Divided Loyalties: Perceptions of Disloyalty Underpin Bias Toward Dually-Identified Minority-Group Members

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Majority-group members often hold negative attitudes toward minority-group members who identify with both the majority and their minority group. Integrating perspectives from social identity theory and acculturation research with a coalitional psychology framework, we show that an underlying mechanism for such bias is the perception that dual identifiers are disloyal to the majority group. In Study 1, majority-group participants in the U.S. questioned the loyalty of a dually identified Arab immigrant more than one who identified solely with the (American) majority group, especially under intergroup threat, which in turn predicted less favorable feelings toward the immigrant. Study 2 conceptually replicated the effect of the identity manipulation and the mediating influence of perceived loyalty on judgments about an immigrant being allowed to enlist in the U.S. military. Study 3, partially replicated the findings in Poland, focusing on Russian immigrants as targets. In Study 4, which independently manipulated both the identity expressed by immigrants and their loyalty, a dually identified immigrant whose loyalty to the majority group was portrayed as high was not judged as less qualified than an immigrant who identified only with the majority group for jobs with the potential to inflict damage on the majority group. Study 5, replicated and extended the previous studies in the context of fans of allied or rival soccer teams in Germany, revealing the moderating role of existing group relations on the hypothesized loyalty processes. In summary, coalitionally driven perceptions of (dis)loyalty appear to undergird bias toward minority-group members who hold dual identifications.

Keywords: acculturation, coalitional psychology, common in-group identity model, dual identities, loyalty

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With recent, unprecedented increases in immigration worldwide (United Nations, 2013), virtually every contemporary nation has become substantially more culturally heterogeneous. Within diverse societies, the identity preferences of members of the host country and those of immigrant groups, as well as those of members of majority and minority groups more generally, often collide: Immigrants and minority-group members typically prefer to hold multicultural dual identities, which involve identification with both the majority and minority group and represent a form of integrative acculturation (Berry & Sam, 2016). By contrast, host-country and majority-group members often expect and prefer immigrants to identify solely with the socially dominant group and to abandon their immigrant- or minority-group identity, reflecting a form of assimilative acculturation (Dovidio, Gaertner, Ufkes, Saguy, & Pearson, 2016; Hehman et al., 2012; Verkuyten & Thijs, 2002). The mismatch between the identity preferences of immigrant- and minority-group members (for a dual identity) and those frequently desired for them by majority-group members (i.e., a common identity, identifying solely with the superordinate, socially dominant group such as Americans) can undermine intergroup relations in society and adversely affect how minority-group members will be treated by members of the socially dominant group (Bourhis, Moïse, Perreault, & Senecal, 1997; Bourhis, Montreuil, Barrette, & Montaruli, 2009), and ultimately the psychological functioning and well-being of immigrant- and minority-group members (Berry, 1997; Kunst & Sam, 2013b; Zagefka & Brown, 2002).

Why might majority-group members feel wary toward dually identified immigrants? Integrating an evolutionary psychology perspective (e.g., Brewer, 2004; Brewer, 2007; Brewer & Caporael, 2006; Neuberg & Cottrell, 2006; Tooby & Cosmides, 2015)

with social identity (Tajfel & Turner, 1986), self-categorization (Turner, Hogg, Oakes, Reicher, & Wetherell, 1987), and acculturation (Berry, 1997; Bourhis et al., 1997) theories, the present research, involving five experiments, investigated whether coalitionally driven loyalty concerns underpin majority-group members' negative orientations toward dually identified minority-group members from potentially rival groups.

From a coalitional psychology perspective, stronger and better-coordinated group coalitions are likely to fare better in competition and conflict with other groups (Bowles, 2006; Boyd & Richerson, 2004; Tooby & Cosmides, 2010). The advantages provided by such coalitions are hypothesized to be a key reason why exposure to intergroup conflict enhances the value of in-group solidarity, altruism, community organization, and conformity (Atran, 2016; Harrington & Gelfand, 2014). From this perspective, immigrants may be perceived as valuable to a group, such as a nation, when they are viewed as bringing resources that strengthen the national group, but immigrants may be seen as detrimental when they are suspected of being disloyal, which would greatly undermine group functioning.

In light of this, the greater bias expressed by majority-group members toward minority-group members and immigrants who display a dual identity, compared with those who display a common identity (identifying only with the socially dominant culture), may be rooted in the threat dually identified minority-group members can be perceived to pose for the majority group. Consistent with such threat perceptions, Scheepers, Saguy, Dovidio, and Gaertner (2014) demonstrated that majority-group members displayed a stronger cardiovascular threat response when they interacted with a minority-group member who expressed a preference for a dual identity than when the minority-group member solely endorsed a common identity associated with the dominant group's culture. This threat experienced by majority-group members may reflect several psychological mechanisms. For example, majority-group members, insofar as they are motivated to protect the in-group from "contamination" by members of another group, may perceive minority-group members who endorse a dual identity as a threat to the integrity of the in-group (Castano, Yzerbyt, Bourguignon, & Seron, 2002; Leyens & Yzerbyt, 1992). This perceived threat may be especially pronounced when the dual identifier comes from a devalued or low-status group, as suggested by work on dominance boundary enforcement (Ho, Sidanius, Cuddy, & Banaji, 2013; Pauker & Ambady, 2009; Thomsen, Green, & Sidanius, 2008) and acculturation research (Kunst & Sam, 2013a; Montreuil & Bourhis, 2001), or when the individual is seen as inferior or "culturally foreign" as recent work suggests (Zou & Cheryan, 2017).

One might derive similar predictions from an evolutionary perspective on the coordination benefits of mutually agreed upon social norms. It is not only costly to cooperate with defectors, but also to coordinate between parties who misunderstand or disagree about their social commitments. Insofar as members of a cultural group tend to perceive that they are successful because of its social norms, newcomers who do not subscribe to them and hence corrode them may also be seen as posing a long-term risk to the group (Delton & Cimino, 2010). This reasoning suggests that inclinations to sanction norm-violators may evolve (Panchanathan & Boyd, 2004; Richerson et al., 2016). Consistent with this, from a social identity perspective, people may perceive dual identifiers

as deviant in-group members, stimulating especially negative responses to them, which in turn may serve to enforce group order and cohesion (Marques & Paez, 1994; Marques & Yzerbyt, 1988).

