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Levy, Aharon; Halperin, Eran; van Zomeren, Martijn; Saguy, Tamar

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Inter-racial Gateways: The Potential of Biracials to Reduce Threat and Prejudice in Inter-racial Dynamics

Aharon Levy¹ · Eran Halperin² · Martijn van Zomeren³ · Tamar Saguy²

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Abstract

We test the notion that the presence of a dual identity group, which partially shares both the ingroup and a relevant outgroup identity, can decrease intergroup prejudice. Previous research has demonstrated that such dual identity groups can act as a possible gateway between the groups that represent the respective sources of the dual identity. The current research applies this notion to the inter-racial context in the United States, focusing on the case of biracial individuals as having dual identities, and thus as potential gateways between blacks and whites. Specifically, we tested the prediction that exposure of whites to biracial individuals would decrease intergroup threat which in turn would decrease prejudice toward blacks. Findings from three studies supported this prediction and showed that the presence of biracial individuals reduced intergroup threat and prejudice among those most likely to harbor them (specifically, those high on social dominance orientation). We discuss the implications of our findings in terms of how this effect corresponds with current theoretical developments on dual identity, and possible practical social implications.

Keywords Biracial · Gateway group · Prejudice · Social dominance orientation · Dual identity · Racism

Globalization and unprecedented shifts in the ethnic and racial make-up of countries and communities have produced a massive growth in the range and diversity of social interaction (Kang and Bodenhausen 2015; Lee and Bean 2004). Such changes have contributed to a new and more complex social landscape, as well as to more encounters with people who have dual or multiple social identities, including different combinations of racial, ethnic, or national identities (Benet-Martínez et al. 2002; Rodeheffer et al. 2012; Wagner et al. 2010). Research on dual identity (e.g., the Turkish minority in Germany that identifies simultaneously as Turkish and as German; Simon et al. 2013) has focused mainly on individuals' experience of their dual identity, (e.g., Baysu et al. 2011; Fleischmann and Phalet 2012; Goćłowska and Crisp 2014; Verkuyten and Pouliasi 2002), and on the

reactions they elicit from members of the dominant group (e.g., González and Brown 2006; Rodeheffer et al. 2012; Scheepers et al. 2014). However, little is known about how the presence of a dually identified group affects the overarching intergroup relations. Indeed, notwithstanding the impressive line of research on dual identity and related concepts (such as integration, Sam and Berry 2010, and multiculturalism, Urbíola et al. 2017; Wolsko et al. 2000), existing research has yet to address an integral aspect of dual identity, which is its potential to act as a possible *gateway* between the groups that represent the respective sources of the dual identity. In other words, dual identity groups can potentially serve as a gateway between two, otherwise separate groups. For example, Turkish immigrants in Germany can impact the relations between Turks and Germans in general, by virtue of being perceived as and identified with both these entities.

In this article, we apply this notion to the context of people of more than one race in the United States, which can be perceived as having a dual identity that can potentially bridge relations between the different racial groups they are affiliated with. Levy et al. (2017b) recently showed that the presence of a dual identity in the context of intergroup tensions led to improved intergroup relations in the form of more generous resource allocations and greater contact

✉ Aharon Levy
al3900@columbia.edu

¹ Columbia Business School, Columbia University, New York, USA

² The Ivcher School of Psychology, Interdisciplinary Center, Herzliya, Israel

³ Heymans Institute for Psychological Research, University of Groningen, Groningen, The Netherlands

motivation toward the outgroup. As opposed to the aforementioned study which mainly examined the Israeli Palestinian context and artificially created groups, we seek to extend that work by focusing on the highly sensitive and relevant context of racism in the United States, and examine the potential conflict-reducing effects of exposure to a group with a dual identity.

Race, at least in the United States, has typically been treated as a dichotomy (e.g., black or white), with individuals who challenge this racial dichotomy likely to become socially excluded or even penalized (Davis 2010; Hickman 1997; Khanna 2010; Wagner et al. 2010). However, in recent years, a clear shift seems to be taking place toward an increase in both the presence and influence of biracial and multi-racial identities. Indeed, over the past 15 years, the number of individuals who have self-identified as black and white biracials in the United States has tripled in size, numbering over 2.5 million (U.S. Bureau of the Census 2015). The current estimate is that by 2050 one out of five Americans will be of mixed-race (Davenport 2016; Lee and Bean 2004). The past generation has seen biracial individuals rise to prominence in the cultural, economic, and political arena, and recent research even suggests the rise of a new multi-racial identity that is replacing the monolithic race identities in the United States census, etc. (Davenport 2016; Roth 2005).

Accordingly, a growing body of research has been examining the psychological experience of biracial individuals. Experiencing a dual identity in general was found to have both positive and negative psychological consequences (e.g., Brewer 1991; Brown and Hewstone 2005; Gaither et al. 2015a; Nguyen and Benet-Martínez 2013; Saguy et al. 2009; Sam and Berry 2010; Scheepers et al. 2014; Simon and Ruhs 2008; Tajfel and Turner 1979; Wolsko et al. 2000). Specifically in the racial context, biracial individuals have been found to adopt a variety of racial identities, and even alternate their racial identity over time (Doyle and Kao 2007; Rockquemore and Brunsma 2002). They have been found to change their social behavior according to situational cues, and social counterparts (Gaither et al. 2013, 2015b). Finally, Biracial individuals also show lower endorsement of race essentialism, and perceive race more as a social construct than a biological factor (Bonam and Shih 2009).

