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Group-Based Dominance and Opposition to Equality Correspond to Different Psychological Motives

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Abstract Social Dominance Orientation, one of the most popular individual differences measures in the study of generalized prejudice, can be understood as having two components: Opposition to Equality (OEQ) and support for Group-Based Dominance (GBD). We consider these components in terms of system justification theory and social identity theory. We find that each component best explains different kinds of political views, consistent with the theory that they arise from different motivations. OEQ reflects system justification motives. It better predicts attitudes towards redistributive social policy, political conservatism, and a lack of humanitarian compassion for the disadvantaged. GBD reflects social identity motives. It is more associated with hostility toward outgroups and concerns about intergroup competition. GBD and OEQ have different personality and demographic correlates, exhibit distinctive relations with explicit and implicit attitudinal preferences, and differentially predict a variety of policy attitudes. Use of GBD and OEQ as separate constructs enriches the understanding of prejudice, policy attitudes, and political ideology.

Keywords Social Dominance Orientation · Political psychology · Prejudice · Authoritarianism · Social identity · System justification

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Introduction

Many social psychological theories seek to explain attitudes towards inequality. These theories can be grouped into the categories of social identity/ingroup promotion (Tajfel, 1981; Tajfel & Turner, 1979, 1986; Turner, Brown, & Tajfel, 1979) and system justification/resistance to change (Jost & Banaji, 1994; Jost, Banaji, & Nosek, 2004; Jost & Hunyady, 2005; Katz & Hass, 1988; Lerner, 1980). These motives, operationalized in various ways, have been shown to independently and differentially predict attitudes towards social policies related to inequality (Bobo & Klugel, 1993; Kluegel & Smith, 1986; Sears & Henry, 2005).

Here, we investigate these two constructs in relation to the two subscales of Pratto, Sidanius, Stallworth, and Malle's (1994) Social Dominance Orientation (SDO) scale: the promotion of Group-Based Dominance (GBD) and Opposition to Equality (OEQ; Jost & Thompson, 2000). In the most comprehensive review of these constructs to date, we consider their convergences and divergences across other measures of political and social attitudes. We gather studies that have investigated these constructs and, using our own new data, establish GBD as an ingroup promotion and outgroup derogation construct and OEQ as a system justification construct. GBD is more strongly related to negative attitudes towards outgroups, hostile competition, and individual differences associated with the propensity to use stereotypes; it appears to be primarily reflective of social identity motives and support for the *dominance of one's own group*. OEQ is more strongly linked to the rejection of universalism, humanitarian/egalitarianism, and economic redistribution; it is primarily related to system justification motives and unwillingness to overturn *the current social order*. Although these constructs are interrelated, they are associated with different underlying motivations, subject to different social pressures, and lead to attitudinal preferences in different domains. This two-factor conceptualization of SDO, we propose, offers an enriched theoretical understanding of its core features and predictive utility for social judgment (see also Jost & Thompson, 2000).

Social Dominance Orientation

Social Dominance Orientation is described as a "general attitudinal orientation toward intergroup relations, reflecting whether one generally prefers such relations to be equal, versus hierarchical" and the "extent to which one desires that one's in-group dominate and be superior to out-groups" (Pratto et al., 1994, p. 742). Those high in SDO are generally opposed to policies that help the disadvantaged and hold negative opinions of low status group members (Pratto et al., 1994; Sidanius & Pratto, 1999).

The creators of SDO emphasize that the scale is a theoretical tool in service of the broader Social Dominance Theory (Pratto, Sidanius, & Levin, 2006). SDO is thus not strictly a personality theory, and levels of SDO are not proposed to be invariant across time and social situation. According to recent formulations, higher levels of SDO in high status group members are partly situational and group

members' SDO would decline if their group lost status or if they were forced into upward comparisons (Pratto et al., 2006). In a sample of Israeli participants, Levin (1996) found that there was no difference in the SDO levels of Askenazi (high status Jews) and Mizrachi (low status Jews) when both groups were primed to think of the Arab–Israeli conflict—in which both groups shared a common high status compared to the relevant outgroup—but that there was a difference when they were asked to consider their intra-religion ethnic divisions. Similarly, the white–black gap in SDO scores is only present among participants who believe that there is a large ethnic status gap between members of the two racial groups (Levin, 2004).

Along with Right-Wing Authoritarianism, SDO accounts for a substantial portion of the variation in prejudice across individuals (Altemeyer, 1998, 2006; Duckitt, 2001, 2006; Ekehammer, Akrami, Gylje, & Zakrisson, 2004; Sibley & Duckitt, 2008; Whitley, 1999). Endorsement of SDO predicts support for wars of dominance (Pratto et al., 1994), valuing the lives of one's own countrymen over foreigners (Pratto & Glasford, 2008), opposition to social welfare policies (Pratto, Stallworth, & Conway-Lanz, 1998), harsh sentences for low status defendants (Kemmelmeier, 2005), and sexist attitudes (Sibley, Wilson, & Duckitt, 2007a). SDO operates similarly across cultural contexts (Pratto et al., 2000). Importantly for present purposes, SDO has been shown to be related to both ingroup favoritism (Levin & Sidanius, 1999) and system justification type effects such as the derogation of lower status groups, even among low status group members (Henry, Sidanius, Levin, & Pratto, 2005; Overbeck, Jost, Mosso, & Flizik, 2004).

Almost all of the theoretical and empirical research on SDO treats it as a unidimensional measure, and it performs reasonably well as such. The scale consistently has high alphas and endorsement of SDO predicts many attitudes and beliefs related to prejudice, hierarchy, and inequality. As a consequence, it is one of the most widely used individual difference measures in the study of generalized prejudice (Sidanius & Pratto, 1999).

A Two-Factor Conceptualization of SDO: Jost and Thompson Identify Distinctions Based on Group Status

Jost and Thompson (2000) argued that SDO combines two related but distinct constructs: OEQ and support for GBD. They believed that treating SDO as a unidimensional construct fails to capture the ideological experiences of low status group members. For high status group members, endorsing the dominance of one's own group (high GBD) and resisting change to the social order (high OEQ) are highly consonant; ingroup dominance is the social order. For low status group members, however, ingroup dominance can only come at the expense of the current social order. For a low status group member to be high in SDO, they would need to promote their ingroup while simultaneously affirming the very social order that is disadvantaging their ingroup. Assuming that the individual recognizes that their group is low status, these are dissonant cognitions.

Consistent with this conceptualization, Jost and Thompson found that the correlation between OEQ and GBD was stronger in White students (higher status)

than in Black students (lower status). They also found reliable differences between Black and White participants in how GBD and OEQ correlated with ethnocentrism and self-esteem. For both racial groups, GBD was positively correlated with ethnocentrism. This is consistent with GBD as a group-justification factor. OEQ, however, was positively correlated with self-esteem for White participants, but negatively correlated for Black participants. This dissociation strongly suggests the operation of distinct constructs.

These results were consistent with system justification theory (Jost & Banaji, 1994; Jost et al., 2004), which suggests that low status individuals will experience a psychological cost if they defend the status quo against their self-interest. While both high and low status groups could endorse GBD and its associated ethnocentric beliefs without internal conflict, agreement with the OEQ statements—and their broad implications for the proper ordering of society—predicts very different outcomes depending on one's status in the system. For Black participants, opposing equality accepts the existing order and the implication that their group deserves to be of lower status. Thus, this system-justifying tendency is associated with lower self-esteem and increased neuroticism among Blacks (Jost & Thompson, 2000). Conversely, for White participants, greater OEQ was associated with higher self-esteem, insofar as it justifies their advantaged position.

In a subsequent study, Ashburn-Nardo, Knowles, and Monteith (2003) investigated implicit racial attitudes among African Americans. A stronger implicit preference for Blacks compared to Whites on an Implicit Association Test (IAT; see Nosek, Greenwald, & Banaji, 2007 for a review) was negatively correlated with OEQ, but was positively (but nonsignificantly) correlated with GBD.[1] This is consistent with Jost and Thompson's theorizing about the negative impact of high levels of OEQ on self- and own-group views for subordinate group members. An untested corollary prediction is that OEQ is positively related with implicit ingroup preference for Whites. This finding ought to generalize across social groups such that dominant groups will show positive relations between ingroup preference and both OEQ and GBD, while subordinate groups will show a split—positive relations with GBD, but negative relations with OEQ.

Jost and Thompson (2000) also considered GBD and OEQ in terms of social values. They found that ethnocentrism was reliably related to GBD, consistent with its framing as a social identity and ingroup promotion (group justification) construct, but OEQ was not. OEQ was more strongly linked to economic system justification ($\beta = .26$)—a general measure of the perceived fairness of the economic system—than was GBD ($\beta = .10$). This follows the trend of OEQ being more strongly correspondent to system justification motives. OEQ also predicted decreased support for affirmative action for women and minorities ($\beta = -.24$), whereas GBD did not.

These findings raise several interesting questions. One might have predicted that Whites high in ethnocentrism would be especially opposed to policies aimed at helping minorities, yet OEQ was a better predictor of affirmative action support than was GBD. Jost and Thompson speculated that this was because opposition to such redistributive policies among members of the dominant group grows more out of

[1] $r_{OEQ}(83) = -.38$, $r_{GBD}(83) = .10$, $t(80) = 3.73$, $p < .001$.

system justification than ingroup protection concerns, which raises the question of when and what kind of views GBD should better predict.

An Updated Conceptualization of Opposition to Equality (OEQ) and Group-Based Dominance (GBD) as Components of Social Dominance Orientation

The foregoing review provides initial support for a two-factor conceptualization of SDO. Until now, however, no attempt has been made to integrate the data that has subsequently emerged with Jost and Thompson's (2000) initial theorizing about the nature of OEQ and GBD. This article provides such a review and adds new evidence supporting a two-factor model. Further, by drawing on such a broad base of data, we are able to go beyond Jost and Thompson (2000) and make additional predictions that may not follow directly from their initial theorizing. We propose the following conceptualizations of the two-factors:

> *Group-Based Dominance* captures preference for one's own group compared to those of others. It is driven by negative attitudes toward the outgroup and the belief that the world is a competitive, zero sum, place. It is associated with individual differences in prejudice toward outgroups. Rather than reflecting approval of inequality in general, GBD exclusively concerns inequalities that have implications for the ingroup and is most strongly associated with active and aggressive hierarchy promotion.
> *Opposition to Equality* is a system justification construct. It is negatively predicted by personality variables related to empathy and universalism and it in turn predicts resistance to changing the status quo, regardless of ingroup involvement. OEQ is the driving force in pro-status-quo sentiment from low status group members.