In the present research, we propose that another specific reason that majority-group members feel more negative toward dually identified than common-identified minority-group members is that they perceive dual identifiers as being *disloyal* to the majority group. Importantly, if such loyalty concerns are adaptations for intergroup conflict and competition, they should be especially pronounced under conditions of intergroup threat from rival groups and their members.

Dual and Common Identities as Coalitions: The Potential Role of Perceived Disloyalty

Loyalty, defined as willingness to support one's group irrespective of the personal disadvantage this may cause (Zdaniuk & Levine, 2001), has been described as the "social glue" that holds groups together (Van Vugt & Hart, 2004). Because forming coalitions with other individuals increases the chance of succeeding in intergroup competition and conflicts, this pressure likely favored the evolution of a psychology that supports the formation and maintenance of strong coalitions (Sidanius & Pratto, 1999; Tooby & Cosmides, 1988, 2010). Importantly, loyalty can be seen as a central cue for determining whom to depend on as member of one's coalitional group and whom to be wary about. Consistent with this perspective, loyalty is valued across societies and different groups (Cottrell, Neuberg, & Li, 2007; Schwartz, 1992; Schwartz & Sagiv, 1995), and its expression and expectation can be observed already in early childhood (Misch, Over, & Carpenter, 2014, 2016).

Loyalty is also closely related to social identity. The boundaries of one's in-group delineates who can be trusted and who is loyal to the group; qualities that are critical for reciprocity and cooperation (Gaertner, Brewer, & Dovidio, 2006), which enable the long-term survival of a group (Trivers, 1971). Indeed, people readily socially categorize themselves and others into coalition-like groups (Fiske & Neuberg, 1990; Kaiser & Wilkins, 2010; Tajfel, Billig, Bundy, & Flament, 1971) and rapidly detect shifting coalitions across settings (Kurzban, Tooby, & Cosmides, 2001; Pietraszewski, Cosmides, & Tooby, 2014). Importantly, coalitions are only effective and meaningful as long as their members are committed and loyal (Tooby & Cosmides, 2010). Hence, perceptions of disloyalty would be expected to have profound implications for an evolved coalitional psychology designed to manage group (and intergroup) living.

From a coalitional perspective, the fact that dual identities involve attachment to, and membership in, two salient groups at the same time is potentially problematic: As Tooby, Cosmides, and Price (2006) argued, members of coalitions "should spontaneously disapprove of the formation of strong individual loyalties toward out-group members by other individuals in the in-group" (p. 12) because they weaken the power of the in-group and because such divided loyalties signal little care about the welfare of fellow in-group members (Boyer, Firat, & van Leeuwen, 2015; Moreland & Levine, 2002; Petersen, Sell, Tooby, & Cosmides, 2010). As Brewer and Caporael (2006) observed, such evolutionary-shaped social motives may well operate proximately through social identity-related processes. In the case of the hypothesized evolu-

tionary role of perceptions of loyalty to one's group, people may generally perceive that an individual who identifies solely with one's (socially dominant) in-group would likely be trustworthy (see Foddy, Platow, & Yamagishi, 2009), whereas there is a risk that a person who identifies with one's in-group *and* with another group might be disloyal to the socially dominant in-group. Thus, from an evolutionary coalitional perspective, people will likely be negatively biased toward individuals who are affiliated with more than one group (such as dually identified minority-group members, as compared with minority-group members who identify only with the shared common identity) because they question their loyalty to the in-group.

We would expect such loyalty concerns to be most pronounced when intergroup threat is high because it is here that a failure to distinguish between loyal and disloyal group members is especially costly (Boyer et al., 2015; Neuberg & Cottrell, 2006; Neuberg, Kenrick, & Schaller, 2010, 2011; Van Vugt & Park, 2009): Falsely perceiving loyal dual-identifiers to be disloyal would be less costly than erroneously perceiving disloyal dual-identifiers to be loyal to the majority group, especially under high intergroup threat and potential danger to the in-group. Hence, an error-management perspective (Haselton & Buss, 2000, 2003; Haselton & Nettle, 2006) would predict that majority-group members will show a tendency to doubt the loyalty of dually identified immigrants particularly under conditions of intergroup threat. Consistent with this prediction, in times of war, traitors and deserters have been fiercely punished if not executed (see French, 1998; Lonn, 1966; Mathew & Boyd, 2011). Moreover, spies and double-agents to the present date face the death penalty (and harsher treatment than ordinary prisoners of war) in many countries involved in conflicts, such as the U.S. or Iran (Katzman, 2003; Norwood, 2002). Indeed, holding dual citizenship may exclude people from joining the army in the U.S. (and many other countries) because it raises "an issue of possibly divided loyalty to the United States" (U.S. Department of State, 2015, p. 1).

The Present Research

Extending the integration of social identity (Dovidio et al., 2016; Gaertner, Dovidio, Guerra, Hehman, & Saguy, 2016) and acculturation perspectives (Bourhis et al., 2009; Horenczyk, Jasinskaja-Lahti, Sam, & Vedder, 2013) with a functional, coalitional psychology perspective (Tooby & Cosmides, 1988, 2010), we propose an additional, theoretically based mechanism for how dual identifiers are evaluated by majority-group members, namely their perceived loyalty to the dominant, superordinate in-group.

Theoretically, the present research offers an integrative account to understand the ways in which perceptions of different social identities shape group attitudes. More specifically, whereas encouraging the adoption of a dual identity has been advocated as an important step toward improving intergroup relations in the long term (Berry & Sam, 2016; Gaertner et al., 2016), the present work explores potential psychological obstacles that could, at least in the short term and in times of tense intergroup relations, exacerbate intergroup conflict. Practically, the present research helps illuminate key dynamics in the relationship between members of a host country and immigrant groups, and between majority and minority groups more generally.

