Review

False polarization: Cognitive mechanisms and potential solutions

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Abstract

Although political polarization in the United States is real, intense, and increasing, partisans consistently overestimate its magnitude. This 'false polarization' is insidious because it re-inforces actual polarization and inhibits compromise. We review empirical research on false polarization and the related phenomenon of negative meta-perceptions, and we propose three cognitive and affective processes that likely contribute to these phenomena: categorical thinking, oversimplification, and emotional amplification. Finally, we review several in-terventions that have shown promise in mitigating these biases.

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Introduction

Something is badly wrong in American politics. We are writing at a time of intense and growing polarization. Large fractions of Democrats and Republicans view those across the aisle as immoral, unpatriotic, close-minded, and lacking shared goals and values [1]. The growing divide is wreaking havoc on policy-making, national unity, and social cohesion [2].

Polarization can be defined in multiple ways and traditionally has focused on policy differences, that is 'issue polarization' [3]. However, the current environment is characterized by a constellation of correlated effects. Differences in stated policy positions exist alongside 'affective polarization', dislike and distrust of those on the other side [4], and avoidance of affiliation with those across the aisle as indicated by who we choose to date or cohabitate with [5,6]. We even disagree about basic facts [7].

There is an active debate in the literature on the causal interpretation of these correlated effects [8–10]. Some argue that policy positions come first, leading to animus toward others who do not share those views. Others argue that issue polarization is sharply exaggerated and that apparent policy differences reflect the fact that ordinary citizens do not have a deep understanding of the issues and merely parrot the positions of their ideological groups. In other words, political identification comes first, defines sociopolitical identities, and determines stated policy preferences. Animosity develops from 'political sectarianism', via mechanisms like othering, aversion, and moralization [11]. There seems to be evidence for causal pathways in both directions [12–14].

There is a ray of light: Many people in both parties express concern about increasing polarization and want the parties to come together in compromise [1,15]. Yet, to this point, we appear unable or unwilling to change course. A major challenge is that several basic cognitive and affective processes push toward polarization, and people are unaware of how these unwanted processes shape their own views. Behavioral science has an important role to play in diagnosing and addressing the underlying mechanisms.

Our focus is on partisans' perceptions of what those across the aisle think and feel. Research consistently shows that people think there is a tremendous partisan gap in beliefs, values, and attitudes. This is an important contributor to the current standoff. Affective polarization occurs because we think others are very different from us, and perceived issue polarization makes it seem like compromise is impossible [16–18].

There are two possible explanations for these perceptions. One is that we really are that different from one another. And there is some evidence that conservatives and liberals differ on fundamental values [19,20] and

basic cognitive processes like reliance on intuition versus deliberation [21] and experience of emotions like disgust [22]. We see this interpretation as oversimplified because in many contexts, Democrats and Republicans are equally prone to biased reasoning [23,24]. A second possibility is that our perceptions of political polarization are mediated by biased inference processes. As per the 'naive realism' view, when someone expresses a political view we do not share, we tend to infer that they are misinformed and/or immoral, while operating under the illusion that our own views are unbiased and the product of rational deliberation, weighing of evidence, and so on [25−27]. We see this interpretation as more optimistic because if polarization is being reinforced by false beliefs about others, it could be corrected.

False polarization

The study of false polarization is rooted in social and political psychology research that compared actual partisan beliefs and attitudes with people's assumptions about those beliefs [28−30]. These studies found that, while actual partisan gaps existed, participants dramatically overestimated their magnitude and also overestimated people's ideological consistency. For instance, in one study, pro-life and pro-choice participants were asked to evaluate various abortion scenarios, some sympathetic and some unsympathetic, and were also asked to guess how those on the other side would evaluate the scenarios. Participants substantially overestimated the extremity of the other side's views. They also exaggerated ideological consistency. For instance, pro-choice participants expected pro-life participants to treat both sympathetic and unsympathetic scenarios as very similar, but that was not at all the case. These phenomena have come to be known as 'false polarization', a somewhat misleading term, because actual polarization does exist. The point is that the people's beliefs about polarization are substantially more extreme than the actual partisan gap.

