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When Passionate Advocates Meet Research on Diversity, Does the Honest Broker Stand a Chance?

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In an ideal world, social science research would provide a strong basis for advocacy and social policy. However, advocates sometimes misunderstand or even ignore scientific research in pursuit of their goals, especially when research pertains to controversial questions of social inequality. To illustrate the chasm that can develop between research findings and advocates' claims, this article addresses two areas: (a) the effects of the gender diversity of corporate boards of directors on firms' financial performance and (b) the effects of the gender and racial diversity of workgroups on group performance. Despite advocates' insistence that women on boards enhance corporate performance and that diversity of task groups enhances their performance, research findings are mixed, and repeated meta-analyses have yielded average correlational findings that are null or extremely small. Therefore, social scientists should (a) conduct research to identify the conditions under which the effects of diversity are positive or negative and (b) foster understanding of the social justice gains that can follow from diversity. Unfortunately, promulgation of false generalizations about empirical findings can impede progress in both of these directions. Rather than ignoring or furthering distortions of scientific knowledge to fit advocacy goals, scientists should serve as honest brokers who communicate consensus scientific findings to advocates and policy makers in an effort to encourage exploration of evidence-based policy options.

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Fostering social policy based on science is a central goal of many social scientists. Commitment to joining sound social science to responsible policy is the fundamental undertaking of the Society for the Psychological Study of Social Issues, in alliance with public interest missions of organizations such as the American Psychological Association and the Association for Psychological Science. Despite the increasing effort that psychologists and many other social scientists are devoting to social policy, relations of science to policy are often troubled. On politically charged issues, science and policy are not linked by a smooth highway but by a more treacherous route where issue advocates hold sway.

Advocates are often ideologically polarized players who eagerly invoke social scientific data that support their objectives but whose use of science can be selective and thus unrepresentative of the available scientific knowledge. Researchers, in turn, may fail to communicate effectively to advocates and policy makers, at least in part because research can yield findings that are more complex and less affirming of advocates' goals than what they desire and expect. Under such circumstances, is it possible for social scientists to serve as honest brokers who communicate research findings to invite creative thinking about evidence-based policy? Is it more common that researchers are shunted to the sidelines, with their findings exploited and often inaccurately portrayed by ideologically polarized advocates?

I approach these matters by analyzing two research questions relating to the social disadvantage of some social groups. The first question pertains to the "woman on boards" issue that has yielded a large research literature on the gender integration of corporate boards of directors. The second question pertains to the workgroup diversity issue that has yielded a large research literature on the integration of groups by gender and race/ethnicity. In these two important research areas, there are surprising contradictions between what advocates claim and what research has demonstrated. Therefore, I argue that social scientists should more assertively communicate the scientific consensus about diversity's relations to corporate financial success and group productivity. Then researchers should proceed to address the conditions under which diversity produces its varied effects on outcomes that include gains for social justice as well as group and organizational performance.

Women on Corporate Boards

Advocacy to include more women on boards of directors is extensive in the United States and many other Western nations. This advocacy makes sense given the low representation of women as directors, currently 19% in the Fortune 500 (Catalyst, 2015) but only 9% if smaller firms are included (Adams & Kirchmaier, 2015). Although social justice arguments could be deployed to favor increasing women's share of board memberships, advocates have typically focused on the so-called "business case," by indicating that companies with more women on their

boards perform better—that is, they have better financial outcomes (e.g., Ernst & Young, 2014). This attention to the economic value of diversity reflects the capitalist societal context in which shareholder value and profits are the measures of corporate success.

The business-case claim that adding women increases corporate success appears often in daily newspapers. In one example, Claire Cain Miller (2014) wrote in the *New York Times*, “Several studies have shown that diversity on boards improves decision making and profits.” Also, Jena McGregor (2014) offered in the *Washington Post*, “Researchers have long found ties between having women on a company’s board of directors and better financial performance.” And Tiffany Hsu (2012) added in the *Los Angeles Times*, “Need a balance sheet boost? Try adding some women to the board of directors.”

What is the source of these claims? The advocacy organization Catalyst (2004) produced a study showing that among Fortune 500 firms, those in the top quartile of female representation on their boards of directors performed better than those in the bottom quartile. The reported performance data consisted of the financial outcomes of returns on equity, sales, and invested capital. This initial report and its replications (Catalyst, 2007, 2011) claimed “a link” between women on boards and corporate performance. Also, the management consulting company McKinsey produced a related study of large European publicly traded corporations that demonstrated better financial outcomes for the 89 firms with the highest level of gender diversity in their top management (including on boards), compared with the average of European listed firms (Desvaux, Devillard-Hoellinger, & Baumgarten, 2007; see also Desvaux, Devillard, & Sancier-Sultan, 2010). Similar data came from the 2020 Women on Boards advocacy organization (Kurth, 2015) and the Credit Suisse financial services organization (Dawson, Kersley, & Satella, 2014). These reports were further disseminated in the business press (e.g., Taylor, 2012; Wittenberg-Cox, 2014) and by consulting firms (e.g., International Finance Corporation, 2014).

