivation" (Jost, 2020, pp. 64-65; Jost 2017a, b). Our student teachers often have epistemic and existential needs for such things as certainty, consistency, meaning, safety, and the relational need of a shared reality with like-minded individuals. When this is disrupted, it creates epistemic chaos which then further drives students to system justifying beliefs.

5. "There are several possible means by which the system can be justified, including direct endorsement of certain ideologies, the legitimation of institutions and authorities, denial or minimalization of system problems or shortcomings, complementary stereotyping, and rationalization (Jost, 2020, p. 65). Student teachers often endorse, or profess, certain ideological belief systems, justifying and legitimating those systems based on their epistemological heritage. Student teachers may do this to satisfy epistemic, existential, relational, and other psychological needs.

6. For the next two postulates, whether student teachers are in the advantaged or disadvantaged group, there are situational, or contextual, issues which drive them into various system-justifying actions. "For members of advantaged groups (those favored by the status quo), system justification is consistent with self- and group-justification motives, and is therefore positively associated with self-esteem, in-group favoritism, and long-term psychological well-being" (Jost, 2020, p. 66; Jost et al, 2001).

7. "For members of disadvantaged groups (those disfavored by the status quo), system justification conflicts with self- and group-justification motives, and is therefore negatively associated with self-esteem, in-group favoritism, and long-term psychological well-being" (Bahamondes-Correa, 2016; Jost, 2020, p. 66; Jost & Thompson, 2000).

8. "System justification serves a palliative function. The endorsement of system-justifying beliefs and ideologies is associated in the short-term with increased positive affect and decreased negative affect for members of advantaged and disadvantaged groups alike" (Jost, 2020, p. 67; Jost et al., 2003; Kluegel & Smith, 1986; Napier & Jost, 2008; Wakslak et al., 2007). Palliative functions such as satisfaction, contentment, security, a sense of place, certainty, etc. are all potentially met by system justifying beliefs and actions.

9. "Although system justification motivation typically leads people to resist social change (and to perceive it as potentially threatening), people are more willing to embrace change when it is perceived as (a) inevitable or extremely likely to occur, or (b) congruent with the preservation of at least some aspect of the social system or its ideals" (Jost, 2020, p. 67). Probably the most problematic issue with system justification, especially for our student teachers, is that it potentially "undermines their

> desire for change and their willingness to participate in collective action aimed at improving society," especially from within the walls of their school districts (Jost, 2020, p. 67).

Student teachers will soon be working within the social sphere and consistently working with a diverse group of students. How are we, as teacher educators, articulating the role of social science in dislodging troublesome epistemic limitations in our students?

Robert Lynd (1939) noted, "the role of social science is to be troublesome, to disconnect the habitual arrangements by which we manage to live along, and to demonstrate the possibility of change in more adequate [and positive] directions" (pp. 181-182). To this end, there have been over fifty studies conducted and/or published between 2005 and 2022 showing that "exposure to threats directed at the social system can heighten the intensity of system-justifying responses, including (but not limited to) the increased use of stereotypes to rationalize social, sexual, economic, [and racial], disparities," which we, as teacher educators, should evaluate as a potential for understanding epistemic limitations in our students (Jost 2020, p. 62). There are numerous studies reflecting the types of system-justifying beliefs we may witness from our student teachers. The list below is just a few of those studies:

> *1. The Protestant Work Ethic*, which is a system where "individuals have a moral responsibility to work hard and avoid leisure activities; thus, hard work is a virtue and its own reward" (Jones, 1997; Jost, 2020, p. 326; Mirels & Garrett, 1971).
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> *2. Meritocratic Ideology*, which is the idea that a system exists that "rewards individual ability and motivation, so success is an indicator of personal deservingness" (Day & Fiske, 2017; Jost, 2020, p. 327; Ledgerwood et al., 2011; McCoy & Major, 2007; Mijs, 2019).
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> *3. Fair Market Ideology (Neoliberalism) & Economic System Justifications,* which includes free-market, capitalist, and neoliberal ideas based on the efficiency, legitimate outcomes, fairness, and justness that a free-market provides; the idea that society should be based on free-market principles; and the Darwinian notion that economic inequality is "natural, inevitable, and legitimate" (Azevedo et al., 2017; Hennes et al., 2012; Jost, 2020, p. 327; Jost & Thompson, 2000; Jost et al., 2003).
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> *4. Belief in a Just World:* the notion that "people typically get what they deserve and deserve what they get in regard to outcomes—what is, is what ought to be" (Hafer & Begue, 2005; Jost, 2020, p. 327; Lerner, 1980).

5. Power Difference & Social Dominance Orientations: This is the notion that "inequality is a natural and desirable feature of the social order; large power differences are acceptable and legitimate; and there exists a general preference for group-based social hierarchies—a desire for unequal relations among social groups" (Jost, 2020, p. 327; Jost & Thompson, 2000; Jost et al., 2003; Kugler et al., 2010; Sidanius & Pratto, 2001).

6. Opposition to Equality: In general, adherents to this belief argue that "increased social and economic equality is unattainable and undesirable; it would be detrimental to society" (Eagly, et al., 2004; Jost, 2020, p. 327; Jost & Thompson, 2000; Kluegel & Smith, 1986).

7. Right-Wing Authoritarianism: General "aggression toward deviants," a belief that one should submit "to established authorities" and hierarchies, and a rigid, "adherence to conventional traditions" and established norms (Azevedo & Jost, 2021; Altmeyer, 1981,1998; Duckitt & Sibley, 2009; Jost, 2020, p. 328; Jost et al., 2003).

8. Social Darwinism: The "belief that the fittest members of society will succeed and that competitive social hierarchies are not only natural but necessary – a way of improving the human race through natural selection" (Hofstadter, 1992/1944; Jost, 2020, p. 328; Rudman & Saud, 2020).

9. General Social, Political, & Economic Conservatism: Social and political conservatism is deeply rooted in "traditionalism (political & social conservatism), resistance to change (social conservatism), and the acceptance of inequality (economic conservatism)" in all its forms (Butz et al., 2017; Jost, 2006, 2017b, 2020, p. 328; Jost et al., 2003; Kandler et al., 2012).