Our research consisted of five experiments. Study 1 provided an initial test of the hypothesis that majority-group members in the U.S. will show less positive feelings toward an Arab dual identifier especially under threat because they perceive him as being disloyal to the majority group. Study 2 again addressed the hypothesis that majority-group members in the U.S. would be biased toward dually identified Arabs when erroneous loyalty perceptions are particularly costly. Specifically, using the scenario of an immigrant attempting to join the army of the American majority group—a position that potentially allows disloyal group members to inflict damage on the majority group—it tested whether participants due to loyalty concerns would disapprove of him enlisting in the army especially when he held a dual as compared with common identity. Study 3 aimed to replicate and extend the first two studies in a different context. Controlling for alternative mediators (i.e., perceived identification and norm adherence), it tested whether loyalty concerns would explain Polish participants' bias toward dually identified Russian immigrants especially when the stakes of conflict are high. Using another American sample, Study 4 extended the previous studies by experimentally manipulating a Russian or Arab immigrant's loyalty in addition to his or her identity, providing crucial evidence for loyalty perceptions' role as a causal mediator. Finally, in Study 5, we tested whether our loyalty paradigm generalizes to group contexts that are not defined by ethnicity. Specifically, the last study aimed to replicate our entire paradigm among fans of rival and allied soccer teams in Germany, measuring a range of dependent variables of affective bias and behavioral intentions toward the target.

Study 1

From a coalitional psychology perspective, perceptions of divided loyalties would be expected to have particularly potent effects when intergroup threats and stakes are high (Boyer et al., 2015; Haselton & Nettle, 2006; Neuberg & Cottrell, 2006; Neuberg et al., 2010; Tooby & Cosmides, 2010; Van Vugt & Park, 2009). In such settings, majority-group members would be expected to be especially likely to question the loyalty of a dually identified immigrant because this scrutiny minimizes the costly risk of falsely perceiving disloyal members to be loyal to the majority group (see Haselton & Buss, 2000). Consistent with this notion, research in applied group settings, such as the military, has demonstrated that group cohesion and conformity are crucial for groups exposed to threatening situations (Griffith, 1997; Oliver, Harman, Hoover, Hayes, & Pandhi, 1999). Hence, we tested our hypothesis that, because of loyalty concerns, majority-group members would display more negative feelings toward a dually identified individual than toward a person solely identifying with the shared common group while varying the salience of the threat associated with the individual's ethnic group.

To test this hypothesis, we first experimentally varied the salience of threat to Americans associated with Arabs. Using a procedure similar to one that manipulated threat salience in previous research (e.g., Dovidio et al., 2004), we either primed White American participants with the alleged Islamic State of Iraq and Syria (ISIS) Terrorist Attack in San Bernardino, California on December 2, 2015 (high threat condition) or did not present this material (low threat condition). The San Bernardino incident was chosen as stimulus for its temporal proximity (the study was run on

December 15, 2015) and because a vast majority of Americans perceived ISIS as the largest threat to the U.S. at that time (Gallup, 2015). Next, adopting an experimental manipulation from previous research (Thomsen et al., 2008), we presented participants with the immigrant "Mohammed" who, depending on the experimental condition, either identified as American only (i.e., common identity in terms of adopting the dominant culture) or as American and Arab (i.e., dual identity). We then assessed participants' perceptions of how loyal Mohammed was to his cultural minority group and to America, as well participants' feelings about him.

We predicted that the manipulation of group threat would moderate the effects of experimentally manipulating whether the immigrant holds a dual versus common identity on majority-group members' feelings toward him. Specifically, we expected that participants under threat would perceive a dually identified minority-group member as particularly disloyal to the common group, which would subsequently lead majority-group members to dislike him more than the immigrant who endorsed only the common, American identity.

Method

Participants.   Participants were recruited through Amazon's Mechanical Turk (MTurk). In our recruitment materials, we did not limit involvement in the study to those who reported "being White" or "holding American citizenship" for two reasons. First, representing our primary reason, we did not want people from other backgrounds to feel excluded from the study. Second, we did not want to sensitize White American MTurk workers to the focus of the research on majority-group members. However, because our hypotheses concerned the responses of members of the socially dominant group, we restricted our data analyses to responses only of those participants who reported that they were White Americans at the end of the study. Because the limited number of minority-group members from various racial and ethnic groups did not allow for an adequately powered separate analysis, only the results for White American participants are presented. This procedure was followed for all studies conducted in the U.S. that we present in this article. All studies in this research were approved by the Institutional Review Board of the first author's primary affiliation.

A total of 470 participants elected to participate in Study 1, 371 of whom indicated that they were White and held U.S. citizenship (men = 53.9%; M_{age} = 34.47, SD_{age} = 11.16, age span = 19–80). Twenty-three (6.2% of the White American participants) were excluded because they failed an attention check (described in detail below). Hence, the final sample comprised 348 respondents. Because we underestimated the proportion of White Americans we would recruit, this sample size exceeded the minimum of 266 participants, which according to a power analysis conducted in G*Power 3.1.9.2 were needed to have 90% probability to observe a small to medium interaction effect (f = .20; numerator df = 1) at a significance criterion of .05. The sample size of this and all remaining studies also satisfied simulation-based criteria for sample sizes in moderated mediation models (Preacher, Rucker, & Hayes, 2007).

Procedure.   In this and all remaining studies, materials were presented and data were collected online via Qualtrics. This study employed a 2 (Threat Condition: control vs. threat) × 2 (Immigrant Target Identity: common vs. dual) design. It was introduced to participants as dealing with attitudes and opinions on current social issues in the U.S. Participants were first randomly assigned to the threat or control condition. In the *threat condition*, a collage of three pictures was shown at the top of each page throughout the survey except for the section comprising demographic questions and the attention check at the end of the survey. The collage showed the crime scene of the terrorist attack in San Bernardino, California, a profile picture of the alleged terrorist and a picture of ISIS (see supplementary online materials [SOM]), accompanied with the text "Fourteen people were killed and 22 injured in an Islamist Terrorist Attack in San Bernardino on December 2. The attack was conducted by a U.S. citizen of Middle Eastern origin." In the *control condition*, the pictures and text were not presented.

Next, participants were randomly assigned to one of two target identity conditions. In both conditions, participants read a text adapted from Thomsen, Green, and Sidanius (2008) about an immigrant named "Mohammed" who had recently immigrated to the U.S. However, in contrast to the study by Thomsen et al. (2008) that presented an immigrant endorsing separation or assimilation, we presented a common-identified or dually identified immigrant. In the *common group condition*, he was described as follows:

> Now imagine Mohammed, a young man who came to the U.S. some years ago hoping to find a better life here. Asked about how he would describe himself, he says that he identifies *only* with being American and *not* with being Arab.