The reports from advocacy and consulting organizations offered comparisons of groups of firms that differed in the gender diversity of their corporate boards—for example, between the top and bottom quartiles in the Catalyst (2004) research. These studies would certainly not be publishable in academic journals because of the elementary form of their data presentations. Such group comparisons do not reveal the strength of the relation between the participation of women and financial success. The analyses lacked even correlations relating the percentages of women on corporate boards to corporate outcomes or simple scatter plots of these relationships. Such studies do not meet the standards of the relevant academic disciplines, which are economics and management. Does it matter that the studies are academically substandard? The answer to this question is an emphatic yes.

Statistically trained investigators, and perhaps even students who have had one or two statistics courses, would recommend at least the presentation of correlation

coefficients and furthermore would raise questions about two matters: (a) possible reverse causation from financial success to the inclusion of women and (b) possible confounding of the percentage of women on boards with omitted variables that may influence corporate success. On the first point of reverse causation, which advocacy and consulting organizations have acknowledged (e.g., Catalyst, 2004; Desvaux et al., 2007), firms that are more profitable may have the resources to seek out and attract women with the requisite corporate executive experience. On the second point, omitted variables might include, for example, firm size, given that women directors are more common on the boards of larger firms (Adams, 2015; Hillman, Shropshire, & Cannella, 2007). Any positive correlation between board gender diversity and financial outcomes might not survive controls for firm size and many other variables potentially correlated with the percentage of women directors.

Social scientists routinely analyze such correlational data using statistical techniques designed to rule out such ambiguities, which economists refer to as *endogeneity* (Antonakis, Bendaham, Jacquart, & Lalive, 2014). For example, given data over time, researchers can exploit these repeated observations while controlling for the stable differences between firms (in so-called “firm fixed effects” analyses). In addition, to address omitted variables, they also may introduce *instrumental variables* that are correlated with the predictor of interest (gender diversity) and with the outcome variables (financial success) only through their relation with gender diversity. Using such methods, investigators can eliminate many confounds and thus discern causal relations with some certainty, whereas investigators have little basis for inferring causality from correlations or comparisons of firms grouped by their level of diversity.

An exemplary study that invoked statistically appropriate techniques examined 1,939 firms from the United States for the period 1996–2003 (Adams & Ferreira, 2009). The observed positive relation between the percentage of female directors and financial outcomes became negative when statistical controls for endogeneity were introduced—that is, greater gender diversity was associated with poorer firm outcomes. The findings also showed that women had better attendance at board meetings and were more likely to sit on monitoring committees; their presence was associated with more CEO resignations after poor company performance. The increased monitoring associated with the increase in the presence of women on boards appeared to have positive effects on firms with weak governance but negative effects otherwise. In the aggregated data, these negative effects outweighed the positive ones. Consistent with these findings, effects of gender diversity on financial outcomes can be causally related to the behavior of female versus male directors and their placement on board committees. Other causal possibilities include a negative effect of female directors on stock prices because of investor gender bias, especially by institutional investors, who are especially attentive to corporate governance (Dobbin & Jung, 2011).

Board gender diversity has become a hot topic among economists and management researchers, with many studies conducted in many nations. A meta-analysis integrated the results of 140 such studies (45 with U.S. data; Post & Byron, 2015). These published and unpublished studies were methodologically diverse, ranging from the Catalyst (2004) report with its simple group comparisons to studies using multiple regression techniques (e.g., Stanwick & Stanwick, 1998) as well as a few more sophisticated studies with controls for endogeneity (e.g., Adams & Ferreira, 2009). Examining only the zero-order correlations from these studies, which are vulnerable to endogeneity effects, the Post and Byron meta-analysis obtained a very small, but significant, positive relation of board gender diversity to firm financial performance ($r = .03$). This relation was slightly higher for accounting outcomes, such as profit and loss ($r = .05$) but smaller and nonsignificant for outcomes indicating market performance, such as stock price and returns to shareholders ($r = .01$). In addition, a smaller meta-analysis that included only 20 studies (4 with U.S. data) published in peer-reviewed academic journals found a near-zero, nonsignificant correlation ($r = .01$) between board gender diversity and financial outcomes (Pletzer, Nikolova, Kedzior, & Voelpel, 2015). Also, an extensive narrative review of the same research literature reached the conclusion that findings are mixed, with no clear trend toward positive or negative relations (Rhode & Packel, 2014).

Given that the findings of studies included in these two meta-analyses varied around these average results, an accurate description of this extensive empirical literature is that correlational findings relating percentages of women on corporate boards to firms' financial performance are mixed, and on the average lean very slightly in the positive direction but only for companies' accounting outcomes. The sign and magnitude of the correlations related to a few moderators: For example, in the Post and Byron (2015) meta-analysis, the null relation between female board representation and market performance became positive in countries with greater gender equality. Despite such moderation, these correlational findings do not reveal causation.

