(IL)LIBERAL BIAS IN ACADEMIA: INVESTIGATION OF THE GRIEVANCE STUDIES AFFAIR

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(Il)liberal Bias In Academia: Investigation of the Grievance Studies Affair

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ABSTRACT

In 2018, a team of academics succeeded in publishing studies with critically flawed methodologies, crass language, and unsupported conclusions in major Social Science academic journals such as *Hypatia*, *Fat Studies*, and *Sex Roles*. One paper was even awarded as "leading scholarship." The hoaxers hypothesized that their success was due to political bias in peer review, specifically a prioritization of politically-correct conclusions in these fields over scientific rigor. An ideologically- and politically-motivated methodology called Critical Social Science does appear to be influencing academia as a whole, particularly in the Social Sciences, and likely affects peer review as well. Critical Social Science explicitly presupposes conclusions and actively rejects critique, thus rejecting the entire paradigm of academic research and the scientific method itself. We sought to evaluate what individual differences might influence an individual to subscribe to this ideology including Liberal Ideology (LI) and Paranoid Egalitarian Meliorism (PEM). We presented 169 MTurk participants with summaries of the hoax articles and measured their agreement with the arguments as well as their willingness to share the articles. Then, we presented them with scientific rebuttals of the hoax arguments and measured changes in attitudes towards the original article, as well as towards the rebuttal researchers. We found that: confirmation bias most likely predicted high-LI individuals' desire to disseminate the hoax articles, that high PEM individuals were far more denigrating towards simulated rebuttal researchers, and that high PEM individuals were far less likely to agree with or share the rebuttals. These findings implicate a possible individual difference explanation for the success of the Hoax Project and appear to identify an individual trait (PEM) that indicates rejection of

scientific principles. The implications of high rates of PEM individuals in academic fields are discussed.

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Chapter I: Introduction and Review of the Literature

The Hoax, Discovered

In October of 2018, the Wall Street Journal discovered a possible scandal in academic integrity: the author of a scholarly article titled "Human reactions to rape culture and queer performativity at urban dog parks in Portland, Oregon," did not seem to exist (Melchior, 2018). Helen Wilson, the supposed author, apparently a faculty member at the "Portland Ungendering Research Initiative" (also non-existent), was contacted to answer for her alleged academic dishonesty. Instead, a man named James Lindsay answered. He explained that he was posing as Helen Wilson, the paper was in fact a hoax, and that it was not the only one: four hoax papers had been published in major academic journals, seven total had been accepted for publication, and even more were in the final stages of review.

Despite being complete fabrications, these hoax papers made their way through the supposedly rigorous peer review process at top journals in various academic disciplines and were welcomed with acclaim. For instance, their "Dog Park" paper, which argued for "publicly… and suddenly yelling" at men when they show sexual interest in a woman a la canine shock training as a method to reduce rape, was even honored with an award as "leading scholarship" by the journal (Wilson, 2015). Indeed, every accepted paper as part of this Hoax Project received rave reviewer comments, including papers that argued that humor should be exclusively reserved for social justice purposes, that rewrote a chapter of *Mein Kampf* to be in line with feminist principles, and that even advocated for reducing homophobia by the use of anal sex toys for straight men. Lindsay and his two colleagues, Dr. Peter Boghossian and Helen Pluckrose, had duped major scholarly journals including *Hypatia*; *Gender, Place, and Culture; Sexuality & Culture,* and others into publishing studies with critically flawed methodologies, crass language,

and unsupported conclusions (Lindsay et al., 2018). Upon discovery of this hoax, the studies were promptly retracted by the hoaxers, but the embarrassing question remained: how did these critically flawed studies pass peer review in the first place?

The Paradigm Wars

To explain this supposed lapse in academic integrity, it is necessary to begin by reviewing some philosophy of science, particularly as it applies to the Social Sciences. During the late 1960s to early 1970s, Social Science underwent a significant overhaul in fundamental assumptions of its work. These evolving assumptions centered on the nature of humanity, the meanings of "truth" (i.e., validity), what constitutes "good" evidence, and when social and/or political values can/should enter the scientific process (Neuman, 1991). Three main schools of thought emerged from this debate: the Positivist, Interpretive, and Critical Social Science approaches. The Positivist approach has been the predominant approach to much of the Social Sciences and assumes that social reality contains preexisting objective "facts" that manifest in ordered patterns, much like the rules of mathematics patterned in the physical world (Turner, 1985). In a Positivist approach to Social Science, hypotheses are to be formulated a priori to avoid biasing observations and tested using statistical techniques, which must be replicable across time and studied populations. Positivism also dictates that the social scientist should strive to separate themselves from their work as fully as possible, keeping the scientific process separate from their own values and biases (Neuman, 1991). In a word, the Positivist approach is a Quantitative approach to science and is the foundation of much of the past 50 years of Social Science research.

However, despite the explosion of high-quality science in the past half-century due to the adoption of Positivism, significant criticisms of its inherent weaknesses have led to differing

approaches. One major criticism of the Positivist technique is that it reduces all human experience to quantifiable measurements, which risks losing the full richness of human life in favor of exacting statistical accuracy. Furthermore, by having researchers develop research questions, hypotheses, and instruments *before* data collection, Positivism is critiqued for overemphasizing the researcher and neglecting the perspectives of the research subjects (Neuman, 1991). In response, the Interpretive approach to Social Science takes a subjective approach, emphasizing the differences between the way individual humans can experience the same events and interactions. The Interpretive approach may include hypotheses, but these are "confirmed" using largely narrative-driven, non-mathematical approaches that prioritize the depth of experience of the population studied (Neuman, 1991). Within the Interpretive approach, social and political values are meant to be analyzed and brought to the forefront as a recognition of their influence on both the researcher and the researched. However, the Interpretive social scientist typically does not assume that any one value is more valid or "better" than any other, and thus avoids taking explicit activist or political roles during research (Neuman, 1991). In a word, the Interpretive approach is a Qualitative method of Social Science research. One can see how both the Positivist and Interpretive approaches contribute significantly to greater understanding of humans and their social landscape, while also accounting for each other's' shortcomings. One can also see, if combined in a mixed-methods design, how Social Science can discover the facts of human nature and interactions while also allowing for more personalized, emotionally meaningful, and collaborative data.

However, these two approaches do not satisfy all criticisms of the social scientific research status quo. The Critical Social Science (CSS) approach, birthed by Karl Marx and Postmodern thinkers, views the Positivist tradition as reductive and the Interpretive approach as

too passive in its aims (Neuman, 1991). CSS does not regard there to be both universal truths and subjective experiences, in fact outright rejecting the idea that unique individuals can interact richly with a universal reality. Instead, the Critical approach believes that "all claims to truth are value-laden constructs of culture" (Lindsay & Pluckrose, 2020, p. 32). This belief is also referred to as a radical form of Social Constructivism and is a significant departure from the Positivist and Interpretive methods. In this approach, what is considered "truth" is purely dictated by how society defines the concept of truth and who was involved in producing it (Sensoy, Özlem, & DiAngelo, 2012). Thus, "truth" is simply the dominant narrative put forward by those in the position to define society's perception of truth and has nothing to do with a universal reality. In fact, the idea of a universal reality is itself disputed (Thompson, 2015, p. 192). Indeed, much of this thinking can be seen in recently developed school curricula, where even the statement "2 + 2 = 4" is deemed to be a subjective narrative claim to truth, rather than a basic rule of a reality governed by mathematical rules (Young, 2020).

Value-laden Study

The Critical approach's attitude towards values and politics is also a central component of its methodology. As opposed to Positivism or the Interpretive approaches that regard all values as either threats to validity or as subjects of careful and balanced study, CSS intentionally prioritizes certain values over others and explicitly advocates for their use within research and application of the research, typically for the "liberation" of "oppressed" peoples (Prilleltensky & Fox, 1997). CSS is firmly activist in its orientation and advocates that science should serve a political purpose at every level of its practice (Sayer, 1992). This purpose is then organized around what Lindsay and Pluckrose (2020) identify as the central uniting variable of interest for Critical Social Science: power. Within a Critical viewpoint, society is seen as in a constant

struggle for power wherein those in privileged positions exert power over the disadvantaged, and Positivist or Interpretive (i.e. “mainstream”) science is seen as attempting to maintain this unjust status quo (Prilleltensky & Fox, 1997).

However, CSS departs from its origins in the Marxist view of a class struggle in which those with economic class privilege directly and intentionally oppress those in lower classes (Habermas, 1973). The Critical view regards the social landscape of humanity as a constant and sometimes unconscious power struggle between identity groups that is enacted at every level of society, from as broad as federal policy to as narrow as momentary personal interactions (Lindsay & Pluckrose, 2020). This view does not require malicious intent by the oppressive perpetrators, but instead relies on systemic definitions of oppression and power imbalances, typically pointing out demographic disparities as evidence of oppression. Most importantly, “truth” is seen only temporarily as what those in “powerful” and “privileged” identities (typically White, heterosexual, thin, able-bodied, Christian males) determine to be the truth (McIntosh, 1988; Sensoy, Özlem, & DiAngelo, 2012). Since the world is seen as inherently oppressive, the “truth” is supposedly constructed and then used by these powerful identity groups to keep the disadvantaged from attaining positions of power. Therefore, as the Critical approach argues, there is a moral mandate for the scientific fields to be used to emancipate and improve conditions for the “oppressed” (Marcuse, 1969).

The Critical Social Science approach, in summary, views truth as entirely socially constructed and through the lens of power, and is meant “not to be factually true but strategically useful: in order to bring about its own aims, morally virtuous and politically useful by its own definitions” (Pluckrose & Lindsay, 2020, p. 39). It should not be overlooked then that Critical Social Science contains an internal contradiction, borne of its postmodern roots: it views there to

be no truth except that which is constructed by power, but regards its own perspective as true enough as to require focused and organized action. Additionally, it presupposes the singular "truth" of power and oppression and enters scientific inquiry with a foregone conclusion in mind: the question is not whether a particular form of oppression such as racism has occurred, but rather how it has manifested in whatever is studied (DiAngelo, 2012). Critical Social Science methods promote proudly carrying one's own assumptions into hypothesis formation, as well as assuming the content and meaning of the results before inquiry even begins: all analysis will find "oppression" in some form, and that "oppression" must be understood and interpreted through a Critical lens. The Critical approach may be correct in its criticism that Positivist and Interpretive methods may still be inherently biased, but it attempts to resolve this issue by wholeheartedly embracing its own bias instead.

In the Hoax Project, the hoaxers intentionally infused biased values and perspectives into their faux-scholarship and predicted that CSS value-consistent papers would be published and praised despite dire flaws in their work. The hoaxers tested this hypothesis by attempting to publish massively flawed research that was nonetheless in-line with CSS principles and conclusions, and succeeded in doing so. Although the hoaxers established that flawed, but value-consistent findings were supported, they did not investigate whether value-inconsistent findings were opposed. To address this limitation, our research expanded upon the hoaxers' project by investigating what individual differences might contribute to both supporting CSS-consistent arguments as well as denigrating CSS-inconsistent arguments.

The Purpose of Science

The primary issues with Critical Social Science's methodology concern the purpose of Science itself. Social Psychologist Jonathan Haidt, in his 2016 lecture at Duke University, lays

out the case for the purpose of science by addressing the Aristotelian concept of Telos: the purpose or end goal of something. Haidt first makes the point that if the Telos of a knife is to cut, and it does not cut, then it is not a good knife. He then translates this concept to more complicated areas, such as that of the profession of a physician, whose Telos is to heal. He also makes the point that the Teloses of different areas, such as applied medicine and medical research, can serve to benefit each other if kept separate but in constructive interaction. Unfortunately, as Haidt explains, if Teloses blend, such as when fields like medicine and business meld in hospital settings, the profession of the physician becomes corrupted and loses its Telos to the influence of another Telos; in this case, to that of maximizing profit. In the end, this hurts those who could have been better served by the field of medicine.

The Telos of Science and the scientific method, Haidt argues, is Institutionalized Disconfirmation: the potential for bad science to be caught and filtered out due to the expectation that every scientist's work will be analyzed for error. In Haidt's words, "this was the genius of science. It's not the scientist who's so rational; it's that science is a community of scholars that critique each other's work" (Haidt, 2016). Unfortunately, it appears that Critical Social Science's methods and presuppositions represent an attempt to blend the Teloses of Science and Activism. Much like when medicine and business collide, it appears that one Telos overwhelms the other: Critical Social Science embraces the Telos of Activism while corrupting the original Telos of Science.