In the *dual group condition*, Mohammed was described as this:

> Now imagine Mohammed, a young man who came to the U.S. some years ago hoping to find a better life here. Asked about how he would describe himself, he says that *he identifies with being American as well as with being Arab.*

On sliding response scales ranging from 0 (*not loyal at all*) to 100 (*very loyal*), participants next rated the degree to which they perceived the immigrant as being (a) loyal to his cultural minority group and (b) loyal to the U.S. American majority group. The presentation order of the loyalty measures was randomized. Lastly, participants indicated their feelings toward the immigrant on a feeling thermometer with 0 (*very negative*) and 100 (*very positive*) as endpoints. This measure is widely used in survey research because it is highly related to other attitude scales and provides a common format for responding to a range of groups (Alwin, 1997; Kinder & Drake, 2009).

At the very end of the survey, participants were asked to complete a demographics section assessing participants' age, gender, ethnicity, and citizenship. Finally, participants completed a multiple-choice attention check asking what Mohammed had been described as identifying with (1 = *only with being American and not with being Arab*, 2 = *with being American as well as with being Arab*, 3 = *only with being Arab*, 4 = *I forgot*; response options were presented in randomized order).[1]

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[1] The questionnaire also included a measure of common identity (α = .92) and dual identity (α = .92) endorsement which participants completed at the very beginning of the survey before being assigned to the experimental conditions. Additional analyses using these variables as moderators are presented in the SOM.

Results

Two-way analyses of variance (ANOVA) were conducted to test for the effects of the target identity manipulation, the threat manipulation and their interaction on the dependent variable (i.e., positive feelings toward the immigrant) and the potential mediators (i.e., perceived loyalty toward the majority and minority groups). In terms of the main dependent variable, feelings about the immigrant (Mohammed), the threat manipulation had a significant effect, $F(1, 343) = 35.89$, $p < .001$, $\eta_p^2 = .10$. Overall, participants felt less positive toward Mohammed when they were primed with the San Bernardino attacks, $M = 50.03$, 95% CI [46.00, 54.06], than when they were not, $M = 67.91$, 95% CI [63.64, 72.18]. There was not a main effect for the target identity manipulation, $F(1, 343) = .66$, $p = .418$, $\eta_p^2 < .01$. Of primary relevance to the predictions, the Target Identity $\times$ Threat Manipulation interaction was significant, $F(1, 343) = 4.01$, $p = .046$, $\eta_p^2 = .01$. As displayed in Figure 1, planned contrasts revealed that participants felt significantly less positively toward the immigrant when he endorsed a dual identity compared to a common identity in the threat condition, $t(343) = -2.05$, $p = .041$, $d = .22$; there was no significant difference in the control condition, $t(343) = .82$, $p = .414$, $d = .09$. Further analyses revealed no gender interactions, ps $> .191$.

A similar pattern was observed in terms of perceived loyalty to the majority group. The threat manipulation had a significant effect, $F(1, 344) = 57.38$, $p < .001$, $\eta_p^2 = .14$. Participants primed with the San Bernardino attacks perceived Mohammed to be less loyal to the majority group, $M = 52.40$, 95% CI [48.28, 56.52], than did participants in the control group, $M = 75.48$, 95% CI [71.12, 79.83]. Next, the target identity manipulation, $F(1, 344) = 33.00$, $p < .001$, $\eta_p^2 = .09$, was significant, with participants perceiving Mohammed to be less loyal to the majority group when he had a dual identity, $M = 55.19$, 95% CI [51.04, 59.33], than when he displayed a common identity, $M = 72.69$, 95% CI [68.36, 77.02]. Importantly, the predicted interaction between the identity and threat manipulations was statistically significant, $F(1, 344) = 4.71$, $p = .031$, $\eta_p^2 = .01$. As displayed in Figure 1, in the control condition, when the immigrant expressed a dual identity he was perceived as less loyal to the majority group than when he endorsed a common, American identity, $t(344) = -2.46$, $p = .014$, $d = .27$. In the threat condition, this effect was especially pronounced, $t(344) = -5.76$, $p < .001$, $d = .62$. Again, additional analyses did not reveal any gender interactions, ps $> .201$.

In terms of perceived loyalty to the minority group, only the target identity manipulation, $F(1, 344) = 238.51$, $p < .001$, $\eta_p^2 = .41$, but not the threat manipulation, $F(1, 344) = .02$, $p = .890$, $\eta_p^2 < .01$, nor the interaction between the manipulations, $F(1, 344) = 3.32$, $p = .069$, $\eta_p^2 = .01$, had an effect. Participants perceived the dual identifier across threat conditions to be more loyal to his minority group, $M = 77.83$, 95% CI [74.07, 81.59], than the common identifier, $M = 35.12$, 95% CI [31.18, 39.05]. Again, no gender interactions were observed, ps $> .586$.

Given that the interaction between the manipulations had an effect on the proposed dependent variable and the mediator, we estimated a moderated mediation model using Model 8 of the PROCESS macro (Hayes, 2013). This model tested whether the threat manipulation would moderate the extent to which dual identity (as compared to common identity) leads to lower scores on

the proposed mediator (i.e., loyalty to the majority group), which, in turn, was expected to be associated with more positive feelings. Hence, in the model (see Figure 2), we tested whether the immigrant target's identity (dual vs. common identity) would have an indirect negative effect on positive feelings toward the immigrant that is mediated by perceptions of (dis)loyalty to the majority group, primarily when threat was high. Although, as reported earlier, no interaction effect was observed on loyalty toward the minority group, we controlled for the variable in this model because it was negatively related to the dependent variable, $r(345) = -.12$, $p = .020$.[2] Bootstrapping with 5,000 random resamples showed that the target identity manipulation indirectly led to less positive feelings toward the immigrant due to lower perceptions of loyalty to the majority group in the threat condition, $B = -8.73$, 95% CI [-17.12, -1.11], but not in the control condition, $B = 2.42$, 95% CI [-5.20, 9.90]. These indirect effects were significantly different from each other, $\Delta B = -11.15$, 95% CI [-19.34, -3.55]. We also estimated an alternative mediation model, in which the positions of the mediator and dependent variable were reversed. The model provided evidence for such reversed mediation in the control condition (see SOM).