Building on this body of work, in the current work we focus on a unique aspect of biracial groups, which to our knowledge has yet to be examined: their role as potential gateways between whites and blacks. Levy et al. (2017b) revealed some initial indications for this social-psychological process in the context of artificially created groups and in the inter-national context but did not address inter-racial dynamics. The main reason for focusing on the context of race in the United States is that this is a clear real-life context in which prejudice has been clearly linked to intergroup

threat. Thus, it follows that in this context, perceiving biracials as a gateway between blacks and whites in the United States should reduce prejudice through the reduction of intergroup threat.

This racial gateway concept fits smoothly within the existing literature on multiple identities such as dual identity and cross categorization (Crisp and Hewstone 1999; Levy et al. 2017a, c; Saguy et al. 2009), although a significant distinction that can be made here is that of perspective. While existing frameworks are mainly rooted in the perspective of the dual or multiple identifier (i.e., focusing on how individuals cope with multiple identities), the gateway concept can also refer to the perspective of racial groups that view the biracial groups from the outside. For instance, if the biracial community is perceived by the white community and the black community as biracial, then the biracials may have an impact on this inter-racial relation even if the biracial individuals do not necessarily subjectively identify with both groups simultaneously (and vice versa). This conceptualization enables us to study both perspectives systematically.

Recently, several studies have begun to examine the impact of exposure to biracials in the form of racial ambiguity studies (see Pauker et al. 2018 for a review). One line of research in this regard deals with hypodescent, and the perception of racially ambiguous targets as belonging solely to their lower status racial group (Ho et al. 2011; Krosch et al. 2013; Peery and Bodenhausen 2008). More importantly, another line of research has found that exposure to racial ambiguity has the potential of decreasing perceptions of racial essentialism and enhancing perceptions inter-racial similarity (Pauker et al. 2017; Sanchez et al. 2015; Wilton et al. 2014; Young et al. 2013). This research lays the groundwork for the biracial gateway hypothesis presented above, by suggesting that simple exposure to racial ambiguity has the potential to impact inter-racial perceptions. Building on these findings, we posit that once ambiguity is removed from the equation, by explicitly addressing the racial duality of biracials, the exposure to biracials may have the potential to impact not only perceptions, but inter-racial prejudice as well. Indeed, in one of the studies from the research mentioned above (Young et al. 2013), the coupling of racially ambiguous faces with explicit biracial labels, increased the impact on racial essentialism reduction.

In the context of inter-racial relations and racism, we expected that pre-existing differences between individuals and their perception of racial issues would be important to take into account. Perhaps one of the most relevant factors in this regard is *social dominance orientation*. Social dominance orientation (SDO; Pratto et al. 1994; see also; Hiel and Mervielde 2005) reflects individual differences in the tendency to favor hierarchy and oppression. SDO predicts, among other variables, legitimization of inequality, support for egalitarian policy, and political values (Knowles et al.

2009; Pratto et al. 1994; Sidanius et al. 1996). Thus, individuals low in SDO would be expected to express low levels of prejudice, whereas those high in SDO should express stronger prejudice toward the outgroup. Accordingly, we predict that while there is not much leeway when it comes to reducing prejudice among participants low in SDO, the presence of biracial individuals could be more effective in reducing prejudice for participants high in SDO. This prediction is also in line with findings that show that dovish individuals are less pertinent to bias reducing interventions (Nasie et al. 2014), and that individuals high in SDO are more susceptible to racial and intergroup manipulations than low SDO individuals (Hodson 2011; Knowles et al. 2009). However, we acknowledge that it is also possible to assume that, alternatively, participants high in SDO would perceive biracials as more of a threat to social boundaries and racial distinctiveness than participants low in SDO. We therefore also measured these variables as well in the later studies in order to rule this option out.

The Current Studies

We report three studies that all tested the biracial gateway hypothesis. Study 1 aimed to test whether the presence of biracials would indeed decrease prejudice among those high in SDO. Study 2 aimed to replicate Study 1, to add a more contextualized dependent variable, and to explore possible mechanisms for the hypothesized effect. Study 3 aimed to provide yet another replication of the findings, and to shed more light on the underlying mechanism (i.e., perceived threat) identified in Study 2. Moreover, in order to generally aggregate our main hypothesized effects and to examine the robustness of our findings, we also conducted an internal meta-analysis, or a mini meta-analysis, on all three studies combined.

Study 1

In Study 1, we primed participants with portraits of black and white individuals in the control condition, versus black, white, and biracial individuals in the experimental biracial condition (see Fazio et al. 1995; Young et al. 2013). This design enabled us to test our initial hypothesis and only prime the mere presence of biracials. According to our hypothesis, we expected white participants primed with the biracial images to display a more positive attitude toward blacks. Because racism can be seen as a stark embodiment of intergroup relations across racial lines, we focused on racism (specifically symbolic racism, see elaboration below) as the DV for this study. Finally, this effect was expected to be moderated by the participants' individual SDO. Taken

together, Study 1 tested a moderation model in which, depending on their individual SDO, the exposure to biracial individuals would impact racist attitudes among white participants.