This risk appears to already have come to fruition: a rejection of Institutional Disconfirmation is evident in prominent Critical Social Science literature. When the presuppositions of Critical Social Science are challenged in the scientific arena, accusations of "privilege-preserving epistemic pushback" are levied against those who dare to do so (Bailey,

2017). Privilege-preserving epistemic pushback is defined in the literature as a form of resistance to CSS ideas as a form of "worldview protection" that preserves one's place of power within society. In simpler terms, CSS explains away critiques of its ideas by means of *ad hominem* attacks against those who challenged them. A litany of other accusations is charged against those who might disagree with Critical Social Science including Willful Ignorance (i.e., not knowing and not wanting to know about the Critical view of the world; Tuana, 2006), Internalized Dominance (i.e., internalizing and acting out power dynamics by critiquing CSS; Sensoy & DiAngelo, 2017), or False Consciousness (i.e., if one is considered to be in an oppressed group and acting against their "own interests" by critiquing CSS; Delgado & Stefancic, 2017). One might even be accused of committing "epistemic violence" against the scientist being critiqued if that Critical Social Scientist is a member of an "oppressed" group (Dotson, 2011). Perhaps the most popular CSS books at the time of this writing is *White Fragility* (DiAngelo, 2016), which accuses Whites who do not agree with CSS principles of being irrational and reactionary. In another popular CSS book, *How to be an Antiracist* by Ibram X. Kendi (2021), Kendi divides people into a binary in which one can only be a Racist or an Anti-Racist. In his model, "there is no in-between safe space of 'not racist.' The claim of 'not racist' neutrality is a mask for racism" (Kendi, 2021, p. 9). Kendi therefore creates a trap for any critics of his simplistic model, shoehorning those that might substantively disagree with him into the ruinous category of "racist." In all of these ways, Critical Social Science builds an inability to accept critique into its own methodology, decrying any criticism as insidious efforts to enact oppressive power dynamics. Thus, Critical Social Science fully and explicitly rejects the Telos of Science. Instead of being considered "Science," one would be more precise in considering CSS to be a form of Institutionalized Activism.

Science is always in a constant state of evolution, being changed, shaped, and improved upon by subsequent researchers. Therefore, even if unduly value-laden science is produced by researchers, this does not mean that this science will go unchallenged. However, as the hoaxers argue, CSS is unequipped and/or unmotivated for this type of corrective effort. Indeed, the hoaxers pre-established a time to retract all the papers since they were being awarded instead of rejected, and it took an independent journalist outside of academia to catch them before that date. The present research investigated how value-laden scientific output is resistant to efforts to correct value-laden findings.

Bad Actors

Although Critical social scientists have historically made up only a small fraction of working social scientists (Neuman, 1991), their fast-growing influence on academia, the research literature, and public trust in the Social Sciences warrants scrutiny of their methods. Within the Critical Social Science literature, one can find explicit tactics meant to undermine traditional science for its own political and moral aims. From as early as the 1920s, foundational Critical Studies scholars such as Antonio Gramsci, later expanded on by Rudi Dutschke and Herbert Marcuse in the 1970s, have advocated for a "long march through the institutions," a term meant as an homage to the Maoist Chinese communist movement (Kimbal, 2001). This "long march," as defined by Marcuse, requires "working against the established institutions while working within them, but not simply by 'boring from within,' rather by 'doing the job'" (Marcuse, 1972, p. 55). By "doing the job," Marcuse refers to subverting the current institution, seen as promoting and continuing societal oppression, by taking advantage of their weaknesses from within. Rather than working politically to rescind funding from these institutions, it is seen as more effective to instead corrupt them from within, with the end result of either institutional

death (Nayna, 2019) or, if done right, an ideological takeover of the institution itself (Marcuse, 1972, p. 56-57). Marcuse also names the Universities specifically as the primary institution from which all other institutions may be captured, since they can be "restructured" to train "counter-cadres" (Marcuse, 1972, p. 56). Put more plainly, Marcuse proposes ideologically capturing the Universities to use them as training grounds for the next generation of Critical Studies thinkers who could further subvert other industries.

The plan to subvert the institutions from within has not lost steam since the musings of Marcuse; activist scholars have continued to call for further implementation of this model. Entire instructional books have been published on the plan and its implementation in modern times (Perna, 2018, as cited in Lindsay & Pluckrose, 2020). Scholar Sandra Grey explicitly calls for professors to push their students to "take up activist roles" and for "rigorous research carried out 'for a cause'" to be regarded as legitimate science on par with the current Positivist-inspired methods of knowledge production (Grey, 2013, p. 208, as cited in Lindsay & Pluckrose, 2020).

Most dubiously, some scholars even compare their Grievance Study field of Women's Studies to the HIV/AIDS virus in its ability to "exploit the vulnerabilities and weaknesses of the systems" it attacks (Fahs & Karger, 2016, as cited in Lindsay & Pluckrose, 2020). These scholars advocate that Women's Studies programs should aim to train students who can "settle into corporate universities and regenerate themselves through the education of students and by manipulating portions of the academy under their control," thereby mimicking viral replication in human cells. The most important point these scholars make is that these students are intentionally unleashed to infect "the formerly isolated and protected, traditional disciplines (e.g., History, Mathematics, Physics, Psychology, and so on) with principles of critical feminist analysis," with the ultimate goal that "the corporate university begins to integrate, bit-by-bit,

portions of feminist pedagogies into its own ideology [and] as the perpetual expansion of the corporate university builds upon itself, it carries these alien blueprints into new domains" (Fahs & Karger, 2016, as cited in Lindsay & Pluckrose, 2020). The Critical fields of study state their own goals plainly: they aim to take over every University department to be used as activist factories for their own political ideology.

Critical Social Scientists who implement these strategies seem to be achieving their goal effectively; fields of scientific study that traditionally study apolitical topics such as Mathematics, Physics, and even Astronomy increasingly find themselves defending against efforts to inject them with Critical Studies material (Brown University Department of Physics, 2021; Math Equity Toolkit, 2021; Sullivan, 2021). The "long march" marches on and threatens to either capture institutions of rigorous knowledge production or, if they cannot be captured, kill them instead.

These are dire circumstances for academia as a whole, but many open questions remain as to specifically how bad-faith science is spread and exactly who is spreading it. The hoaxers cannot be completely sure that the reviewers of their hoax papers accepted their flawed papers because of their value-laden conclusions, nor can they be completely sure that the reviewers themselves were bad actors. For instance, the hoaxers' flawed papers may have been accepted either by bad actors seeking to proliferate value-laden findings or accepted by good actors with ideological blind spots suffering from confirmation bias. The present research sought to disentangle these possibilities by investigating the individual differences underlying the acceptance of flawed, but value-laden, research findings.

Bad Science, Real Consequences

If Critical Social Science and its machinations were simply unenacted theories swirling

around the minds of academics, their impact would be minimal. Unfortunately, the persecutorial, strategic, power hierarchy-based mindset has appeared to have infected even the Positivist wings of scientific knowledge production. Specifically, when Positivist scientists produce substandard work, it may be praised and proliferated due to appealing to CSS values rather than its inherent quality. One example is the construct of Implicit Bias, purportedly measured by the Implicit Association Test (IAT; Greenwald, McGhee, & Schwartz, 1998; see https://implicit.harvard.edu/implicit/takeatest.html). "Implicit Bias" as a construct is typically described as an unconscious preference for or against any number of different identity categories including race, weight, and gender. Supposedly, if one holds an implicit bias, that individual might act in a discriminatory manner without even knowing they are doing it or that they have the bias in the first place. The IAT then purports to measure one's implicit bias by measuring one's reaction time to pairing "good" or "bad" valanced words with the identity category in question. Clearly, this construct is in line with some of the core tenets of the Grievance Fields and Critical Social Science: if individuals can discriminate against others of a different identity class without even knowing it, the claim that oppression is ever-present and can exist without conscious intention is bolstered.

However, the construct and measurement of Implicit Bias and the Implicit Association Test (IAT) appear to be so rife with ambiguity and insufficient validity that the entire enterprise is called into question. Firstly, as Jussim, Careem, Goldberg, & Honeycutt (2021) explain, there is no one definition for the construct that is used in the Implicit Bias literature. Implicit Bias is described as a behavior, a mental association, a decision-making process, and even as the seemingly unavoidable influence of cultural stereotypes (Jussim et al., 2021). Simply put, Implicit Bias cannot be all of these at the same time. Psychological constructs require a greater

degree of specificity, and certainly necessitate a consensus on whether they are artifacts, behaviors, or social constructions before attempting to measure them. Schmader, Dennehy, & Baron (2021) point out that the confusions in definitions for Implicit Bias are found in both scientific literature and in public discourse, leading to further confusion about its scientific basis.

Even if the term were to be accurately defined, the measures used to assess it are dubious. The variance within results appears to be over 80% due to both methodological and random error, with less than 20% of the variance due to identifiable trait variance (Chequer & Quinn, 2021). With this level of error, Schimmack (2019) has calculated that within the Black racial IAT, a participant who scores at the mean level could have an extreme pro-Black bias *or* an extreme pro-White bias; clearly, the result of the test means little for the individual who took it. Along with a host of other methodological problems including inflated effect sizes and reliance on a monomethod approach (Jussim, et al., 2021), the IAT appears to measure a poorly defined construct, and measures it poorly at that.

If Implicit Bias and the IAT are so fraught, one would imagine that they should be relegated to the "questionable theories" category of psychological research or at least constrained in practical use until more research can be conducted to improve them. Instead, the field of assessing one's Implicit Bias (coined "Unconscious Bias" in Diversity Training Programs) utilizing the IAT is booming to the tune of between $8-10 billion every year (Kirkland & Bohnet, 2017). By late 2015, approximately 17 million IAT tests had been taken online, the majority of which were likely taken by individuals in institutional settings undergoing "Diversity Training" (Goldhill, 2020). Though the content of these trainings varies, the overwhelming shared message is that the world is biased against "oppressed" groups and that current disparities between identity groups can largely be explained by discrimination fueled by Implicit Bias

(DiAngelo, 2021). The IAT is used as the primary form of evidence in these trainings and is meant to highlight to everyone's supposed unavoidable, secret biases. Once each individual has been "revealed" to have unconscious biases using the IAT, these trainings follow a similar pattern: the participants are subjected to ideologically-charged activities such as "privilege walks" and evaluations of their "positionality" (status as an oppressor or oppressed identity), asked to identify episodes of "Implicit Bias" in work-related vignettes, and given the take-home message that one must always be focused on how their Implicit Bias may reinforce systems of oppression (Kirwan Institute, 2017; Project READY, 2021; DSHS, 2021). It appears that Diversity Trainings, using the IAT as "scientific" bolstering, push largely ideological and unproven ideas and techniques. Thus, it is perhaps unsurprising that these Diversity Trainings appear to do little to reduce discrimination, are ineffective at shifting either Implicit or Explicit Biases, and may in fact *increase* conflict and division in workplaces (Burns, Monteith, & Parker, 2017; Cooley et al., 2019; Forscher et al., 2019; Lai et al., 2016; Paluck, Porat, Clark, & Green, 2021; Vorauer, 2012).

If the IAT and Diversity programs are unreliable, invalid, and ineffective, how do they persist so pervasively in use? One could make the argument that this is just another instance of shoddy psychological science making its way into the public sphere and being notoriously difficult to excise; after all, the legacies of Power Posing (Cuddy, 2015), Multiple Intelligences (Gardner, 2006), Grit (Duckworth, 2018), and others still persist in many institutional consultants' programs despite their use being largely debunked and/or unsupported by evidence (Glazzard, 2015; Singal, 2021). None of the researchers or authors of Power Posing, Multiple Intelligences, or Grit appear to be engaging in intentional or politically-motivated bad science. Instead, it appears that their research was methodologically sub-par but was still picked up by

popular media, influencing wide-spread acceptance before institutional disconfirmation could run its course.

However, there are a number of these flawed theories and constructs that have failed to replicate in larger studies including Implicit Bias, Microaggressions (Cantu & Jussim, 2021; Lillienfield, 2017), and Stereotype Threat (Jussim, Crawford, Anglin, & Stevens, 2016) that appear importantly different: each of these theories appeals to the ideological framework that is Critical Social Science, even if they were produced within Positivist methodologies by Positivist researchers. For example, Stereotype Threat presupposes a belief of absolute equality in desirable traits between racial, gender, and other groups to make its claims, despite decades of unresolved scientific debate on this very topic (Hernstein & Murray, 1996; Weisberg, DeYoung, & Hirsh, 2011). Each of these theories begins with assumptions of social oppression and injustice, purports to measure a facet of the oppression, and prescribes a doctrine of how to recognize and theoretically eliminate them. In reality, these theories begin with ideologically motivated presuppositions which lead to scientifically invalid constructs that fail to be reliably measured. Nevertheless, each of these theories has been translated into consultation programs that purport to solve problems they identify for hefty prices. In short, bad science appears to be given a methodological "pass" since it fits into a Critical Social Science ideological framework and thus promotes the favorable political viewpoint. With this "pass," ideologues are set loose upon academic, corporate, and governmental institutions, backed by illusory "science," to spread their particular political prescriptions. This is not science; this is Institutionalized Activism given the "veneer of scientific credibility" (Jussim, 2021). The hoaxers themselves appear to have exploited this pathway from scientifically-veneered ideology to publication and fame: they hypothesize that by writing articles that were in line with CSS ideology, their intentionally and

blatantly flawed work was able to be published and even awarded.

Because the hoaxers were caught when they were, it is impossible to know what impact their hoax articles would have had on their respective fields. Would they have been heavily cited and influential, or would their flaws have been recognized by other researchers and their papers forgotten? We attempted to better investigate the consequences of value-laden research by measuring not only participants' agreement with the value-laden conclusions but also their desire to share and spread flawed research. In doing so, we attempted to extend the hoaxers' project by investigating the downstream consequences of value-based decisions surrounding the acceptance of flawed, but fashionable, research.