Establishing that the presence of women on corporate boards causes any of the positive or negative outcomes is far more challenging (see Adams, 2015). As in many other domains of nonexperimental research, relatively few researchers have addressed endogeneity in a manner that allows claims about causation (Antonakis, Bendahan, Jacquart, & Lalive, 2010). However, the "business case"—that is, the boldly causal claim that including women on corporate boards improves firms' financial outcomes, lives on in communications directed to the public and business community (e.g., Committee for Economic Development, 2015), most often supported by citations of the least informative studies, which are those containing only simple group comparisons (e.g., Catalyst, 2004; Desvaux et al., 2007).

Gender Diversity of Task Groups

Given the ambiguities and complexities of relations between corporate board gender diversity and company performance, social scientists might turn to simpler situations for examining the impact of diversity. Findings might be clearer if the diversity independent variables and the outcome dependent variables were closer in time and space, thereby presenting fewer possibilities for confounding variables and complicated mediation than with corporate performance. One such domain is the study of workgroups, where the question is whether demographically diverse groups perform better than groups composed on a homogeneous basis. In these correlational and experimental studies, diversity is typically proximate to the group outcomes because the workgroups themselves generate the products (e.g., solutions to problems) that are the basis of the outcome variables.

The view that diversity improves group performance appears often in news media. For example, Nicholas Kristoff (2013) wrote in the *New York Times*, “Scholarly research suggests that the best problem-solving doesn’t come from a group of the best individual problem-solvers, but from a diverse team whose members complement each other. That’s an argument for leadership that is varied in every way—in gender, race, economic background and ideology.” And, in *Financial Times* (“Definition of diverse teams,” n.d.), “Research shows that diversity [of all types] results in better performance on complex decisions and problems, just the type of challenges faced by global firms.”

These opinions were fueled in part by Scott Page’s claims, presented in his journal articles (e.g., Hong & Page, 2004; Page, 2007) and book, *The Difference: How the Power of Diversity Creates Better Groups, Firms, Schools, and Societies* (Page, 2008). These writings featured abstract, theory-driven arguments from mathematics, computer science, and economics supporting the idea that groups of diverse individuals are more effective in solving problems and predicting events than are homogeneous groups, even when those homogeneous groups are made up of the best individual problem solvers. Page’s reasoning was based on the assumption that diversity of all types brings *cognitive heterogeneity*—differences between group members in their knowledge, perspectives, and heuristics, which yield more tools and resources for doing the work of the group. Critics quickly faulted the unidimensionality of Page’s reasoning: While prioritizing groups’ cognitive resources, he failed to consider that diversity’s potential is often compromised by social processes that follow from in-group favoritism and status disparities within groups (Klein & Harrison, 2007).

In-group favoritism is critical because increasing diversity often means that female and minority individuals enter groups composed primarily of white men, as is the case for many decision-making boards and committees. Such newcomers are vulnerable to being categorized as members of an out-group. These intergroup phenomena reflect people’s derivation of their identities and esteem from their

group memberships (see review by Hogg, 2006). Because gender and racial group memberships serve as important bases of collective identity (Ashmore, Deaux, & McLaughlin-Volpe, 2004; Howard, 2000), in-group preferences are often organized around these identities. Therefore, women and minority individuals can be disadvantaged in groups composed mainly of the other gender or the majority race/ethnicity, and this disadvantage can hamper their contributions.

As social psychological research has demonstrated (see review by Bodenhausen, Kang, & Peery, 2012), out-group members generally receive less positive evaluations and inferior rewards and support, compared with objectively equivalent in-group members. These processes are typically compounded by status differences that are correlated with membership in gender and race/ethnicity groupings (van Dijk & van Engen, 2013). Although status differences that reflect genuine competence differences can serve a valuable coordination function, status differences that arise from demographic groupings often do not reflect competence differences among those who are members of decision-making bodies (Correll & Ridgeway, 2006). Nevertheless, women and minorities may be regarded with some skepticism and marginalized in discussions and negotiations (see Karpowitz & Mendelberg, 2014). Under these circumstances, these individuals may find it difficult to engage productively in the work of the group, and any potentially valuable cognitive heterogeneity that they bring to the group can dissipate.

Much earlier diversity research had given clear signs that all is not simple when it comes to effects on performance. For example, a classic study by Allmendinger and Hackman (1995) examined the inclusion of women in symphony orchestras in the second half of the 20th Century, fostered by the introduction of blind auditions conducted behind a screen that obscured musician gender (Goldin & Rouse, 2000). In this project, which encompassed 78 professional symphony orchestras in the United States and Europe, the outcome measures included players' reports about their orchestra's functioning, the quality of their relationships, and their own motivation and satisfaction. In cross-sectional comparisons of orchestras that differed in the extent of their inclusion of women, these outcome measures declined with the inclusion of more women. However, on some measures, this decline flattened and the trend even turned upward as the percentage of women approached 50%. Apparently, gender integration proved to be destabilizing, but some of these negative reactions moderated when women became at least a substantial minority of players.