Method

Participants and Design

Eighty-four white American participants (45 male; $M_{\text{age}} = 34.7$ years, $SD = 12.1$) were recruited via MTurk. MTurk is an online web-based platform for recruiting and paying subjects to perform tasks. To initiate a survey using MTurk, a researcher establishes an account, and then posts a "job listing" using the MTurk web interface that describes the Human Intelligence Task (HIT) to be completed and the compensation to be paid. Each HIT has a designated number of tasks and the requester can specify how many times an individual MTurk "Worker" can undertake the task. Research has found that relative to other convenience samples often used in experimental research, MTurk subjects are often more representative of the general population and appear to respond to experimental stimuli in a manner consistent with prior research (Berinsky et al. 2012).

Participants were randomly assigned to either the control condition or the biracial condition. The participants provided demographic information, performed a portrait memory task, and filled out a questionnaire, all on the Qualtrics platform. The sample size for Study 1 was estimated to be able to detect a medium-sized effect (i.e., f^2 of 0.2). Additionally, a post hoc power analysis (using G*Power, Faul et al. 2009) suggested that the Study 1 sample size ($N = 84$) provided a statistical power of .91 to identify medium-sized effects.

Procedure

Initial demographic information and the SDO moderation scale were filled out by participants prior to the manipulation, and tested on a 1 (*not at all*) to 6 (*to a very high extent*). The SDO scale by Pratto et al. (2013) is a measure of individual differences in the propensity for prejudice (e.g., "Superior groups should dominate inferior groups."; "Group equality should be our ideal" ($R \alpha = .87$)). SDO correlates positively with endorsement of ideologies that legitimize inequality, such as racism, sexism, and nationalism, using a variety of culturally appropriate measures. The scale has been used in translations in many cultures over the past two decades, has been validated across contexts and over time, and has been found to be cross-culturally robust (e.g., Pratto et al. 2013).

In the next stage, the participants were exposed to a collection of 12 headshots of random individuals. Each image was accompanied by the name, age, and race of the

individual (see Fig. 1). In the control condition, half of the images were of black people and half were of white people. In the biracial condition, a third of the images were of black people, a third were of white people, and a third were of biracial people. In order to prevent hypodescent (Ho et al. 2011; Krosch et al. 2013), and based on existing racial ambiguity studies mentioned above (Young et al. 2013), we clearly stated what the race of the individuals in the pictures was, including “Biracial” labels in the experimental condition. In both conditions, participants saw an equal number of male and female portraits from each race. The participants were told that the images will disappear after 45 s and that they should try and remember as much information as they can about the people in the pictures such as their eye color, age, race. After the images disappeared, participants were asked ten memory questions regarding the images including how many people from each race appeared in the pictures.

Following the memory exercise, participants filled out a questionnaire regarding their symbolic racism. Symbolic racism is conceptualized as a unidimensional construct

representing prejudice toward blacks. The content of the items used in the most recent work on symbolic racism has been formalized in terms of the following four specific themes including: The sense that blacks’ failure to progress results from their unwillingness to work hard; the sense that blacks are demanding too much; denial of continuing racial discrimination; and the sense that blacks have gotten more than they deserve (Henry and Sears 2002). The symbolic racism scale has been found to be reliable and internally coherent. It has discriminant validity, being distinctively different from both older forms of racial attitudes and political conservatism, although with a base in both. It has predictive validity, explaining whites’ racial policy preferences considerably better than do traditional racial attitudes or political predispositions (e.g., “*Blacks are getting too demanding in their push for civil rights.*”; “*Generations of slavery and discrimination have created conditions that make it difficult for Blacks to work their way out of the lower class*” (R) $\alpha = .89$, six items, tested on a 1 (*not at all*) to 6 (*to a very high extent*) scale; Henry and Sears 2002; Rabinowitz et al. 2009).

Fig. 1 Participants were either shown black and white faces in the control condition (right), or black, white, and biracial faces in the experimental condition (left). © 2015 National Geographic Society.

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Results and Discussion

To examine our hypothesis that the mere presence of biracials would undermine racism among participants high in SDO, we ran a moderation analysis (using Preacher and Hayes' PROCESS macro, model 1, Hayes 2012) on racism, considering participants' condition (with/without biracials), and SDO levels as independent variables. The analysis yielded a significant two-way interaction between dual identity presence and SDO, $b = 0.43$, $SE = 0.21$, $t = 1.99$, $p = 0.05$. As indicated in Fig. 2, among participants who were relatively low in SDO (one standard deviation below the SDO mean), symbolic racism levels were generally low, and did not differ as a function of whether biracials were present ($M = 2.67$) or not ($M = 2.31$), $p = -0.27$, ns. However, consistent with our predictions, participants who were relatively high in SDO (one standard deviation above the SDO mean) had somewhat lower levels of symbolic racism in the presence of the biracials ($M = 3.19$) than participants in the control condition without the biracials ($M = 3.76$), $b = 0.57$, $SE = 0.32$, $t = 1.76$, $p = 0.08$. Thus, the presence of biracials reduced symbolic racism among those most prone to express racism.

As expected, individual differences in terms of SDO led to a different reaction to the racial outgroup as a function of biracial presence. The results of Study 1 show that for individuals with high SDO, the presence of biracials indeed seemed to marginally decrease their racism. However, despite these first encouraging findings, Study 1 was of relatively abstract context and did not provide information regarding the mechanism at hand. Accordingly, the goals of Study 2 were to determine if the predicted pattern replicated, to explore the underlying mechanism, and to further examine whether the effects obtained in Study 1 would hold when racial tension is on the rise in a more specified real-life event context.