Social Epistemology and Epistemic Vices

Few students will exit their teacher education programs without a definitional understanding of epistemology. Epistemology comes from the Greek *episteme*, meaning knowledge or understanding, and *logos*, meaning to account, to logic, or to reason (Woleński, 2004). In broader terms, epistemology may be defined as how one comes to know what they know, and how one comes to understand and reason. More recent definitions of formal epistemology include varying degrees to which one has confidence in their knowledge, considering the numerous constraints on knowledge acquisition (Woleński, 2004). How truly

confident can anyone be of their own cognitive successes, the search for truth, considering limited resources, experiences, and combined with the excessive noise of society? Embedded within epistemology are two aspects – knowledge and justification. Our knowledge, our justifications for that knowledge, and the psychological need to defend that knowledge through justification is at the core of this article.

One of the more fascinating aspects of teaching educational foundations is recognizing and discussing how students have become socialized into various epistemological heritages and identity formations. As Harro (2018) discussed, "we are each born into a specific set of social identities," and at the same time, through socialization and epistemological processes, we begin to recognize differences and categorize others (p. 27). Our socialized identities are created through various epistemological processes which are "pervasive (coming from all sides and sources), consistent (patterned and predictable), circular (self-supporting), self-perpetuating (intradependent), and often unrecognizable (unconscious, [implicit], and unnamed)" (Harro, 2018, p. 27). Much of understanding why student teachers think as they do can be examined in the way they have come to identify.

Students may link their knowledge and understandings directly with their identity. As Tatum (2018) discusses, "the concept of identity is a complex one, shaped by individual characteristics, family dynamics, historical factors, and social and political contexts" (p. 7). When we think about who we are, how would we answer? The answer is as much social and epistemological as it is psychological. Working with student teachers on critical issues within teacher education, we must first contend with our students, and for that matter our own, socioepistemological and sociopsychological groundings. Our socializations and the epistemological influences leading to those socializations, "shape our self-concepts, and self-perceptions, the norms and rules we must follow, the roles we are taught to play [in society], our expectations for the future," and how we view other members of society and our social and political institutions (Harro, 2018, p. 29). Regardless of the influence of our arbiters of knowledge, and the exposure to others, we all manifest the epistemological heritage of those who have influenced us, raised us, and taught us. Socializations and knowledge formation combine over time to create our core identities and beliefs.

It is difficult, but none-the-less important, to recognize the potential limitations shaping one's growth and new knowledge formations. More specifically, and in relation to the goal of this article, what epistemological limitations influence a future educator's ability to recognize injustices, to critically examine different perspectives, the world, institutions, and the ability to self-analyze implicit biases, ideologically

laden, and socialized identities. To that end, it seems prudent to understand how one develops *epistemic regimes*—patterns and/or systems of ideologies, philosophies, and other thought patterns and knowledge traditions, by which people know or believe they know. Put another way, epistemic regimes are the arrangements and the practices of knowledge production combined with the social structures in which these practices are carried out—the collective marketplace of ideas where individuals and groups hammer out what is real or is not real and/or factual (Brooks, 2020; Espahangizi & Wulz, 2020; Gläser et al., 2018).

Faculty and students arrive in classrooms having been socialized within certain epistemic regimes, replete with accompanying epistemic bubbles and echo chambers, limiting our exposure to contradicting and/or different perspectives. As members of society, we may also be prone to problematic epistemological characteristics such as epistemic vices. Unfortunately, skewed knowledge formations, and our own, often misguided, certainties of our knowledge lead to a form of epistemological hubris. In turn, individuals may utilize system justifications to reinforce, rather than critique, their own socialized and epistemological heritage. Ultimately, SJT offers a potential theoretical jumping-off-point to help teacher educators recognize and understand epistemological issues in colleges and schools of education. Therefore, it seems prudent to explain the various terms and phrases related to the epistemological problems/issues we should be aware of in teacher education.

Epistemological Issues

In our increasingly polarized society, there seems to be a need for members of society to identify in certain ways and to defend that identity. Future educators may experience some of those same palliatively psychological needs to identify in particular ways stemming from their epistemological and socialized heritages. If we are speaking specifically to political and ideological identities, there is an argument to be made that political and ideological polarization is at its highest level in five decades (Tokita, et al., 2021). Social media has not helped with this situation creating information ecosystems which work to reorganize social networks and exacerbate polarization in society (Tokita, et al., 2021). Individuals often seek out affirmation for one's own viewpoints and perspectives and this is no different with student teachers.

Epistemic Bubbles and Echo Chambers

Two epistemic issues that lead to a rise in societal polarization are *epistemic bubbles* (or filter bubbles) and *echo chambers*. *Epistemic bubbles* are "social epistemic structures from which other relevant

voices have been left out," whereas "*echo chambers* are social epistemic structures from which other relevant voices have been actively [and purposefully] excluded and discredited" (Flaxman, et al., 2016; Nguyen, 2020, p. 141; Pariser, 2011). Both epistemic bubbles and echo chambers create epistemological limitations for their constituents and may contribute to *cognitive rigidity*—the inability to change behavior or beliefs when faced with contradicting perspectives (Zmigrod, 2020; Zmigrod et al., 2019a, 2019b). Social media is a significant contributor to epistemic issues such that "informational input is being radically filtered" and individuals relying on social media sites are by-and-large exposed to "arguments and views with which they already agree" (An et al, 2014; Kuklinski et al., 2000; Nguyen, 2020, p.141; O'Conner & Weatherall, 2019; Saez-Trumper, et al., 2013; Southwell & Thorson, 2015). We are all exposed to epistemic bubbles and echo chambers merely by our social groups and affiliations.