These effects have been replicated and extended in many articles and have been shown to emerge for both issue polarization and affective polarization, to be particularly acute for values that are central to the perceiver's ideology, and to be stronger when assessing the views of out-group members relative to in-group members [31−34]. One study used results from four decades (1960−2008) of the American National Election Study, a longitudinal panel survey of respondents in the United States [35]. Across a range of issues, from defense spending to urban unrest to government health insurance, Democrats and Republicans exaggerated the gap between other Democrats and Republicans. The same study showed that although actual polarization between Democrats and Republicans increased over the 40-year period, perceived polarization kept apace, typically exceeding actual polarization by a factor of two. Democrats and Republicans were especially inclined to exaggerate the issue stances of members of the opposing party. The same pattern emerged in two recent studies of actual and perceived polarization between Democrats' and Republicans' belief in climate change and support for climate policy [36,37].

More recently, researchers introduced a distinction between first-order and second-order beliefs about polarization [38]. First-order beliefs are assessments of how someone else feels about issues or how strongly they identify with their party. This is what is studied in the articles just described. Second-order beliefs are assessments of how those on the other side feel about me. A recent stream of research has investigated these 'meta-perceptions'—that is, people's perceptions about others' perceptions—and found that they are also exaggerated. People consistently overestimated how negatively out-group members felt toward them. These negative meta-perceptions were heightened among those who expressed more ideological extremity and predicted desire for social distance from members of the opposing party and support for policies that violate democratic norms to favor the in-group party [39−41].

Cognitive mechanisms

We suggest that false polarization and negative meta-perceptions emerge from and are exacerbated by three basic cognitive and affective processes: categorical thinking, simplification, and emotional amplification. The mind is built to extract useful information from the environment to guide action [42]. We do not represent the world in all of its complexity and nuance. Instead, our mental models structure and simplify perceptual input so that we can make use of it. Categorization is the process by which we discretize continuous dimensions and sort objects into groups. Simplification can take many forms. We can reduce complexity by representing objects with fewer dimensions, by thinking about an object at a single level of abstraction, or by representing fewer variables in a causal mechanism, for instance. Although these processes convey substantial benefits much of the time, they can also lead to systematic biases and misrepresentations and likely contribute to false polarization. Abetting these cognitive processes are the often strong states of anger that infuse relations between social groups in competitive, conflict-laden, politicized contexts.

Categorical thinking

The human mind is a categorization machine [43]. As Plato said, valid categories 'carve nature at its joints'. Because categorization is so natural for us, we sometimes overdo it, assuming that underlying categories are more coherent than they are. This is especially true for social categories [44−46]. Categorical thinking

leads to bias in our representation of category members. We amplify differences across category boundaries, assuming that individuals from different categories are more different than they are, and we compress within categories, assuming that individuals from the same category are more similar than they are [47,48]. Simply labeling someone as obese versus normal, for instance, increases perceived differences across weight categories and reduces perceived differences within categories [49]. Depicting states as 'red' or 'blue' rather than shades of purple makes them seem more polarized [50].

Merely categorizing people into Democrats and Republicans may lead people to exaggerate differences between them [35]. Moreover, when asked to estimate the views of the 'typical' Republican or Democrat, that is the category prototype, judgments are overly extreme [19,51]. This suggests that false polarization stems, in part, from the tendency to think about members of political groups in terms of the prototypical party member, leading to overly extreme judgments across parties and an underestimation of within-party ideological variability.

Simplification
In general, people tend to see the world as much simpler than it is [42]. Two types of oversimplification are relevant to false polarization. First, we oversimplify the bases for people's political positions. Political views are the product of a complex interaction of individual knowledge and values, group identification [52], elite opinion [53], and a host of other situational factors. When someone on the other side expresses a view that differs from ours, we tend to attribute it to differences in knowledge or values [25] and we tend to underappreciate other factors, like the extent to which they may not really understand the nuances of the policy and are taking cues from their group. This can make it seem like those on the other side are more different from us than they are.