The Hoaxers' Hypothesis

Peter Boghossian, one of the hoaxers, refers to the process described above as "Idea Laundering," a term originally coined by evolutionary biologist Bret Weinstein (Boghossian, 2019). Idea Laundering begins when CSS academics inject their political opinions into academic papers, which are collected into "scientific" peer-reviewed journals. Since CSS rejects the typical process of institutionalized disconfirmation (upon which the entire system of peer review is based), Idea Laundering contends that CSS hijacks the legitimacy of peer review by prioritizing publishing papers that support its own political view, rather than prioritizing academic rigor. Given that peer reviewers are typically academics from the very fields from which the work is produced, the hoaxers hypothesized that the reviewers possess shared ideologies and values. Soon, there are entire "scientific" journals built upon political ideologies and opinions, but which have the exterior veneer of legitimate knowledge production.

Idea Laundering does not stop there. Rather, institutions then begin to create entire departments devoted to these supposedly rigorous studies, named for the "oppressed" identity

groups which they study and advocate for: Women's Studies, African-American Studies, LGBTQIA+ Studies, Fat Studies, and so on. Lindsay, Pluckrose, and Boghossian have nicknamed these fields the "Grievance Studies" for their proclivity to "refer to themselves as [something] Studies" and for their Critical focus on the grievances of their particular identity group (Lindsay, Boghossian, & Pluckrose, 2018).

As with all academic fields, these Grievance fields grow over time. If, as the hoaxers hypothesize, these Grievance fields are engaging in Idea Laundering, it then follows that the CSS scholars within these fields benefit from academic systems such as tenure and the ability to hire others that share their view. Courses are designed around this material, with students graded on how well they conform to the values prescribed within the discipline. Eventually, in line with the HIV/AIDS comparison, these students burst forth into the world with political opinions they believe are scientific facts, going on to influence the academic, corporate, and governmental institutions into which they are hired.

The life cycle of Idea Laundering is alive and well in modern universities. For example, the academic field of "Critical Dietetics" is still in its infancy but appears to be well on its way to adoption in several Canadian universities. In 2009, a collection of academics met for the first-ever conference on Critical Dietetics, otherwise known as the Critical Social Science approach to the study of diet and nutrition. At this conference, the academics united together under a declaration of the foundational principles and aims of Critical Dietetics. In this declaration, the academics announced that the field of Critical Dietetics was to be founded on the principles that the "ways of knowing" (i.e. epistemology) of the current Dietary scientific field were insufficient and that it would require a Critical lens to "give voice to the unspoken," "reveal and explore power relations," and "acknowledge that there are no value-free positions" in Dietary Science

(Gingras & Brady, 2019, p. 5). The authors of the declaration explicitly state the goal for their discipline: rather than seeking any kind of as-yet-undiscovered truth in nutritional study (a worthy challenge to extant knowledge), Critical Dietetics nakedly attempts to "create space for an emancipatory (i.e., liberating and socially just) scholarship" (Gingras & Brady, 2019, p. 6). It is important to keep in mind that "emancipatory" or "liberating" scholarship traces its roots directly back to Herbert Marcuse and his goal of institutional capture, as described previously. The authors also describe two of the founding tenets of Critical Dietetics as a "Commitment to Anti-oppression" and a "Commitment to Critical Praxis," with Praxis defined as "*reflection and action* directed at the structures to be transformed" (Brady & Gingras, 2019, p. 22). In sum, it appears that scholars in Critical Dietetics follow the same structure of other Critical fields: they declare that current knowledge in a scientific discipline is insufficient and biased, that power is the dominant factor in current society related to the scientific field, and that their efforts as a Critical field are explicitly to embrace bias towards these assumptions and seize the power for themselves to work towards "emancipatory" aims.

Two of the founders of the field (and the authors of the work cited above) are both prolific in their collection of published works, most of which are published in "peer-reviewed" journals such as "Fat Studies" (which itself published a hoax paper), "Fat Studies in Canada," and most importantly, the field's own "Journal of Critical Dietetics." With their prolific publication records in journals that are explicitly biased in favor of "emancipatory" scholarship, the authors have become influential professors at Canadian universities, with Dr. Jacqui Gringas serving as the Undergraduate Program Director for the Sociology department at Toronto Metropolitan University and Dr. Jennifer Brady working as the Director of the School of Nutrition and Dietetics at Acadia University. Both of them teach courses where students are

assumedly graded on their adherence to the nakedly biased tenets of Critical Dietetics, most notably in Dr. Gringas' "Sociology 493: Making Social Change" course in which students are to "learn how their sociological perspective and skills can be used to create social change" where "power, equity, and diversity" are central themes (Toronto Metropolitan University, 2022). In sum, a 2009 conference of biased academics birthed a quasi-scientific academic field by publishing amongst themselves enough to launder their own biases into the veneer of scientific rigor, thereby creating a discipline where students can be trained in Critical Praxis intended to "emancipate" (i.e. capture) the current Positivist and Interpretive Dietary scientific fields.

The hoaxers' project was a test of one of the postulates laid out in the theory of "Idea Laundering:" that of the corrupted peer review process. Characteristic of the Hoax Project was the quality that each hoax study shared: no matter the shoddiness of the methodology or how ridiculous the premises, each paper came to a politically "fashionable" conclusion. In these cases, "fashionable" means conforming to the orthodoxy of the CSS field and to traditionally left-leaning politics: their Dog Park paper forwarded the theory of a pervasive "Rape Culture," which has received much attention within academic feminist thinking for decades (Whisnant, 2017) by applying the concept to canine culture. Additionally, their "Fat Bodybuilding" paper claimed that "fatphobia" was more dangerous than the health risks of obesity, reflecting a core tenet within Fat Studies regarding labels as more impactful on the individual than one's physical health (Bacon & Severson, 2019). With the vast majority of academics in these fields on the political left (Langbert, 2018), these conclusions were more than likely consistent with the reviewers' moral and political beliefs. The hoaxers claimed that their papers passed through peer review, not because of the merit of their scholarship, but because the conclusions appealed to the political beliefs of Critical Social Science academics who purport to guard the gates of academic

discourse.

Of course, finding flaws in the peer review process is not sufficient to support the overall Idea Laundering argument. Furthermore, the hoaxers cannot know for certain that their hoax papers were accepted, despite their flaws, on the basis of their fashionable conclusions. Although the Hoax Project establishes serious issues in the publishing and dissemination of scholarship with maximal external validity, there are many lingering questions. Chief among them, were the hoax articles accepted on the basis of their fashionable conclusions?

What About Good-Faith Mistakes?

Despite the strong argument of the hoaxers given the previous evidence, the hoaxers' hypothesis is potentially muddied by the nuances of the world of academia. Given that the peer review process was blind, the hoaxers knew little-to-nothing about the reviewers other than their academic discipline. As a result, the hoaxers do not know for sure the political values of any particular reviewer, whether the reviewer identified as a critical social scientist, or whether the fashionable conclusion was the reason the hoax papers were accepted. These unknowns serve as the basis of the present research. Were the reviewers all "bad actors" working in the service of an activist ideology, or could the papers have slipped through scientifically honest reviewers for other reasons?

A review of the typical Social Science academic offers some initial insight into the likely characteristics of these reviewers. Specifically, a great deal of evidence suggests an overwhelmingly Liberal bias in academia, particularly in the Social Sciences. For instance, the field of Social Sciences are overwhelmingly Liberal: between 58-66% of professors in these fields identify as political Liberals, while only 5-8% identify as Conservative, with self-identified Democrats outnumbering Republicans by at least 8:1 (Gross & Simmons, 2007; Klein & Stern,

2009; Rothman & Lichter, 2008). In fields like Psychology, the disparity is even greater, with 84% identifying as liberal and with a 10.5:1 Liberal to Conservative ratio in the field (Gross & Simmons, 2007; Rothman & Lichter, 2008). At the time these measures were taken, the Liberal to Conservative ratio in the United States as a whole sat at 1:2 (Gallup, 2010). While this ratio has shrunk to about 1:1.4 in 2020 (Saad, 2021), the point persists: the Social Sciences are overwhelmingly Liberal, out of proportion to the country at large. Therefore, we can infer that the reviewers were more than likely politically Liberal.

Duarte et al. (2015), specifically investigating the effects of political skew in Social Psychology, proposed that these overwhelmingly skewed ratios are a cause for great concern. Importantly, none of the authors of the paper identify as Conservative or Republican, demonstrating that non-CSS Liberals can and will effectively critique their own field's political biases/blind-spots even when these critiques align with their political values. They point out three ways in which Liberal bias might degrade scientific inquiry. Firstly, they propose that Liberal values and assumptions become embedded in research design such that the research itself is invalidated. They point out several examples of this in published research where ideological and/or political statements are treated as the truth and "observed deviation from that truth is treated as error" (Duarte, 2015, p. 9), such as when environmentalist opinions were treated as "environmental realities" in prominent research (Feygina et al., 2010).

Next, Duarte et al. identify a long-standing trend in Social Science research in which topics that might invalidate or challenge politically Liberal assumptions go largely unstudied, leaving many important areas of research completely hidden from scientific view. They propose that some important topic areas, such as Stereotype Accuracy, go largely unresearched due to a Liberal bias; in this case, the biased view that all stereotypes are inaccurate and mean-spirited.

However, once a self-identified Conservative researcher took the initial leap to study this uncomfortable topic, Stereotype Accuracy was and has continued to be one of the strongest and most replicable effects in Social Psychology (Jussim, 2012). In this case, Liberal bias appears to have delayed valuable research until someone was willing to risk discovering uncomfortable data, leaving one to wonder what other vital areas might remain unstudied due to Liberal bias. This resistance to challenge Liberal assumptions creates a homogenous literature wherein future research may be evaluated on the basis of "fit," thereby facilitating the proliferation of fashionable results and suppression of unfashionable results.

Finally, Duarte et al. (2015) propose that Liberal bias in the study of Conservatives and other political outgroups groups can warp and distort research due to Liberal stereotypes of those groups. Because Liberals view Conservatives as more judgmental and dogmatic than themselves, research tends to be conducted that supports this hypothesized difference (Altemeyer, 1996). However, when the same methodologies are turned against Liberals using slightly modified scenarios, Liberals are found to be equally guilty of the same accusations (Crawford, 2012). Thus, the results are reached primarily due to the method of study, rather than the characteristics of the group being studied. In short, Liberal researchers can confirm their own negative stereotypes of outgroups by using unintentionally biased methods.

None of these instances of bias affecting research require nefarious intentions or bad actors; they can occur because of the lack of Institutionalized Disconfirmation in an overwhelmingly politically one-sided academe. When Liberal bias creates poor research, these errors are unlikely to be caught by Liberal peer reviewers who have parallel biases (Gampa et al., 2019). Duarte et al. (2015) point out that this process demonstrates an instance of Confirmation Bias, in which it is common for someone to seek out evidence that confirms their own views and

disconfirms views that run against them. When there are practically no individuals of an ideological minority (e.g. Conservatives) that might catch and counter the Confirmation Biases of the Liberal majority, such as in the Social Sciences, there is no regulating mechanism to prevent runaway distortions of research. Bias, transformed into inaccuracy, is enshrined in the literature by peer reviewers who fail to account for their own shortcomings.

Taken together, we can reasonably presume that the reviewers of the Grievance Studies Hoax were Liberal themselves. Is this what enabled the Grievance Studies Hoax to succeed? Was it the nefarious workings of bad-actor Critical Social Studies activists laundering ideas into academia for their own aims through biased peer review, or did unintended, runaway Liberal biases affect honest researchers who intended to provide high quality evaluation of good-quality science? To rescue the Social Sciences from losing the trust of the public, it is imperative to distinguish between those who prioritize their own political ideology from those that simply fall prey to their own biases while attempting to generate knowledge in good faith. Accordingly, the present research expanded upon the Hoax Project to better understand the causes of the proliferation of value-laden research, how acceptance of value-laden science can translate to the sharing of value-laden science, and the obstinance of value-laden science to challenge.

Separating Bad Actors from Biased Liberals

Sometimes, a simple survey allows for a rough estimate of the problem. In 2007, 43% of Social Sciences and Humanities faculty considered themselves to be radicals, activists, or Marxists (Gross, 2007). This number has likely grown since then as the subfields have become more Liberal and, at the same time, more infused with CSS ideology. These academics, or at least a great majority of them, might fairly be considered those who would prioritize their politics over scientific rigor. However, we the researchers aimed to be more precise in

identifying those who might intentionally, versus unintentionally, corrupt the Telos of science. Even if the vast majority of social scientists are self-identified Liberals, we reasoned it unlikely that *all* Liberals suffer to the same extent from these confirmation biases. Accordingly, we sought to identify if there might be a way to reliably identify an underlying belief system that might predict if an individual would prioritize politics over rigor when evaluating research. Furthermore, we sought to evaluate if its effects might extend into increased dissemination of bad science, just as the hoax papers made their way into established journals.