Epistemic bubbles can form through "ordinary processes of social selection and community formation" in similar ways that *de facto* segregation occurs, and from no purposeful ill intent by the participant (Bishop, 2009; Nguyen, 2020, p. 142). As individuals, we often have a palliative need to belong and be part of a group (Jost, 2021, Jost et al., 2007). In group versus out group dynamics often lead individuals to participate in epistemic bubbles and echo chambers out of a desire to belong and for a sense of a shared identity. We all may find ourselves inadvertently immersed in epistemic bubbles and echo chambers merely from the desire to stay connected with family, friends, and colleagues who share some, if not all, of our ideological (whether social, cultural, political, etc.) viewpoints and potentially due to the organizations from which we belong or operate within. Regardless of the genesis of the associations, epistemic bubbles and echo chambers lead to constrained perspectives and self-perpetuating epistemic limitations, thus restricting potentially contrary views, which "illegitimately inflates our epistemic self-confidence," or epistemic hubris (Nguyen, 2020, p. 142). Echo chambers are much more malicious social epistemic structures than epistemic bubbles.

Individuals participating in echo chambers may purposefully, and actively, discredit other relevant voices thereby preventing democratic dialogue (Jamieson & Capella, 2008). In an echo chamber, in group perspectives are favored and acted upon while the out group's ideological perspectives are dismissed and/or ridiculed. Members of echo chambers "share beliefs which include reasons to distrust those outside of the echo chamber" (Nguyen, 2020, p. 142). Scholars have discussed this same phenomenon in terms of group polarization, group extremism, and information filtration effects where individuals active-

ly negotiate and constrict information resources to purposefully omit differing ideological positions (Pariser, 2011; Sunstein, 2009a, 2009b). Epistemic bubbles and echo chambers contribute to the palliative need for individuals to belong and to associate with a particular group by neutralizing the epistemic impact of exposure to outsiders with contrary beliefs and differing perspectives (Begby, 2017; Nguyen, 2020) Regardless of which mechanisms we examine, each are embedded within system justification.

Epistemological Vices

Other epistemological issues faced in foundation of education courses are *vice epistemologies*. When examining epistemological vices versus epistemological virtue, I rely significantly on the work of Quassim Cassam who notes, "few of us are model epistemic citizens, the idealized *homo philosophicus*…and one way of making this point is to draw attention to the influence of a range of…intellectual vices in the day-to-day cognitive lives of most members of *homo sapiens* (Cassam, 2016, p.159; Cassam, 2015, 2018). As we mature, much emphasis, whether explicit or implicit, is placed on character traits, including intellectual character traits. Intellectual traits may be positive in nature (e.g., open-mindedness, thoroughness, attentiveness, empathy, etc.) while others may be considered negative, or limiting, traits (e.g. dogmatism, gullibility, prejudice, bias, carelessness, etc.). Obviously, more could be added to the positive and the negative.

Cassam discusses the need to examine *vice epistemology*—a branch of epistemological study focused on intellectual character vices that impede one's knowledge acquisition capabilities by creating barriers to learning (Cassam, 2015, 2016, 2018). This is especially critical in understanding how student teachers may examine, engage with, and process critical forms of knowledge in their foundations of education courses. Hookway (2003) notes that intellectual vices impede "effective and responsible inquiry" (p.198) and potentially increase the cognitive rigidity manifested as ideological/epistemological absolutism. In other words, individual students may "exhibit heightened ideological prejudice and dogmatism" noting a lack of cognitive flexibility when confronted with epistemic challenges (Zmigrod, 2020, p. 34). This form of inflexibility, or absolutism, may then lead to the epistemic vice of hubris.

Epistemic hubris constitutes an "expression of unwarranted factual certitude" and "an inflated sense of epistemic privilege and pride often bound closely to power, [privilege], arrogance, and over-confidence" (Baird & Calvard, 2018, p. 270; Barker, et al., 2022, p. 38; Ogden, 2017). This over-confidence, or unwarranted certitude, manifests in two possible ways, with individuals potentially displaying

"both in relation to their knowledge, credibility, and expertise" (Baird & Calvard, 2018, p. 270). The primary manifestation is when an individual presumes to have "epistemic authority or superiority where one in fact lacks it" (Baird & Calvard, 2018, p. 270; Kraemer, 2015). It thus involves a false perception to the true nature of one's expertise (Roberts & Wood, 2007). A secondary manifestation is "the conviction that one has the right or privilege not to know, or not to need to know," which is also an aspect of anti-intellectualism discussed later (Baird, & Calvard. 2018, p. 270; Tanesini 2016). Individuals who are arrogant with their knowledge claims may misjudge the realities of the situation (Claxton et al., 2013). The reliance on information from within echo chambers and epistemic bubbles convinces individuals that they have the epistemic superiority, thus their epistemic hubris. Faculty and student teachers may be susceptible to the epistemic vice of epistemic hubris. Unfortunately, epistemic hubris, along with cognitive rigidity and anti-intellectualism, may inhibit "sound decision making and the uptake, or assimilation, of new information and perspectives" (Barker et al, 2022, p. 38; Barker et al, 2014; Grant 2021; Zmigrod, 2021).

Social psychologists and social epistemologists have known for some time now that individuals (and groups and institutions) are susceptible to "motivated reasoning, or the drive to see the world in ways that are consistent with one's attitudinal predispositions" and that normative orientations play a role in epistemic limitations (Barker et al., 2020, p. 40; Erisen et al., 2014; Jost, 2020; Marietta & Barker, 2019; Taber & Lodge, 2006). Additionally, there has been significant research conducted on anti-intellectualism versus intellectualism. As noted by Hofstadter (1963) and others (Barker et al, 2022; Baumgardner, 2020; Gauchat, 2012; Merkley, 2020, Motta, 2018; Lupia, 2016; Nichols 2017, Oliver & Rahn, 2016; Oliver & Wood, 2018; Rigney, 1997; Shogan, 2007), intellectualism and anti-intellectualism are not necessarily opposites found on the same epistemic scale nor necessarily mutually exclusive. Anti-intellectualism is in fact an expression of negative affect toward intellect, intellectuals, and/or the intellectual establishment, whereas intellectualism is marked by deep thought, critical engagement, and learning for its own sake (Barker et al, 2020; Hofstadter, 1963; Rigney, 2009). What does this mean for our students? Our students may slide into system-justifying behavior and display anti-intellectual tendencies because of the palliative need for certainty and the aversion to change and complexity. Anti-intellectualism and system-justifying behaviors may increase when exposed to the critical discussion in many teacher education programs, when students are faced with a myriad of epistemic challenges. What may occur prior

to system-justifying behavior and anti-intellectual tendencies, is the phenomenon of epistemic exhaustion and epistemic chaos.