We begin by considering the individual differences that may be related to OEQ and GBD. In assembling a list of these constructs, we are indebted to Jost and colleagues (Jost, Glaser, Kruglanski, & Sulloway, 2003) for their meta-analytic review of politically conservative ideologies. For this section of the article, we will consider the preexisting literature as well as new data from a large-scale web-based data collection (Project Implicit: https://implicit.harvard.edu/). Afterward we consider the political and social attitudes that are correlated with OEQ and GBD. This section will draw upon more data from Project Implicit as well as two other survey studies and a small meta-analysis of data from other researchers. In the final phase, we will address an alternative explanation for our results by producing a new version of the SDO scale that counterbalances item framing within subscale, showing that the pattern of results observed is not due to pro- and con-trait item wordings.

The Relationship Between OEQ and GBD

Overall, OEQ and GBD are positively correlated in all of the datasets we have examined. The strength of the relationship varies from moderate (Study 2 in this

article; $r = .39$) to strong (Cohrs, Moschner, Maes, & Kielmann, 2005; $r = .63$). In the largest dataset we considered, OEQ and GBD correlated $r = .47$ among 6,714 White participants (Nosek & Hansen, 2008).[2] Methodological factors such as superficially similar wording and intermixing of items may inflate the correlation somewhat. Even so, it is clear that there is both substantial shared and unique variance between OEQ and GBD. We hypothesize that the unique variance captures two distinct constructs.

Individual Differences Correlated with OEQ and GBD

Over the last 15 years, many individual difference and personality traits have been shown to correlate with SDO and even more have been shown to correlate with political orientation in general. For example, the meta-analysis by Jost and colleagues (2003) found that political conservatism—measured in a variety of ways, including SDO, Right-Wing Authoritarianism, the F-scale, the C-scale, and a simple liberal-conservative axis—was positively correlated with dogmatism, inflexibility, intolerance of ambiguity, need for order, personal need for structure, neuroticism, perception of a dangerous world, attention to danger and threat (variously measured), fear of death, mortality salience, and need for cognitive closure. Conservatism was negatively correlated with integrative complexity, cognitive flexibility, cognitive complexity, attributional complexity, sensation seeking, valuing broadmindedness, and openness to experience. Self-esteem and collective self-esteem had mixed relations across studies. Only a handful of these associations were derived from studies that employed SDO, most notably: attributional complexity, openness to experience, personal need for structure, self-esteem and collective self-esteem, perceptions of a dangerous world, and neuroticism. Though all of these were related to political orientation overall, not all were correlated with SDO in particular. For example, personal need for structure and collective self-esteem exhibited very weak relationships with SDO and the correlations with Rosenberg's self-esteem scale and neuroticism varied considerably in sign and magnitude across studies.

The relations of OEQ and GBD to these measures have not been extensively studied previously, so let us consider how we would expect these constructs to relate to each. From the above list, several broad categories can be extracted: self- and group-worth, cognitive engagement and closure, and perceptions of dangerousness and threat. The relationship of self-esteem with OEQ and GBD appears to be dependent on group status and, presumably, social context (Jost & Thompson, 2000). Thus, we do not predict that self-esteem will inherently be more related to one component or the other.

We would, however, expect cognitive engagement and need for cognitive closure to be more strongly negatively related to GBD than OEQ. Previous work has found that low Need for Cognition and high Need for Cognitive Closure are related to

[2] These data are reported as Study 1 in this article. OEQ and GBD correlated at $r = .42$ in the sample as a whole ($N = 9{,}531$).

increased use of stereotypes as cognitive shortcuts (Crawford & Skowronski, 1998; Neuberg & Newsom, 1993; Tam, Leung, & Chiu, 2008; Waller, 1993). Similarly, more education is correlated with less prejudice (e.g., Farley, Steeh, Jackson, & Reeves, 1994; Tumin, Barton, & Burrus, 1958). Thus, these cognitive measures are all indicative of majority group propensity to stereotype and engage in discriminatory behavior. Since we conceptualize GBD as our ingroup promotion and outgroup derogation factor, we expected it to be more strongly correlated with all three. Supporting this hypothesis, one study has shown that educational attainment was strongly negatively correlated with GBD, but was not related to endorsement of equality (Eagly, Diekman, Johannesen-Schmidt, & Koenig, 2004).

Perceptions of dangerousness and threat are moderately associated with SDO as a whole (Duckitt, 2001, 2006; Jost, Glaser et al., 2003). As we expect GBD to govern ingroup promotion and bias, it should be more closely tied to such defensiveness in response to group-level threat. We would, therefore, predict that GBD is more strongly related to dangerous world beliefs and Right-Wing Authoritarianism than is OEQ. Related to concern for the safety of the ingroup, two studies using the Portrait Values Questionnaire (PVQ) have found that GBD is more strongly related to valuing security—a composite of items such as "the safety of his country is very important to him" and "he wants his country to be safe from its enemies" (Schwartz et al., 2001, p. 526)—than is OEQ (Caricati, 2007; Cohrs et al., 2005).[3]

Also consistent with our conception of GBD being related specifically to ingroup security and responses to threat, patriotic feelings toward the US are positively related to GBD among the dominant ethnic group (Whites), but this relationship actually reversed among a sample composed of members of a politically less powerful—and sometimes persecuted—group (Latinos; Peña & Sidanius, 2002).

Acceptance of hierarchy is also related to conservatism and SDO (Altemeyer, 1998; Pratto et al., 1994). SDO is, in fact, centrally focused on acceptance of group-oriented inequality (Pratto et al., 1994; Pratto et al., 2006). In splitting SDO into OEQ and GBD, we have introduced a degree of ambiguity to this relationship. High GBD, we believe, is more strongly related to promotion of hierarchies—especially ingroup beneficial hierarchies—and high OEQ is more strongly related to passive acceptance of the status quo and rejection of active attempts to help the disadvantaged. This distinction can be illustrated using the power distance beliefs scale (Brockner et al., 2001). Sample items include "there should be established ranks in society with everyone occupying their rightful place regardless of whether that place is high or low in the ranking," and "an organization is most effective if it is clear who is the leader and who is the follower." These items endorse hierarchy in a prescriptive manner. Consistent with our prediction GBD is more closely related to power distance beliefs than is OEQ (Guimond et al., 2007).[4]

[3] Caricati (2007): $r_{OEQ}(162) = .00$, $r_{GBD}(162) = .19$, $r_{GBD-OEQ}(162) = .50$, $t(159) = 2.45$, $p < .01$. Cohrs et al. (2005): $r_{OEQ}(1564) = -.21$, $r_{GBD}(1564) = .30$, $r_{GBD-OEQ}(1573) = .63$, $t(1561) = 4.11$, $p < .001$. Correlations from Cohrs et al. obtained from authors.

[4] $r_{OEQ}(914) = -.23$, $r_{GBD}(914) = -.52$ (the correlation between OEQ and GBD is not reported but the difference in their relationships with power distance beliefs is significant given any plausible value).

Study 1A—Individual Difference and Personality Relations of OEQ and GBD

Although the existing literature provides support for our predictions regarding individual difference correlates of OEQ and GBD, there was only limited data concerning several relationships of interest. Specifically, we had only one measure of educational attainment from the cognitive closure and cognitive engagement category and only the security dimension of the PVQ from the threat category. We thus employed a dataset that would allow us to examine the relations of OEQ and GBD with several key cognitive measures—Need for Cognition (Cacioppo, Petty, & Kao, 1984), Need for Cognitive Closure (Webster & Kruglanski, 1994), and educational attainment—along with a more external threat-based political ideology: Right-Wing Authoritarianism (Altemeyer, 1996). This dataset would also allow us to probe the relation of OEQ with another measure of equality support, Humanitarianism–Egalitarianism (Katz & Hass, 1988).

Method

We made use of a very large dataset ($N = 66{,}074$) that included SDO along with a variety of relevant individual difference and implicit and explicit measures of attitudes toward social groups, political issues, consumer goods, and other topics. This dataset, known as "Attitudes 2.0," was amassed at the Project Implicit research website (https://implicit.harvard.edu/) from September 17, 2004 to October 17, 2006. Volunteers registered to participate in research during which they completed a demographics questionnaire. Each time they visited the site, they were randomly assigned to a study (including this one) among dozens of possible studies.

"Attitudes 2.0" is a massive multivariate dataset with a planned missing data design. It included about two dozen individual difference questionnaires, 95 IATs measuring implicit attitudes or identity for a variety of social topics, and dozens of self-report attitude, identity and belief measures about the 95 social topics (see Nosek & Hansen, 2008 for a report of this dataset unrelated to the current use). The IAT and attitude questionnaire were presented in a randomized order, the individual differences questionnaire was always last. A single session required approximately 10 min to complete.

When a registered participant initiated a study session, he or she would be randomly assigned to complete one individual difference questionnaire, one IAT, and a subset of self-report measures about the same topic measured by the IAT. Therefore, a single session administered approximately 2% of the total numbers of measures in the data collection. Each time the participant returned and initiated a new session, he or she would receive a new random set of measures except that the topics measured by the IAT and self-report items were never repeated for a single participant.

This design facilitated the collection and comparison of many measures without creating an undue burden on any one participant and was feasible only because there were so many total participants. The participants were very heterogeneous but not representative of any definable population.

For the purposes of this article, we focus on the 9,537 participants who completed the SDO scale in one of their sessions. Though this is only a fraction of the total sample, it provides ample statistical power for our purposes. To avoid multiple comparison issues, we selected in advance four demographic items, seven individual difference measures, and three clusters of object pairs (implicit and explicit attitudes data) for comparison with the SDO subscales. No participant ever completed two individual difference measures in the same study session; therefore, all correlations between individual difference measures are across study sessions (from minutes to months apart). Participants may have completed the IAT and explicit measures related to given object pairs in the same session as the SDO scale, but they need not have done so.