Fig. 2 Participants who were relatively high in SDO (one standard deviation above the SDO mean) displayed lower levels of symbolic racism in the presence of biracials than participants in the control condition without the presence of biracials

Study 2

Study 2 was run in late 2014, adjacent to the decision of the United States grand juries not to indict the white police officers that caused the deaths of Michael Brown and Eric Garner, two unarmed black men involved in misdemeanors. These decisions by the grand juries led to great inter-racial tension in the U.S. and especially in the city of Ferguson. Therefore, besides the replication of Study 1 and additional mediation measures, Study 2 incorporated the “Ferguson” issue as well. As for the underlying mechanism, we explored three possible mediators that we expected might play a role in the impact of biracials on inter-racial relations. The exposure to the identity overlap that is embodied by the biracial gateway group has been found to potentially reduce prejudice toward the outgroup (Roccas and Brewer 2002; Crisp and Hewstone 1999). We therefore examined the perception of social category overlap as our first possible mediator. Next, since the presence of a dual racial identity has the potential to signal the existence of a superordinate common identity (Dovidio et al. 2009), we examined common ingroup identity as the second potential mediator. Finally, exposure to ingroup members that have significant ties with the outgroup has the potential to increase familiarity and reduce threat perception in intergroup relations (Levy et al. 2017; Wright et al. 1997). Accordingly, inter-racial threat was selected as the final possible mediator between biracial presence and outgroup prejudice.

Method

Participants and Design

Sixty-eight white American participants (39 male; $M_{\text{age}} = 38.5$ years, $SD = 11.9$) were recruited via Mturk. The participants provided demographic information, performed the same portrait memory task as in Study 1, and filled out a questionnaire, all on the Qualtrics platform. Participants were randomly assigned to either the control condition or the biracial condition. A power analysis (through G*Power, Faul et al. 2009) of Study 1 found that in order to replicate the effect size ($R^2 = 0.28$, $F^2 = 0.39$) with an additional predictor, we only needed a sample of 49 participants, and therefore the sample size in Study 2 was smaller than in Study 1.

Procedure

Study 2 was a replication of Study 1 with two additional elements. First, an additional dependent variable regarding the Ferguson events was devised. The “Ferguson” scale addressed the subjects' attitude toward the current events,

namely, empathy toward the victims and criticism toward the system, and was composed of four items (“*The use of lethal force by the police against unarmed Black people is a problem that needs to be addressed*”; “*The Jury’s decision is just and any protests following this incident should be severely punished*” (R); “*I can relate to the anger and discontent of the black community in the U.S. as a result of the Jury’s decision*”; “*I feel empathy towards Michael Brown and Eric Garner’s families.*” $\alpha = .86$). Second, Study 2 incorporated possible mediation measures that were expected to possibly explain the effects of the biracials presence on intergroup prejudice reduction. The perception of social category overlap was tested using the inclusion of other in self graphic scale (Aron et al. 1992). The perception of a common identity was measured by the Common Ingroup Identity scale (Gaertner and Dovidio 2014). The perception of race-based threat (“*How threatened do you feel by the Black community in the United States?*”) was tested on a 1 (*not threatened at all*) to 6 (*extremely threatened*) scale.

Results and Discussion

A moderation analysis (using Preacher and Hayes’ PROCESS macro, model 1) on each of the outcome variables, considering participants condition (with/without biracials), and SDO levels as independent variables was performed. The analysis on symbolic racism yielded a significant two-way interaction of biracial presence and participants SDO levels, $b = 0.43$, $SE = 0.19$, $t = 2.34$, $p = 0.02$. Replicating Study 1, participants who were relatively low in SDO (one standard deviation below the SDO mean) did not differ in their symbolic racism levels with and without the presence of the biracials ($M = 2.21$ vs. 2.63 respectively), $b = -0.17$, ns. However, among participants who were relatively high in SDO (one standard deviation above the SDO mean), levels of symbolic racism were lower in the presence of the biracials ($M = 3.81$) than when no biracials were present ($M = 4.41$), $b = 0.61$, $SE = 0.31$, $t = 1.96$, $p = 0.05$. Thus, as in Study 1, the presence of biracials reduced symbolic racism among those most prone to express racism.

Corroborating this pattern of findings, the same analysis on the Ferguson scale showed a significant biracial X SDO interaction ($b = -0.68$; $SE = 0.24$; $t = -2.86$; $p = 0.01$). Participants low in SDO did not differ in their critical point of view of the police violence or levels of their empathy toward the victims, in the presence of the biracials $p = 0.19$, ns. However, among those higher in SDO, participants were significantly more critical toward police violence against blacks, and more empathetic toward the victims in the presence of the biracials $b = -1.1$, $SE = 0.39$, $t = -2.79$; $p = 0.01$. Here too the presence of a dual identity reduced the level of racist tendencies, among those most likely to harbor racism.

Fig. 3 Participants who were relatively high in SDO (one standard deviation above the SDO mean) displayed lower levels of symbolic racism in the presence of biracials than participants in the control condition without the presence of biracials

Fig. 4 Mediated moderation analysis revealed that participants perceptions of threat from the outgroup mediated the effect of biracial presence on symbolic racism among people high in SDO

To test our prediction regarding the mechanism at hand, we examined whether the effect of biracials on symbolic racism among people high in SDO would be mediated by different mediating variables. To that end we first examined and found that the SDO X biracials interaction significantly predicted threat (the mediator) $b = 0.64$, $SE = 0.24$, $t = 2.7$, $p = 0.01$, and threat significantly predicted symbolic racism, $b = 0.31$, $SE = 0.09$, $t = 3.47$, $p < 0.001$ (See Fig. 3).