Epistemic Exhaustion and Epistemic Chaos

When student teachers are introduced to critical topics in teacher education, they often struggle to internalize new ideas. They may struggle with their socialized identities and their inculcated beliefs. As they grapple with unfamiliar topics or examine critical perspectives, especially perspectives that challenge their epistemic heritage, they potentially experience epistemic exhaustion. *Epistemic exhaustion* is "cognitive fatigue generated by efforts to determine, retain, or communicate what one believes under conditions that make doing so taxing" (Satta, 2020, p.1). There are three environments where individuals and/or groups may experience epistemic exhaustion: (1) environments where there is a large degree of sociopolitical activity and polarized groupings; (2) environments which may be considered epistemically chaotic; and (3) environments considered epistemically oppressive to those in the minority (Satta, 2020). Each of those situations may arise in foundations of education courses when discussing critical social issues, the sociopolitics of education, and sociohistorical topics.

Epistemic exhaustion may also occur in epistemically chaotic environments. *Epistemic chaos* may occur when an individual and/or group "experiences a glut of conflicting information while lacking widely agreed upon epistemic authorities to resolve conflicts" (Brady, 2015; Satta, 2020, p. 12). Two key features are present in chaotic environments: (1) whether due to main-stream media, social media, or other sources, there are usually large volumes of conflicting claims pulling individuals and/or groups in different directions; and (2) those conflicting claims often coincide with "an absence of widely acknowledged, [or accepted], epistemic authorities to help sort out which of the conflicting claims are true and false" (Satta, 2020, p. 12). In an extension to number two, individuals may make more normative decisions on whether certain knowledge, facts, and/or claims may be justified versus unjustified, reasonable versus unreasonable, or ethically valued versus unjust.

Impacts on Teacher Education

The epistemic limitations mentioned in this article may make it extremely difficult for students to engage in critical discussions and shatter the epistemic walls they have erected. Especially for our students in foundations of education courses, which may indeed be the epistemic exhaustive/chaotic environment, they must grapple with

three forms of epistemic exhaustion: (1) *belief-determination exhaustion* which occurs when students must define and determine what they may believe by articulating their thoughts and supporting those thoughts with experience, information, and evidence; (2) *belief-retention exhaustion*, which occurs when students attempt to retain and justify one's beliefs amidst the pressure of competing perspectives, values, and belief justifications, adhering adamantly to their beliefs in the face of pressure to change; and (3) *belief-communication exhaustion*, which results from the effort to continuously communicate what one already firmly believes, as well as communicating the reasons for those beliefs to others in the hopes of changing others' perspectives (Satta, 2020, p. 3). Each of the above forms are epistemically taxing, especially if one does not have significant evidentiary support for their beliefs and potentially exhibit a degree of epistemic hubris.

Faculty in colleges of education may witness the following epistemic exhaustive behaviors: (1) Students unable to concentrate on epistemically challenging activities and struggling with activities that once were considered manageable; (2) Students relaying the increased feelings of being overwhelmed beyond the normal stresses of course workloads, including the onset of rapid fatigue when discussing certain epistemically challenging material; (3) Students may become detached, apathetic, or resistant to matters they once cared deeply about because they are epistemically unsure and unable to see through the epistemic chaos; (4) Some students may become combative while others may experience pessimism and/or even anxiety, depression, and expressions of hopelessness, which may in turn manifest as disappointment and/or antagonistic feelings to epistemic interlocuters in class, whether a fellow student or faculty member; (5) Students may move in the opposite direction as part of discussions and become more intolerant of other perspectives, entrenched in their own epistemic heritage and system justifications, and unwilling to participate further in class; and (6) Students may deeply internalize potential epistemic transgressions leading to a feeling of guilt and/or despair.

Each of the situations listed above require faculty members to be acutely aware of the students in one's class. Regardless of the reasonings for the varying manifestations of epistemic exhaustion in response to epistemic challenges, the "likelihood of [students] becoming epistemically exhausted increases as the cognitive and emotional cost of undertaking that epistemic activity increases" (Satta, 2020, p. 5). Our challenge in teacher education courses, especially in foundations of education courses, is to mitigate epistemic activities by scaffolding the epistemic demands and preempting epistemic exhaustion through early discussions on how to engage in critical thought. For example,

I now begin my semester with discussions the first three sessions on the nature of critique, fact vs. opinion, epistemic vices, system justifications, etc., introducing students to many of the epistemic limitations early on so we can recognize those when they occur. Students are encouraged to challenge me when they believe I am exhibiting any of those same epistemic limitations. Regardless of how faculty encourage students to overcome epistemic limitations and system-justifying beliefs, we should recognize we are all situated in epistemically chaotic environments requiring extra pedagogical work.

Discussion

The goal of this article was to engage the reader in the challenges and limitations, both social psychologically and social epistemologically, faced by students within teacher education courses. In the complex and polarizing times in which we live, teacher educators should understand the critical roles in the sense-making process and expose students to various knowledge claims to critically evaluate alternatives. However, this becomes problematic considering the politically contested, and politically charged, nature of truth-claims through manipulation by propaganda, ideological agents, and other forms of power, social construction, and knowledge production" (Baird & Calvard, 2019). Critical evaluation requires engaging in epistemic matters, recognizing the epistemic vices, confronting those vices, dislodging system-justifying beliefs, especially when those beliefs act in non-democratic ways, and helping our students navigate the epistemic chaos and epistemic exhaustion often faced in critical course work.

There are few model epistemic agents in our complex society—no one corresponds to the idealized rationality of *homo philosophicus* (Baird & Calvard, 2019; Cassam, 2014, 2016). Acknowledging epistemic vices, recognizing when epistemic vices occur, mitigating those "suboptimal epistemic conditions," understanding normative epistemic activities, providing guidance for epistemically virtuous conduct in class, avoiding "idealizations of knowing" and messy pedagogical practices that do not contend with epistemic vices, should be at the forefront for every teacher educator (Baird & Calvard, 2019, Brady & Pritchard, 2003). Scholars may recognize this as just good reflective practice. However, while many of us consistently reflect on our pedagogy and the need to scaffold difficult material, we rarely consider the epistemological limitations of ourselves, our students, and the system-justifying beliefs that permeate the thoughts of individuals and groups, as well as our academic institutions.