To avoid complications related to differences across majority and minority groups, only white participants were included in analyses. This left a sample of 6,714. No minority group was present in the sample to a sufficient degree to be analyzed separately.[5]

Measures: Individual Difference and Demographic

Of the 20 individual difference measures, 7 that had particular relevance for our hypotheses were selected for analysis. As mentioned above, four were Egalitarianism (Katz & Hass, 1988), Need for Cognition (Cacioppo et al., 1984), Need for Cognitive Closure (Webster & Kruglanski, 1994), and Right-Wing Authoritarianism (Altemeyer, 1996). We also examined the Protestant Work Ethic (Katz & Hass, 1988), as a source of contrast with Humanitarianism–Egalitarianism, Belief in a Just World (Dalbert, Lipkus, Sallay, & Goch, 2001), due to its association with system justification (Jost, Blount, Pfeffer, & Hunyady, 2003), and the Balanced Inventory of Desirable Responding—Impression Management (Paulhus, 1998).

Of the demographic measures, four were selected for analysis. These were: political orientation (7-point, 3 to −3 scale; strongly liberal—strongly conservative $M = .90$, $SD = 1.71$), education level (5-point scale; some high school or less 5.3%, high school diploma 6.4%, some college 35.3%, bachelor's degree 21.7%, and advanced degree 31.4%), self-reported social class (5-point scale; lower class 1.6%, lower-middle class 13.4%, middle class 54.1%, upper-middle class 27.8%, and upper class 3.1%), and self-reported family income (5-point scale; less than $25,000 19.5%, $25K–$49.9K 22.6%, $50K–$74.9K 20.9%, $75K–$149.9K 25.1%, >$150K 11.9%). There were more women (65%) than men (35%) in the sample.

Results and Discussion

The bivariate correlations of these measures with the two SDO subscales were examined. The SDO subscales were each computed with 5 items taken from the SDO6 scale ($\acute{\alpha} > .70$ in each case). The subscales are coded such that higher

[5] For example, African Americans were one of the more common minority groups ($N = 469$) but, due to the nature of the design, the N for correlations with any particular IAT rarely exceeded 20 and the N for correlations with any particular individual difference measure rarely exceeded 40.

numbers imply greater support for GBD and OEQ. Need for Cognitive Closure was longer than most of the other scales so it was split into two parts for study administration. One part consisted of the discomfort with ambiguity and preference for order subscales and the other of the decisiveness, closed-mindedness, and preference for predictability subscales. Others have argued that the decisiveness subscale does not measure the same underlying construct as the other four (Neuberg, Judice, & West, 1997). In this dataset, decisiveness correlated more weakly with the other four scales than they did with each other, so we did not include it in the analysis. The remaining four subscales were averaged into a single composite score for ease of interpretation, though the results are similar when they are treated separately as halves or as four distinct measures. With the exception of Need for Cognitive Closure, all other scales were scored in a manner consistent with their original instructions.

The correlations between GBD and OEQ and the seven individual difference measures are presented in Table 1. All differences are significant except those related to Belief in a Just World. Katz and Hass's (1988) measure of Humanitarian–Egalitarianism correlated very strongly with OEQ (corrected for alphas $r = -.80$). This suggests that Humanitarianism–Egalitarianism is conceptually very similar to the negation of OEQ, and is especially notable given that the study design ensured that these two scales were administered in separate study sessions.

Similar to Humanitarianism–Egalitarianism is another value from the PVQ, universalism. It concerns valuing the equality of all people, and wanting justice

Table 1 Zero order and partial correlations of Group-Based Dominance (GBD) and Opposition to Equality (OEQ) with individual difference and demographic measures (Study 1A)

	N	Zero order correlations		Partial correlations	
		GBD	OEQ	GBD	OEQ
GBD			.47		Controlled
OEQ		.47		Controlled	
Belief in a Just World	730	.14***	.09*	.11**	.03
Humanitarianism–Egalitarianism	729	−.38***	−.62***	−.15***	−.54***
Impression Management BIDR	709	−.22***	−.05	−.22***	.06
Need for Cognition	679	−.19***	−.02	−.21***	.10**
Need For Cognitive Closure	1171	.23***	.08*	.22***	−.03
Protestant Work Ethic	704	.35***	.25***	.28***	.11**
Right-Wing Authoritarianism	672	.42***	.33***	.32***	.18***
Liberalism/Conservatism scale	6491	.30***	.42***	.14***	.33***
Education	5316	−.18***	−.02	−.20***	.07***
Social class	1046	.05	.20***	−.05***	.14***
Family income	6500	.02	.14***	−.04	.19***

Note: Differences between the correlations of OEQ and GBD with all outcome variables except Belief in Just World are significant at the $p < .05$ level. Higher values on the Liberalism/Conservatism scale indicate greater conservatism

* $p < .05$, ** $p < .01$, *** $p < .001$

even for those one does not personally know. Past research has shown that it, too, is more related to OEQ than GBD (Caricati, 2007; Cohrs et al., 2005).[6]

As expected, the measures of cognitive engagement, cognitive closure, and educational attainment all correlated significantly more strongly with GBD than with OEQ, with OEQ having almost no relation to any of the measures while GBD was negatively associated. Again, this was predicted due to the associations of these constructs with stereotyping, which we believe should be related to GBD. OEQ is, however, positively correlated with the demographic measures of social class and family income. This is consistent with a self-interest perspective; those who benefit from inequality are more likely to support its continuance. Similar findings have been observed elsewhere (e.g., Jost & Thompson, 2000; Wakslak, Jost, Tyler, & Chen, 2007). It is instructive, to see the divergence between educational attainment and social class, insofar as these variables are themselves positively correlated.

Right-Wing Authoritarianism correlates more strongly with GBD than with OEQ. This is another piece of evidence suggesting that GBD is more related to dynamics of group justification than is OEQ. The Protestant Work Ethnic also correlated more strongly with GBD, something we will reflect on in Study 2.

Impression management concerns were correlated with GBD, but not with OEQ. This implies that people who were attempting to present themselves positively refrained from fully endorsing GBD but did not feel likewise compelled to do so with OEQ. This may indicate differences in the perceived acceptability of endorsing hierarchy in each of these ways.

Overall political orientation was significantly more strongly correlated with OEQ than GBD. This pattern is different than the one observed by Jost and Thompson (2000). In that case, however, conservatism was operationalized as a multi-item composite of certain conservative beliefs, which included more anti-outgroup attitudes (i.e., anti-gay rights) than the operationalization of political orientation in this study (i.e., self-placement on a "strongly liberal" to "strongly conservative" dimension). These results suggest that our participant's own definition of conservatism is more related to system justification beliefs (especially the justification of inequality) than to GBD attitudes, which is consistent with past research (Jost, Glaser, et al., 2003).

Study 1B: IAT and Explicit Preferences

A significant test of the multidimensionality of SDO is whether each dimension differentially predicts not just individual difference measures but also social and political attitudes. We expect that OEQ will predict rejection of hierarchy attenuating social policies, lack of pro-minority group attitudes, and indifference to the disadvantaged. GBD should predict hostility towards outgroups, ingroup bias, and stereotyping.

[6] Caricati (2007): $r_{OEQ}(162) = -.58$, $r_{GBD}(162) = -.45$, $r_{GBD–OEQ}(162) = .50$, $t(159) = 2.03$, $p < .05$. Cohrs et al. (2005): $r_{OEQ}(1564) = -.55$, $r_{GBD}(1564) = -.42$, $r_{GBD–OEQ}(1573) = .63$, $t(1561) = 7.50$, $p < .001$.

In Jost and Thompson (2000), GBD was consistently linked to ethnocentrism and OEQ was shown to be more closely related to economic system justification and support for affirmative action, consistent with our own theorizing about the constructs. Since this demonstration, only a handful of studies have examined the subcomponents of SDO as they differentially relate to social policy attitudes. Some (e.g., O'Brien & Major, 2005; Reyna, Henry, Korfmacher, & Tucker, 2006) include items from the OEQ subscale when assessing system-justifying tendencies, but omitted GBD items, which prohibits comparison. Similarly, Wakslak and colleagues found that moral outrage mediated the effect of OEQ on support for redistributive policies (Wakslak et al., 2007), but did not contrast OEQ with GBD. Wakslak and colleagues also defined redistributive policy support largely in terms of support for affirmative action and similar programs (Wakslak, personal communication). Though support for affirmative action is often treated as synonymous with support for redistributive social policies in the social psychology literature (e.g., Garcia, Desmarais, Branscombe, & Gee, 2005; Lowery, Knowles, & Unzueta, 2007), this is only one possible definition and may not represent the full range of redistributive policies.

One paper that did explicitly contrast a support for equality measure with GBD found that the equality construct was more predictive of social compassion—i.e., willingness to help the disadvantaged and improve living standards (Eagly et al., 2004). This is consistent with a system justification framing. GBD was more predictive of opposition to the rights of women and homosexuals (Eagly et al., 2004).

Measures: IAT and Explicit Preferences

Returning to the Project Implicit data, we now consider the attitude pair data. For this task, participants' explicit and implicit preferences were measured for one attitude object over another. Of the 95 object pairs, 15 were selected for analysis because they fell into one of three categories.

Category 1: Ingroup Versus Outgroup

We have discussed GBD as being related to ingroup favoritism, outgroup derogation, and stereotyping. In the majority group, this should manifest clearly as a preference for the ingroup over the outgroup. In this category, participants contrasted between the items in at least one of the following pairs: American places versus Foreign places; European Americans versus African Americans; Straight People versus Gay People; and Whites versus Asians. We limited this analysis to only those participants who reported being US citizens; thus, in all cases except that of Straight versus Gay, all participants belonged to the majority group. If this sample corresponds to national trends in sexual orientation, the overwhelming majority of the sample would also identify as hetereosexual.

Category 2: Political Issues

In Study 1A, we found that political orientation as a whole was significantly more related to OEQ than GBD. Here, we test the breadth of that effect with alternative measures. There were six relevant pairs in this set: Democrats versus Republicans; John Kerry versus George Bush; Liberals versus Conservatives; Pro Choice versus Pro Life; Religion versus Atheism; and Gun Rights versus Gun Control.

Category 3: Economic Issues

OEQ should be a much better predictor than GBD of support for redistributive and liberal economic policies. There were five relevant pairs in this set: Management versus Organized Labor; Non-Profits versus Corporations; Rich People versus Poor People; Social Programs versus Tax Reductions; and Beautiful People versus Rich People.