Then we conducted a mediated moderation analysis (using Preacher and Hayes’ PROCESS macro, model 8) using condition and participants’ SDO levels as independent variables, symbolic racism as an outcome, and participants perceptions of threat from the outgroup as a mediator. As indicated earlier, the interaction of SDO X biracials presence on symbolic racism was significant, $b = 0.43$, $SE = 0.19$, $t = 2.34$, $p = 0.02$. After considering the effect of the mediator in the model, the interaction term became non-significant, $p = 0.20$. In addition, the indirect effect of SDO X biracials presence on symbolic racism via the mediator was significant, $a \times b = .20$; CI 95% 0.01–0.46 (see Fig. 4). Analysis of the simple effects further revealed that only for participants high in SDO the effect of biracials on symbolic racism was mediated by threat, $a \times b = 0.30$, CI 95% 0.01–0.75,

but not for participants low in SDO, $a \times b = -0.17$, CI 95% -0.59 to 0.04 .

Finally, we tested threat as a mediator for the Ferguson attitude measure as well. Threat (the mediator), significantly predicated the Ferguson measure, $b = -0.42$ $SE = 0.11$, $t = -3.71$, $p < 0.001$, and after considering the effect of the mediator in the model, the interaction significance diminished, $p = 0.08$. Additionally, the indirect effect of SDO X biracials presence on the Ferguson measure via the mediator was significant, $a \times b = -.27$; CI 95% -0.6 to -0.03 (see Fig. 5). Inclusion of Other in Self and the Common Ingroup Identity scales did not significantly mediate either of the dependent variables ($a \times b = .11$, CI 95% -0.01 , 0.38 ; $a \times b = .04$, CI 95% -0.27 – 0.32).

In sum, Study 2 replicated the results of Study 1, showing again that the presence of biracials reduces racist tendencies among high SDO individuals. Furthermore, the results of Study 2 also showed the effect of the exposure to biracials on attitudes toward specific current events such as the Ferguson case in addition to the more general symbolic racism. Finally, Study 2 shed some light on the underlying mechanism, and found that inter-racial threat mediates the influence of biracials presence when moderated by SDO.

While this study provides a more robust portrayal of the influence of biracial presence on inter-racial attitudes, it also raises some new questions. Threat, that has been found to mediate the impact of biracial presence, is a multifaceted construct. While Study 2 only measured a general threat perception, there are several types of threat that can impact intergroup relations. Previous research has shown that alternate forms of threat, such as realistic threat or symbolic threat, may have different impacts on social behavior (Stephan and Stephan 2000). Additionally, while Study 2 generally addressed threat from the outgroup, it is possible that participants also perceived the biracials as an outgroup, and this is a distinction that requires further examination. Accordingly, we designed a final study in order to provide a more detailed understanding of the threat-based mechanism identified in Study 2.

Fig. 5 Mediated moderation analysis revealed that participants perceptions of threat from the outgroup mediated the effect of biracial presence on the Ferguson measure among people high in SDO

Study 3

The main purpose of Study 3 was to provide a more detailed examination of the threat-based mechanism that was found in Study 2. Furthermore, in Study 3 we added an additional possible moderator, as recent research has found that racial identification moderated inter-racial similarity perceptions after exposure to biracials (Wilton et al. 2014; Young et al. 2013). Therefore, we wanted to compare racial identification to SDO as an alternative moderator of the effects observed in Study 1 and 2. Lastly, Study 3 was conducted more than 2 years after Study 2. During this time, the issue of expressing racist opinions was very prominent in the public sphere and in social media (the 2016 elections, the black lives matter campaign, etc.). More specifically, at the time of Study 3, there was controversy in the U.S. following the President's lack of proper criticism toward displays of white supremacy and racism in Charlottesville (Cillizza 2017). Due to the fact that these issues could lead to a demand characteristics effect on our main dependent variable of symbolic racism (i.e., voicing your opinion on general race-related issues), we wanted to add a dependent variable that would be less related to elements of opinion and criticism, and more related to basic behavioral tendencies. To that end in Study 3, we added contact motivation with the racial outgroup as an additional dependent variable.

Method

Participants and Design

Eighty-eight white American participants (54 male; $M_{age} = 35.4$ years, $SD = 13.7$) were recruited via Mturk. The participants provided demographic information, performed the same portrait memory task as in Study 1, and filled out a questionnaire, all on the Qualtrics platform. Participants were randomly assigned to either the control condition or the biracial condition. Due to the addition of the new moderating variable, we returned to that original sample size as in Study 1. The sample size for Study 3 was estimated to be able to detect a medium-sized effect (i.e., f^2 of 0.2). Additionally, a post hoc power analysis (using G*Power, Faul et al. 2009) suggested that the Study 1 sample size ($N = 88$) provided a statistical power of .99 to identify medium-sized effects.