References

Anson, J., Pyszczynski, T., Solomon, S., & Greenberg, J. (2009). Political ideology in the 21st century: A terror management perspective on maintenance and the status quo. In J. T. Jost, A. C. Kay, & H. Thorisdottir (Eds.), *Social and psychological bases of ideology and system justification*, (pp. 210-240). Oxford University Press.

Altmeyer, B. (1981). *Right wing authoritarianism*. University of Manitoba Press.

Altmeyer, B. (1998). The other "authoritarian personality." *Advances in Experimental Social Psychology, 30*, 47-92.

Althusser, L. (2014/1971). *On the reproduction of capitalism: Ideology and ideological state apparatuses*. Verso.

An, J., Quercia, D., & Crowcroft, J. (2014). Partisan sharing: Facebook evidence and societal consequences. In *Proceedings of the Second ACM Conference on Online Social Networks*. Retrieved from http://cosn.acm.org/2014/files/cosn033f-anAembTS.pdf.

Azevedo, F. & Jost, J. T. (2021). The ideological basis of antiscientific attitudes: Effects of authoritarianism, conservatism, religiosity, social dominance, and system justification. *Group Processes & Intergroup Relations, 24*(4), 518-549.

Azevedo, F., Jost, J. T., & Rothmund, T. (2017). "Making America great again": System justification in the 2016 Presidential election. *Translational Issues in Psychological Science, 3*, 231-240.

Bahamondes-Correa, J. (2016). System justification's opposite effects on psychological wellbeing: Testing a moderated mediation model in a gay men and lesbian sample in Chile. *Journal of Homosexuality, 63*, 1537-1555.

Baird, C., & Calvard, T. S. (2019). Epistemic vices in organizations: Knowledge, truth, and unethical conduct. *Journal of Business Ethics, 160*, 263-276.

Barker, D. C., DeTamble, R., & Marietta, M. (2022). Intellectualism, Anti-intellectualism, and epistemic hubris in red and blue America. *American Political Science Review, 116* (1), 38-53.

Barker, D. C., Marietta, M., & DeTamble, R. (2014). American hubris: The politics of unwarranted epistemic certitude in the United States. In D. C. Barker & E. Suhay (Eds.), *The politics of truth in polarized America* (pp. 113-128). Oxford University Press.

Baumgardner, P. (2020). Intellectuals in politics. *New Political Science, 47*(2), 241-262.

Begby, E. (2013). The epistemology of prejudice. *Thought: A Journal of Philosophy, 2*(2), 90-99.

Bishop, B. (2009). *The big sort: Why the clustering of like-minded America is tearing us apart*. Houghton Mifflin Harcourt.

Bourdieu, P. (1986/1977). *Outline of a theory of practice*. Cambridge University Press.

Brady, M. S., & Pritchard, D. (2003). Moral and epistemic virtues. *Metaphilos-*

ophy, 34(1-2), 1-11.
Brady, N. (2015). "Epistemic chaos": The recontextualization of undergraduate curriculum design and pedagogic practice in a new university business school. *British Journal of Sociology of Education, 36*(8). 1236-1257.
Brooks, D. (2020, November 6). The rotting of the Republican mind: When one party becomes detached from reality. *New York Times*. https://www.nytimes.com/2020/11/26/opinion/republican-disinformation.html
Butz, S., Kieslich, P. J., & Bless, H. (2017). Why are conservatives happier than liberals? Comparing different explanations based on system justification, multiple group membership, and positive adjustment. *European Journal of Social Psychology, 47*, 362-372.
Cassam, Q. (2014). *Self-knowledge for humans*. Oxford University Press.
Cassam, Q. (2015). Bad thinkers. *Aeon*. https://aeon.co/essays/the-intellectual character-of -conspiracy-theorists.
Cassam, Q. (2016). Vice epistemology. *The Monist, 99*(2), 159-180.
Cassam, Q. (2018). Epistemic insouciance. *Journal of Philosophical Research, 43*, 1-20.
Cikara, M., Lee, T. L., Fiske, S. T., & Glick, P. (2009). Ambivalent sexism at home and at work: How attitudes toward women in relationships foster exclusion in the public sphere. In J. T. Jost, A. C. Kay, & H. Thorisdottir (Eds.), *Social and psychological bases of ideology and system justification*, (pp. 444-462). Oxford University Press.
Claxton, G., Owen, D., & Sadler-Smith, E. (2013). Hubris in leadership: A peril of unbridled intuition. *Leadership, 11*(1), 57-78.
Day, M. V., & Fiske, S. T. (2017). Movin' on up: How perceptions of social mobility affect our willingness to defend the system. *Social Psychological and Personality Science, 8*, 267-274.
de la Boétie, E. (2008/1548) *The politics of obedience: Discourse of voluntary servitude*. Ludwig von Mises Institute.
Destutt de Tracy, A. L. C. (1818). *A Treatise on Political Economy; to which is prefixed a supplement to a preceding work on the understanding, or Elements of Ideology*. Translated from the unpublished French original by Thomas Jefferson.
Duckitt, J. & Sibley, C. G. (2009). A dual process motivational model of ideological attitudes and system justification. In J. T. Jost, A. C. Kay, & H. Thorisdottir (Eds.), *Social and psychological bases of ideology and system justification*, (pp. 292-313). Oxford University Press.
Eagley, A. H., Diekman, A. B., Johannsen-Schmidt, M. C., & Koenig, A. M. (2004). Gender gaps in sociopolitical attitudes: A social psychological analysis. *Journal of Personality and Social Psychology, 87*, 796-816.
Eidelman, S. & Crandall, C. S. (2009). A psychological advantage of the status quo. In J. T. Jost, A. C. Kay, & H. Thorisdottir (Eds.), *Social and psychological bases of ideology and system justification*, (pp. 85-106). Oxford University Press.
Eibach, R. P., & Libby, L. K. (2009). Ideology of the good old days: Exaggerated perceptions and moral decline and conservative politics. In J. T. Jost, A. C. Kay, & H. Thorisdottir (Eds.), *Social and psychological bases of ideology*