Over the years, a very large research literature has accumulated relating workgroup diversity to group performance, published in academic journals mainly in industrial-organizational psychology and management. These investigators have distinguished two types of diversity: *job-related*, which pertains to differences in knowledge and expertise related to the problems that work groups are charged with solving, and *demographic*, which pertains to differences in attributes such

as gender, race, and age (e.g., Mannix & Neale, 2005). Research has extensively examined both of these forms of diversity.

Several meta-analyses of the diversity-performance relation have been prominently published, with the latest and most inclusive produced by van Dijk, van Engen, and van Knippenberg (2012). Among this project's 146 studies, there were three types of settings: (a) laboratory experiments (b) field studies, and (c) studies conducted on teams composed of undergraduate or MBA students. These field and student studies generally provided correlational data relating amount of diversity to group performance. The finding that the classification of studies by these three types of settings did not moderate diversity-performance relations eases concerns about endogeneity, given the greater ability of the laboratory experiments to rule out alternative explanations based on uncontrolled variables.

The meta-analysis produced mainly very small average effect sizes: The key overall findings were that demographic diversity yielded a small negative relation to performance outcomes ($r = -.02$), which was present for both gender diversity ($r = -.01$) and racial/ethnic diversity ($r = -.05$); all of these relations were nonsignificant. In contrast, job-related diversity produced a significant, but small, positive relation ($r = .05$). These findings replicated four prior meta-analyses based on smaller samples of studies (Bell, Villado, Lukasik, Belau, & Briggs, 2010; Horwitz & Horwitz, 2007; Hülshager, Anderson, & Salgado, 2009; Joshi & Roh, 2009). In addition, a meta-analysis of 68 studies produced a nonsignificant relation between gender diversity and team performance ($r = -.01$; Schneid, Isidor, Li, & Kabst, 2015). Moreover, these meta-analytic results were generally consistent with earlier narrative reviewers' cautions that demographic diversity had yielded mixed and inconclusive effects (Harrison & Klein, 2007; Mannix & Neale, 2005; Milliken & Martins, 1996; Williams & O'Reilly, 1998).

Novel results emerged when van Dijk van Engen, and van Knippenberg (2012) separated outcome variables according to (a) subjective ratings by team members and leaders, and (b) objective measures, such as financial outcomes or numbers of problems solved. Subjective measures produced more extreme data—that is, an accentuation of the positive effects for job-related diversity and of the negative effects for demographic diversity. To account for these more extreme findings, these authors argued that subjective ratings, especially when performed by raters external to the team, tended to be biased against demographic diversity and in favor of job-related diversity. Yet, even on the objective measures, demographic diversity related nonsignificantly and slightly negatively to performance for both gender ($r = -.02$) and racial/ethnic ($r = -.01$) diversity.

The van Dijk van Engen and van Knippenberg (2012) meta-analysis examined moderation by variables that might produce conditions that especially benefit from diversity. Task complexity is one such variable: with greater complexity, job-related diversity had more positive effects. Because job-related diversity generally involves choosing group members for their differing knowledge and expertise,

these gains are consistent with Page's (2007) reasoning about cognitive heterogeneity. However, comparable gains were absent for demographic diversity.

In summary, when aggregated across studies, an extensive research literature on group performance has shown no overall advantage for demographically diverse groups, with a small tendency toward disadvantage, especially on subjective measures of performance. However, these meta-analytic averages encompassed heterogeneous outcomes, whereby some studies did produce positive effects of diversity. Yet, approximately as many studies yielded negative effects, producing average effects that were near zero. In this respect, these findings are similar to the correlations between the representation of women as corporate directors and financial outcomes.

Social Scientists' and Advocates' Responses to These Research Literatures

Given these findings on diversity in corporate boards and task groups more generally, what is the current state of discourse on diversity in these contexts? How do advocates, policy makers, and scientists cope with clear evidence that broad, simple claims about diversity's positive relations to corporate financial outcomes and group effectiveness are not supported by scientific research?

Understandably, the findings that have accumulated may be troubling, especially for the researchers who have produced studies with negative outcomes and the meta-analysts who have failed to produce support for blanket claims about gains from diversity. Because many academic researchers in the social sciences are of a decidedly liberal bent (Duarte et al., 2015; Gross & Fosse, 2012), they presumably hope that their research will support progressive agendas to increase diversity and inclusion. From advocacy and policy perspectives, there is an obvious appeal in simple, straightforward claims that diversity in groups and organizations produces performance gains.