In each case, participants completed a battery of explicit measures and an IAT measuring the relative strength of association between the object pairs and evaluative attributes (good/bad, pleasant/unpleasant, positive/negative). In addition to the IAT, we selected a single self-report item for analysis: preference for 1 item in the pair over another (a 7-point bipolar scale ranging from "strongly prefer" X to "strongly prefer" Y).

Results and Discussion

Data were analyzed in AMOS using maximum likelihood estimation for missing observations. Models were constructed that used OEQ and GBD as correlated predictor variables of latent constructs. Separate latent constructs were created for the explicit and implicit measures from each of the three categories, making six in all.

Table 2 gives the standardized regression weights of the various object pairs on their latent factors as well as the standardized regression weights of the SDO subscales predicting these factors and fit indices. As expected, OEQ was the better predictor of both implicit and explicit attitudes related to economic issues and wealth. This is consistent with our conception of OEQ, insofar as system justification should be heavily related to economic redistribution and willingness to help others. OEQ was also significantly more predictive of political orientation on both implicit and explicit measures, replicating the suggestive finding from the liberal-conservative self-placement item.[7] This further supports the proposition that political orientation is more a function of concern for inequality than of intergroup biases.

Intergroup attitudes, which we expected to be predicted more strongly by GBD than OEQ, displayed a more complex pattern. OEQ and GBD independently

[7] If the political issues composite is restricted to the more theoretically central pairings (liberal and conservative; John Kerry and George Bush; and Democrat and Republican) the pattern for OEQ and GBD is unchanged.

Table 2 Standardized regression weights of each object pair on its category and the regression weights of Opposition to Equality (OEQ) and Group-Based Dominance (GBD) predicting the resulting factors (Study 1B)

	Wealth	IAT	Explicit		Political	IAT	Explicit		Ingroup	IAT	Explicit
Management	Organized labor	−0.43	0.59	Democrats	Republicans	−0.78	−0.92	American Places	Foreign Places	0.46	0.47
Non-Profits	Corporations	−0.62	−0.77	John Kerry	George Bush	−0.65	−0.91	European Americans	African Americans	0.50	0.69
Rich People	Poor People	0.38	0.68	Liberals	Conservatives	−0.57	−1.01	Straight People	Gay People	0.46	0.66
Social Programs	Tax Reductions	−0.75	−0.83	Pro Choice	Pro Life	−0.38	−0.61	Whites	Asians	0.59	0.55
Beautiful People	Rich People	−0.43	−0.23	Religion	Atheism	0.36	0.48				
	GBD	0.17	0.19		GBD	0.07	0.15		GBD	0.24	0.30
	OEQ	0.36	0.50		OEQ	0.44	0.39		OEQ	0.10	0.34
	RMSEA	0.00	0.02		RMSEA	0.01	0.02		RMSEA	0.02	0.01

RMSEA fit indices are for models containing OEQ and GBD predicting latent variables composed of the contributing 4–6 items

predicted intergroup attitudes both explicitly and implicitly. Further, neither OEQ nor GBD was a significantly better predictor than the other for explicit attitudes and, though GBD was a non-significantly better predictor of implicit attitudes, the difference was not as large as we had expected. That both factors are contributing unique predictive validity is inconsistent with our hypotheses. We investigated this further in Study 2.

Study 2—GBD and OEQ Predicting Ambivalent Intergroup Attitudes

One possible explanation for both OEQ and GBD predicting intergroup attitudes is related to attitudinal ambivalence. GBD should predict outgroup attitudes because a person high in GBD would want to ensure that the ingroup dominates the outgroup. OEQ might also predict outgroup-related attitudes if the successes of the outgroup were challenging to the status quo. As a system justification construct, OEQ should be associated with attitudes aimed at helping a disadvantaged outgroup improve their status. As an ingroup promotion construct, GBD should be more closely linked to hostile attitudes against that same outgroup, intended to specifically keep that group in its low status position. Each would then predict some unique variance in overall views of that group. Attitudes toward Blacks, for example, can be decomposed into pro- and anti-Black components, with OEQ predicting rejection of the former and GBD predicting endorsement of the latter. Previous work has shown that pro-Black attitudes are closely linked to Humanitarian–Egalitarian beliefs whereas anti-Black attitudes, such as the stereotype that blacks are lazy, are more closely linked to the Protestant Work Ethic (Katz & Hass, 1988). In Study 1A, OEQ was very tightly associated with rejection of Humanitarian–Egalitarian beliefs—almost to the point of collinearity—whereas GBD was somewhat more strongly associated with the Protestant Work Ethic than was OEQ. In this study, we examine the possible divergences between OEQ and GBD in their relations with pro-Black and anti-Black attitudes. We employ a slightly revised SDO scale that clarifies GBD items by specifying that it is the ingroup who should be dominant over the outgroup and modifies OEQ items to refer to "people" rather than "groups." Both of these changes better capture the constructs as both we and Jost and Thompson (2000) conceptualized them.

Participants, Measures, and Procedure

Because this study examined attitudes toward African Americans, only non-Black participants were recruited. Three-hundred and twenty non-Black participants (124 male, 195 female, 1 unreported; median age = 32) completed this study and passed attention checks. All were recruited through Amazon's Mechanical Turk site for a short study on "social attitudes."

Participants completed the pro- and anti- Black scales from Katz and Hass (1988) in counter-balanced order as well as a modified version of the SDO scale. A composite mean was calculated for each scale (separately for OEQ and GBD subscales). Demographics were collected last.

Results and Discussion

Eight univariate outliers from the GBD and OEQ measures were removed (scores > 3 SD from mean). In the remaining sample, GBD and OEQ were positively correlated r (312) = .39, $p < .001$. All four scales had good reliability (OEQ $\alpha = .89$; GBD $\alpha = .78$; Anti-Black $\alpha = .85$; Pro-Black $\alpha = .87$). The predicted patterns regarding pro- and anti-Black attitudes were observed, though the difference in correlations was not significant for anti-Black attitudes. OEQ had a significantly stronger negative association with pro-Black attitudes ($r = -.32$, $p < .001$) than did GBD ($r = -.13$, $p < .05$; $t(309) = 3.18$, $p < .001$; OEQ partial $r = -.29$, $p < .001$; GBD partial $r = -.00$, $p > .97$). GBD was a non-significantly better predictor of Anti-Black attitudes ($r = .35$, $p < .001$) than was OEQ ($r = .31$, $p < .001$; $t(309) = .70$; OEQ partial $r = .20$, $p < .01$, GBD partial $r = .27$, $p < .001$). These results suggest that the SDO subscales may tap distinct evaluative features attitudes towards outgroups.

In Study 1B, the intergroup attitudes questions measured relative preference between the contrasting groups (Black versus White, American versus Foreign). This preference is, by necessity, global, encompassing both pro- and con- attitudes for both the ingroup and the outgroup. These results suggest that it is this amalgamation that results in GBD and OEQ each having unique predictive power. It would be interested to attempt to experimentally prime system-justifying versus group-justifying concerns and test whether this manipulation differentially affects the predictive powers of GBD and OEQ.

Study 3—Redistributive Social Policies and Symbolic Racism

Studies 1B and 2 provide some support for our prediction that GBD and OEQ have distinct relations with social policy attitudes. In those studies, however, the attitude measures were very general. In Study 3, we examine the relationships of GBD and OEQ to more specific policy attitudes. The target outcomes of greatest interest to us were racial attitudes, redistributive economic policies, and redistributive racial policies. We believe that views on these issues are especially socially relevant and that divergence between OEQ and GBD in relation to them would be a very strong indication that using the SDO subscales separately can enhance our understanding of real-world issues.

We also wished to bridge the gap between redistributive policies as discussed by social psychologists, who are often concerned about whether high power groups are willing to help low power groups (especially low power ethnic groups), and redistributive policies as discussed by political scientists studying welfare states, who are more concerned with issues like unemployment insurance, tax policy, and direct aid to the poor.

Our initial review provides evidence that people endorsing OEQ are less likely to support social justice concerns and exhibit preference for rich people over poor people, management over labor, and tax reductions over social programs. Though it is suggestive that individuals low in OEQ are more likely to prefer the poor over the

rich, it does not necessarily follow that they would support policies that would level the playing field between rich and poor. Other ideological factors might intervene. For example, one could feel sorry for the poor but also think that it was not the government's task to fight poverty. Thus, to show that OEQ is a system justification variable we must link it directly to willingness to alter the status quo.

Study 2 suggests that GBD is a better predictor of negative racial attitudes than is OEQ. In Study 3, we continued our investigation of prejudice and GBD by using a more conventional racism scale, symbolic racism (Henry & Sears, 2002), which taps negative attitudes toward the outgroup. We anticipate that GBD will be more strongly associated than OEQ with symbolic racism.

Redistributive racial policy attitudes are at the intersection of redistributive policies (predicted by OEQ) and racial attitudes (often predicted by GBD). We expect that support for such policies will be more a function of OEQ than GBD based on the Jost and Thompson's (2000) results concerning affirmative action and OEQ's relation to pro-Black attitudes (Study 2), but we are intrigued by the expected divergence between hostile racism (GBD) and resistance to affirmative action (OEQ).

We also used two other popular measures related to ideology: Right-Wing Authoritarianism and Belief in a Just World. Cohrs and colleagues (2005) report evidence that RWA is more closely associated with GBD than OEQ, so here we seek to replicate that effect (see also Study 1A). Belief in a Just World is often treated as a system justification construct (Jost, Blount, et al., 2003; Jost & Hunyady, 2005), as is OEQ (Wakslak et al., 2007). In Study 1A, Belief in a Just World scores correlated equally well with both OEQ and GBD. This was surprising. Here, we use a different Belief in a Just World scale to test the robustness of that finding.

Given the framing of OEQ as a humanitarianism indicator, emotional responses to inequality should be more strongly related to OEQ than GBD. We include three such measures, existential guilt and moral outrage with respect to inequality—drawn from Wakslak and colleagues (2007), as well as collective guilt (modified from Powell, Branscombe, & Schmitt, 2005). The latter measure has been related to support for race-based affirmative action in previous work (Powell et al., 2005).

Method

Participants

174 participants were recruited from Craigslist New York or Craigslist Boston using an ad that promised a $5 Paypal or Amazon credit in exchange for completing a 15-min survey. Data from 17 participants were disregarded due to abnormally fast completion times, leaving 157 participants (39 male, 118 female; median age = 28; median education = four-year college graduate) in the final sample.