Procedure

Study 3 was a replication of Study 2 with a number of additional elements. First, Study 3 elaborated the examination of the threat mechanism that was found to mediate the

biracials presence impact on inter-racial prejudice. Based on Stephan and Stephan (2000), in Study 3 we provided a more elaborate threat measure that included realistic threat (e.g., “Blacks are increasing the amount of crime in the U.S.”; “The welfare services offered to Blacks are increasing the tax burden on Whites,” three items, $\alpha = .92$), and symbolic threat (e.g., “The Black community is ruining the American culture”; “The moral values of Blacks and Whites are fundamentally different.” Two items, $\alpha = .77$, Stephan and Stephan 2000). Additionally, in order to find out if the relevant inter-racial threat originates from the black outgroup or from the biracial group, participants filled out these threat items both regarding the blacks and the biracials. Furthermore, based on the work done by Wilton et al. (2014) that suggests that racial ambiguity can induce distinctiveness threat, we also added a distinctiveness threat (e.g., “It annoys me when others don’t see the important differences between Whites and Blacks”; “It is not right that Whites and Blacks are treated as if they were the same.” Three items, $\alpha = .81$, Schmid et al. 2009). Research has found that racial identification moderated the impact of exposure to racial ambiguity (Wilton et al. 2014; Young et al. 2013). Accordingly, we added racial identification as an additional moderating variable (e.g., “The racial group I belong to is an important part of who I am”; “My race has very little to do with how I feel about myself.” Four items, $\alpha = .71$, Luhtanen and Crocker 1992). As for the dependent variables, we added a new variable of contact motivation with the racial outgroup (e.g., “to what extent would you like to have a black coworker/neighbor/friend.” Five items, $\alpha = .96$, based on Bogardus 1933). Additionally, due to the time that past between Study 2 and 3, we updated the Ferguson scale with a more recent current event, and described the shooting of Philando Castile from late 2016, while the items that followed remained the same.

Results and Discussion

A moderation analysis (using Preacher and Hayes’ PROCESS macro, model 1) on each of the outcome variables, considering experimental condition (with/without biracials), and SDO levels as independent variables was performed. The analysis on symbolic racism found a similar trend to Studies 1 and 2 in which participants high on SDO displayed a slight decrease in symbolic racism (see Fig. 6); however, this interaction was not significant ($t = 0.74$, $p = 0.46$). This weaker effect may be due to the anti-racism discourse in the media at the time. Nevertheless, the pattern was similar to the previous studies and also discernible on the Ferguson scale: As in Study 2, the same analysis on the Ferguson scale showed a marginally significant biracial X SDO interaction ($b = -0.34$; $SE = 0.19$; $t = -1.73$; $p = 0.08$, see Fig. 7). Finally, the same pattern emerged on the newly added variable of

Fig. 6 Participants who were relatively high in SDO (one standard deviation above the SDO mean) displayed lower levels of symbolic racism in the presence of biracials than participants in the control condition without the presence of biracials

Fig. 7 Participants who were relatively high in SDO (one standard deviation above the SDO mean) were more critical toward the police and more empathetic toward the victims in the presence of biracials than participants in the control condition without the presence of biracials

contact motivation with the outgroup, which yielded the same significant interaction of SDO X biracial presence ($b = -0.38$; $SE = 0.17$; $t = -2.16$; $p = 0.03$). Participants high in SDO displayed a pattern of greater contact motivation with the outgroup after being exposed to biracials ($b = -0.39$, $SE = 0.26$, $t = -1.52$; $p = 0.13$). Surprisingly, participants low in SDO actually displayed the opposite trend regarding contact motivation in the biracial condition ($b = 0.38$, $SE = 0.25$, $t = 1.50$; $p = 0.14$); nevertheless, in line with expectations, their contact motivation was still higher than the contact motivation of those high in SDO in the biracial condition ($M = 5.71$, $SD = 0.71$, vs. $M = 4.81$, $SD = 0.98$, $p = 0.001$, see Fig. 8).

Importantly, Study 3 also suggested that these effects are specific to SDO. Racial identification did not act as a moderator for any of the dependent variables (symbolic racism: $t = -0.03$ $p = 0.97$; Ferguson: $t = -0.14$ $p = 0.89$; contact motivation: $t = 0.55$ $p = 0.58$). This suggests that the pattern of effects we observed in Study 3, which are in line with those found in Study 1 and 2, pertain specifically to

Fig. 8 Participants who were relatively high in SDO (one standard deviation above the SDO mean) displayed lower levels of social distance in the presence of biracials than participants in the control condition without the presence of biracials

those high in SDO, rather than to those high in racial group identification.

As for the threat mechanism, we examined which of the five types of threat (and also which target of threat) we measured in Study 3 mediated the effect of biracial presence on inter-racial prejudice among people high in SDO. As shown in Table 1, the only type of threat that significantly mediated the impact of the SDO X biracial presence interaction on inter-racial prejudice for both the Ferguson and contact motivation variables was *symbolic threat from the biracials* (see Table 1). A SDO X biracial presence interaction significantly predicted symbolic threat from biracials $b = 0.45$ $SE = 0.16$, $t = 2.91$, $p = 0.005$, and symbolic threat from biracials significantly predicted the Ferguson measure, $b = -0.29$ $SE = 0.13$, $t = -2.20$, $p = 0.03$, and contact motivation $b = -0.47$ $SE = 0.11$, $t = -4.19$, $p < 0.001$. After considering the effect of the mediator in the model, the interaction term turned non-significant for both the Ferguson scale: $p = 0.31$, and contact motivation: $p = 0.33$. Additionally, the indirect effect of SDO X biracials presence was significant via the mediator, for the Ferguson scale: $a \times b = -.13$; CI 95% -0.41 to -0.01 , as well as for

Fig. 9 Mediated moderation analysis revealed that participants perceptions of threat from the outgroup mediated the effect of biracial presence on the Ferguson measure among people high in SDO

contact motivation: $a \times b = -.22$; CI 95% -0.59 to -0.02 (see Fig. 9).