and system justification, (pp. 402-426). Oxford University Press.
Erisen, C., Lodge, M., & Taber, C. (2014). Affective contagion in political thinking. *Political Psychology, 35*(2), 187-206.
Espahangizi, K. & Wulz, M. (2020). The political and the epistemic in the twentieth century: Historical perspectives. *KNOW: A Journal on the Formation of Knowledge, 4*(2), 161-174.
Fehr, E., & Gintis, H. (2007). Human motivation and social cooperation: Experimental and analytical foundations. *Annual Review of Sociology, 33*, 43-66.
Ferguson, M. J., Carter, T. J., & Hassin, R. R. (2009). On the automaticity of nationalist ideology: The case of the USA. In J. T. Jost, A. C. Kay, & H. Thorisdottir (Eds.), *Social and psychological bases of ideology and system justification*, (pp. 53-84). Oxford University Press.
Feygina, I., & Tyler, T. R. (2009). Procedural justice and system-justifying motivations. In J. T. Jost, A. C. Kay, & H. Thorisdottir (Eds.), *Social and psychological bases of ideology and system justification*, (pp. 351-370). Oxford University Press.
Flaxman, S., Goel, S., & Rao, J. M. (2016). Filter bubbles, echo chambers, and online news consumption. *Public Opinion Quarterly, 80*, 298-320.
Foucault, M. (2008). *The Birth of Biopolitics: Lectures at the Collège de France, 1978-1979.* Picador.
Foucault, M. (2008). *The Government of Self and Others: Lectures at the Collège de France, 1982-1983.* Picador.
Frederico, C. M., & Goren, P. (2009). Motivated social cognition and ideology: Is attention to elite discourse a prerequisite for epistemically motivated political affinities. In J. T. Jost, A. C. Kay, & H. Thorisdottir (Eds.), *Social and psychological bases of ideology and system justification*, (pp. 267-291). Oxford University Press.
Gauchat, G. W. (2012). Politicization of science in the public sphere: A study of public trust in the United States, 1974 to 2010. *American Sociological Review, 77*(2), 167-187.
Gerring, J. (1997). Ideology: A definitional analysis. *Political Research Quarterly, 50*, 957-994.
Gläser, J., Laudel, G., Grieser, J., & Meyer, U. (2018). Scientific fields as epistemic regimes: new opportunities for comparative science studies. *Working Papers from Technische Universität Berlin*.
Gramsci, A. (1971). *Selections from the prison notebooks*. International Publishers.
Grant, A. (2021). *Think again: The power of knowing what you don't know*. Viking Press.
Hafer, C. L. & Bègue, L. (2005). Experimental research on just-world theory: Problems, developments, and future challenges. *Psychological Bulletin, 131*, 128-167.
Hafer, C. L., & Choma, B. L. (2009). Belief in a just world, perceived fairness, and justification of the status quo. In J. T. Jost, A. C. Kay, & H. Thorisdottir (Eds.), *Social and psychological bases of ideology and system justification* (pp. 107–125). Oxford University Press.

Haidt, J. & Graham, J. (2009). Planet of Durkheimians, where community, authority, and sacredness are foundations of morality. In J. T. Jost, A. C. Kay, & H. Thorisdottir (Eds.), *Social and psychological bases of ideology and system justification*, (pp. 371-401). Oxford University Press.

Harro, B. (2018). The cycle of socialization. In M. Adams, W. J. Blumenfeld, D. C. J. Catalano,

K. Dejong, H. W. Hackman, L. E. Hopkins, B. J. Love, M. L. Peters, D. Shlasko, and Ximana Zuniga (Eds.), *Readings for diversity and social justice, 4th ed*. (pp. 27-33). Routledge.

Hennes, E. P., Nam, H. J., Stern, C., & Jost, J. T. (2012). Not all ideologies are created equal: Epistemic, existential, and relational needs predict system-justifying attitudes. *Social Cognition, 30*(6), 669-688.

Hofstadter, R. (1963). *Anti-intellectualism in American life*. Knopf.

Hofstadter, R. (1992/1944). *Social Darwinism in American thought*. Beacon Press.

Hookway, C. (2003). How to be a virtue epistemologist. In M. DePaul & L. Zagzebski (Eds.), *Intellectual virtue: Perspectives from ethics and epistemology* (pp. 183-202). Oxford University Press.

Jamieson, K. H., & Cappella, J. N. (2008). *Echo chambers: Rush Limbaugh and the conservative media establishment*. Oxford University Press.

Jones, H. B. Jr. (1997). The Protestant ethic: Weber's model and the empirical literature. *Human Relations, 50*, 757-778.

Jost, J. T. (2006). The end of the end of ideology. *American Psychologist, 61*, 651-670.

Jost, J. T. (2017a). Ideological asymmetries and the essence of political psychology. *Political Psychology 38*(2), 167-208.

Jost, J. T. (2017b). Working class conservatism: A system justification perspective. *Current Opinion in Psychology, 18*, 73-78.

Jost, J. T. (2018). A quarter century of system justification theory: Questions, answers, criticisms, and societal applications. *British Journal of Social Psychology, 58*(2), 263-314.

Jost, J. T. (2020). *A theory of system justification*. Harvard University Press.

Jost. J. T. (2021). *Left and right: The psychological significance of a political distinction*. Oxford University Press.

Jost, J. T., Blount, S., Pfeffer, J., & Hunyady, G. (2003). Fair market ideology: Its cognitive motivational underpinnings. In R. M. Kramer & B. M. Staw (Eds.), *Research in organizational behavior* (Vol. 25, pp. 53-91). Elsevier.

Jost, J. T., Burgess, D., & Mosso, C. (2001). Conflicts of legitimation among self, group, and system: The integrative potential of system justification theory. In J. T. Jost & B. Major (Eds.), *The psychology of legitimacy: Emerging perspectives on ideology, justice, and intergroup relations* (pp. 363-388). Cambridge University Press.