Measures

Many of the measures employed were either well-established scales or were closely adapted from such. With the exception of 1 item from the OEQ subscale (noted below), these scales were analyzed in their entirety.

Social Dominance Orientation (SDO) The standard 16-item SDO scale (Pratto et al., 1994) was used. For analysis purposes, the scale was split into the OEQ and GBD subscales (Jost & Thompson, 2000). One item from the OEQ subscale—"We should strive to make incomes as equal as possible"—was omitted because its wording was too similar to dependent measure of support for redistributive policy. This omission did not meaningfully affect the results.

Right-Wing Authoritarianism (RWA) We used Altemeyer's (2006) 22-item (including 2 filler items) RWA scale.

Belief in a Just World The Belief in a Just World for Others scale developed by Lipkus and colleagues (Lipkus, 1991; Lipkus, Dalbert, & Siegler, 1996) has repeatedly been shown to be a better predictor of social policy attitudes than the Belief in a Just World for Self scale (Bègue & Bastounis, 2003; Sutton & Douglas, 2005). Thus, we used the former (8 items). This is different from the scale used in Study 1A.

Moral Outrage We used 4 items from Wakslak and colleagues' (2007) moral outrage scale: (1) "I feel really angry when I learn about people who are suffering from injustice," (2) "I feel morally outraged by social injustice," (3) "I am enraged when I hear about the filthy living conditions which some people must live in because they are poor," and (4) "It makes me furious to see how unfair disadvantageous living conditions of the poor can be."

Existential Guilt We used 3 items from Wakslak and colleagues' (2007) existential guilt scale: (1) "My conscience starts to bother me when I compare my situation to that of people who are less fortunate than me," (2) "I often feel guilty when I receive a privilege I don't really deserve," and (3) "I feel uncomfortable when someone pulls a few strings for me." A fourth item was administered but later omitted from the analysis because it did not relate sufficiently to the other three.

Collective Guilt We used a 7-item scale developed by Powell and colleagues (2005). This scale was slightly modified to refer to the actions of "my group" toward "the disadvantaged" as opposed to the actions of "White Americans" to "Black Americans." Examples of items include "I feel guilty about my groups' harmful actions toward the disadvantaged" and "Sometimes I feel guilty because of the benefits that being part of my group brings to me."

Redistributive Policy Support Often social psychologists use the term "redistributive policies" to refer to affirmative action style policies (Lowery et al., 2007). Scholars of comparative politics (e.g., Esping-Andersen, 1990), on the other hand, use the term to refer to social welfare policies that provide aid to the economic lower classes or insurance against negative life events (i.e., job loss).

To cover both definitions, we created two scales. One measured attitudes towards the federal government's institution of affirmative action style programs. This 7-item scale drew from items created by Wakslak and colleagues such as: "The federal government should use hiring quotas to make sure that they employ a certain percentage of minorities and females" and "The federal government should not give special attention to job applicants based on their race or sex" (reverse scored). The second scale was composed of items measuring attitudes towards helping the poor and redistributing wealth from the rich. Two items were drawn from the same scale as above; the rest were original. Sample items include "we should increase the tax burden on the rich, relative to the poor" and "the government should increase its spending on poverty-related programs." All items from the second scale appear in Appendix 1.

Symbolic Racism The 2000 version of the symbolic racism scale (8 items) was used (Henry & Sears, 2002). This is a traditional racism scale that includes such items as "generations of slavery and discrimination have created conditions that make it difficult for blacks to work their way out of the lower class" and "over the past few years, blacks have gotten more economically than they deserve."

Procedure

Advertisements were posted on Craigslist New York and Boston inviting anyone over the age of 18 to participate. A link to the survey instrument was included in the advertisement. Upon clicking on the link, participants were redirected to one of several versions of the survey. The two redistributive attitudes scales and the symbolic racism scale were always presented last, whereas the other scales were presented in varying orders based on a Latin square design. Demographic measures appeared at the end.

Results and Discussion

The primary question of interest is the degree to which OEQ and GBD have different relations to the other ideological constructs (Right-Wing Authoritarianism and Belief in a Just World), the emotional reaction constructs (Moral Outrage at Inequality, Collective Guilt, and Existential Guilt), and the primary dependent measures (Support for Redistributive Economic Policies, Support for Affirmative Action, Symbolic Racism). Table 3 presents the reliabilities, means, and standard deviations of all measures along with their intercorrelations.

To examine the unique variance of OEQ and GBD, we calculated the partial correlations of each with the various outcome measures, testing the effect of one subscale while controlling for the other (Table 4). As predicted, GBD again independently predicted Right-Wing Authoritarianism ($r = .37$) and Symbolic Racism ($r = .37$), whereas OEQ explained independent variance in neither. This supports our interpretation of GBD as being tied to especially negative attitudes regarding outgroups and hostility towards them.

Table 3 Descriptive statistics and correlations (Study 3)

	Descriptive statistics		Correlations									
	Reliability	Mean	1	2	3	4	5	6	7	8	9	10
Opposition to Equality	.86	2.29 (1.02)										
Group-Based Dominance	.86	2.72 (1.20)	.45**									
Right-Wing Authoritarianism	.94	3.71 (1.63)	.19*	.41**								
Belief in a Just World	.88	3.70 (1.13)	.07	.43**	.38**							
Existential Guilt	.69	4.14 (1.06)	−.16	−.07	−.01	.04						
Collective Guilt	.87	4.39 (1.18)	−.24**	−.11	−.05	−.03	.41**					
Moral Outrage	.87	5.45 (1.09)	−.34**	−.25**	−.12	−.19*	.33**	.35**				
Affirmative Action	.67	3.72 (0.91)	−.14	−.03	−.06	−.03	.04	.06	.21**			
Economic Redistribution	.81	5.22 (1.09)	−.52**	−.35**	−.25**	−.19*	.22**	.15	.39**	.18*		
Symbolic Racism	.83	0.43 (0.19)	.31**	.45**	.35**	.29**	−.05	−.20*	−.24**	−.31**	−.32**	
Conservatism	NA	3.31 (1.56)	.20*	.22**	.52**	.24**	−.11	−.18*	−.22**	−.18*	−.37**	−.25**

Note: Right-Wing Authoritarianism is scored on a 1–9 scale and Symbolic Racism is scored on a 0–1 scale. All other measures are 1–7

* $p < .05$, ** $p < .01$, *** $p < .001$

Table 4 Partial correlations of Opposition to Equality (OEQ) and Group-Based Dominance (GBD) to attitude measures (Study 3)

	OEQ	GBD
Right-Wing Authoritarianism	−.01	.37***
Belief in a Just World	−.15*	.45***
Collective Guilt	−.21**	.00
Existential Guilt	−.14↑	.00
Moral Outrage	−.26***	−.12
Support for Affirmative Action	−.15↑	.04
Support for Economic Redistribution	−.44***	−.16*
Symbolic Racism	.13	.37***
Conservation	.12	.15

↑ $p < .10$, * $p < .05$, ** $p < .01$, *** $p < .001$

We had also predicted that OEQ would be more closely associated with emotional reactions to inequality. OEQ independently predicted a reduction in each of these constructs: existential ($r = -.14$) and collective guilt ($r = -.21$), as well as moral outrage ($r = -.26$). GBD did not explain any unique variance in any of these measures. This supports our argument that sympathetic emotional engagement with disadvantaged groups is more a factor of OEQ than GBD. OEQ also independently predicted support for affirmative action ($r = -.15$), and, especially, support for redistributive economic policies ($r = -.44$). GBD only explained unique variance in support for redistributive economic policies, and even that weakly ($r = -.16$) compared to OEQ ($r = -.44$).

Let us consider the main outcome measures: symbolic racism, support for affirmative action, and support for redistributive economic policies. Given that African Americans are disproportionately poor, one might have expected that there would not be much of a divergence on the redistributive policy and racism measures; this would have been consistent with the racialized views of welfare policies prevalent in public opinion surveys of the 1980s and 1990s (Gilens, 1999; Kluegel & Smith, 1986). Instead, there is a clear split between hostile intergroup attitudes, as represented by symbolic racism, and the social policy measures of support for redistributive economic and racial policies. The contributions of GBD and OEQ to each of these followed predictions. OEQ predicted support for affirmative action (replicating Jost and Thompson, 2000) and redistributive economic policies, whereas GBD did not. Likewise, GBD was uniquely predictive of symbolic racism, whereas OEQ was not.[8] Notably, symbolic racism was strongly related to affirmative action support. This means that the lack of a direct effect between GBD and affirmative action support counters what would otherwise be a fairly strong indirect effect, Sobel $Z = 3.63$, $p < .001$, making it all the more notable that OEQ is the primary predictor of affirmative action attitudes.

Surprisingly, GBD explained substantial variance in Belief in a Just World for Others ($r = .45$), whereas OEQ explained far less ($r = .15$). This contradicts results of Study 1B and suggests a useful direction for future research.

[8] Removing the 10 Black participants did not alter this conclusion. Rather, it strengthening the divergence: GBD partial $r = .38$, $p < .001$; OEQ partial $r = .11$, $p = .19$.

Study 4—Meta-Analysis with Authoritarianism

In three samples (Study 1, Study 3, Cohrs et al., 2005), GBD correlated more strongly with RWA than did OEQ. RWA concerns submission to authority, support for conventionality, tradition, and social conformity. Authoritarians denigrate outgroups because they are perceived to be different and potentially dangerous. This raises the question of the nature of the relationship between the SDO subscales and RWA (see Altemeyer, 1998). Is GBD the authoritarian component of SDO, or are GBD and OEQ both distinct from authoritarianism?

Since SDO and RWA are two of the most frequently used individual difference measures in the study of prejudice, there is a significant literature contrasting their relative effects. Central in this research is work by John Duckitt and Chris Sibley (e.g., Duckitt, 2001; Duckitt & Sibley, 2007; Sibley & Duckitt, 2008; Sibley, Liu, Duckitt, & Khan, 2008; Sibley et al., 2007a, b; Sibley, Wilson, & Robertson, 2007). According to Duckitt's (2001) original model (Fig. 1), Right-Wing Authoritarianism is related to a desire for social conformity and beliefs that the world is a dangerous place. SDO stems from a tough-minded view of the world and a sense that it is a competitive place. Sibley and Duckitt were generous enough to allow us to reexamine data from several of their studies (Duckitt & Sibley, 2007; Sibley et al., 2008, Study 2; Sibley et al., 2007a, Study 2; Sibley et al., 2007b; Sibley, Wilson, & Robertson, 2007).