Given this appeal, simplistic renditions of scientific findings on diversity continue to find favor among diversity's advocates and the legions of practitioners and consultants engaged in helping organizations meet their diversity goals. Presented as if they were evidence-based findings, broad claims about the advantages of diversity for group and organizational performance appear regularly in promotional materials of consultants and advocates (e.g., Kirby & Burns, 2012; Lee, n.d.). Also, their scientific allies may engage in selective citations of those studies or portions of studies that have shown the hoped-for performance gains, without hinting at the general pattern of findings across studies. However, the scientific consensus inherent in multiple meta-analyses and narrative reviews drawing consistent conclusions surely pressures scientists to be even-handed. Yet, scientists, like advocates, may fear that acknowledging the lack of support for broad claims about diversity's gains could undermine efforts to promote diversity.

At least some policy makers, whose knowledge of and access to the scientific literatures on diversity may be quite limited, appear to have accepted these broad claims as a basis for their policy recommendations. For example, in a document of the European Commission (2012, p. 5), “The proposed Directive [to include more women on corporate boards] will lead to breaking down the barriers that women face when aiming for board positions and to improved corporate governance, as well as enhanced company performance.” In a U.K. government-sponsored report (Davies, 2011, p. 7), “There is a strong business case for balanced boards.”

Despite the chorus of advocacy that has enjoyed at least some limited success in relation to policy, social scientists who are dedicated to fostering social policy based on sound social science should assiduously avoid misrepresenting research. While foreswearing misrepresentation and selective citations of studies with congenial results, social scientists who support inclusive agendas might pursue two responsible directions: (a) Carry out and identify research that discerns the conditions under which diversity does produce positive outcomes and communicate the resulting findings to advocates and policy makers, and (b) encourage broadening the focus of advocacy by arguing that gains of profit and productivity are not the only or most appropriate place to look for diversity’s benefits.

Discovering Moderators of Diversity–Performance Relationships

Simplistic claims about diversity’s benefits can discourage new research by suggesting that diversity has consistently positive effects on corporate performance and group effectiveness. Instead, awareness of the inconsistencies in the research literature is needed to foster the challenging and important task of uncovering the conditions under which demographic diversity has positive or negative effects. To illustrate this direction, I note three areas of investigation that offer promise for discovering moderators—specifically, research on (a) sex-related differences in styles of social interaction and leadership, (b) the duration of interaction, and (c) diversity mindsets and climate for inclusion.

Although demographic diversity may not have generally positive effects on group effectiveness, some aspects of diversity may have such effects under some conditions. In particular, research has considered whether the participation of women may be advantageous when groups’ tasks are socially complex. Consistent with women’s relatively relational self-construal (Cross & Madson, 1997; Gabriel & Gardner, 1999), they are more likely than men to emphasize collaborative teamwork and to have a participative and interpersonally concerned leadership style (see meta-analyses by Eagly, Johannesen-Schmit, & van Engen, 2003; Eagly & Johnson, 1990; van Engen & Willemssen, 2004). These relational tendencies of women may be advantageous for group performance if groups’ tasks entail social complexity, for example, by requiring discussion and negotiation or coordination between functionally diverse or geographically dispersed units (Post, 2015). (In

contrast, the task complexity variable assessed in the van Dijk van Engen & van Knippenberg (2012) meta-analysis pertained only to cognitive demands, or “mental labor,” and did not moderate the effects of gender diversity on group performance.)

Although these ideas about female advantage with social complexity require more exploration, existing findings are promising. Specifically, under socially complex conditions, women experienced less disadvantage in emerging as group leaders (see meta-analysis by Eagly & Karau, 1991) and their leadership yielded improved communication and group cohesiveness (Post, 2015), likely precursors to performance gains. Also, in Wood’s (1987) group performance meta-analysis, interaction in all-female groups, but not in all-male groups, facilitated performance on socially complex tasks (see also Wood, Polek, & Aiken, 1985). Finally, in a large sample of U.S. firms, greater female representation in their top management teams predicted better firm performance for those firms that focused on innovation, a context that may reward participative leadership and collaborative social interaction (Dezső & Ross, 2012; but see van Dijk van Engen & van Knippenberg, 2012, for absence of analogous moderation by innovative vs. in-role group tasks).

Another potential moderator of diversity’s effects is the time spent in interaction. Diversity’s gains for group and organizational performance may emerge gradually over time. Short-term measures can reflect the challenges that people often initially experience when they encounter coworkers who are not part of their cultural in-group. Such challenges have emerged in research on interracial interaction showing heightened stress and anxiety compared with same-race interaction, especially for whites (see meta-analysis by Toosi, Babbitt, Ambady, & Sommers, 2012; Trawalter, Richeson, & Shelton, 2009). Such reactions can produce process losses that lower group effectiveness.