Discussion

Consistent with our hypotheses, White American participants, representative of the socially dominant group in the U.S., expressed less positive feelings toward, and greater concern about, the loyalty of the immigrant when threat was made salient and the immigrant expressed a dual identity, as both American and Arab, compared with when he asserted only an identity as American. Moreover, only in the threat condition did these perceptions of disloyalty, in turn, explain why participants were less positive toward the dual identifier than toward the common group identifier. This finding is consistent with the idea that the coalitional psychology of humans evolved in part as an adaptation to intergroup conflicts (Sidanius & Pratto, 1999; Tooby & Cosmides, 2010) and thus operates most potently under intergroup threat.

In the next study, we aimed to conceptually replicate the finding that majority-group members dislike dually identified immigrants in settings in which coalitional loyalty is crucial. Moreover, we aim to replicate that perceived disloyalty to the majority group rather than to the minority group is the dominant process underlying this effect.

Study 2

Many countries, including the U.S., formally allow their inhabitants to hold dual citizenships but still have laws that, due to explicit loyalty concerns, can prevent them from enlisting in their nation's army (U.S. Department of State, 2015). In fact, from an error management perspective (Haselton & Buss, 2000, 2003; Haselton & Nettle, 2006) such laws make sense because falsely

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[2] When we did not control for this variable, the bootstrapped indirect effects via perceived loyalty to the majority group was somewhat stronger in the threat condition, $B = -16.49$, 95% CI [-23.72, -9.86], whereas the indirect effect in the control condition was weaker but significant, $B = -7.61$, 95% CI [-12.52, -2.58]. Also in this model, both effects were significantly different, $\Delta B = -8.88$, 95% CI [-16.88, -1.15].
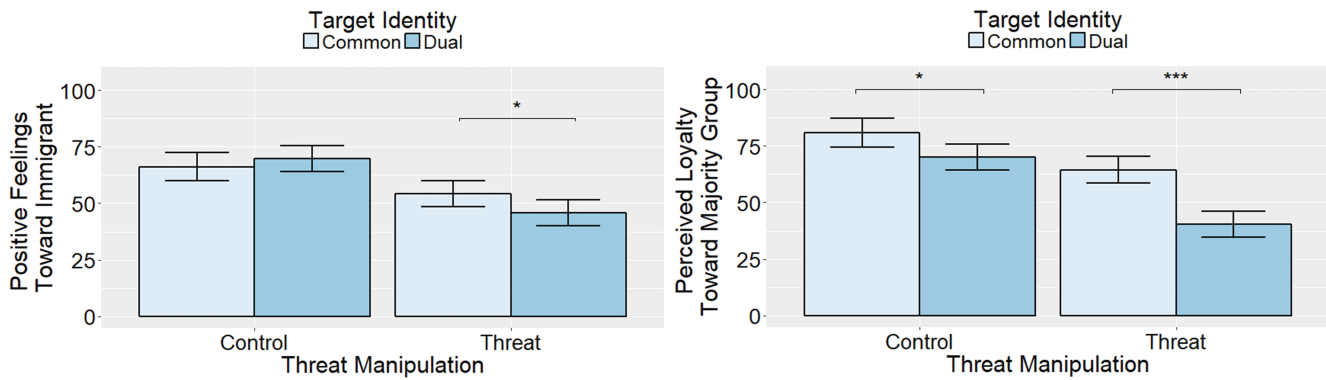
Figure 1. Effects of the target identity manipulation in the control and threat conditions are displayed for Study 1. Error bars represent 95% confidence intervals. See the online article for the color version of this figure.

perceiving disloyal group members as loyal can have fatal consequences, particularly if the latter hold positions within the group with large potential to inflict damage (Neuberg, Kenrick, & Schaller, 2011). Against this background, Study 2 investigated how majority-group members assess the suitability of an immigrant in one such role—serving in the military—as a function of the immigrant's expressed identity.

As in Study 1, we again experimentally varied an Arab immigrant's identity as either a dual identity (as Arab and as American) or a common (American) identity and measured how loyal majority-group participants perceived the immigrant to be. The dependent measure of interest was the extent to which majority-group participants approved of the immigrant enlisting in the U.S. army. We predicted that majority-group members because of such loyalty concerns, in general, would be less approving of a dually identified immigrant enlisting as soldier in their army compared to one who identifies solely with the dominant culture.

Method

Participants. A total of 116 White Americans (men = 43.1%; $M_{age} = 34.72$, $SD_{age} = 10.28$, age span = 18–61) were recruited in January 2016 using the same procedure as in the previous study with the difference that the study was introduced as dealing with "ratings of job applicants during a hiring process." This sample size satisfied the minimum of 112 participants needed for a 90% chance to detect a medium main effect ($f = .31$), which was

observed for loyalty to the majority group in the coalitionally relevant threat condition of the previous study. Yet, the obtained sample size was underpowered assuming a main effect of small size ($f = .11$), such as the one observed on feelings toward the immigrant in the threat condition of the previous study. All of the participants reported holding U.S. citizenship.

Procedure. Following the paradigm used in Study 1, participants first read about an Arab immigrant named Mohammed who held either a common identity or a dual identity. As determined by random assignment, approximately half of the participants ($n = 61$) assigned to the common identity condition were informed that he "identifies *only* with being American and *not* with being Arab." The other approximate half ($n = 55$) assigned to the dual identity condition learned that he "identifies with being American as well as with being Arab."