In sum, Study 3 replicated the pattern of results of Study 1 and 2, showing once again, and several years apart, that the presence of biracials reduces prejudice among participants high in SDO. Furthermore, the results of Study 3 provided more insight into the precise underlying mechanism by pinpointing reduction of symbolic threat from biracials as the mediator of prejudice reduction. Taken together with the findings of Study 1 and 2, we conclude that the biracial gateway hypothesis was substantiated for those high in SDO across the three studies.

Internal Meta-analysis

While we were able to find the same pattern throughout all three studies, the statistical significance of the results differed across studies and the sample sizes can be considered relatively small. To address these limitations and to examine the robustness of our hypothesized effects, we conducted an internal meta-analysis, or a mini meta-analysis, on the studies presented here. In a recent paper, Goh et al. (2016) outline the many benefits of conducting

Table 1 Analysis of five types of threat as possible mediators for the impact of biracial presence on participants high in SDO for both the Ferguson scale and contact motivation

Mediator	<i>b</i>	<i>SE</i>	LLCI	ULCI
Realistic threat from blacks—Ferguson	-.05	.06	-.22	.03
Symbolic threat from blacks—Ferguson	-.05	.07	-.25	.04
Realistic threat from biracials—Ferguson	-.15	.10	-.39	.01
Symbolic threat from biracials—Ferguson ^a	-.13	.09	-.41	-.01
Distinctiveness threat—Ferguson	-.05	.06	-.27	.01
Realistic threat from blacks—contact motivation	-.06	.06	-.21	.03
Symbolic threat from blacks—contact motivation	-.08	.10	-.30	.10
Realistic threat from biracials—contact motivation	-.12	.09	-.40	.01
Symbolic threat from biracials—contact motivation ^a	-.22	.14	-.59	-.02
Distinctiveness threat—contact motivation	-.09	.07	-.27	.01

^aSignificance at a 95% confidence interval

such a mini meta-analysis and outline a detailed method for doing so. In our mini meta-analysis our main aim was to generally aggregate our main hypothesized effects, and show that the exposure to biracials reduced symbolic racism and increased empathy toward blacks (Ferguson scale) among participants high in SDO. We meta-analyzed symbolic racism in all three studies, and the Ferguson scale in the two studies that included the relevant variables (Studies 2–3), using fixed effects in which the key effect size was weighted by sample size. In this case, the key effect size was the difference between the biracial condition and control condition on symbolic racism, and the Ferguson scale for high SDO participants. In this case, the key effect size was the difference between the biracial condition and control condition on symbolic racism, and the Ferguson scale for high SDO participants (see Table 2). Since this simple effect essentially represents a difference between conditions, it can also be expressed in terms of Pearson's r (Shuman et al. 2018). We first converted these simple effect coefficients into Pearson's r for ease of analysis, and proceeded according to the methods outlined in Goh et al. (2016). All correlations were then Fisher's z transformed for analyses, and converted back to Pearson correlations for presentation of general effect sizes. Overall among high SDO, the exposure to biracials significantly decreased symbolic racism ($M_r = 0.17$, $Z = 2.68$, $p = 0.007$, two-tailed), and increased criticism toward police violence and empathy toward black victims ($M_r = 0.29$, $Z = 3.72$, $p < 0.001$, two-tailed) compared to the control condition. This supports our hypotheses that exposure to biracials has the potential to improve inter-racial attitudes among those high in SDO.

Table 2 Coefficients and simple effect of condition at one SD above the mean of SDO for symbolic racism and the Ferguson scale across all studies

Dependent variable	Mean	<i>SE</i>	<i>b</i>
Symbolic racism—Study 1			
Treatment	3.19	.42	.57
Control	3.76	.98	
Symbolic racism—Study 2			
Treatment	3.81	.89	.61
Control	4.41	.61	
Symbolic racism—Study 3			
Treatment	3.2	.78	.23
Control	3.4	1.2	
Ferguson scale—Study 2			
Treatment	3.5	.39	−1.1
Control	2.4	.88	
Ferguson scale—Study 3			
Treatment	4.3	.57	−.34
Control	3.9	.97	

General Discussion

Dually identified groups are becoming more and more prevalent as a result socio-demographic shifts, and social processes worldwide. These social changes are bound to affect existing intergroup dynamics in general, and mostly those that have previously been perceived in a binary and dichotomous manner. One theoretical approach that can be used in order to better explain some of the results of said global changes is that of the dual identity corpus. The work done so far in the realm of dual identity offers insights on several aspects of intergroup relations (Brewer 1991; Brown and Hewstone 2005; Nguyen and Benet-Martínez 2013; Plaut 2010; Scheepers et al. 2014; Saguy et al. 2009; Sam and Berry 2010; Simon and Ruhs 2008; Wolsko et al. 2000). Most recently, this research has also begun to shed light on the potential of dually identified individuals and groups to positively affect intergroup relations between the groups that represent the respective sources of their dual identity (Levy et al. 2017).