Liberal Feminist Ideology

To be certain, there are innumerable within-group variations among Liberals and academic Liberals more specifically. In order to capture what type of Liberal academic might best explain why the Grievance Studies Hoax succeeded, we first focused on Liberal Feminist Attitude and Ideology Scale (LFAIS; Morgan, 1996), specifically its Discrimination/Subordination subscale. We chose to use the Discrimination/Subordination subscale because it reflects a central aspect of Liberal ideology, namely that particular groups (in this case, women) are aggrieved, unfairly discriminated against, and treated unfairly in society. Items in this subscale include "even though some things have changed, women are still treated unfairly in today's society" and "women in the U.S. are treated as second-class citizens." To be clear, while a view of the world as oppressive against certain identity groups is central to CSS ideology, a fair and balanced evaluation of societal imbalances is an essential component of traditionally liberal/left ideology and is not incompatible with a rational, scientific approach (Graham et al., 2012).

Additionally, there is little reason to think that this measure is unique to attitudes toward woman, sexism, or feminism. Instead, items from this subscale appear highly adaptable to all

groups central to the Grievance fields. For instance, a pilot study we conducted had participants complete the Discrimination/Subordination subscale in its original form focusing on women and an adapted form focusing on African Americans. Results revealed that these two versions were highly related, $r(141) = .83$, $p < .001$, verging on redundancy. Furthermore, the sex- and race-based Discrimination/Subordination subscales were highly related to basic Liberalism, $r(141) = .59$, $p < .001$ and $r(141) = .63$, $p < .001$ respectively, but are far from completely overlapping constructs. Put another way, not all Liberals in our sample endorsed the beliefs captured in the Discrimination/Subordination subscale. Thus, by using this subscale, we are attempting to capture a certain subset of liberals who see aspects of society as oppressive (a potential source of ideological bias) while not necessarily subscribing to CSS ideology. That is, we are attempting to measure those liberals who, when evaluating evidence, might succumb to their own ideological biases towards societal aggrievement while not engaging in intentional bad-faith behaviors as CSS ideology prescribes.

In sum, we chose the Discrimination/Subordination subscale because it appears to measure a central, defining characteristic of political Liberals (sensitivity to unfairness and/or imbalance on a societal level) while also appearing to capture a subset of Liberals who might fall prey to confirmation bias. In theory, this subset of Liberals might be able to modify their beliefs when presented with sound evidence that contradicts their current stance. However, a further measurement was required to discriminate between those with this ideology who retain an ability to logically evaluate evidence (albeit with the possible interference of bias) and those who intentionally predetermine the conclusion of their analysis based on their ideology.

Paranoid Egalitarian Meliorism

In addition to Liberal ideology, we considered that Liberals likely varied in Paranoid

Egalitarian Meliorism (PEM, Winegard, Clark, Hasty, & Baumeister, 2018). PEM describes an underlying ideology that likely predetermines conclusions to analyses. A PEM scale has been validated by the inventors of the construct, with excellent internal reliability and a one-factor solution in a principle components analysis (Winegard, Clark, Hasty, & Baumeister, 2018). To define the term, Egalitarians in this case are those who believe that all groups (sex, racial, etc.) are relatively equal in desirable traits (intelligence, creativity, athleticism, etc.). Next, Meliorists are those who believe that humanity can architect a fairer and more just world if enough people were able to strive hard enough in that direction and declare that those actions are a moral imperative. Thus, Egalitarian Meliorists are those who believe that if humans strived hard enough, all sociocultural disparities between any racial group or the sexes could be eliminated. Paranoid, in this conceptualization, indicates an exceptional sensitivity to threats to this worldview and indicates a willingness to ascribe negative motives to those who might challenge it, much like those who work from a CSS perspective. The developers of the scale argue that if a critical mass of Social Science academics in a given discipline subscribe to the Paranoid Egalitarian Meliorist worldview, it would explain why they typically:

> "(a) study topics that are related to perceived injustices (stereotyping, prejudice, hierarchies, immorality of the wealthy, obedience); (b) ignore topics that are perceived to threaten egalitarianism (heritability, stereotype accuracy, possible benefits of conformity/hierarchy); and (c) become hostile/biased against research which suggests that some outcome differences among individuals and/or groups are at least partially caused by differences in personal traits rather than by discrimination or social oppression (e.g., that sex differences in science, technology, engineering, and mathematics (STEM) fields are partially caused by the cognitive differences and the different occupational

preferences of men and women and thus not entirely caused by unjust hiring practices or prejudices)" (Winegard, Winegard, & Geary 2015, found in Hasty, 2016).

If someone were to score high in PEM, it indicates a worldview that is so central to their view of humanity that it would be inseparable from their reasoning, as Positivism demands. Additionally, it indicates a moral imperative to act on this worldview, as well as a willingness to denigrate those who might challenge this worldview as sexists or racists, which violates the principles of the Interpretive approach. Items on the scale that support this include "when people assert that men and women are different because of biology, they are usually trying to justify the status quo," "racism is everywhere, even though people say they are not racist," and "people often use biology to justify unjust policies that create inequalities." Thus, if someone were to score highly in both LFAIS and PEM, it would indicate an individual who is prone to see society as oppressive, conclude that all disparities between groups are the result of discrimination, who believes that enough action in the right direction could eliminate these disparities, and who believes that certain nefarious others are attempting to maintain this state of affairs.

In sum, these two scales appear to uniquely tap into the assumptions underlying Critical Social Science and the hoaxers' critiques of Critical researchers. However, if one were to score high in LFAIS but low in PEM, it would indicate an individual with strong left-leaning opinions without the illogical, activist-oriented baggage of a Paranoid Egalitarian Meliorist worldview. As a result, PEM (and LFAIS) may serve as useful tools in identifying bad, versus good, actors impacting the legitimization and spreading of bad science.

Overview of the Present Research

Our research sought to evaluate and extend the claims made by the original hoaxers. Specifically, the hoaxers claimed that their fake papers passed through peer review due to the

CSS-friendly conclusions they crafted, rather than the quality of the study. While the hoaxers were able to account for an excellent amount of external validity by getting the studies published and awarded in real, well-respected academic journals, there were several gaps in their research we hoped to fill.

Firstly, there was no experimental control group, as the hoaxers did not submit articles with conclusions that were unfashionable to the CSS worldview. In a series of pilot studies, we presented participants with conclusions that are both fashionable and unfashionable to the CSS worldview, inspired directly from the hoax articles themselves. High LFI predicted significantly higher agreement, higher willingness to share, and higher desire to learn more about the fashionable hoax articles, while it did not predict the agreement and desire to share of the unfashionable articles. Thus, we have already established that the articles' and conclusions' alignment with CSS principles explained the article's positive reviews/acceptances among people high in LFI.

Second, when the hoax articles were reviewed, no measurements were taken of the reviewers themselves, thus leaving the motivations and attitudes of the reviewers up for debate. While one can logically deduce the reviewers' political leanings from the review comments they submitted (Lindsay, Boghossian, & Pluckrose, 2018), our research measured individual differences (LFI, PEM) in order to determine if there are specific qualities of individuals that lead to intentionally or unintentionally biased evaluations.

Third, though the comments left by the peer reviewers enable a face valid analysis of their agreement with the fake articles' publication worthiness and desire to share the material, no measurement was taken to specifically evaluate their level of ideological agreement. In our research, we specifically measured level of agreement with the conclusions of the articles.

Fourth, it is unclear if these patterns of behavior and individual differences are unique to scholars in the Grievance Study fields. Thus, it is important to determine if the CSS worldview affects more than those deeply steeped in CSS literature. In our research, we used laypeople as samples.

Finally, while some of the hoax papers continue to be cited in new research despite being retracted by the authors themselves, the Hoax Project did not demonstrate whether the fake articles would have impacted the field as laid out by Peter Boghossian's "Idea Laundering" hypothesis. Since many academic articles are published and never cited, their hoax articles could have similarly been lost to the trove of published but ultimately insignificant and unused research. Furthermore, these articles were retracted once the Hoax Project was discovered, which could be taken as evidence of the self-corrective nature of science. In our research, we measured desire to share and spread the content within the articles, while also analyzing this measured desire in relation to level of agreement and level of LFI and PEM. We also investigated participants' agreement and desire to share the article even in the face of information calling into question the articles' veracity. Consistent with our argument of ideologically-motivated reasoning, we hypothesized that participants high in LFI and PEM would continue to agree with and share fashionable conclusions even in the face of critique and contradictory information.

Hypotheses

Our hypotheses were as follows:

1. A main effect of PEM on the agreement/evaluation of logical quality/desire to share the hoax articles such that higher levels of PEM predict higher scores in each of these dimensions across measurements.
2. A main effect of PEM such that higher levels of PEM will predict higher levels of critique

towards the “rebuttal researchers.”

3. A main effect of LI (Liberal Ideology) on the agreement/evaluation of logical quality/desire to share the hoax articles such that higher levels of LI predict higher scores in each of these dimensions across measurements.

4. An interaction effect between LI and PEM such that agreement/evaluation of logical quality/desire to share the hoax articles will be significantly higher in all three of these dimensions for participants high in LI and PEM compared to participants high in LI but low in PEM.

5. An interaction effect between LI and PEM such that agreement/evaluation of logical quality/desire to share the hoax articles pre- and post-rebuttal presentation will be significantly higher in all three of these dimensions for participants high in LI and PEM compared to participants high in LI but low in PEM.

6. An interaction effect between LI and PEM such that agreement/evaluation of logical quality/desire to share the rebuttals will be significantly lower in all three of these dimensions for participants high in LI but low in PEM compared to participants high in both LI and PEM.

Chapter II: Research Design and Method

Participants

According to our pilot studies, which investigated the interrelations between focal measures and perceptions of politically fashionable conclusions, the effect of the Discrimination/Subordination subscale of the LFI on agreement with the fashionable article/conclusion pairs was strong, meta-analytic $r = .54$. An a priori power analysis specifying bivariate correlations indicated we would need between 19 (one-tailed) and 24 (two-tailed) participants to detect a comparable effect with 80% power. However, we also anticipated that this effect would be made stronger post-rebuttal relative to pre-rebuttal among participants also high in PEM. Using modern conventions to estimate the required sample for attenuated effects, we required approximately 7x the number of participants needed to detect our estimated pre-rebuttal effect, or between 133 and 168 participants.

To account for potential poor data, unanticipated exclusions, and other data collection issues we recruited 177 participants from Amazon's Mechanical Turk online data collection service. The only preemptive exclusion criteria was a requirement to live in the United States, which accounts for most cultural and potential language barriers. Per Leiner (2016), we calculated a "speed factor" by dividing the overall sample's median completion time (in seconds) by each participant's completion time. Scores of 1.75 or greater indicated that participants completed the study 1.75x faster than the median completion time, and were to be excluded. Eight participants had a score of 1.75 or greater and were excluded. Finally, 33 participants failed the attention check item included in the study. However, the results did not change following depending on whether these participants were excluded, and therefore these participants were retained to maximize our sample size and statistical power to detect effects of

interest.

After excluding implausibly fast responders, 169 participants were retained. Although MTurk has a Liberal bias in their participants (Berinsky et al., 2012; Huff & Tingly, 2015), other research suggests that MTurk is a valid instrument for ideology-related research (Clifford et al., 2015). Participants were compensated $0.40. Participants were over age 18, and of any gender.

Participants were primarily middle-aged (M = 43.19, SD = 13.70) and non-Hispanic (91.1%, 8.9% Hispanic). The most common racial/ethnic group was White (80.5%), followed by African-American (10.7%), Asian-American (7.1%), and Middle Eastern (1.2%), with 1.2% identifying as "Other." Participants included slightly more women (52.7%) than men (46.2%). Participants also ranged in education from "Some High School" (1.7%) to "Doctorate Degree" (5.3%), with the most common level being "4-Year College Degree" (33.7%).

Procedure

Participation was completed online. The study was described as being interested in participants' opinions of academically-published arguments and conclusions, and they were required to sign an informed consent form before continuing. Participants were led to believe that the article summaries they were reading were from authentic published articles. In reality, these were our summaries of two Grievance Study hoax articles and, in one case, an original hoax summary of our design. These hoax articles cover the Grievance Study Fields of Fat Studies, Women's Studies, and Critical Race Theory (see Appendix A).

Participants were shown the hoax argument/conclusion sets one-at-a-time. Each argument/conclusion set presented the article summary as a bulleted list with 3-4 arguments followed by a conclusion statement (see Appendix A for full argument/conclusion stimuli and additional details surrounding the creation of stimuli). After each summary, participants then

indicated their agreement with the article's conclusions across 5 items (e.g., "I find myself agreeing with the arguments.") and logical evaluation of the argument/conclusion sets they just read across two items (e.g., "The conclusion logically follows from the argument."). Items were averaged to form an index of agreement (M = 3.28, SD = 1.42, α = .96). Finally, participants indicated their desire to share the article across three items (M = 2.89, SD = 1.53, α = .92; e.g., "I would share the original article with a friend.") and two items assessing participants' desires to learn more about the article (M = 3.32, SD = 1.62, α = .88; e.g., "I want to read the original article."). All responses were made on 1 (*strongly disagree*) to 7 (*strongly agree*) scales (see Appendix B for full scale information). The presentation of the three argument/conclusion pairs was randomized across participants.