We addressed two questions. First, what is the magnitude and consistency of the interrelations between these three constructs? Second, is a close relationship between GBD and RWA the result of a common core of related beliefs? Duckitt (2001)'s dual process model is one of ideological development; causal paths are postulated from a desire for social conformity, leading to beliefs that the world is a dangerous place, which in turn, leads to authoritarian beliefs, whereas tough-mindedness leads to beliefs about the competitive nature of the world which, in turn, leads to SDO. If GBD and RWA share the same origins of social conformity and dangerous world beliefs, then one might conclude that OEQ is the "real" SDO in the context of the Duckitt model. If, on the other hand, GBD's origins are quite

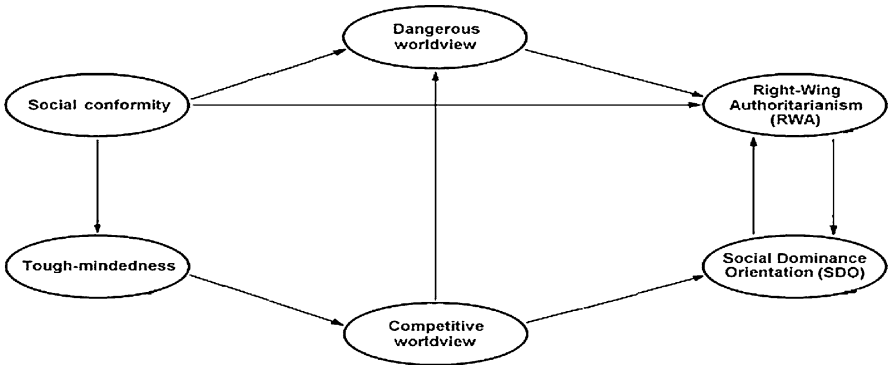

Fig. 1 Duckitt's (2001) model for the formation of Social Dominance Orientation and Right-Wing Authoritarianism

different from those of RWA, then differences between GBD and OEQ might suggest three (or more) distinct processes are at work.

We examined the relationships of the variables from Duckitt (2001)'s model across multiple datasets. Given that the main analysis of interest (GBD vs. OEQ) was not reported in any of the relevant articles, it was not feasible to review every article from this line of research. These studies, therefore, represent a convenience sample, not a comprehensive review. All studies included some subset of these measures.

Opposition to Equality (OEQ) and Group-Based Dominance (GBD): All of these studies included items from the 16 item SDO scale. Only two studies (apart from our own Study 3), however, included the entire scale. As can be seen in Table 5, two of these five studies used only 3 items for each subscale, three used five, and two used eight. Despite this, alphas were fairly robust.

Right-Wing Authoritarianism (RWA): Items were subsets of Altemeyer's RWA scales (Altemeyer, 1996, 2006). For full details about the RWA version used and the number of items used to represent the scale, see the original articles.

Competitive World Scale: The construction of the Competitive World, Tough-mindedness, Social Conformity, and Dangerous World scales is described in detail in Duckitt (2001). The competitive world scale measured participants' adherence to a social Darwinist, ruthless worldview. Sample items included: "Winning is not the first thing; it's the *only* thing," "it's a dog-eat-dog world where you have to be ruthless at times," "charity (i.e. giving somebody something for nothing) is admirable, *not* stupid" (reverse coded), and "it is better to be loved than feared" (reverse coded).

Tough-Mindedness Scale: Participants were asked to rate the extent to which a series of tough-mindedness related adjectives were descriptive of their personality and behavior. Some examples of pro-trait items are Ruthless, Cynical, and Hard-hearted. Some examples of con-trait items are Kind, Humane, and Sympathetic.

Dangerous World Scale: The dangerous world scale was intended to capture the extent to which participants viewed the world as dangerous and threatening. Some items included: "Any day now chaos and anarchy could erupt around us, all the signs are pointing to it," "despite what one hears about 'crime on the street,' there probably isn't any more now than there ever has been" (reverse coded), "there are many dangerous people in our society who will attack someone out of pure meanness, for no reason at all," and "it seems that every year there are fewer and fewer truly respectable people, and more and more persons with no morals at all who threaten everyone else."

Social Conformity Scale: Participants rated the extent to which a series of social conformity related adjectives were descriptive of their personality and behavior. Some examples of pro-trait items are Moralistic, Obedient, and Law-abiding. Some examples of con-trait items are Erratic, Unconventional, and Unorthodox.

Results and Discussion

The raw correlations of each scale with the two SDO subscales and RWA are represented in Table 5. Before we could proceed with meta-analysis, we needed to

Table 5 Correlation coefficients from eight datasets showing the relations of Opposition to Equality (OEQ), Group-Based Dominance (GBD), and Right-Wing Authoritarianism (RWA) to each other and various constructs

Study	*N*	# of items	Reliability		Intercorrelation	With RWA		With Competitive World Beliefs			With Tough-Mindedness			With Dangerous World Beliefs			With Social Conformity		
			GBD	OEQ	GBD&OEQ	GBD	OEQ	RWA	GBD	OEQ	RWA	GBD	OEQ	RWA	GBD	OEQ	RWA	GBD	OEQ
Study 1A	672	5	.78	.70	.47	.42	.33												
Study 3	157	8	.86	.86	.46	.41	.18												
Cohrs et al., 2005	1576	8	.79	.86	.63	.54	.47												
Duckitt & Sibley, 2007	212	3	.62	.72	.43	.15	.00												
Sibley et al., 2008 (S2)	194	3	.65	.48	.60	.29	.11	.16	.58	.44	−.04	.37	.27	.40	.29	.17	.31	−.03	−.02
Sibley et al., 2007a (S2)	340	5	.72	.69	.39	.25	.19	.12	.57	.36	.09	.32	.30	.49	.25	.16	.50	.09	.18
Sibley et al., 2007b	331	5	.73	.72	.42	.25	.10	.15	.58	.36				.43	.15	.06			
Sibley, Wilson, & Robertson, 2007	213	8	.86	.81	.54	.35	.27	.22	.63	.50	−.07	.26	.29	.38	.17	.14	.41	.17	.09

account for the shared variance between OEQ and GBD (Gleser & Olkin, 1994; Roberts, Kuncel, Viechtbauer, & Bogg, 2007). To do this, we calculated the partial correlations for each, extracting the common variance with the other. These partial correlations were then transformed into Fisher's z scores. Weighted averages of the correlations were calculated using standard procedures (e.g., Johnson & Eagly, 2000; Lipsey & Wilson, 2001). These analyses and homogeneity tests are presented in Table 6. For three of the analyses, GBD with RWA, OEQ with RWA, and RWA with social conformity, the effect sizes were significantly heterogeneous.[9] For these analyses, we therefore employed random effects models to account for the lack of homogeneity. All other analyses employed fixed effects.

Our theoretical question required a comparison of the unique variance measured by OEQ and GBD to the other measures. There were several ways of performing this contrast. One is to compare the confidence intervals of the correlation estimates. From this method, one would conclude that: GBD is consistently a better predictor of RWA than is OEQ; GBD is more closely tied to the belief that the world is a competitive dog-eat-dog place than is OEQ; and GBD is more closely tied to beliefs that the world is a dangerous place than is OEQ.

Another method is to treat the observations from OEQ and GBD as if they had come from independent samples and then test the homogeneity of the effect sizes for this combined set. This method relies on the use of partial correlations as the only correction for dependence but also provides a more direct test of the hypotheses, perhaps making it preferable (A. Eagly, personal communication, February 24, 2009). This analysis is conceptually analogous to ANOVA. A total variance score is calculated (collapsing across conditions), a within condition variance score is calculated (adding the within condition variance of one condition to the within condition variance of the other) and a between condition variance score is derived (by subtracting the within condition variance from the total variance). We employed a fixed effects model (mixed effects for RWA), as the methods across studies were highly similar. According to this analysis, the effects of OEQ and GBD on RWA, competitive world beliefs, and dangerous world beliefs are not homogeneous (the QTotal statistic is significant). In each case, the factor representing the distinction between GBD and OEQ is significant (Table 7). Thus, the two methods of exploring differences between GBD and OEQ yield convergent results.

Across all of the datasets, RWA was more closely associated with GBD than OEQ. Also consistent was a strong association between competitive world beliefs and GBD. This second finding raises an important question in light of Duckitt and Sibley's theory about the development of SDO (e.g., Duckitt, 2001). They have argued that a tough-minded personality tends to foster competitive world beliefs. These beliefs, in turn, encourage a person to become high in SDO. OEQ and GBD are similarly associated with tough-mindedness. And, yet, GBD is much more closely associated with the presumed consequent—competitive worldview

[9] For the comparisons of GBD and OEQ with RWA, the heterogeneity of the effect sizes is introduced by the data from Project Implicit and Cohrs et al., 2005. Without those samples, the effect sizes are homogeneous Q-GBD = 6.75, Q-OEQ = 7.10, and the results are similar to what is reported above, OEQ: $r = .02$ (CI −.03 to .07). GBD $r = .24$ (CI .19 to .30).