With continued interaction, people from different demographic groups may discover bases of similarity that lessen negative effects and foster positive ones. As argued by MacInnis and Page-Gould (2015), the heightened anxiety and resulting process losses that often accompany integration can dissipate over time. Also, this reasoning about the passage of time is consistent with demonstrations that intergroup contact generally lessens intergroup prejudice (see meta-analysis by Pettigrew & Tropp, 2006). Relatedly, it is this attitudinal and social rationale for diversity that was influential in the Supreme Court’s *Grutter v. Bollinger* 2003 decision that achieving student body diversity justifies preferential student admissions of minorities to colleges and universities (Levinson, 2011). The Court thus appeared to accept research evidence that diversity reduces prejudice, promotes intergroup understanding, and counters racial stereotyping (Gurin, Nagda, & Lopez, 2004). Although such reduction of prejudice may help the positive effects of diversity on group performance to emerge over time, unfortunately direct support is lacking because the great majority of studies of prejudice have either

not assessed group performance outcomes or have assessed them on a short-term basis.

Even though diversity may often improve intergroup attitudes, organizational researchers have argued that favorable intergroup attitudes are not sufficient to unleash positive effects on group performance. In view of research on the effects of diversity-relevant beliefs and attitudes (van Knippenberg, van Ginkel, & Homan, 2013), valuing diversity is only a first step toward establishing conditions under which positive outcomes can manifest (Homan, van Knippenberg, van Kleef, & De Dreu, 2007). Specifically, positive effects of diversity appear to be dependent on group members developing a so-called *diversity mindset*, which encompasses knowledge about the ways in which diversity can have positive or negative effects on team processes and performances. Another concept that captures social relational contexts allowing diversity to become an asset is *climate for inclusion*, by which workgroups create norms that foster personal ties and the exchange of ideas across identity groups (Nishii, 2013). Without such conditions, majority group members often dominate discussions and fail to share their leadership and decision-making power. In such ways, majority group members can unwittingly weaken the potential contributions of diverse group members, who may in turn become discontent or discouraged and lessen their effort and cooperation. Accurate knowledge of such pitfalls, combined with an attitudinally positive, promotion-focused and inclusive outlook, can foster favorable outcomes to the extent that these conditions are shared among group members.

As these examples illustrate, some diversity researchers have moved beyond simple (and false) generalizations about consistently positive effects of diversity on group and organizational performance toward more nuanced hypotheses that reflect growing understanding of the processes by which diversity can have positive or negative effects (e.g., Galinsky et al., 2015). As such research cumulates, social scientists will be in a position to offer meaningful advice to advocates, trainers, and policy makers. However, as I detail in the next section, scientists who participate in discussions about the implications of diversity research findings should in addition promote understanding of the importance of outcomes beyond group and organizational performance.

Diversity's Gains for Social Justice

A fundamental rethinking of potential gains from diversity questions the typical emphasis on competitive advantage, corporate profits, or group effectiveness. Given near-exclusive emphasis on these tangible utilitarian ends, the absence of consistently positive effects of this type would undermine the very basis of efforts to increase diversity.

Issues of inclusion were traditionally framed in terms of fairness and social justice (van Dijk, van Engen, & Paauwe, 2012). The rationale for affirmative action

and antidiscrimination policies in the United States and many other nations emphasized that discriminatory practices had excluded women and minorities from many opportunities (e.g., Fullinwider, 2014). From this perspective, it would be an egregious violation of equal opportunity and antidiscrimination laws, for example, to exclude women musicians from symphony orchestras. Although obvious, overt discrimination of that type is no doubt less common in recent years, discrimination can still be present in relation to obtaining jobs and attaining higher wages and promotions (e.g., Addison, Ozturk, & Wang, 2014; Correll, Benard, & Paik, 2007; Gaddis, 2015; Lips, 2013; Reskin, 2000). The cumulative effects of such discrimination contribute to the underrepresentation of women and minorities on corporate boards and other decision-making groups. Eliminating discrimination would increase diversity in such settings, thus serving social justice goals. However, the faster route of compensatory affirmative action (i.e., reverse discrimination) that disfavors those who were historically advantaged continues to meet considerable public resistance in the United States (Kahlenberg, 2013; Sharp, 1999).

Beyond the matter of continuing discrimination lies an even more fundamental social justice argument. This principle is that, in a democracy, citizens should have equal access to the decision making that shapes their lives. Political scientists refer to this consideration as *substantive representation*, the idea that leaders represent the interests of certain societal groups. To the extent that women and minorities do not have *descriptive representation*—that is, numerical representation in decision making that is proportional to their numbers in the population—they are unlikely to have their interests fairly represented (Mansbridge, 1999; Wängnerud, 2009). The issue is whether the ideals of democracy are violated if decision making is dominated by the rich, the white, and the male. Then the needs of the poor, the minorities, and the female may be neglected.

Whether women and minorities truly lack substantive representation raises two questions. Do they have different attitudes and values than the white men who dominate corporate and political decision making? The answer to this question is yes. Do these differences emerge in women and minorities' advocacy and their decisions when they do gain power in organizations and governments? The answer to this question is a somewhat more tentative yes.