Second, we oversimplify policies themselves. Intractable conflicts can arise when policy disputes become oversimplified and lose nuance [54]. One way this happens is that political debates that begin as negotiations over costs and benefits shift to intractable debates over basic values [55], a process sometimes called moralization [56]. In other words, a consequentialist analysis gives way to a battle over 'protected' or 'sacred' values [57,58]. This is a kind of simplification because while consequentialist analysis requires taking into account tradeoffs and uncertainty, moralized disputes hinge on binary, black-and-white thinking: My position is right and yours is wrong regardless of the outcomes. This has the effect of making the two sides seem further apart than they actually are [31,42].

Anger amplifies
Competitive, politicized intergroup contexts invite emotional reactions of anger that amplify categorical thinking and simplification. When others are categorized and oversimplified as Democrats and Republicans, people who identify with one of the parties also categorize other people into in-groups and out-groups [35,59]. Self-categorization and social categorization can therefore bind people to moralized sociopolitical tribes [60] or sects [11] toward which people experience anger and other intergroup emotions [61]. Combative rhetoric between political leaders [62], accompanied by a highly polarized media [63], can stoke ordinary citizens' anger toward opposing political groups.

The arousal of anger as an intergroup emotion matters not only because it directly impacts polarization but also because anger can increase categorization, simplification, and other forms of intuitive, nonanalytical thinking [64–67]. In one experiment, when made to feel angry, Democrats and Republicans became more polarized in their attitudes toward policies to address two national tragedies, Hurricane Katrina and a mass shooting, and they perceived even greater polarization between the stances of other Democrats and Republicans [68]. Anger uniquely interferes with perspective taking of opponents in social conflict [69].

Solutions
Recognizing its emergence from basic processes of categorization, simplification, and emotional amplification hints at promising approaches to decrease false polarization. The most straightforward intervention is to simply give people accurate information about other people's political attitudes. In one study, participants either were assigned to estimate or were told the positions of opposing partisans on issues like a job guarantee policy and environmental protection [70]. Participants given the actual data rated their own positions as less extreme, suggesting that correcting their false beliefs about polarization had a moderating effect. A similar manipulation has also proven effective at reducing negative meta-perceptions [39,[80]]. These strategies are similar to norm-based interventions that successfully correct collective misperceptions [71,72].

A different approach targets people's underlying tendency toward oversimplification. In one study, participants were induced to think with greater or less complexity by reading a complex or simple text before engaging in a discussion with someone with an opposing view about abortion, euthanasia, or punishment of sex offenders [73]. Discussions in the complex condition evidenced greater perceived 'resolution tractability', an increased sense that the two sides are not too far apart to permit compromise. A related approach is to ask people to focus on consequences (i.e. what will be the effects of the policy?) rather than

values (i.e. why do people believe what they do?) when elaborating on a policy conflict. This has a similar effect of making complexity more apparent and increasing perceived resolution tractability [42].

Another idea is to encourage citizens to engage in deeper discourse about the issues than is the norm. One way to do this is through a 'consensus conference', where people on opposing sides of issues are brought together along with topic experts to learn and discuss over the course of hours or days, with the goal of coming to an agreement [74−76]. The depth of analysis cuts against the tendency to over-simplify, and the face-to-face nature diminishes categorical thinking by highlighting individuality. The challenge of consensus conferences is scalability. They are resource intensive. However, a recent study showed that simply telling people about the outcome of a consensus conference can yield some of the beneficial effects [77].

The amplifying effects of anger can be targeted by emotional reappraisal through the lens of sadness [66,67]; people who were induced to states of sadness rather than anger exhibited lower polarization and false polarization in the context of Hurricane Katrina and a mass shooting [68]. In another study, induced sadness increased people's willingness to negotiate and their openness to opponents' perspectives [78]. Sadness reappraisals are feasible in many challenging contexts involving threat to health and security, such as the COVID-19 pandemic, that are readily interpreted as saddening or angering [79].

Conclusion
Our focus has been on false polarization and ideas for reducing it by intervening on individual thinking. This is just one piece of a difficult puzzle. Other research has targeted affective and issue polarization more directly. A different approach is via top-down policy changes that attempt to do things like alter the incentive structure for politicians, reduce partisan gerrymandering, and decrease the proliferation of false information. Political polarization is a complex problem, and addressing it will require a multipronged approach. As polarization grows and its toxic effects on society become more apparent, research aimed at understanding why it occurs and how to reduce it is increasingly vital.

Conflict of interest statement
Nothing declared.

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