Table 6 Meta-analytic statistics for the relations of Opposition to Equality (OEQ), Group-Based Dominance (GBD), and Right-Wing Authoritarianism (RWA) with other variables

	Σw	ES Fisher's z	SE	Z	Lower CI (95%)	Upper CI (95%)	r	Q	df	Homogeneous
RWA										
OEQ	3692	.12	.020	4.84	.07	.17	.12	34.55	7	No
GBD	3692	.31	.020	15.42	.27	.35	.30	20.02	7	No
Competitive World Beliefs										
OEQ	1066	.54	.031	5.92	.12	.24	.18	1.80	3	Yes
GBD	1066	.18	.031	17.57	.48	.60	.49	4.48	3	Yes
RWA	1066	.16	.031	5.15	.10	.22	.16	1.93	3	Yes
Tough-Mindedness										
OEQ	738	.16	.037	4.38	.09	.23	.16	2.47	2	Yes
GBD	738	.22	.037	5.92	.15	.29	.21	2.90	2	Yes
RWA	738	.01	.037	.32	−.06	.08	.01	4.37	2	Yes
Dangerous World Beliefs										
OEQ	1066	.03	.031	1.08	−.03	.09	.03	1.18	3	Yes
GBD	1066	.18	.031	5.74	.12	.24	.17	3.02	3	Yes
RWA	1066	.46	.031	15.11	.40	.52	.43	5.22	3	Yes
Social Conformity										
OEQ	738	.07	.037	1.96	.00	.14	.07	4.98	2	Yes
GBD	738	.04	.037	1.19	−.03	.12	.04	3.35	2	Yes
RWA	738	.46	.046	9.98	.37	.55	.43	8.24	2	No

Note: Correlations of OEQ and GBD are partial correlations of each controlling for the other. Non-homogeneous comparisons are calculated using random effects procedures. All other lines are calculated with fixed effects

Table 7 Meta-analytic statistics testing whether treating the relations of OEQ and GBD as similar provides a better fit than treating them as categorically distinct, with respect to five outcome variables

	QWithin	QBetween	*p*
RWA	54.57	67.29	<.001
Competitive World Beliefs	6.28	67.78	<.001
Tough-Mindedness	5.37	1.19	NS
Dangerous World Beliefs	4.20	10.85	<.001
Social Conformity	8.33	.30	NS

Note: This method used the partial correlations described in Table 6 as initial effect sizes

(Tables 5, 6, 7). The difference in degree of association with dangerous world beliefs is smaller but reliable, so it may also be meaningful. It would be interesting to further investigate these divergences and determine their implications for Duckitt's developmental model.

The stronger relationship between GBD and competitive world beliefs is conceptually consistent with findings from the preceding studies. It may be that when tough-mindedness takes on elements of group competition it manifests through GBD as persecution of different racial and social groups, as seen in relation to Anti-Black attitudes (Study 2) and Symbolic Racism (Study 3). When tough-mindedness does not take on those connotations, however, it may instead manifest itself through OEQ as a degree of hard-heartedness towards those that others might consider worthy of sympathy, as demonstrated in emotional reaction measures and decreased desire to redistribute resources to help the poor (Study 3).

One of the primary questions addressed by this study concerns the relations of GBD and RWA to the various attitudinal precursors. The data are clear on this point. On tough-mindedness and social conformity, GBD and OEQ are indistinguishable from each other and very different from RWA. With respect to dangerous world beliefs, GBD is slightly more similar to RWA than is OEQ, which is consistent with the presumption that both RWA and GBD concern hostile responses to outgroups. Competitive world beliefs produce the largest divergence between GBD and OEQ, with GBD being much more strongly related. RWA, however, has virtually no relationship with competitive world beliefs. Taken as a whole, this evidence undermines the possibility that GBD is simply a more authoritarian version of OEQ. Instead, GBD seems to have its own ideological precursors, independent of authoritarianism.

Study 5—Development of Balanced Scales

One possible objection to Studies 1, 3, and 4 is that they use items from the original SDO6 scale. The main advantage of this approach is that the findings are more directly comparable to the existing research on SDO and its operationalization. The main disadvantage is that the SDO6 items that compose OEQ are all negatively worded, whereas those composing GBD are all positively worded (see also Jost & Thompson,

2000). This leaves open the possibility that OEQ and GBD differ not because they are distinct constructs but merely because one is pro-trait and one is con-trait. To handle this concern, we devised new versions of the OEQ and GBD scales that contained positively and negatively coded items in each.[10] With these scales, we then sought to replicate several of the key effects from the previous studies.

Methods

Participants

371 (229 female) non-Black participants were recruited from the Amazon Mechanical Turk website for a study on Political Attitudes. Thirty-seven did not pass attention checks or exhibited implausibly fast completion times, so their data were discarded. This left a final sample of 334 (211 female). Their median age was 29.

Measures

Opposition to Equality (OEQ) In Study 1A, we noted that the Humanitarianism–Egalitarianism scale from Katz and Hass (1988) correlated very strongly with the OEQ items taken from the SDO scale. We thus incorporated several of those items into the new OEQ scale to allow for a greater item bank. A 7-item scale was created drawing on the Humanitarianism–Egalitarianism scale as well as the original SDO scale, 3 positively worded, 4 negatively worded. Sample items are "forcing equal treatment for everyone will just create more problems than it solves" and "one should find ways to help others less fortunate than oneself" (reverse scored).

Group-Based Dominance (GBD) A 7-item scale was created drawing on the original SDO items, 4 positively worded, 3 negatively worded. Sample items are "no group is inferior to any other group" (reverse scored) and "sometimes other groups need to be kept in their place." All items from the OEQ and GBD scales used in this study are included as Appendix 2.

Redistributive Policy Support We used 3 items from Study 3, including "the government should decrease its spending on poverty-related programs" and "large fortunes should be taxed fairly heavily over and above income taxes."

Political Orientation Pairs We used 3 items from the item pairs of Study 1B. Participants were asked to rate their preference for Democrats versus Republicans, Obama versus McCain (study conducted June, 2008), and Liberals versus Conservatives.

[10] Jost and Thompson (2000) also devised a balanced version of the SDO scale. The two factor solution for that version, however, was not an especially large improvement over the one factor solution (though it was significant). We sought to further differentiate the scales by rewording several items that both we and John Jost (personal communication) thought may have confounded GBD and OEQ.

Wealth Pairs We used 3 items from the item pairs of Study 1B. Participants were asked to rate their preference for Social Programs versus Tax Reductions, Non-profits versus Corporations, and Rich People versus Poor People.

Anti-Black Attitudes We administered 6 items, 4 from the anti-Black attitudes scale in Study 2 and 2 taken from the Symbolic Racism scale used in Study 3, measuring negative attitudes toward African Americans.

Pro-Black Attitudes We used 4 items from the pro-Black attitudes scale in Study 2.

Right-Wing Authoritarianism (RWA) We used 4 items from the Altemeyer (2006) scale, half of which were reverse coded. Sample items are "this country would work a lot better if certain groups of troublemakers would just shut up and accept their group's traditional place in society" and "atheists and others who have rebelled against the established religions are no doubt every bit as good and virtuous as those who attend church regularly."

Need for Cognition We used 4 items from the 18 item version of the scale including "the notion of thinking abstractly is appealing to me" and "I only think as hard as I have to" (Cacioppo et al., 1984).

Except for the political orientation and wealth item pairs, all scales' response options ranged from 1 (strongly disagree) to 7 (strongly agree). The item pairs ranged from 1 (strongly prefer X) to 7 (strongly prefer Y).

Procedure

The study began with the instructional manipulation check designed by Oppenheimer, Meyvis, and Davidenko (2009). In this check, participants are directed to bypass, rather than answer, a set of three questions. Participants who marked answers to more than 1 of the questions in that set were not able to proceed and a message directed them to reread the instructions. This instructional manipulation check has been shown to increase participant attention to later items, even among participants who initially fail the check and are presented with a reminder to attend to the instructions (Oppenheimer et al., 2009). Due to a programming limitation, participants who marked exactly one of the questions in the test set were able to proceed, but they were marked as inattentive.

Participants were first presented with the OEQ and GBD scales, in counterbalanced order. They were then given the other scales in the above order. Demographics were collected at the end.

Results and Discussion

The expected two-factor solution failed to provide a good fit to the data, RMSEA = .11, suggesting that the new items were not completely effective in

Table 8 Zero order and partial correlations of Group-Based Dominance (GBD) and Opposition to Equality (OEQ) with individual difference and demographic measures from Study 5

	# of items	Descriptive statistics		Zero order correlations			Partial correlations	
		Reliability	Mean	GBD	OEQ	t_{diff}	GBD	OEQ
Group-Based Dominance	7	.75	3.08 (1.13)	.45***	.45***			Controlled
Opposition to Equality	7	.78	2.78 (1.09)	−.24***			Controlled	
Redistributive policy support	4	.70	4.84 (1.35)	.15**	−.62***	8.31***	.05	−.59***
Political Orientation Pairs	3	.88	3.09 (1.70)	.24***	.39***	−4.42***	−.03	.36***
Wealth Pairs	3	.56	3.72 (1.18)	−.24***	.43***	−3.66***	.06	.37***
Pro-Black Attitudes	4	.79	4.31 (1.38)	.45***	−.38***	2.57**	−.08	−.31***
Rightwing-Authoritarianism	4	.61	2.99 (1.21)	.39***	.33***	2.30*	.36***	.16**
Anti-Black Attitudes	6	.88	3.49 (1.48)	−.31***	.29***	1.98*	.29***	.15**
Need for Cognition	4	.64	2.87 (0.56)	.45***	−.19***	−2.11*	−.25***	−.06

* $p < .05$, ** $p < .01$, *** $p < .001$

Note: Partial correlations control for the other subscale. The t value refers to a Williams t-test contrasting dependent correlations with GBD and OEQ

forming coherent factors. The two-factor solution was, however, a substantially better fit than a one-factor solution χ^2 (1, $N = 334$) = 239.9, $p < .001$ reinforcing the two-factor interpretation despite the weaker internal structure.

Our primary prediction is that the pattern of results observed previously would replicate, even after removing the pro-/con-trait confound from the original SDO scale. Right-Wing Authoritarianism, anti-Black attitudes, and Need for Cognition were all expected to correlate more strongly with GBD than with OEQ. Redistributive policy support, the political orientation object pairs, the wealth pairs, and pro-Black attitudes were all expected to correlate more strongly with OEQ than with GBD. As can be seen in Table 8, these predictions were all supported (all differences between OEQ and GBD correlations are significant).

This confirms that our results, like those of Jost & Thompson (2000), are independent of a positive versus negative question wording; even internally balanced subscales still yield the expected pattern of results. We ran a nearly identical study ($N = 350$) with a slightly different and less reliable GBD scale ($\alpha = .62$) and obtained the same pattern of results (correlation table available at http://briannosek.com/), so we have additional reason to trust this result.

General Discussion

In our review of the existing literature and five studies, we find evidence that SDO combines two distinct ideological constructs that differ in important ways. OEQ is a system justification construct that is linked to negative attitudes toward the disadvantaged, rejection of universalism, and opposition to policies that would redistribute resources from the rich to the poor. GBD is a group-justifying construct linked to hostile attitudes towards outgroups, competitive worldview, feelings of concern about outside threats, pride in the ingroup, lower cognitive engagement, and greater desire for cognitive closure. This distinction provides an enriched understanding of SDO. GBD and OEQ are not merely two sides of the same coin.