Loyalty was then assessed using the same scales employed in Study 1 (again with the order randomized across participants). Participants rated, from 0 (*not loyal at all*) to 100 (*very loyal*), the degree to which they perceived the immigrant as being (a) loyal to his cultural minority group and (b) loyal to the U.S. American majority group. Finally, participants were asked to imagine that "Mohammed wants to join the U.S. Army" and, on a sliding-response scale ranging from 0 (*totally disagree*) to 100 (*totally agree*), to indicate their position on whether "he should be allowed to become enlisted as a soldier."[3]

Results

As we predicted, participants agreed less that the immigrant target should be allowed to enlist in the army when he had a dual identity, $M = 71.02$, 95% CI [62.10, 79.93], than when he had a common identity, $M = 81.74$, 95% CI [75.88, 87.59], $F(1, 113) = 4.23$, $p = .042$, $\eta_p^2 = .04$. No interaction with participants' gender was observed, $p = .502$. Moreover, as in the previous study, participants perceived the immigrant target to be more loyal to his minority group when he held a dual identity as compared with common identity, $M = 76.76$, 95% CI [72.20, 81.33] versus $M = 32.54$, 95% CI [25.78, 39.30], $F(1, 114) = 112.77$, $p < .001$, $\eta_p^2 =$
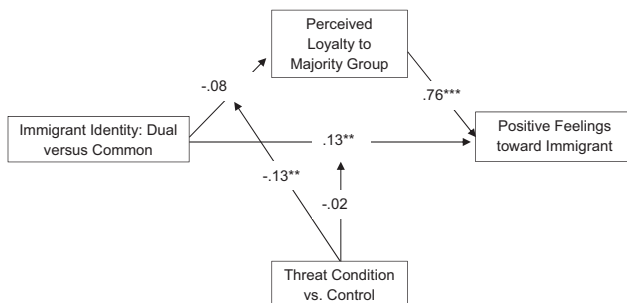

Figure 2. The moderated mediation model estimated in Study 1 is displayed. Standardized estimates are presented. ** $p < .01$. *** $p < .001$.

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[3] This survey also included measures of common identity ($\alpha = .91$) and dual identity endorsement ($\alpha = .95$). Additional analyses using these variables as moderators can be found in the SOM.

.50, but to be less loyal to the majority group, $M = 62.31$, 95% CI [55.55, 69.07] versus $M = 79.33$, 95% CI [73.84, 84.82], $F(1, 114) = 15.59$, $p < .001$, $\eta_p^2 = .12$. No interaction with participants' gender was observed in terms of perceived loyalty to the majority group, $p = .502$, but a gender interaction in terms of perceived loyalty to the minority group was observed, $p = .047$, with women perceiving the common identifier as somewhat less loyal to the minority group than men did, see SOM.

Given these results, we set out to test whether varying the immigrant target's identity (as a dual vs. common identity) would have an indirect negative effect on agreeing that he should be allowed to enlist in the army that would be mediated by perceived loyalty to the majority group. To test this hypothesis, we used Model 4 of the PROCESS macro (Hayes, 2013). Indirect effects were tested using bootstrapping with 5,000 random resamples.

Indeed, while the experimental manipulation (target identity: $0 =$ common identity, $1 =$ dual identity) had a significant effect on participants' agreement with the immigrant being allowed to join the army in the first regression, $\beta = -.19$, $p = .042$; $F(1, 113) = 4.23$, $p = .042$ (with less agreement in the dual identity than in the common identity condition), this relation became nonsignificant, $\beta = -.02$, $p = .868$, when perceived loyalty to the majority group, $\beta = .61$, $p < .001$, and perceived loyalty to the minority group, $\beta = .05$, $p = .644$, were added to the model in a second regression, $F(3, 111) = 20.57$, $p < .001$. Bootstrapping showed a significant indirect effect mediated by perceived loyalty to the majority group, $B = -11.68$, 95% CI [$-20.17, -5.36$], but a nonsignificant indirect effect mediated by perceived loyalty to the minority group, $B = 1.98$, 95% CI [$-6.06, 11.24$]. Hence, these analyses suggested that participants agreed less that the immigrant should be allowed to enlist in the army when he had a dual identity because they questioned his loyalty to the majority group. As in Study 1, we also estimated an alternative model, which showed evidence for reversed cross-sectional mediation (see SOM).

Discussion

As predicted, majority-group members were less approving of a dually identified immigrant joining their army as a soldier because they perceived him as being disloyal to the majority group. Being a soldier is a group position that provides a disloyal group member with the means to inflict large damage on the in-group, for instance by deserting in conflict situations or by using force against the group and its members. In line with this, the results of the second study again suggested that the coalitional psychology of humans makes people especially sensitive to possible (dis)loyalty in such contexts of intergroup threat or potential danger.

Two studies thus far have demonstrated that majority-group members are biased toward minority-group members with dual identification because they perceive them as disloyal to the majority group. However, both studies have important limitations that need to be addressed. In the previous studies, we measured perceptions of loyalty and the dependent variables with single-items only. Although single-item scales often have high predictive validity and can have advantages over multiitem measures (see, e.g., Bergkvist & Rossiter, 2007; Nagy, 2002; Robins, Hendin, & Trzesniewski, 2001), it is valuable to replicate our findings with more comprehensive scales. It is also important to test for alternative mediators of our experimental effects. Most centrally, it is

possible that it is not perceptions of disloyalty but perceptions of disidentification from the majority group or a perceived lack of adherence to its norms that mediates the effects as self-categorization and social identity perspectives may predict. Next, both studies investigated attitudes toward Arab dual identifiers in the U.S. Hence, to establish the generalizability of our findings, it is important to replicate them in a different cultural context. Finally, and more specifically concerning this second study, although we showed predicted effects on approval for a job that brings the potential to inflict damage on the majority group, a stronger test would be to also include a measure of approval for jobs without such potential. The next study aimed to address these issues.

Study 3

In the times of the Soviet Union, Russian immigrants living in Poland were common, and to present date 13,000 Russians are living in the Polish Republic (Polish Central Statistical Office, 2013). While both Poles and Russians have a Slavic ethnicity, their intergroup relation has been far from harmonious, and is characterized by a long history of violent conflicts, occupations, and oppression (Cheremushkin, 2002). In recent years, tensions and suspicion between both groups have been on the rise as evidenced, for instance, by increased activities of the Russian army on the Russian side and by NATO troops on the Polish side of the shared border. Because betrayal in such a tense context can have fatal consequences, this is the type of scenario where Poles should be wary of Russian immigrants' potential disloyalty, especially if these retain their identification with the Russian group in addition to identifying as Poles.