On the first question of attitudes and values, women tend to be more compassionate, other-oriented, and egalitarian (i.e., favoring policies supporting families, education, health care, the poor, etc.) than men, yet more supportive of traditional morality (e.g., Beutel & Marini, 1995; Clawson & Oxley, 2012; Dietz, Kalof, & Stern, 2002; Eagly, Diekmann, Johannesen-Schmidt, & Koenig, 2004; Huddy & Cassese, 2013; Huddy, Cassese, & Lizotte, 2008; Miah, 2013; Schwartz & Rubel, 2005; Schwartz & Rubel-Lifschitz, 2009). Women are also more opposed than men to military spending and are generally more dovish (Eichenberg & Stoll, 2012; Huddy & Cassese, 2013). African American and Hispanic minorities show

similar trends toward more compassionate and egalitarian attitudes (Clawson & Oxley, 2012; Eagly van Engen & van Knippenberg, 2004; Kinder & Kam, 2010).

On the second question of women's and minorities' advocacy as members of decision-making groups, evidence suggests that their attitudes and values do tend to guide their behavior. Specifically, as members of legislative bodies, women, minorities, and especially women of color, are more likely than their white male colleagues to advocate for socially compassionate policies that promote the interests of women, minorities, children, families, and the poor and that support public welfare in areas such as health care and education (Griffin, 2014; Karpowitz & Mendelberg, 2014; Reingold & Smith, 2012; Swers, 2013). Because political party alignments are of overriding importance, these trends in legislative behavior are weaker among Republican than Democratic legislators, especially more recently because newly elected Republicans are more conservative than those elected earlier (Osborn, 2014).

To determine how the participation of women on corporate boards may affect women's substantive representation, some studies have examined the gender diversity of corporate boards in relation to various outcomes broadly subsumed under the concept of corporate social responsibility (e.g., charitable giving, environmental sustainability). Several projects have shown positive relations between women on boards and corporate social responsibility (e.g., Boulouta, 2013; Harjoto, Laksmana, & Lee, 2014) although such studies have varied in their ability to address causal relations (see narrative review by Rao & Tilt, 2015). Relatedly, women on boards and as owners of firms increased the likelihood that firms engaged in what economists call "labor-hoarding"—that is, they were less likely to lay off workers with economic downturns (Matsa & Miller, 2013, 2014). A tentative generalization is that women directors influence corporate decisions to be less single-mindedly concerned with shareholder value and more attentive to a wider range of stakeholders—in particular, to employees and the larger community, which are priorities generally consistent with women's relatively other-oriented and compassionate attitudes and values.

In summary, social justice considerations provide consistent arguments for more equitable representation of women and minorities in corporate and political decision making (Murray, 2014; Sierstad, 2015). To the extent that members of these groups lack access to these roles because of discrimination, equality of opportunity is violated. Moreover, when they have gained opportunities to influence organizational and social policy, they have not acted as clones of white men. Existing evidence thus suggests that women and minorities may shift corporate boards toward broader perspectives that take into account the welfare of employees, communities, and the environment. In legislative bodies, female and minority legislators would tend to direct more resources toward supporting families and vulnerable groups such as children, disadvantaged minorities, and poor people. Therefore, aside from ideological debates about whether such changes would

produce a better society, equitable substantive representation of women and minorities would not only serve social justice but promote more compassionate and egalitarian social policy.

Social Scientists as Honest Brokers

In diversity research, as in many other areas of social science, research literatures are often much more extensive than anticipated by most advocates, who may fix on particular studies that support their favored policy positions, with little concern for how typical, generalizable, or scientifically valid their findings are. Psychologists and other social scientists may be swept up by the excitement of seeing their findings used in advocacy and policy contexts. However, in contemporary science, researchers often have the benefit of relatively even-handed meta-analyses that aggregate and integrate findings across the available studies. Although meta-analyses are subject to various forms of bias (Matt & Cook, 2009), the generalizations they yield are typically much more valid than those based on traditional narrative reviewing and vastly more valid than those based on spotty knowledge of a few relevant studies (Cooper & Hedges, 2009).

The publication of multiple independent meta-analyses addressing the same question and producing consistent conclusions inspires trust in scientific conclusions. Such an unusually large display of consistent evidence has emerged in tests of the effects of diversity on corporate success and group performance (see prior sections *Women on Corporate Boards* and *Gender Diversity of Task Groups*). Two meta-analyses have been published concerning the business case for women on boards and six for the diversity-performance relation in workgroups. Moreover, narrative reviews reached compatible conclusions, with one pertaining to women on boards and four to workgroup performance. Given this abundance of social scientific effort, each of these topics features a high-quality scientific consensus that diversity-performance relations are mixed and produce null or very small means when aggregated across studies. Such a consensus is fully worthy of presentation to advocates and policy makers (Fiske & Borgida, 2011). However, social scientists have a long way to go before understanding the mediators and moderators of relations between diversity and outcomes, most especially the causal relations that are involved. Links to social policy cannot become strong and meaningful until scientific understanding becomes more developed (Antonakis van Engen, & van Knippenberg, 2010).