On a purely statistical level, previous research provided reason to believe that the SDO scale contained two factors. Jost and Thompson (2000), for example, found a two-factor model to be a better fit than a one-factor model across four samples. Li and colleagues (Li, Wang, Shi, & Shi, 2006) found similar results in an East Asian sample. Our data provide additional support and allow us to greatly expand our knowledge of the relations of these constructs to other psychological variables. Across a variety of domains, the studies reviewed and reported here demonstrated clear evidence that the two factors underlying SDO are both statistically and conceptually distinct.

Group-Based Dominance

We claim that GBD is related to group justification. Reviewing previous research, GBD has a stronger relationship with beliefs about power and hierarchy (Guimond et al., 2007), security values (Caricati, 2007; Cohrs et al., 2005), and negative attitudes toward women and homosexuals (Eagly et al., 2004), than does OEQ. In

our own studies, we found that there was a stronger relationship between GBD and Right-Wing Authoritarianism (Studies 1A, 3, 4, and 5), anti-Black attitudes (Studies 2 and 5), competitive worldview (Study 4) and Symbolic Racism (Study 3) than between OEQ and those constructs. We also observed that endorsement of GBD views was linked to lack of education (Eagly et al., 2004; Study 1A), low Need for Cognition, and high Need for Cognitive Closure (Study 1A). These cognitive factors are all associated with stereotyping and facilitate outgroup derogation.

Opposition to Equality

Our review suggests that OEQ is related to a lack of humanitarian concern for the disadvantaged and a greater need to engage in system justification. Consistent with this, endorsement of OEQ was more closely related to the rejection of universalism (Caricati, 2007; Cohrs et al., 2005), social compassion (Eagly et al., 2004), and Humanitarian-Egalitarianism (Study 1A), in comparison with GBD. People who reported high household incomes or otherwise occupying a relatively high social class were more likely to endorse OEQ beliefs (Study 1A). OEQ was also strongly related to support for redistributive policies (Study 3, Study 5), political conservatism, and attitudes toward the wealthy both explicitly and implicitly (Study 1B, Study 5), whereas GBD was not.

It could be argued that results such as ours are an artifact of the group framing of GBD versus the more individual level framing of OEQ (in both the original and revised scales). A recent laboratory study that employed our revised version of the SDO scale (from Study 5) lends support to our interpretation. In this study, students at a prestigious university read an article about an inequality that either involved their own institution or a distant high prestige institution (Kugler & Cooper, 2010). In each case, the high prestige university was said to be having substantially more success placing their graduates in good jobs after graduation than was a low prestige neighboring institution. Participants were then asked to rate the legitimacy of this disparity between high and low prestige schools. Only in the ingroup-relevant condition did GBD predict participants' perceptions of the legitimacy of the inequality ($r = .50$). Perceptions of the inequality concerning distant universities were not influenced by GBD ($r = .03$), even though that inequality was equally group-based. The predictive power of OEQ was not significantly affected by the manipulation of ingroup relevance. Interestingly, this study also provided support for the system justification role of OEQ. When the inequality was described as illegitimate (i.e., the status quo was threatened), the strength of the relationship between OEQ and perceived legitimacy increased.

General Implications and Next Steps

We believe that there are benefits to considering OEQ and GBD separately in future investigations of SDO. GBD behaves like the group-level dominance construct that SDO was originally meant to be. It predicts negative attitudes towards outgroups and an aggressive outlook on the world. OEQ is different. It is predicted by social class, and is primarily related to views about the appropriate structure of society,

how far the top should be from the bottom and the degree of sympathy that those on the bottom deserve. It is more similar to political conservatism and to Katz and Hass's (1988) Humanitarianism–Egalitarianism construct than the standard conception of SDO. Though less connected to hostile discrimination than GBD, OEQ is still heavily implicated in some of the hierarchy-enhancing findings related to SDO. In a Lebanese sample, for example, high levels of SDO predicted low levels of support for anti-US forces; a pro-hierarchy but anti-ingroup finding (Henry et al., 2005). We were able to reanalyze this data and we found that the negative effect of SDO on support for pro-Arab (ingroup) factions was primarily due to OEQ, and not GBD.[11] This supports the view of OEQ as a system justification factor.

When researchers employ SDO in the investigation of system justification (Jost & Banaji, 1994; Jost & Hunyady, 2005) and economic stratification (Wakslak et al., 2007), the majority of the variance explained by SDO is likely due to OEQ. As we have shown, the precursors of OEQ are quite different than those of GBD. Were one to look at the predictors of the full SDO scale and the impact of SDO on attitudes toward economic redistribution, one might wonder why lack of education and high social class both predict an ideology that leads to opposition to policies aimed at helping the poor. If, instead, one used only the OEQ scale, then this puzzle would be averted because only social class correlates with OEQ (on the links among social class, educational attainment, and political attitudes see also Napier & Jost, 2008). Therefore, it would be more methodologically and theoretically precise to use only the OEQ scale when working in this domain. Note again that the Humanitarianism–Egalitarianism scale from Katz and Hass (1988) appears to be functionally equivalent to the OEQ scale. In the article that first validated the SDO scale, Pratto and colleagues (1994) showed that the full SDO was only weakly correlated with Humanitarianism–Egalitarianism. The more nuanced relationship we observed here shows the advantages of treating SDO as a two-factor construct.

SDO's power as a component of generalized hostile prejudice (e.g., Altemeyer, 1998) is more likely driven by GBD. Using the GBD scale in isolation reveals weak relationships with Need for Cognition, Need for Cognitive Closure, and education. These are related to prejudicial attitudes and behaviors and could suggest important developmental or mediational mechanisms for SDO in the domain of prejudice. Therefore, we believe it would be advantageous to consider GBD and OEQ subscales separately in future research in this area as well. Given the stronger connection between GBD and Right-Wing Authoritarianism, it would be especially helpful to consider the nature of this relationship in light of the rich literature contrasting and comparing SDO and authoritarianism (Altemeyer, 1998; Duckitt, 2001; Sibley & Duckitt, 2008; Whitley, 1999).

There is also room for substantial work investigating how the different underlying motivations of GBD and OEQ might be affected by appeals for more egalitarian conduct. Freemen and colleagues recently attempted to enhance willingness to give to outgroup charities (Freemen, Aquino, & McFerran, 2009). Both OEQ and GBD are normally negatively correlated with such willingness, but

[11] $r_{OEQ}(90) = -.34$, $r_{GBD}(90) = -.13$, $r_{GBD–OEQ}(90) = .42$, $t(87) = 1.92$, $p = .06$. $\beta_{OEQ} = -.344$, $\beta_{GBD} = -.010$.

for different reasons; one might see GBD as being more related to harm of commission—the active suppression of outgroups—whereas OEQ is closer to the harm of omission—i.e., a lack of motivation to help. Freemen and colleagues primed participants with stories of moral excellence. These were cases in which people have overcome anger and hate toward others and tried to do good at great personal cost, reaching out to those who have wronged them. Witnessing acts of moral excellence leads to feelings of elevation and may promote affiliative behaviors (Haidt, 2001), which one might expect to be especially inhibitive of prejudice-related active harm. Freeman and colleagues found that moral elevation diminishes the effect of GBD on willingness to give, but has no effect on OEQ's influence; the correlation between GBD and willingness to help vanished under moral elevation (Freemen et al., 2009). This result underlines the importance of respecting the conceptual distinctiveness of the factors. Had one looked at the mitigating effect of moral elevation on SDO in a context in which GBD played less of a role, then this finding might have been overlooked.

Despite the differences between GBD and OEQ, it is important to consider their substantial overlap. It could be the case that the latent concepts tapped by GBD and OEQ are strongly related. Alternatively, part of the overlap may be artifactual. The SDO scale is usually presented with GBD and OEQ items interspersed, and the question wordings are similar. These methodological factors may exaggerate the relationship between the constructs and it may be useful to employ cleaner measures of these constructs in future research. Our Study 5 take one step in this direction and, even in this case, GBD and OEQ were correlated at $r = .45$.

Conclusion

Treating OEQ and GBD as distinct constructs has important implications for the study of policy attitudes and intergroup relations (see also Jost & Thompson, 2000). In the study of social policy support, OEQ seems to operate largely independently of GBD, and it drives attitudes toward a host of issues. The distinction is also important for the study of the origins of prejudice, such that GBD and OEQ relate differentially to many of the demographic and ideological precursors of intergroup hostility. Moving forward, there is much work left to be done to better understand these constructs. On the applied level, interventions aimed at reducing anti-outgroup attitudes or increasing support for pro-outgroup policies (such as Freemen et al., 2009; Kugler & Cooper, 2010) could demonstrate the benefit of a two-factor view of SDO. On a theoretical level, the domain of generalized prejudice has for several years focused on a distinction between SDO and RWA, and this literature could be reconsidered in light of the present findings.

Appendix 1: Support for Redistributive Policy (Study 3)

1. We should increase the tax burden on the rich, relative to the poor.
2. The government should increase its spending on poverty-related programs.

3. Large fortunes should be taxed fairly heavily over and above income taxes.
4. Rising income inequality is not a problem. (reverse)
5. The government should do more to close the gap between rich and poor.
6. The federal government should send recruiters to poor neighborhoods to give people who are less advantaged an opportunity to apply for jobs (Wakslak et al.).
7. The federal government should set up training programs to help the unemployed make the transition to the working world (Wakslak et al.).

Appendix 2: Opposition to Equality and Group-Based Dominance Scales from Study 5

Opposition to Equality:

1. It is alright if people do not have equal chances in life.
2. We should do what we can to equalize conditions for everyone.
3. Forcing equal treatment for everyone will just create more problems than it solves.
4. One should find ways to help others less fortunate than oneself.
5. There should be equality for everyone—because we are all human beings.
6. We are not obligated to help those who are unable to provide for themselves.
7. Increased social equality is desirable.

Group-Based Dominance:

1. In getting what you want, it is sometimes necessary to use force against other groups.
2. No group is inferior to any other group.
3. Sometimes other groups need to be kept in their place.
4. To get ahead in life, it is sometimes necessary to step on other groups.
5. It's probably a bad thing that certain groups are at the top and other groups are at the bottom.
6. If certain other groups stayed in their place, we would have fewer problems.
7. Other groups need not stay in their place.

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