After responding to all three argument/conclusion sets, participants were informed that these articles were being debated within their respective academic disciplines. Participants were then shown each argument/conclusion set that they just considered along with a corresponding rebuttal (see Appendix A), with the preface that the rebuttal was written by "prominent scientists in the field." These rebuttals provide the typical critiques of CSS conclusions found in the real world, as well as legitimate contradictory research. Again, each argument/conclusion set and rebuttal was displayed one-at-a-time.

Participants were then asked to re-indicate their agreement (M = 3.97, SD = 1.30, α = .94), desire to share (M = 3.25, SD = 1.50, α = .91), and desire to learn more about the article (M = 3.78, SD = 1.59, α = .79) across the same items as previously described. Participants also indicated their agreement and willingness to share the rebuttal information across 8 items (M = 3.77, SD = 1.19, α = .92; e.g., "This statement changed my opinion of the initial article.") Finally, participants indicated their perceptions of the rebuttal and the researchers behind the

rebuttal across five items (M = 3.40, SD = 1.42, α = .93; e.g., "I question the motives of the researchers who wrote this statement."). Again, responses were made on 1 (*strongly disagree*) to 7 (*strongly agree*) scales (see Appendix B for full scale information, and see Appendix C for prompt-specific response descriptives.)

After the conclusion of the final set, each participant was asked to complete the Liberal Feminist Ideology's Discrimination/Subordination measure (e.g., "Women in the U.S. are treated as second-class citizens"), its Racial Adaptation (e.g., "The achievements of racial minorities in history have not been emphasized as much as those of White people"), and the Paranoid Egalitarian Meliorism (PEM) scale (e.g., "We should strive to make all groups equal in society"). Responses were made on 1 (*Strongly Disagree*) to 6 (*Strongly Agree*) scales for the LFI measures, which were averaged to form an overall index of Liberal Ideology (M = 4.72, SD = 1.36, α = .96). The PEM items were scored on a 1 (*Do Not Agree At All*) to 7 (*Agree Completely*) scale (M = 4.75, SD = 1.13, α = .90). Finally, participants completed demographic items, including political ideology measured with a 1 (*Very Liberal*) to 11 (*Very Conservative*) scale (M = 5.31, SD = 3.23) as well as a measure of social (M = 3.14, SD = 1.32, α = .79) and economic (M = 3.13, SD = 1.22, α = .82) conservatism that was scored on a 1 (*Strongly Disagree*) to 7 (*Strongly Agree*) scale (see Appendix B for full measure information).

After the completion of the study, the participants were provided with a debriefing form that explained the main questions and hypotheses of the study, as well as information about why deception was used in the study and what components used deception. The participants were provided the name and email of both researchers and provided the opportunity to withdraw their data if they wished. Once the predetermined number of participants to be collected was reached, the study was removed from MTurk.

Chapter III: Results

Transformations of Data

Items from the LFI and LRI measures were averaged to form a "Liberal Ideology" (LI) index, since pilot testing suggested that the construct of Liberal Ideology is not exclusive to either feminist or racial topics.

Additionally, the researcher denigration measure was administered once for each rebuttal prompt and was combined into an average denigration score for each participant.

Pre-Rebuttal Results

Hierarchical linear regressions were run predicting pre-rebuttal outcome variables from LI, PEM, and their interaction. In predicting pre-rebuttal agreement, only the main effect of LI was significant, $t(165) = 2.90$, $B = 0.81$, $p = .004$. The same was found for pre-rebuttal willingness to share, $t(165) = 2.70$, $B = 0.85$, $p = .008$, and pre-rebuttal desire to learn more, $t(165) = 2.63$, $B = 0.86$, $p = .009$, with no other significant effects. This result was partially expected, as LI has previously shown to predict these outcome measures in pilot studies and was predicted to do the same in Hypothesis 3. However (in accordance with Hypothesis 1), PEM was expected to also predict these outcome measures, which it did not. This finding, when combined with LI and PEM's significant bivariate correlation (see Appendix C), indicates that despite a significant overlap, LI and PEM are distinctly separate constructs in their degree of influence over the hoax article evaluations. This pattern preliminarily suggests that PEM only factors in when there is a finding which contradicts some aspect of Egalitarian Meliorism, which was not characteristic of the hoax article summaries.

Mediation Analysis

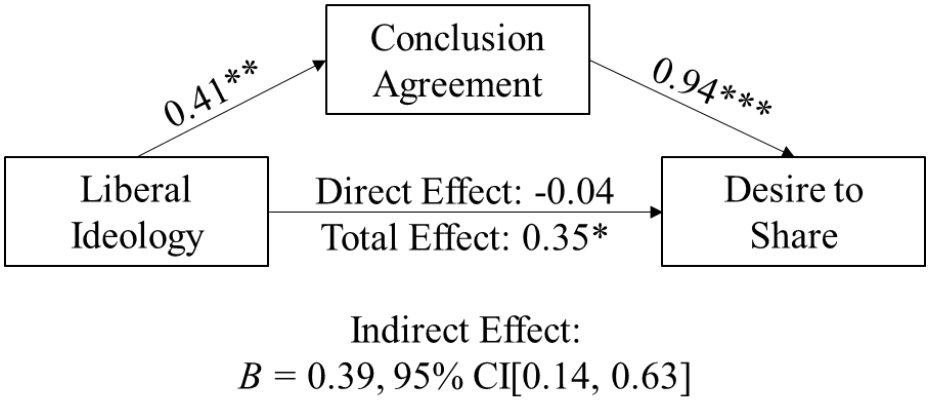
Consistent with our pilot studies, a mediation analysis was run using LI to predict

conclusion agreement, which would in turn predict desire to share (see Figure 1). Unique to this experiment, PEM was included as a covariate in order to test if LI-driven confirmation bias, rather than any bad-actor PEM motivations, would predict this pathway.

Liberal ideology, as in our pilot studies, predicted agreement with the articles' conclusions pre-rebuttal, $t(166) = 3.13$, $B = 0.41$, $p = .002$. In turn, pre-rebuttal agreement significantly predicted pre-rebuttal desires to share the article, $t(165) = 19.96$, $B = 0.94$, $p < .001$. The inclusion of the mediator rendered the direct effect of Liberal Ideology on pre-rebuttal desires to share nonsignificant, $p = .657$, indicating full mediation. Most importantly, the indirect effect was significant, $B = 0.39$, 95% CI[0.14, 0.63].

Figure 1

Pre-Rebuttal Mediation Model



This finding replicates the pattern seen in pilot studies and demonstrates that agreement with the conclusion (confirmation bias), rather than simply one's ideology, predicts one's desire to disseminate the hoax articles. Additionally, although PEM correlated with pre-rebuttal measures at the bivariate correlational level (see Appendix C), it is clear that LI is vastly more important in predicting these initial pre-rebuttal outcomes. This finding is consistent with our predictions given that PEM is more characteristic of a hostility towards perceived anti-egalitarian research and dissenting voices and should factor much more into evaluations of the rebuttal, only

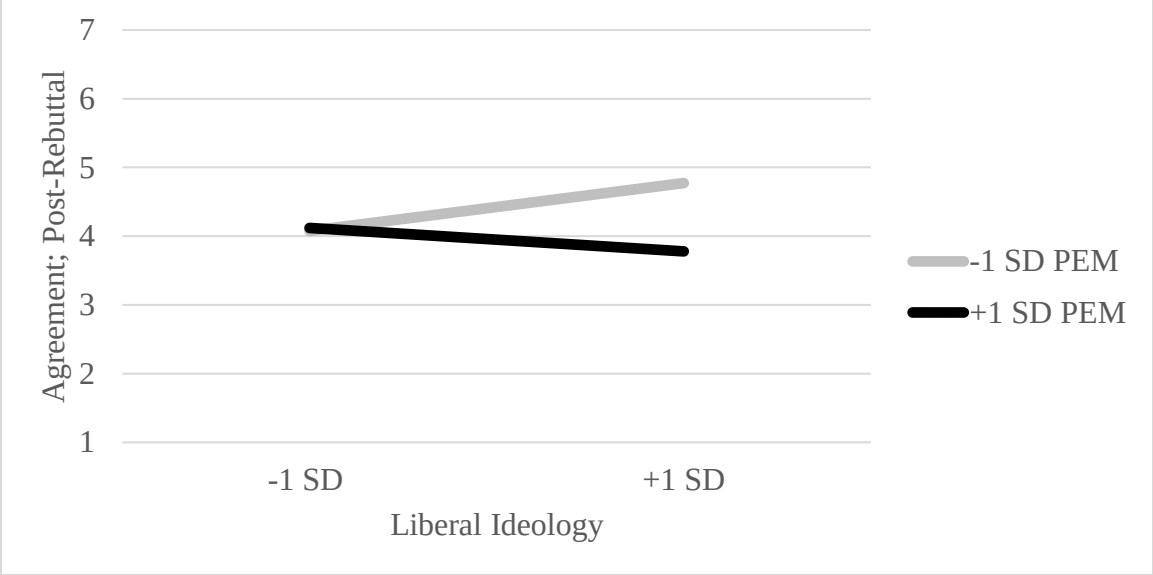
contributing to pre-rebuttal evaluations to the degree that it overlaps with LI.

Post-Rebuttal Responses

Hierarchical linear regressions were run predicting post-rebuttal outcome variables from LI, PEM, and their interaction. When predicting post-rebuttal Agreement, the interaction was significant, $t(165) = 3.15$, $B = -0.17$, $p = .002$ (Figure 2). Among those low in liberal ideology (-1 *SD*), the effect of PEM was not significant, $p = .909$. However, among those high in liberal ideology (+1 *SD*), high PEM participants agreed with the article less than low PEM participants, $t(165) = 2.47$, $B = -0.44$, $p = .015$. Neither the slope among low PEM participants nor high PEM participants was significant, *p*s > .068.

Figure 2

Interaction between PEM and liberal ideology on post-rebuttal agreement



This finding was the opposite of what we predicted. Participants high in both PEM and LI were expected to agree with the hoax articles post-rebuttal more than anyone else, rather than less. This same pattern was largely repeated when analyzing participants' willingness to share, where the interaction was significant, $t(165) = 2.44$, $B = -0.15$, $p = .016$. The pattern also repeated when analyzing participants' desire to learn more, where the interaction was significant,

$t(165) = 2.87$, $B = -0.19$, $p = .005$. Among participants high in liberal ideology, greater PEM predicted less desire to learn more, $t(165) = 2.22$, $B = -0.48$, $p = .028$. Among participants low in Liberal Ideology, the effect of PEM was not significant, $p = .894$. Among low PEM participants, greater liberal ideology predicted greater desire to learn more, $t(165) = 2.83$, $B = 0.48$, $p = .005$. Among participants high in PEM, the effect of liberal ideology was not significant, $p = .753$.

The explanation for this unexpected pattern likely lies in the bivariate correlations (see Appendix C). Specifically, post-rebuttal agreement, post-rebuttal desire to share, and post-rebuttal desire to learn more were all positively correlated with rebuttal agreement. If one agreed with the rebuttal, thus exposing the weaknesses of the original hoax article, why would one persist in rating the original article highly? Participants who agreed with the rebuttal were predicted to rate the original articles lower and thus produce a negative correlation, or at least express ambivalence with a non-significant correlation. These positive bivariate correlational results, taken together with the post-rebuttal hierarchical linear regression results, led us to conclude the following: the participants, who were asked to voice opinions about the original hoax articles post-rebuttal, were instead responding to the rebuttal itself. Consequently, the post-rebuttal hoax article perceptions were unfortunately unable to be interpreted. Thus, we were unable to evaluate the effects of the rebuttal on high PEM/high LI participants' opinions of the original article, meaning that Hypothesis 5 was unable to be tested. However, PEM effects on researcher critique (Hypothesis 2) and reactions to the rebuttals themselves (Hypothesis 6) were still able to be tested.