Jost, J. T., Frederico, C. M., & Napier, J. L. (2009). Political ideology: Its structure, functions, and elective affinities. *Annual Review of Psychology, 60*, 307-337.

Jost, J. T., Glaser, J., Kruglanski, A. W. Sulloway, F. J. (2003). Political conservatism as motivated social cognition. *Psychological Bulletin, 129*(3), 339-375.

Jost, J. T., Napier, J. L., Thoridottir, H. Gosling, S. D., Palfai, T. P, & Ostifin, B. (2007). Are needs to manage uncertainty and threat associated with political conservatism or ideological extremity? *Personality and Social Psychology Bulletin, 33*(7), 989-1007.

Jost, J. T., Nosek, B. A., & Gosling, S. D. (2008). Ideology: Its resurgence in social, personality, and political psychology. *Perspectives on Psychological Science, 3*, 126-136.

Jost, J. T., Pelham, B. W., Sheldon, O., & Sullivan, B. N. (2003). Social inequality and the reduction of ideological dissonance on behalf of the system: Evidence of enhanced system justification among the disadvantaged. *European Journal of Social Psychology, 33*, 13-36.

Jost, J. T., & Thompson, E. P. (2000). Group-based dominance and opposition to equality as independent predictors of self-esteem, ethnocentrism, and social policy attitudes among African Americans and European Americans. *Journal of Experimental Social Psychology, 36*, 209-232.

Jost, J. T., & van der Toorn, J. (2012). System justification theory. In P. A. M. van Lange, A. W. Kruglanski, & E. T. Higgins (Eds.), *Handbook of theories of social psychology* (Vol. 2, pp. 313-343). Sage.

Jost, J. T., Wakslak, C. J., & Tyler, T. R. (2008). System justification theory and the alleviation of emotional distress: Palliative effects of ideology in an arbitrary social hierarchy and in society. *Advances in Group Processes, 25*, 181-211.

Kandler, C., Bleidorn, W., & Reimann, R. (2012). Left or right? Sources of political orientation: The roles of genetic factors, cultural transmission, assortative mating, and personality. *Journal of Personality and Social Psychology, 102*, 633-645.

Kay, A. C. & Zanna, M. P. (2009). A contextual analysis of the system justification motive and its social consequences. In J. T. Jost, A. C. Kay, & H. Thorisdottir (Eds.), *Social and psychological bases of ideology and system justification*, (pp. 158-184). Oxford University Press.

Kluegel, J. R., & Smith, E. R. (1986). *Beliefs about inequality: Americans' views of what is and what ought to be*. Aldine de Gruyter.

Kraemer, E. (2015). Virtue epistemologies and epistemic vice. *Athens Journal of Humanities and Arts, 2*(1), 19-29.

Kruglanski, A. W. (2004). *The psychology of close-mindedness*. Psychology Press.

Kugler, M., Cooper, J., & Nosek, B. A. (2010). Group-based dominance and opposition to equality correspond to different psychological motives. *Social Justice Research, 23*, 117-155.

Kuklinski, J, Quirk, P., Jerit, J., Schweider, D., & Rich, R. (2000). Misinformation and the currency of democratic citizenship. *Journal of Politics, 62*(3), 790-815.

Ledgerwood, A., Mandisodza, A., Jost, J. T., & Pohl, M. (2011). Working for the system: Motivated defense of meritocratic beliefs. *Social Cognition, 29*, 323-340.

Lerner, M. J. (1980). *The belief in a just world: A fundamental delusion*. Plenum Press.

Lukes, S. (2011). In defense of "false consciousness." *University of Chicago Le-*

gal Forum, 19-28.
Lupia, A. (2016). *Uninformed: Why people seem to know so little about politics and what can we do about it.* Oxford University Press.
Lynd, R. (1939). *Knowledge for what?* Princeton University Press.
Marietta, M. & Barker, D. C. (2019). *One nation, two realities: Dueling facts and American democracy*. Oxford University Press.
Marx, K., & Engels, F. (1970). *The German ideology*. International Publishers.
McCoy, S. K., & Major, B. (2007). Priming meritocracy and the psychological justification of inequality. *Journal of Experimental Social Psychology, 43*, 341-351.
Merkley, E. (2020). Anti-intellectualism, populism, and motivated resistance to expert consensus. *Public Opinion Quarterly, 80*(1), 351-377.
Mijs, J. J. B. (2019). The paradox of inequality: Income inequality and belief in meritocracy go hand in hand. *Socio-Economic Review*. https://doi.org/10.1093/ser/mwy051.
Mirels, H. L. & Garrett J. B. (1971). The Protestant ethic as a personality variable. *Journal of Consulting and Clinical Psychology, 36*, 40-44.
Mitchell, G. & Tetlock, P. E. (2009). Disentangling reasons and rationalizations: Exploring perceived fairness in hypothetical societies. In J. T. Jost, A. C. Kay, & H. Thorisdottir (Eds.), *Social and psychological bases of ideology and system justification*, (pp. 126-157). Oxford University Press.
Motta, M. P. (2018). The dynamics and political implications of anti-intellectualism in the United States. *American Politics Research, 46*(3), 465-498.
Napier, J. L., & Jost, J. T. (2008). Why are conservatives happier than liberals? *Psychological Science, 19*, 565-572
Nichols, T. (2017). *The death of expertise: The campaign against established knowledge and why it matters*. Oxford University Press.
Nosek, B. A., Banaji, M. R., & Jost, J. T. (2009). The politics of intergroup attitudes. In J. T. Jost, A. C. Kay, & H. Thorisdottir (Eds.), *Social and psychological bases of ideology and system justification*, (pp. 480-506). Oxford University Press.
Nguyen, C. T. (2018). Echo chambers and epistemic bubbles. *Episteme, 17*(2), 141-161.
O'Brien, L. T., & Major, B. (2009). Group status and feelings of personal entitlement: The roles of social comparison and system-justifying beliefs. In J. T. Jost, A. C. Kay, & H. Thorisdottir (Eds.), *Social and psychological bases of ideology and system justification*, (pp. 427-443). Oxford University Press.
O'Connor, C., & Weatherall, J. O. (2019). *The misinformation age: How false beliefs spread*. Yale University Press.
Ogden, S. G. (2017). *The church, authority, and Foucault*. Routledge.
Oliver, J. E., & Rahn, W. M. (2016). Rise of the 'Trumpenvolk': Populism in the 2016 election. *The Annals of the American Academy of Political and Social Science, 667*, 189-206.
Oliver, J. E., & Wood, T. A. (2018). *Enchanted America: How intuition and reason divide our politics*. University of Chicago Press.
Osborne, D., Sengupta, N. K., & Sibley, S. G. (2019). System justification theory at 25: Evaluating a paradigm shift in psychology and looking towards