In Study 3, we again tested the general hypothesis that majority-group members (Poles) would perceive a (Russian) immigrant as less loyal to the (Polish) majority group when he has a dual identity compared with when he has a common identity, and again expected this perception of disloyalty to cross-sectionally mediate effects on various forms of bias. Extending our previous findings, first, we predicted that loyalty concerns would lead participants to perceive the dual identifier as a poor coalitional member who takes advantage of them and is unlikely to altruistically share with them. Second, we expected loyalty concerns to lead participants to be less supportive of a dual identifier taking societal positions that provide him with high potential to inflict damage on the majority group (i.e., working as a Polish border patrol, in the Polish army or in the Polish secret service), while we did not expect loyalty to play a main role for positions with less potential to inflict damage (i.e., working as librarian, construction worker or architect). Third, we predicted that participants would expect the dual identifier to be more likely to support the Russians in a low-conflict zero-sum scenario (i.e., a soccer game between Poland and Russia) as well as in a high-conflict zero-sum scenario (i.e., a war between both countries). However, because false loyalty estimates are particularly costly in the high-conflict scenario, we expected perceptions of disloyalty to play a role especially here. Fourth, to test whether effects would generalize toward Russians as whole, we also tested for effects on a scale measuring willingness to participate in the ethnic persecution of Russians in general (Altemeyer, 1996; Thomsen et al., 2008).

With respect to potential mediators, to obtain a more robust measure of loyalty, we tested our hypotheses with a multi-item loyalty scale instead of the single-item scale from the previous studies. Importantly, we also included other potential mediators. From the perspectives of self-categorization or social identity theory (Turner et al., 1987) and integrated threat theory (Stephan, Ybarra, & Bachman, 1999; Stephan, Ybarra, Martínez, Schwarzwald, & Tur-Kaspa, 1998), majority-group members may dislike a dual identifier because they perceive him as threatening to the norms and culture of their majority group (Zárate, Garcia, Garza, & Hitlan, 2004). For instance, one may argue that a dually identified Russian immigrant is devalued because he is perceived as dissimilar to typical Poles in terms of the norms and culture of the group. Finally, to ensure that perceived loyalty does not simply function as a proxy measure of perceived identification, which was found to predict negativity toward minority-group members in past research (Kaiser & Pratt-Hyatt, 2009), we also assessed perceived identification with both the majority and minority group.

Method

Participants. A total of 345 Polish participants (men = 50.1%; M_{age} = 31.60, SD_{age} = 8.96, age span = 18–62) were recruited through Clickworker, an online panel company that offers similar services as Amazon MTurk in many European countries, and through snowball sampling on online social networks. Based on a power analysis in G*Power 3.1.9.2, this number exceeded the 266 participants needed for a 90% probability to observe a small to medium main effect (f = .20; numerator df = 1) at a significance criterion of .05. As we had no prior experience with the attention of Clickworker participants, we included an attention check as in Study 1 that tested whether participants remembered the content of the vignette manipulation. Thirty participants (8.7%) were excluded because they did not pass this check, resulting in a final sample of 310.

Procedure. The same experimental procedure as in the previous studies was used with the difference that the immigrant was from Russia and had the name "Ivan Sokolov." The dual-identifier (read by n = 165) or common-identifier (read by n = 150) text manipulation was presented on top throughout the survey except for the demographics page at the end. Unless stated otherwise, participants completed the following measures that were translated into Polish on 7-point Likert scales ranging from 1 (*totally disagree*) to 7 (*totally agree*).[4]

Mediators. Five items measured *perceived loyalty to the Polish majority group* (α = .93), and five items measured *perceived loyalty to the Russian minority group* (α = .96). These items were: "Ivan Sokolov is loyal to the (Russian/Polish) people," "Ivan Sokolov would do whatever it takes to support the (Russian/Polish) people," "Ivan Sokolov would make any sacrifice necessary to support the (Russian/Polish) people," "Ivan Sokolov would never betray the (Russian/Polish) people," and "Ivan Sokolov would always put the (Russian/Polish) people's interests first."

An adapted version of the three-item scale developed by Ellemers, Kortekaas, and Ouwerkerk (1999) was used to measure *perceived identification* of the target person with the majority group (α = .80) and the minority group (α = .91). An example item is "For Ivan Sokolov, being (Russian/Polish) is an important reflection of who he is."

Two items measured *perceived norm adherence*—specifically, the degree to which participants perceived the target person as adhering to the norms of the majority group, $r(309)$ = .70, $p <$ .001, and the norms of the minority group, $r(309)$ = .85, $p <$ .001. These items were: "To which extent do you think that Ivan Sokolov follows (Russian/Polish) norms and values?", and "To which extent do you think that Ivan Sokolov follows (Russian/Polish) traditions?" Responses were rated on a 7-point scale ranging from 1 (*not at all*) to 7 (*to a large extent*).

The loyalty measures were weakly to moderately correlated with the alternative mediators (see Table 1) and confirmatory factor analyses in Mplus 7.2 supported that majority-group and minority-group loyalty were statistically distinct from perceived identification and norm adherence. As in previous research, we present χ^2/degrees of freedom ratios in addition to different fit indices (Ho, Sidanius, et al., 2015) for the following results. Specifically, a six-factorial solution (i.e., perceived loyalty, identification, and norm adherence to the minority and majority group loading on separate factors), χ^2/df = 4.34, CFI = .892, RMSEA = .099, sRMR = .053, showed closer fit to the data than (a) a unifactorial solution, χ^2/df = 17.30, CFI = .423, RMSEA = .218, sRMR = .236; (b) a two-factorial solution in which all items framed toward the minority group loaded on the first factor and all items framed toward the majority group loaded on a second factor, χ^2/df = 8.90, CFI = .722, RMSEA = .152, sRMR = .103; (c) a four-factorial solution (i.e., as the six-factor solution but with loyalty and norm adherence framed toward the majority group loading on the same factor, and loyalty and norm adherence framed toward the minority group loading on the same factor), χ^2/df = 6.40, CFI = .816, RMSEA = .126, sRMR = .082; and (d) another four factor solution (i.e., as the six-factor solution but with loyalty and identification framed toward the majority group loading on the same factor, and loyalty and identification framed toward the minority group loading on the same factor), χ^2/df = 7.49, CFI = .778, RMSEA = .138, sRMR = .096. A three-factorial solution in which loyalty to the minority and majority group, identification with the minority and majority group, and adherence to the norms of the minority and majority group loaded on separate factors did not converge.