Researcher Critique

The interaction was not significant, $p = .444$, nor was the main effect of Liberal Ideology, $p = .148$. However, the main effect of PEM was significant such that as PEM increased so too

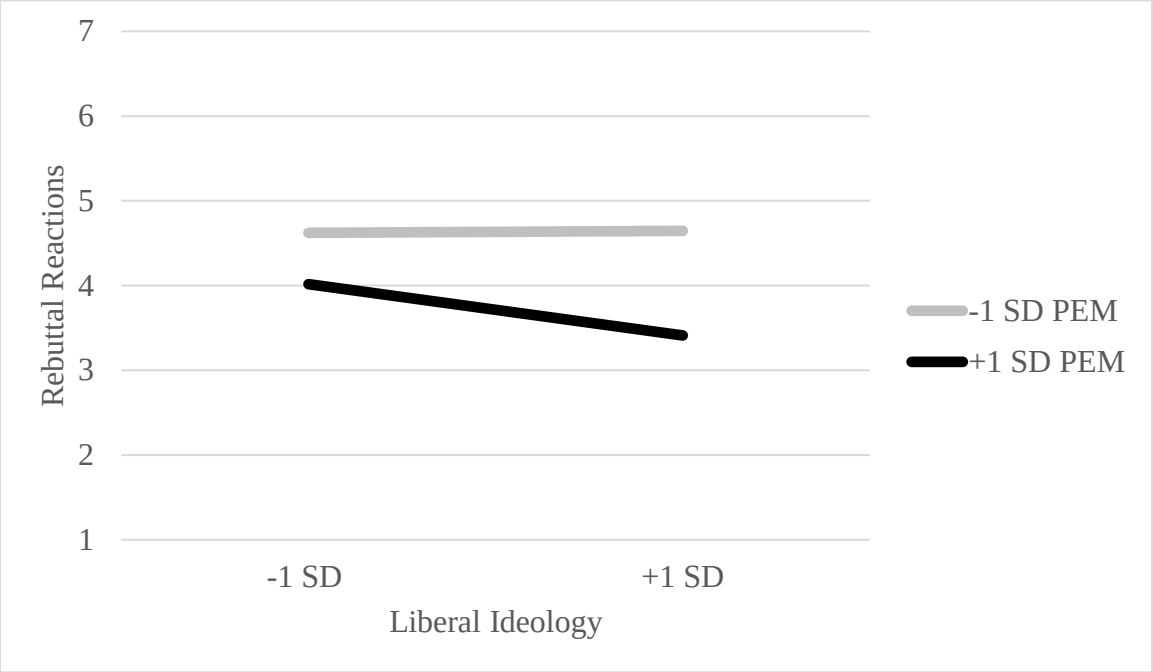
did critiques of the rebuttal researchers, $t(165) = 2.32$, $B = 0.63$, $p = .021$. This result was predicted by Hypothesis 2.

Rebuttal Reactions

In response to previous participant confusion and in an effort to reduce possible systematic error, all rebuttal reactions (agreement, willingness to share, desire to learn more) were combined into a single scale. The interaction was significant, $t(165) = 3.18$, $B = -0.10$, $p = .002$ (see Figure 3). Among participants low in LI, greater PEM predicted less positive reactions overall, $t(165) = 2.68$, $B = -0.27$, $p = .008$. Among participants high in LI, as PEM increased, positive reactions to the rebuttal overall decreased, $t(165) = 5.11$, $B = -0.55$, $p < .001$. Although PEM predicted negative reactions across LI, the effect was about twice as large at high levels LI. Among people low in PEM, the effect of Liberal Ideology was not significant, $p = .918$. However, among participants high in PEM, greater liberal ideology predicted less positive reactions to the rebuttal overall, $t(165) = 2.52$, $B = -0.22$, $p = .013$. These findings were predicted in Hypothesis 6.

Figure 3

Interaction between PEM and liberal ideology on overall rebuttal perceptions



Hypotheses Results Summary

In sum, Hypothesis 1 (a main effect of PEM on the agreement/evaluation of logical quality/desire to share the hoax articles such that higher levels of PEM predict higher scores in each of these dimensions across measurements) was not confirmed.

Hypothesis 2 (a main effect of PEM such that higher levels of PEM will predict higher levels of critique towards the "rebuttal researchers") was confirmed.

Hypothesis 3 (a main effect of LI on the agreement/evaluation of logical quality/desire to share the hoax articles such that higher levels of LI predict higher scores in each of these dimensions across measurements) was confirmed.

Hypothesis 4 (an interaction effect between LI and PEM such that agreement/evaluation of logical quality/desire to share the hoax articles will be significantly higher in all three of these dimensions for participants high in LI and PEM compared to participants high in LI but low in PEM) was not confirmed.

Hypothesis 5 (an interaction effect between LI and PEM such that agreement/evaluation of logical quality/desire to share the hoax articles pre- and post-rebuttal presentation will be significantly higher in all three of these dimensions for participants high in LI and PEM compared to participants high in LI but low in PEM) was unable to be tested.

Hypothesis 6 (an interaction effect between LI and PEM such that agreement/evaluation of logical quality/desire to share the rebuttals will be significantly higher in these dimensions for participants high in LI but low in PEM compared to participants high in both LI and PEM) was confirmed.

Chapter IV: Discussion

The Grievance Studies Hoax project concluded in late 2018, but its impact continues to ripple across academia. Though the hoaxers were able to demonstrate excellent external validity by actually getting their papers past peer review and into scholarly journals, some central questions remained. Firstly, if these hoax articles were not ethically withdrawn by their authors, would they have impacted scholarly inquiry and the outside world or would they have languished in relative obscurity? Through our mediation analysis, we found that Liberal Ideology (LI) predicted agreement with the hoaxes, which in turn significantly predicted a participants' willingness to disseminate them. Combined with the real-world external validity demonstrated by their "Dog Park" paper receiving a designation as "leading scholarship," as well as their "Conceptual Penis" paper continuing to be cited 16 times despite its retraction (Lindsay & Boyle, 2017), we argue that a disturbingly unknown amount of low-quality work is likely to have been (and continues to be) published, cited, and shared as long as its conclusions fall in line with Liberal Ideology. Given that the hoax articles represent the highest ideological-fidelity but lowest scientific-quality work designed to be rejected on grounds of rigor, it is impossible to know just how many genuinely-written but poor-quality articles have been published, cited, and shared due to their ideological fashion. In other words, it appears that ideological opinions have been granted the "veneer of scientific rigor" (Jussim, 2021) by passing through a biased and motivated peer review process. This is the definition of Bret Weinstein's concept of Idea Laundering (Boghossian, 2016) and is a core tenet of the hoaxers' claims.

Additionally, how did these papers make it past assumedly experienced peer reviewers? In our research, we were able to demonstrate that Liberal Ideology, and thus a type of Confirmation Bias, likely contributed to participants' initial positive evaluations of the hoax articles. This

result was unsurprising, and previous research has also demonstrated the relevant negative effects of an overwhelmingly Liberal/Left-leaning academe (Duarte et al., 2015). However, our research took this question one step further in attempting to parse participants falling prey to Confirmation Bias from those specifically acting in the service of an ideology (Paranoid Egalitarian Meliorists/PEMs). We found that PEMs not only degraded the rebuttals but in fact attacked the supposed rebuttal researchers for suspected dubious motives, whereas participants high in LI but low in PEM were able to evaluate the rebuttals without resorting to ad hominem attacks against those who wrote them. Importantly and contrary to our hypotheses, it appeared that PEM did not factor into participants' evaluations of the hoax articles, instead only coming into play when the articles received pushback in the form of rebuttals.

In sum, these findings provide support for the argument that PEMs are resistant to engage in scientifically sound inquiry and exchange, instead demonstrating ideologically-motivated (rather than scientifically-based) attacks toward those who might disagree with them. Thus, it would seem a likely explanation that Liberal Ideology produced a blind spot for some peer reviewers, while other reviewers may have been acting in scientific bad faith, allowing ideologically-fashionable papers to bypass standards for rigor. These reviewers may be distinguished by their comments on the hoax articles, such as a *Feminist Theory* journal reviewer's nakedly ideological comment: "I am very sympathetic to the core arguments of the paper, such as the need for solidarity and the problematic nature of neoliberal feminism" or a *Hypatia* journal reviewer's explicit praising of a paper's "especially nice connection of pedagogy and activism" (Lindsay, Boghossian, & Pluckrose, 2018).

Limitations

We are able to identify several important but justifiable limitations within this study.

Firstly, though we have justified the use of MTurk for collecting participants for this study, our preferred participant pool would have been Social Science researchers and professors themselves since they were the population implicated by the original Grievance Studies Affair Hoax Project. If we were able to sample Social Science researchers and professors, we could have more easily drawn a link between the results of our study and the claims of the Hoaxers. However, Gross' 2007 study that found 43% of Social Sciences and Humanities faculty considered themselves to be radicals, activists, or Marxists allows us to infer that high-PEM individuals are likely found in high concentrations in academia. Additionally, given that PEM is likely not found exclusively within individuals in academia, we believe that sampling non-academic Liberals was sufficient to find adequate levels of PEM, particularly in an era where Critical theories and their practical applications are ascendent in the popular culture. Additionally, given the rising effect that social media has in academic discourse and its products, laypeople now play a significant role in the spread of potentially bad science, amplifying it far beyond the academy. Thus, this study contributed to our understanding how PEM outside of academia can still shape academia and society for the worse.

Secondly, the use of a subscale adapted from a measure meant to assess Feminist ideology and attitudes to assess Liberal Ideology might be called into question. Within social and political science, a standard measure of political ideology has never been established, and as a result, the construct of "political orientation" is likely captured in wildly varying ways across all studies that claim to measure it (Azevedo, 2022). In our study, we neither aimed to capture the entire construct of political orientation, nor even measure the entirety of Liberal Ideology. Instead, we simply attempted to capture one critical piece of Liberal Ideology: sensitivity to group differences. As Graham et al. (2012) explain, the moral foundation of Fairness is one of the two

most relied-upon dimensions of morality for self-described Liberals when evaluating any number of issues within both personal and societal domains. Thus, our choice to use the Discrimination/Subordination subscale has merit: this subscale's items are intended to measure one's perceptions of a societal unfairness, and the adapted racial version does the same for racial issues. Likewise, the PEM scale does the same, albeit with its items couched in pre-determined explanatory power and accusatory language (e.g., "people often use biology to justify unjust policies that create inequalities). In sum, we believe that the use of the adapted Discrimination/Subordination subscale is theoretically relevant and appropriate given that we aimed to differentiate between Liberals who are simply aware of and concerned by group imbalances from those who fervently believe they already understand their origins and solutions. Though we found that LI and PEM are overlapping constructs, we were still able to provide valuable insight into the specific ways that LI and PEM differently affect an individual's ability to evaluate arguments and counterarguments.

Thirdly, we recognize that writing one of the hoax prompts ourselves ("Racism Redux: Police slayings of Black men repeats slavecatcher history") might introduce some inconsistency, given that the other two hoax prompts were derived directly from the Grievance Studies Hoax Project. Nevertheless, this decision is justified. We determined that including prompts from multiple Critical fields of study (Fat Studies, Women's Studies, and Critical Race Theory) would best capture the breadth of Critical Social Science and decrease our reliance on any one Critical field of study. Additionally, it was essential to include a hoax paper based on racial subject matter given the focus on race within the PEM scale. However, the Hoax project only included one paper written primarily from a Critical Race Theory perspective which did not easily translate into argument/conclusion summary format and was also too complex for a simple

rebuttal. Thus, given our own knowledge of the tenets of Critical Race Theory and the contemporary debate around police use of force against Black and White Americans, we wrote our own hoax prompt and rebuttal using primary sources. We attempted to keep this prompt and rebuttal as close to both the primary sources and Hoax project format as possible. Additionally, our pilot studies demonstrated that our overall method of distilling articles to argument/conclusion sets resulted in acceptable reliability and validity. In sum, we believe that the potential risk to validity of writing our own hoax prompt and rebuttal outweighed the risk to validity of not including a racially-focused hoax prompt.

Finally, we recognize that participant confusion impacted our ability to test our fifth hypothesis. In a future study and/or replication, it would be important to modify the format and instructions of the prompts to clarify the intent of the measures. This could involve reducing the amount of text per page and highlighting the particular prompts we desired the participants to evaluate; modifications could additionally involve using an alternative to Qualtrics, which can sometimes present prompts in a visually confusing manner.

Self-Correction?

As the Hoax Project and current research exposes academia's serious problem with bias, one might hope that academia could attempt some form of self-correction. Unfortunately, there appears to be little hope for an effective response. Multiple fields' replication crises have been well-documented (Baker, 2016) including in Psychology where many of its most famous studies and findings (e.g., the Stanford Prison Experiment, Milgram Shock Experiments, Robbers Cave findings, Stereotype Threat, Power Posing, Multiple Intelligences, Grit, and others) have been found to either fail replication attempts or to have failed standards for scientific rigor altogether (Le Texier, 2019; Griggs, 2017; Haslam, 2018; Jussim, 2015; Cuddy, 2015; Gardner, 2006;

Duckworth, 2018; Glazzard, 2015; Singal, 2021). If academia could be self-correcting, studies and findings that fail to replicate or to meet standards for rigor would cease to be cited and repeated, but recent findings show that papers which fail to replicate are cited more than papers that do and that citation patterns largely do not change even after replication attempts fail (Serra-Garcia & Gneezy, 2021).