the future. *British Journal of Social Psychology, 58*, 340-361.
Pariser, E. (2011). *The filter bubble: What the internet is hiding from you*. Penguin U.K.
Rentfrow, P. J., Jost, J. T., Gosling, S. D., and Potter, J. (2009). Statewide differences in personality predicting voting patterns in 1996-2004 U.S. Presidential elections. In J. T. Jost, A. C. Kay, & H. Thorisdottir (Eds.), *Social and psychological bases of ideology and system justification*, (pp. 314-350). Oxford University Press.
Rigney, D. (1991). Three kinds of anti-intellectualism: Rethinking Hofstadter. *Sociological Inquiry, 61*, 434-451.
Roberts, R. C., & Wood, W. J. (2007). *Intellectual virtues: An essay in regulative epistemology*. Oxford University Press.
Rosen, M. (1996). *On voluntary servitude: False consciousness and the theory of ideo*logy. Harvard University Press.
Rudman, L. A., & Saud, L. H. (2020). Justifying social inequalities: The role of social Darwinism. *Personality and Social Psychology Bulletin, 46*(7), 1139-1155.
Saez-Trumper, D., Castillo, C., & Llamas, M. (2013). Social media news communities: Gatekeeping, coverage, and statement bias. In *Proceedings of the 22nd ACM International Conference on Information and Knowledge Management*. Retrieved from https://dl.acm.org/citation.cfm?id=2505623
Satta, M. (2020). *Epistemic exhaustion and the retention of power*. Unpublished Manuscript.
Shogan, C. J. (2007). Anti-intellectualism in the modern Presidency: A Republican populism. *Perspectives on Politics, 5*(2), 295-303.
Sidanius, J. & Pratto, F. (2001). *Social dominance: An intergroup theory of social hierarchy and oppression*. Cambridge University Press.
Southwell, B. G., & Thorson, E. A. (2015). The prevalence, consequence, and remedy of misinformation in mass media systems. *Journal of Communication, 65*(4), 589-595.
Starzyk, K. B., Blatz, C. W., & Ross, M. (2009). Acknowledging and redressing historical injustices. In J. T. Jost, A. C. Kay, & H. Thorisdottir (Eds.), *Social and psychological bases of ideology and system justification*, (pp. 463-479). Oxford University Press.
Sunstein, C. R. (2009a). *Going to extremes: How like minds unite and divide*. Oxford University Press.
Sunstein, C. R. (2009b). *Republic.com 2.0*. Princeton University Press.
Taber, C. S., & Lodge, M. (2006). Motivated skepticism in the evaluation of political beliefs. *American Journal of Political Science, 50*(3), 755-769.
Tanesini, A. (2016). 'Calm down dear': Intellectual arrogance, silencing, and ignorance. *The Aristotelian Society Supplementary, XC*, 72-92.
Tatum, B. D. (2018). The cycle of socialization. In M. Adams, W. J. Blumenfeld, D. C. J. Catalano, K. Dejong, H. W. Hackman, L. E. Hopkins, B. J. Love, M. L. Peters, D. Shlasko, and Ximana Zuniga (Eds.), *Readings for diversity and social justice, 4th ed*. (pp. 6-8). Routledge.
Thorisdottir, H., Jost, J.T., & Kay, A. C. (2009). On the social and psychological bases of ideology and system justification. In J. T. Jost, A. C. Kay, & H. Thorisdottir (Eds.), *Social and psychological bases of ideology and system*

justification, (pp. 3-26). Oxford University Press.

Tokita, C. K., Guess, A. M., & Tarnita, C. E. (2021). Polarized information ecosystems can reorganize social networks via information cascades. *Proceedings of the National Academy of Sciences, 118*(50).

Uhlmann, E. L., Poehlman, T. A., & Bargh, J. A. (2009). American moral exceptionalism. In J. T. Jost, A. C. Kay, & H. Thorisdottir (Eds.), *Social and psychological bases of ideology and system justification*, (pp. 27-52). Oxford University Press.

van den Bos, K. (2009). The social psychology of uncertainty management and system justification. In J. T. Jost, A. C. Kay, & H. Thorisdottir (Eds.), *Social and psychological bases of ideology and system justification*, (pp. 185-209). Oxford University Press.

Wakslak, C. J., Jost, J. T., Tyler, T. R., & Chen, E. (2007). Moral outrage mediates the dampening effect of system justification on the support for redistributive social policies. *Psychological Science, 18*, 267-274.

Willer, R. (2009). No atheists in foxholes: Motivated reasoning and religious belief. In J. T. Jost, A. C. Kay, & H. Thorisdottir (Eds.), *Social and psychological bases of ideology and system justification*, (pp. 241-266). Oxford University Press.

Woleński, J. (2004). The history of epistemology. In M. Sintonen, J. Wolenski & I. Niiniluoto (Eds.), *Handbook of epistemology*, (pp. 3-54). Kluwer Academic Publishers.

Zmigrod, L. (2020). The role of cognitive rigidity in political ideologies: Theory, evidence, and future directions. *Current Opinion in Behavioral Sciences, 34*, 34-39.

Zmigrod, L., Rentfrow, P. J., & Robbins, T.W. (2019a). The partisan mind: Is extreme political partisanship related to cognitive inflexibility? *Journal of Experimental Psychology: General, 149*(3), 407-418.

Zmigrod, L., Rentfrow, P. J., & Robbins, T.W. (2019b). Cognitive inflexibility predicts extremist attitudes. *Frontiers in Psychology, 10*, 989.