In the studies described in this paper, we sought out to continue this line of thought, and test whether this potential would be present in the inter-racial context in the United States as well. Indeed, in the three studies presented above we found that the exposure to biracials led to a diminished sense of prejudice among individuals high in SDO who are usually prone to higher levels of racism. Additionally, in Study 2 and 3, we also found that the said exposure to biracials also improved the attitudes toward black victims of current events among the same high SDO participants, and found strong pointers toward the reduction of perceived inter-racial threat as the mediator. In Study 2, the presence of biracials reduced a general sense of inter-racial threat which in turn led to diminished symbolic racism. In Study 3, the presence of biracials reduced the sense of symbolic threat from the biracials themselves which in turn led to reduced social distance between whites and blacks. This variance in the mediating and outcome variables should be taken into account when considering the implications of the findings. Nonetheless, the fact that we were able to find the same patterns (i.e., improved inter-racial attitudes as a result of biracial presence) across three different studies that spanned over 3 years, strongly signals that there is a phenomenon here that both identity and intergroup relations researchers should be aware of. This was also corroborated by the mini meta-analysis that analyzed all the findings across the three studies. Moreover, the emergence and persistence of these patterns despite the subtlety of the experimental manipulation also speak to the robustness of the findings despite the slight inconsistencies. Below we offer several possible future directions that can build on these findings, and help shed more light on the mechanisms at hand.

The studies presented in this paper tested the alleged potential of dual identity groups to act as a possible gateway, and improve intergroup relations in the inter-racial context. While the findings of these studies offer initial support for this hypothesis, this line of research clearly requires further elaboration and specification. The racial context is but one more possible venue for this new intergroup dynamic, and additional contexts such as ethnic, religious, and other intergroup contexts should be put to the test. While theoretically, the same intergroup gateway structure can be applied also in other similar scenarios, research in the field of multiple identity has found context-dependent phenomena (Young et al. 2017) and therefore this should be examined for the sake of generalization.

Moreover, the studies above have all addressed the presence of biracial individuals in a relatively simplified manner. In reality, however, the experience and perception of such dually identified groups can be substantially more complex, and additional mediating and moderating factors should be explored in order to develop a well-based theoretical model. For instance, group-based emotions that may be linked to threat, such as anxiety and fear (Stephan and Stephan 2000), might also take part in the mediation process. Such emotions have been found to have significant impact on intergroup relations (Halperin 2016; Levy et al. 2017) and should be examined accordingly. Additionally, other moderating factors such as the perceived identification of the biracials might also affect the impact they have on intergroup relations (Jugert et al. 2017). Although the link between the perceived and experienced identity of dual identifiers seems natural, this link is still surprisingly understudied, and this calls for further examination in order to understand how the identity experience and perception of such dual identifiers influences their surroundings (Kang and Bodenhausen 2015; Levy et al. 2017; Pauker et al. 2018).

Furthermore, while the studies in this paper solely examined the effects of the passive presence of a dually identified group in the midst of an intergroup dynamic, gateway groups with dual identities such as the biracial community rarely remain completely passive. For example, such a group can choose to support one of its counterparts in a struggle against the other, or try and actively promote conflict resolution endeavors as a mediator (Kaiser and Pratt-Hyatt 2009). Accordingly, future studies should test the effects of active dually identified agents in order to provide a more significant, and perhaps more representative depiction of real-world intergroup relations. In addition, as previous research has found that “race is gendered,” i.e., race and sex categories are psychologically and phenotypically confounded (Johnson et al. 2012), and that individuals affiliated with two low power groups (e.g., black Females) are perceived differently than their single low power identity counterparts (e.g., white females, or

black males; Crenshaw 1991). In this paper, we simply presented participants with an equal number of male and female portraits from each race across all studies, but future research should examine how the element of gender interacts with the exposure to biracial individuals as demonstrated above. Finally, the manipulation in the studies above was very subtle, and very short (which is in line with the size of the effects). Once a better understanding of the mechanism at hand is developed, it will enable the development of stronger, and hopefully long-lasting intervention for the reduction of inter-racial threat and prejudice among people high in SDO (Walton 2014).

Notwithstanding the limitations listed above which call for additional research, we believe that the studies presented in this paper offer both a theoretical and applicable contribution in the realm of intergroup conflict resolution. From a theoretical perspective, the approach presented above moves beyond the traditional dichotomous view of “us” versus “them,” and offers a wider and more complex structure of intergroup dynamics. From a practical perspective, coupled with the previous research on the conflict-reducing potential of dually identified gateway groups (Levy et al. 2017), a new and promising venue for conflict alleviation is starting to take shape. The fleshing out of previously marginalized dually identified groups may point to new and promising methods of intergroup prejudice reduction. So far, such groups have been marginalized in the context of intergroup relations, and have been subjugated by physical conflict from without, and identity conflict from within (Berdahl and Moore 2006; Derks et al. 2015, 2016; Gaither et al. 2013; Kulich et al. 2015; Lowrance 2006; Pinson 2008; Verkuyten and Reijerse 2008). Labeling these groups as potential facilitators of conflict resolution can help in empowering such groups, in fleshing out their unique capabilities, and in increasing their overall wellbeing.

In conclusion, dually identified groups that can be found in the midst of almost every intergroup conflict situation, and are likely to become even more prevalent in the future, may have a very significant role to play in intergroup conflict resolution if integrated correctly. The studies above provide a very partial yet very optimistic picture of the suggested potential, and future research will attempt to provide a more comprehensive and developed framework for these new found gateway groups.

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Compliance with Ethical Standards

Conflict of interest All authors have no conflict of interest.

Ethical Approval All procedures performed in studies involving human participants were in accordance with the ethical standards of the institutional research committee and with the 1964 Helsinki Declaration and its later amendments or comparable ethical standards.

Informed Consent Informed consent was obtained from all individual participants included in the study.

Research Involving Animal Studies This article does not contain any studies with animals performed by any of the authors.

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