Additionally, even if academia attempts to self-correct its blind spots and unintentional bias problem, there will still be academics who regard the political Critical Social Science approach to knowledge production as equally scientifically legitimate and valuable as the Positivist and Interpretive approaches. There is perhaps no more relevant example than the responses the hoaxers received from Dr. Geoff Cole, a Cognitive Science researcher (Cole, 2020). In a series of commentaries on the Hoax Project, Cole argued most centrally that the Hoax Project was fundamentally flawed because the papers (specifically the "Fat Bodybuilding" paper), though questionable in rigor, advanced opinions that might be considered reasonable. Cole argued that therefore, papers like "Fat Bodybuilding" should be reinstated because regardless of the authors' motivations, "it simply comes down to a matter of opinion as to whether fat bodybuilding is ludicrous" (Cole, 2020). This hyper-relativist perspective on matters of scientifically-informed opinion flies in the face of all three of the Positivist, Interpretive, and Critical approaches to science. To use the example of "Fat Bodybuilding," Obesity is the construct of interest. The Positivist tradition would attempt to understand the effects of Obesity through experimentation and measurement (and in fact has done so in extant medical literature, finding almost universally negative health outcomes), the Interpretive approach would attempt to understand the experience of those who are Obese, and the Critical approach would attempt to subvert both other methods by deeming them "oppressive" and replacing them with its own

theories about how to use Obesity to deconstruct supposed societal power dynamics. *Each of these approaches informs opinion about the reality of Obesity*. However, only the Critical approach is resistant to outside critique and assumes its opinion and evaluation of the construct *a priori*, while denigrating any other method as oppressive. This is the key difference between academia's previous failures and the issue at hand: while replication crises and poor research integrity can emerge due to a mixture of perverse incentives and honest mistakes, the Critical approach appears to encourage reductions in rigor if the research can be ideologically consistent and politically useful. To make matters worse, the Critical approach explicitly seeks to eliminate the Positivist and the Interpretive methods. Unlike the healthy tension between the Positivist and Interpretive methods, the Critical approach cannot coexist with others, seeking to take them over for its own ideological uses (Fahs & Karger, 2016, as cited in Lindsay & Pluckrose, 2020). Dr. Cole's tepid response, which boils down to the argument "everyone is entitled to their own opinion," fails to appreciate the immensely powerful tool that Science can be (if used correctly), and fails to recognize the threat that Critical approaches present to proper Science. Along with replication crises and overall poor quality, Social Science's newfound CSS dogmatism has culminated in cratering credibility for the field. Social Science Academia must therefore decide which approaches are more legitimate in establishing fact and informing opinion, and act accordingly.

Possible Solutions

How might academia respond to the risk that is the Critical approach? Given that this paper focuses on peer review, we suggest two major directions in this area.

Improve Peer Review

The first path would be to focus on improving peer review as it currently stands. In the

past, peer review has bestowed an air of academic rigor to papers that made it through its gatekeeping, and not without justification; papers that have made it through peer review in major journals have (at least hypothetically) fewer major errors and pass field-wide standards for rigor. However, these field-wide standards are exactly the issue at hand with the Critical approach to scholarship: as both the Hoax Project and the present research demonstrate, rigor appears to fall down the list of priorities in favor of ideological conformity.

As rigor in peer review is regarded as less important or, even more dubiously, as a form of "epistemic oppression" (Berenstain et al., 2021), the quality of the work produced will plummet (as the Hoax Project has already demonstrated). In order to protect rigor as the top priority in knowledge production, a clearer delineation approach could work to improve the current state of peer review. Firstly, academics could produce and adhere to a clear demarcation between fields and journals that utilize the different approaches to knowledge production. The Critical fields have already accomplished this to a great extent: any field that explicitly uses the word "Critical" (e.g. Critical Dietetics) is self-identifying, while the vast majority of fields that end in the word "studies" (e.g. Fat Studies, Disability Studies, Gender Studies) could reasonably be shown and have admitted to be rooted in Critical theories and methodology (Pluckrose & Lindsay, 2020). Simultaneously, the non-Critical fields could work to sanitize and protect themselves from the intrusions of Critical methodology which explicitly seeks to colonize the non-Critical fields (Fahs & Karger, 2016, as cited in Lindsay & Pluckrose, 2020). In all likelihood, this approach would not decrease the amount of study that each topic receives. To use the example given above, "Fat Studies" could apply a Critical methodology to the question of Obesity, while the more empirical and qualitative methodologies of the Positivist and Interpretive approaches could examine Obesity in their own ways. One could see how the topic of Obesity would actually

receive more well-rounded and multifaceted attention from three different approaches, likely leading to a better quality of understanding.

Additionally, the peer review process could look different in each of these systems. Whereas the Critical fields may deem the current state of affairs as acceptable (given that scholarship can be published in its major journals if it is ideologically fashionable), the Positivist/Interpretive approaches could choose to be more stringent in their peer review processes in order to provide the most rigorous results. Given that the current state of much of the Social Sciences is overwhelmingly left-leaning (Langbert, 2018), guidelines in this area could include several proposed by Duarte et al. (2015) including: expanding the number of peer reviewers who identify as conservative, moderate, and libertarian; developing strategies to encourage and support research training to attract and retain non-left-leaning students and early career professionals; and supporting "adversarial" (left- and right-leaning) scholarly collaborations. These proposals would work to solve the confirmation bias issues that come with Liberal Ideology. Additionally, the Positivist/Interpretive peer review boards could include a verification process in their methods in order to ensure that the reviewers were committed to rigor over ideological outcome, which could include administering the PEM measure and designating a cutoff score.

Lastly, the demarcation between the Critical and Positivist/Interpretive methods could even become structural, with entirely different institutions housing each camp. This structural approach has been proposed by Jonathan Haidt in his 2016 discussion on the Teloses of universities where he describes differentiating between a "Social Justice University" and a "Truth University," and a similar approach is being piloted in Florida to reinvigorate a "Classical College" (Downey, 2023). However, it will take significant effort from inside academia to

realize this potential. In the end, though other agents like policy makers and the media also bear responsibility for the proper use of scientific findings, Social Science academia could get its own house in order by separating itself from Critical methods, thereby resuscitating its own reputation and function as producers of knowledge.

Abandon Peer Review

While improving on an existing system may be the most desirable decision, some systems may be so fundamentally broken that removing them entirely could be the best outcome. Many challenges have been raised against the current system of peer review beyond the problems addressed in the present research. For example, peer review appears to perform poorly in detecting fraud, as data are typically assumed to have been collected properly (such as in the Hoax Project). Additionally, plagiarism is difficult to catch, especially when images or diagrams can be tweaked to avoid easy detection, leaving these issues to be caught after papers have already been published (Shen, 2020). In some instances, peer review itself has been the source of fraudulent enterprise as authors have been caught reviewing their own papers or forming back-room deals to reciprocally positively review each other's' work (Ferguson, Marcus, & Oransky, 2014). This issue continues to plague peer review as even large publishers like Springer have needed to retract over 100 papers as recent as 2017 for these reasons alone (Marcus & Oransky, 2017).

Additionally, the peer review process is an extremely costly and time-consuming affair. In 2019, peer reviewers globally were estimated to have worked 100 million hours, and in the U.S., the estimated value of time spent peer reviewing exceeded 1.5 billion dollars (Aczel, Szaszi, & Holcombe, 2021). Given that much of peer review time is donated voluntarily, and that publishers make significant profit from subscriptions and sales of the papers that are peer

reviewed, some argue that the peer review process is exploitative (Allen, Reardon, Crawford, & Walsh, 2022). To make matters worse, peer review's notoriously sluggish pace can mean that cutting-edge research can languish in the system for months or even years. Even after the immense cost and delay, the quality of the reviews can range from excellent to negligent with reviewers contradicting one another in their recommendations, leading some to argue that passing peer review can more be attributed to luck than quality (Smith, 2006). Even worse, the gatekeeping function of peer review can sometimes be used to intentionally prevent groundbreaking or paradigm-shifting research from entering a field on the grounds that it may be too disruptive to the status quo (Weinstein, 2019). Papers can also be maliciously rejected and their ideas stolen for later publication by the reviewers (Weinstein, 2020). These are considered the untransparent, "black box" problems of peer review. Clearly, peer review's supposed filtering role is faulty, slow, and costly at best, while elevating fraud and corruption at worst.

Abandoning the current system of peer review could resolve many of its issues, but what system could replace it? Though the scope of this question is larger than this paper can answer, several prototype solutions have already presented themselves in recent years. Researchers.one is a website where authors of papers can submit their work to non-anonymous peer review as many times as they wish, and when the authors deem the paper publishable, the authors (rather than journal editors or peer reviewers) publish it. This allows for the responsibility of quality to fall squarely on the authors' shoulders, allowing for rigor to be judged by the public and scholarly reputation to be built on paper quality rather than the "rubber stamp approval" of publication in a journal (Crane & Martin, 2018). This system could provide a solution for many of the issues with current peer review listed above, as papers could be published without the "black box" problems and without the risk of uncaught poor quality or fraudulent science being "rubber stamped" as

good-quality work. In fact, a system like this could reinvigorate the scientific environment of a "culture of doubt" in which healthy skepticism detects errors and inspires innovation, as opposed to the current peer review system that exacerbates the impact of bad science that leaks through its filter (Crane and Martin, 2018). Additionally, this system would allow for scientific papers to be freely available to the public as opposed to behind exorbitantly expensive paywalls. With close to nine billion taxpayer dollars given to universities for research in 2020 alone (Duffin, 2023), it is a wonder that the public would then need to pay even more to be granted the privilege to view and evaluate the results of that work.

Another similar solution presented itself in the midst of the SARS-COV-2 pandemic: a drastic increase in postings on scientific pre-print servers (Fraser et al., 2021). Given that a large amount of research attention turned to studying the virus and its effects, and given that there was not enough time on the urgent matter to go through the normal peer review process, authors began publishing much more of their work in pre-print servers. With this explosion in non-peer-reviewed literature, it is reasonable to assume that a good deal of "bad science" was initially disseminated. However, the papers that were pre-published were able to be scrutinized by anyone who chose to do so, and lively scientific debate arose around many subjects including masking, vaccination, prophylactic medication, and more. This allowed for more scrutiny than most peer reviewed papers ever receive, advancing knowledge and discounting poor work at a much faster pace than normal (Kwon, 2020). Additionally, this also allowed the public to view a proper scientific debate in action, as opposed to the "black box" of current peer review, although this debate was conducted in many different formats including Substack blogs, YouTube videos, podcasts, and more. One could see how, if pre-print servers allowed for written (or even audio/video recorded) commentary and critique, the debate could be centralized and located at

the same access point as the paper. Overall, the pre-print servers provide another look into a possible peer review alternative that demonstrates true "review by peers," a seemingly preferable process over formalized peer review (Weinstein, 2020).

While abandoning peer review would not completely solve academia's serious problem with Critical methodology, it could address the issue of Idea Laundering. It is clear that peer review has been institutionally captured by Critical scholars who approve articles based on ideological conformity, rather than rigor. An article's status of being "peer reviewed" is one of the markers of the overused descriptor "gold standard," giving some papers the previously described "veneer of scientific credibility" (Jussim, 2021). Thus, peer review as it currently exists seems to exacerbate the impact of bad science, the opposite of its supposed intent. If peer review were voluntarily abandoned by every field, the Critical scholars may hold on to the process and attempt to preserve its power as a legitimization machine. However, with all other pieces removed, this would mean that their approach to peer review could be revealed as the nakedly ideological process that it is.

Why does this matter?

Why did we focus our research on ideology's intrusion into science? Recent history provides a disturbing example of what can happen when ideology perverts scientific rigor: Lysenkoism. In Soviet Russia, Trofim Lysenko was promoted to lead Soviet agriculture efforts (Kean, 2017). Lysenko was not particularly accomplished in agriculture or biology, but his promotion was instead based on his radical rejection of Mendelian genetics, which he deemed to be reflective of a Capitalist mindset that reinforced an unjust status quo. Instead, Lysenko combined Marxist social theory with genetic theory, believing that the environment a crop experienced was the determining factor of its ability to prosper. Thus, he believed that he could

remake plant behavior by simply "educating" the plants to the frigid Russian environment (a chilling echo of Soviet "reeducation camps.") He also believed that plants from the same "class" would not compete with one another, meaning that seeds could be planted as close together as possible (again, a direct injection of Marxist class theory). These beliefs were the result of attempting to force reality to fit an ideology (specifically, a direct ancestor ideology to current Critical methods), rather than allowing careful study of reality to inform opinion and action. The result of perverting science with ideology was the complete collapse of Soviet food production, with widespread starvation killing more than 30 million people (Kean, 2017). Soviet citizens were forced to eat anything they could find, sometimes resorting to cannibalizing their own children (Vardy & Vardy, 2007). One might hope that after this catastrophic failure, the Soviet Union would have self-corrected. But instead, many scientists who had studied agriculture using Positivist methods, and thus better knew the reality of agricultural production in Russia's climate, were either dismissed from their posts and left destitute or simply jailed and executed (Kean, 2017). Stalin then banned the use of the words famine, hunger, or starvation, even preventing doctors from diagnosing malnutrition, and blamed the failures on "enemies of the state" (Follett, 2020).

This example is not an attempt at hyperbolic fearmongering. The central findings from our research resound in Lysenkoism: Ideology took precedent over rigor in scientific fields, resulting in real-life consequences on a genocidal scale. Instead of self-correcting, the Ideologues simply rejected critique and blamed others for their failures. The Hoax Project, combined with our research, strongly indicates that this process has already instantiated itself in modern scientific institutions. Evidence for this claim abounds: the Critical methods-inspired goals of "Diversity, Inclusion, and Equity" (with the apt acronym "DIE") have become the ideological filter through

which research must pass in order to become part of the scientific literature (Brookings Institute, 2022; Ricci, 2021; BJS and BJS Open Editorial Teams, 2023; British Medical Journal, 2023; Taylor & Francis, 2021; Elsevier, 2023; Nature Medicine, 2021; National Science Foundation, 2023), and through which doctors and clinicians must pass in order to become part of the medical and helping professions (Association of American Medical Colleges, 2023; University of Minnesota Medical School, 2018; American Psychological Association, 2023). Those that critique DIE find themselves harassed, punished, or even fired (including the author of this research) (Friedersdorf, 2015; Kabbany, 2021; Nayna, 2019).