How might social scientists who are expert on diversity research approach advocates and policy makers? Any outreach should anticipate that scientists' goals of producing valid knowledge are not the same as advocates' goals of promoting their favored causes or policy makers' goals of efficiently deploying resources to attain organizational or societal goals. Despite these differing goals, advocates and policy makers generally perceive some advantage in basing their work on valid

evidence and therefore may welcome social scientific expertise. From their side, scientists often welcome such collaboration because they hope that their research can be useful to others. Of course, scientists have a better chance of facilitating the flow of research into advocacy and policy if their relations with these stakeholders are cooperative and cordial. Yet, interactions may not be easy when scientific knowledge does not fit comfortably into advocates' or policy makers' agendas.

The larger issue is the role that scientists should adopt in relation to social policy (Pielke, 2007). There are several possibilities worthy of consideration by scientists who wish to promote the public interest. One role is that of scientific expert who does not reach out to engage public issues but merely stands ready to provide relevant scientific information when asked to do so by advocates or policy makers. Another role, which entails more policy engagement, is *issue advocate*, whereby a scientist (or a nonscientist) deploys supportive scientific findings to promote favored issue positions. The danger is that issue advocates may act rather like lobbyists for ideologically driven public policies. Scientists, like other advocates, may find it difficult to overcome fixing on research findings based on their compatibility with their policy preferences or political ideology (e.g., Nisbet, Cooper, & Garrett, 2015). Yet another role for scientists is the *honest broker of policy alternatives*, who considers the full range of scientific information in relation to policy options (Pettigrew, 1967; Pielke, 2007). Such scientists reach out to enlarge policy makers' thinking with input from the all relevant scientific findings. By expanding thinking, the honest broker encourages decision makers to think beyond personal values and ideologically driven preferences to consider options that may make sense from a variety of perspectives. In contrast, the issue advocate works to narrow policy makers' thinking to favor a particular policy.

Does the honest broker actually stand a chance with issues as politically volatile as the effects of diversity on groups and organizations? The role is challenging if advocates and policy makers are guided by deeply held ideologies, but it is not impossible. As my two case studies illustrate, science can produce findings that are not what advocates want to hear. Few scientists want to undercut advocacy for causes that they too may believe in. Therefore, knowledgeable social scientists may retreat from engaging policy and just silently cringe when encountering advocacy based on misleading claims about research findings. However, merely withdrawing from discussions is not a responsible way for scientists to proceed. For the two case studies featured in this article, the danger for diversity advocates is that in the longer run, the opponents of inclusive diversity goals may study the science and undercut false claims, probably with "junk science" accusations that would not be entirely misplaced.

How should social scientists move forward? Their first responsibility is to pursue research that allows more confident conclusions about the mediators and moderators of diversity's relations to important outcomes. At the same time, scientists should abandon silent cringing and speak up when they encounter

misrepresentations of the existing research. Although speaking up risks backlash from advocates, scientists should have the courage to stand behind their consensus findings. They should also be attentive to the dangers of gradually slipping into issue advocacy while consulting with advocates and policy makers. Should this “stealth advocacy” (Pielke, 2007) involve selectively representing only some scientific findings or misrepresenting them altogether, evidence-based policy would lose out.

As honest brokers, social scientists seek to communicate valid scientific knowledge through multiple channels. They may reach out to engage social policy by writing articles and books designed for broader publics, giving talks for nonacademic audiences, and engaging social media. Above all, scientists should create and seek access to settings where policy makers and scientists think broadly and deeply about their society and do not merely pursue narrow political ends. For example, the Society for the Psychological Study of Social Issues (<http://www.spssi.org/>) features a Congressional Seminar Series in which expert social scientists present findings pertaining to key issues (e.g., psychology of prejudice and discrimination) for members of Congress and their staffs. Northwestern University’s Institute for Policy Research (<http://www.ipr.northwestern.edu>) arranges briefings that bring together leading social science experts to present their policy-relevant research at public meetings involving outreach to journalists, advocates, and politicians. The Brookings Institution’s Hamilton Project (<http://www.hamiltonproject.org>) seeks to introduce innovative proposals from leading economists that are guided by evidence, not ideology or doctrine. More such initiatives should be undertaken to bring thoughtful consideration of social science research into the policy arena.

To conclude, this article conveys some ways in which science, advocacy, and policy have not related easily or harmoniously. I have told two somewhat complicated stories, one pertaining to women on corporate boards and the other to workgroup diversity—two domains with extensive social scientific research relating diversity to performance outcomes. Despite the striking lack of research support for the optimistic generalizations about these outcomes that have been widely shared among advocates, policy makers, and the general public, many social scientists with relevant expertise have remained silent. It is time for more social scientists to take stock of what diversity research has produced so far and join those who are addressing the complexities of diversity’s effects on group and organizational performance. It is also time for all stakeholders in diversity initiatives to focus on the violations of social justice inherent in the limited access of women and minorities to decision making in most political and corporate contexts.

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