We sit at a precipice. Either the Critical methods can continue to parasitize our scientific institutions and risk leading us back down the path to hell, or we can act to do something about it.

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Appendix A

Hoax Article Argument/Conclusion Sets with Rebuttals

These argument/conclusion sets were distilled from the retracted hoax articles and involved directly quoting and/or paraphrasing their main points. One of the hoaxers, Dr. James Lindsay, was on the dissertation committee for this study and raised no objections to our framing.

1. "Who are they to judge? Overcoming anthropometry through fat bodybuilding," published in *Fat Studies* (Baldwin, 2018).
    i. People who inhabit fat bodies are constantly judged—morally, aesthetically, physically, emotionally, economically, and in other ways that undermine their dignity.
    ii. Stigma and Fatphobia are more harmful to people's health than fat itself.
    iii. The best way to reduce stigma and Fatphobia is to include fat people in spaces that are traditionally fat-exclusionary.
    iv. The current focus of Bodybuilding (dieting, weight loss, etc.) creates a fat-exclusionary space within the health community.

    Conclusion: A new category of Bodybuilding should be introduced called "Fat Bodybuilding," which will serve to normalize fat, encourage fat body-positivity, and eliminate the idea of fat as unhealthy.

    Rebuttal: Recently, a group of prominent researchers put out a statement outlining their concerns about the validity and rigor of the article summarized above. Specifically, they said that "unlike the building of muscle – which requires a great deal of self-regulatory control over one's diet and exercise regime - becoming obese is a self-regulatory failure

that is in large part a lifestyle choice and is extremely unhealthy. In fact, we worry that by celebrating it, the authors of this paper are encouraging irresponsible, dangerous behavior that will slowly kill people over time. Therefore, it should not be celebrated or promoted in any way." The researchers have requested that the article have a comment added to it explaining their concerns.

2. "Rubbing one out: Defining metasexual violence of objectification through nonconsensual masturbation" (Written by Lindsay, Boghossian, & Pluckrose, 2018).

i. Sexual violence is not only physical, but also includes things like sexual harassment and locker-room talk.
ii. Non-physical sexual violence contributes to proven harms such as objectification and Rape Culture.
iii. When a man sexually fantasizes about a woman while masturbating, he is depersonalizing her into solely a sexual object for the purpose of his pleasure.
iv. When a man fantasizes about a women while masturbating, he is usually doing it without her consent.

Conclusion: A man sexually fantasizing about a woman while masturbating, without her consent, is committing a form of sexual violence.

Rebuttal: Recently, a team of prominent researchers put out a statement regarding their concerns about the article above. Specifically, these concerned researchers said that "individual masturbation done in private is far from a form of sexual misconduct." Next, they cited their own research that found that over half of women (~57%) reported

frequent fantasies in which they are forced into sex against their will (sometimes referred to as consensual non-consent). Secondly, and more importantly, if women are having sexual fantasies about having sexual violence done to them – as our research consistently finds - then having men masturbating to thoughts of them without their consent is indeed the best, safest way to satisfy women's sexual fantasies related to force. Therefore, we should not discourage men masturbating to thoughts of women they know." They have requested that the original article include a comment explaining their argument.

Note: This rebuttal is based on research by Critelli & Bivona (2008) that found the cited rate of fantasies of consensual non-consent. Additionally, the argument/conclusion set will be provided with author names replaced with invented names, as the hoaxers did not invent a fake author for this paper.

3. "Racism redux: Police slayings of Black men repeats slavecatcher history" (Written by Husick & Burns).

    i. Systemic racism is everywhere in the United States, especially in institutions of power.

    ii. Some of the worst systemic racism is found in police departments, which originated from the groups that would hunt down escaped slaves who were wanted "dead or alive."

    iii. Police shoot and kill Black men by the hundreds every year.

    iv. People who commit racist acts sometimes don't even know that they are doing it; this is referred to as "unconscious bias."

Conclusion: Police shoot and kill hundreds of black men every year because they are unconsciously continuing their departments' original goal of hunting down slaves.

Note: This argument/conclusion set was written based on a combination of both unconscious bias (Greenwald, McGhee, & Schwartz, 1998) and existing historical analyses that utilize Critical Race Theory methodology (NAACP, 2020; Lepore, 2020; Hassett-Walker, 2021). Author names will be replaced with invented names.

Rebuttal: Recently, a group of scientists who study police shootings released a statement regarding their concerns with the article above. Specifically, they said that "Violent crimes often lead to legally justifiable police shootings, and sociological evidence finds that Black men proportionally commit more violent crimes than other demographic groups in the country. Therefore, Black men are shot more, not because of racist police officers, but because they commit more violent crimes." They have requested that the original article have a comment added to it explaining their concerns.

Note: This rebuttal was written using statistics and arguments from Miller et al., 2017 and Fryer, 2019.

Appendix B

Dependent Measures

Agreement with Arguments and Conclusions

For each argument/conclusion set and before being presented with the rebuttal, participants will be asked for their level of agreement with the arguments and conclusions. Participants will be asked to indicate their level of agreement with the following statements on a 1 (*strongly disagree*) to 7 (*strongly agree*) scale.

1. I find myself agreeing with the arguments.
2. Any reasonable person would agree with this argument.
3. I wish more people would write arguments like these.
4. I agree with the conclusion.
5. I find myself agreeing with the conclusion.

Evaluation of Logical Quality

For each argument/conclusion set and before being presented with the rebuttal, participants will be asked to indicate their level of agreement on the following statements on a 1 (strongly disagree) to 7 (strongly agree) scale.

1. The conclusion logically follows from the argument.
2. The arguments build on each other well.

Willingness to Read More/Share

For each argument/conclusion set and before being presented with the rebuttal, participants will be asked to indicate their level of agreement on the following statements on a 1 (*strongly disagree*) to 7 (*strongly agree*) scale.

1. I would share the original article with a friend.

2. I want to read the original article.
3. I would post a link to this article on social media.
4. I would like to read more on this topic.
5. If these topics came up in conversation, I would probably mention these findings.

Agreement with Rebuttal

For each rebuttal, participants will be asked to indicate their level of agreement on the following statements on a 1 (strongly disagree) to 7 (strongly agree) scale.

1. I find myself agreeing with this statement.
2. Any reasonable person would agree with this statement.
3. I wish more people would write statements like this.
4. This statement changed my opinion of the initial article.
5. If my opinion of the initial article changed, do you agree more or less now?

Willingness to Read More/Share

For each rebuttal, participants will be asked to indicate their level of agreement on the following statements on a 1 (*strongly disagree*) to 7 (*strongly agree*) scale.

1. I would like to read more on this topic.
2. If these topics came up in conversation, I would probably mention this statement.
3. I would post a link to this statement on social media.

Denigration of Rebuttal Researchers

In line with the predictions of Paranoid Egalitarian Meliorism, participants will be asked to indicate their level of agreement on the following statements on a 1 (strongly disagree) to 7 (strongly agree) scale.

1. These researchers are (fatphobic/sexist/racist.)

2. This statement is using scientific theories to justify discrimination.
3. Statements like this are just trying to justify (fatphobia/sexism/racism).
4. These researchers are biased against (fat/female/black) people.
5. I question the motives of the researchers who wrote this statement.

Liberal Feminist Ideology (Morgan, 1996)

Participants will rate their agreement with the following statements on a 7-point Likert scale from 1 (*Strongly Disagree*) to 7 (*Strongly Agree*).

1. Even though some things have changed, women are still treated unfairly in today's society.
2. Women have been treated unfairly on the basis of their gender throughout most of human history.
3. The achievements of women in history have not been emphasized as much as those of men.
4. Men have too much influence in American politics compared to women.
5. People who complain that pornography treats women like objects are overreacting (reverse coded).
6. Men still don't take women's ideas seriously.
7. Women are already given equal opportunities with men in all important sectors of their lives (reverse coded).
8. Women have fewer choices available to them as compared to men.
9. Women in the U.S. are treated as second-class citizens.

Liberal Racial Ideology (Adapted from Morgan, 1996)

Participants will rate their agreement with the following statements on a 7-point Likert

scale from 1 (*Strongly Disagree*) to 7 (*Strongly Agree*).

1. Even though some things have changed, racial minorities are still treated unfairly in today's society.
2. Racial minorities have been treated unfairly on the basis of their race throughout most of human history.
3. The achievements of racial minorities in history have not been emphasized as much as those of White people.
4. White people have too much influence in American politics compared to racial minorities.
5. White people still don't take racial minorities' ideas seriously.
6. Racial minorities are already given equal opportunities with White people in all important sectors of their lives (reverse coded).
7. Racial minorities have fewer choices available to them as compared to White people.
8. Racial minorities in the U.S. are treated as second-class citizens.

Paranoid Egalitarian Meliorism (Winegard, Clark, Hasty, & Baumeister, 2018)

On a scale from 1 to 7 (1 = strongly disagree, 7 = strongly agree), how much do you agree with the following statements?

1. The only reason there are differences between men and women is because society is sexist.
2. Differences between men and women in society are caused by discrimination.
3. Differences between ethnic groups in society are caused by discrimination.
4. Most people are not biased and racism is not a problem anymore.*
5. When people assert that men and women are different because of biology, they are

usually trying to justify the status quo.

6. People often try to conceal their racism and sexism but they act that way anyways.
7. People often use biology to justify unjust policies that create inequalities.
8. Racism is everywhere, even though people say they are not racist.
9. Sexism is everywhere, even though people say they are not sexist.
10. People use scientific theories to justify inequalities between groups.
11. Men and women have equal abilities on all tasks (for example, mathematics, cooking, nursing).
12. All ethnic groups have equal abilities on all tasks (for example, mathematics, sports, creativity).
13. Some differences between men and women are hardwired.*
14. Although things are unequal now, if we work really hard, we can make society better and more equal.
15. We should strive to make all groups equal in society.
16. We should strive to make men and women equally represented in science fields.
17. If we work hard enough, we can ensure that all ethnic groups have equal outcomes.
18. Differences among ethnic groups in social outcome are at least partially biologically caused.*

*Reverse coded items

Social/Economic Conservatism (Zell & Bernstein, 2013)

On a scale from 1 to 7 (1 = strongly disagree, 7 = strongly agree), how much do you agree with the following statements?

1. There need to be stricter laws and regulations to protect the environment.

2. The government should help more needy people even if it means going deeper into debt.
3. The growing number of newcomers from other countries threaten traditional American customs and values.
4. I never doubt the existence of God.
5. Business corporations make too much profit.
6. Gays and lesbians should continue to be allowed to marry legally.
7. The government needs to do more to make health care affordable and accessible.
8. One parent can bring up a child as well as two parents together.
9. Government regulation of business usually does more harm than good.
10. Abortion should be illegal in all or most cases.
11. Labor unions are necessary to protect the working person.
12. Poor people have become too dependent on government assistance programs.

Appendix C

Table 1

Descriptives and interrelations between measures, Study 3

Variable	*M*	*SD*	α	1	2	3	4	5	6	7	8	9	10	11	12	13
1. Liberal Ideology	4.72	1.36	.96	-												
2. PEM	4.75	1.13	.90	**.83**	-											
3. Social Conservatism	3.14	1.32	.79	**-.54**	**-.59**	-										
4. Economic Conservatism	3.13	1.22	.82	**-.75**	**-.70**	**.71**	-									
5. Conservatism (12-item)	3.13	1.17	.87	**-.70**	**-.69**	**.93**	**.92**	-								
6. Agree; Pre	3.28	1.42	.96	**.43**	**.37**	-.07	**-.22**	-.15	-							
7. Agree; Post	3.97	1.30	.94	-.02	-.06	**.28**	**.21**	**.27**	**.32**	-						
8. Share; Pre	2.89	1.53	.92	**.34**	**.29**	.07	-.12	-.02	**.86**	**.37**	-					
9. Share; Post	3.25	1.50	.91	.03	.01	**.36**	**.16**	**.28**	**.50**	**.69**	**.68**	-				
10. Learn; Pre	3.32	1.62	.88	**.39**	**.32**	-.02	**-.20**	-.12	**.78**	**.31**	**.82**	**.47**	-			
11. Learn; Post	3.78	1.59	.79	**.15**	.09	**.22**	.02	.14	**.53**	**.63**	**.58**	**.73**	**.68**	-		
12. Researcher Critique	3.40	1.42	.93	**.50**	**.53**	-.13	**-.28**	**-.22**	**.59**	**.22**	**.57**	**.39**	**.53**	**.38**	-	
13. Rebuttal Agreement	3.77	1.19	.92	**-.31**	**-.35**	**.52**	**.38**	**.49**	**.18**	**.48**	**.33**	**.64**	**.21**	**.49**	-.04	
14. Overall Rebuttal	4.04	0.94	.91	**-.51**	**-.56**	**.50**	**.46**	**.52**	-.15	**.30**	-.01	**.34**	-.09	**.22**	**-.54**	**.87**

Note. Correlation coefficients in bold are significant at $p < .05$ at least.