Dependent variables. The dependent measures assessed a range of responses related to perceptions of the target person. To measure *negative evaluation as coalitional member*, participants completed three questions framed to the majority group and three matched questions framed to the minority group such that a relative evaluation score could be calculated. Specifically, on sliding-response scales from 0% to 100%, they were asked how likely they thought it was that Ivan Sokolov would (a) rob a (Russian/Polish) person if he would get away with it; (b) rape a (Russian/Polish) person if he would get away with it; and (c) refuse to lend 500 zloty (around $130) to a (Russian/Polish) friend. Separate mean scores were created for the three questions framed toward the

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[4] Please note that the study also included a set of potential moderators (i.e., common and dual identity expectations, social dominance orientation, right-wing authoritarianism, national and religious identity). The results using participants' common identity and dual identity as moderators are presented in SOM, whereas data including the remaining moderators are available on request. These results do not qualify the results presented in the main analyses reported here.

Table 1
Correlations Between Main Variables in Study 3

Variable	2	3	4	5	6	7	8	9	10	11	12
1. Perceived loyalty to majority group	.61***	.57***	−.17**	−.31***	−.30***	−.32***	.22***	.26***	−.42***	−.38***	−.03
2. Perceived identification with majority group		.54***	−.24***	−.27***	−.27***	−.25***	.24***	.22***	−.40***	−.36***	−.12*
3. Perceived adherence to majority norms			−.14*	−.16**	−.12*	−.18**	.28***	.20***	−.24***	−.22***	−.07
4. Perceived loyalty to minority group				.68***	.67***	.35***	−.14*	−.13*	.54***	.47***	.06
5. Perceived identification with minority group					.72***	.32***	−.09	−.06	.61***	.46***	−.01
6. Perceived adherence to minority norms						.32***	−.08	−.02	.61***	.46***	.04
7. Devaluation as coalitional member							−.08	−.05	.38**	.25***	.04
8. Approval for nondangerous jobs								.32***	−.12*	−.17**	−.30***
9. Approval for dangerous jobs									−.23***	−.39***	−.31***
10. Support for Russia in soccer game										.70***	.07
11. Fight for Russia in a war											.17**
12. Ethnic persecution											

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

minority group ($\alpha = .73$) and the three questions framed toward the majority group ($\alpha = .75$). To get a relative bias estimate, we subtracted the minority-group scale from the majority-group scale, such that higher scores on the scale meant more negative evaluations as coalitional member of the majority group relative to the minority group.

We assessed *support for the target taking job positions with or without the potential to inflict damage* by instructing participants to imagine that Ivan Sokolov wanted to work as a Polish border patrol, in the Polish army, or in the Polish secret service agency (i.e., positions with potential to inflict damage; $\alpha = .90$), and then asking them how much they agreed that he should be allowed to take each position on a sliding-response scale ranging from 0 (*totally disagree*) to 100 (*totally agree*). On the same scale, participants also rated the degree to which they agreed that he should be allowed to work as librarian, construction worker or architect (i.e., positions with little potential to inflict damage; $\alpha = .95$). Confirmatory factor analyses in Mplus 7.2 supported the dangerous versus nondangerous job distinction, showing that a two-factor solution, $\chi^2/df = 6.84$, CFI $= .971$, RMSEA $= .137$, sRMR $= .055$, had better fit than a unifactorial solution, $\chi^2/df = 66.90$, CFI $= .634$, RMSEA $= .460$, sRMR $= .219$.

Perceived support in a low- and high-conflict zero-sum scenario was measured by asking participants to indicate on a scale from 0 (*Poland*) to 100 (*Russia*) which team they thought Ivan Sokolov would support if Russia and Poland would play a soccer game against each other (i.e., a low-conflict zero-sum scenario), and second, which country they thought he would fight for in case of a war between both countries (i.e., a high-conflict zero-sum scenario).

Finally, we used the Posse Scale developed by Altemeyer (1996) and adjusted to an immigrant context by Thomsen et al. (2008) to measure participants' willingness to engage in *ethnic persecution* against Russians in a future, hypothetical scenario:

> Now suppose that the government sometime in the future passed a law outlawing Russian organizations in Poland. Government officials then stated that the law would only be effective if it were vigorously enforced at the local level and appealed to every citizen to aid in the fight against these organizations.

Here, participants were asked to indicate their agreement with six items varying in strength (e.g., "I would tell my friends and neighbors that it was a good law" or "I would participate in attacks on the Russian organizations' headquarters organized by the proper authorities;" $\alpha = .93$).

Results

In terms of dependent variables, participants evaluated the dually identified immigrant as a worse coalitional member than the common-identified immigrant (see Table 2). They also expected the dual identifier to side more with Russia than Poland in case of a soccer game (i.e., the low-conflict scenario) and to be more likely to fight for Russia in a war between both countries (i.e., the high-conflict scenario). The target identity manipulation had no significant effect on the dangerous jobs measure, the nondangerous job measure, and the ethnic persecution scale.

In terms of mediating variables, participants perceived the dually identified immigrant as less loyal to the majority group and more loyal to the minority group compared with the common-identified immigrant, replicating the pattern of results observed in the previous studies. Participants also perceived the dually identified immigrant as adhering more to minority-group norms, adhering less to majority-group norms, identifying more with the minority group and identifying less with the majority group than the common-identified immigrant. Additional analyses indicated the presence of some inconsistent gender interactions (see SOM).

Next, we estimated a fully saturated path model, in which the effects of the identity manipulation on the dependent variables were expected to be mediated by loyalty, identity, and norm adherence. Table 3 present an overview over all significant paths in the model (see SOM for a complete overview including nonsignificant paths).

Perceived loyalty to the majority group and perceived loyalty to the minority group emerged as the most consistent mediators. Perceived loyalty to the majority group was related to less devaluation as coalitional member, more approval for dangerous jobs, less expected support for Russia in a soccer game, and less perceived willingness to fight for Russia in a war against Poland. Bootstrapping with 5,000 random resamples further indicated that the indirect effect of the identity manipulation on each of these variables was significantly mediated by perceived loyalty to the majority group (see Table 4). By contrast, perceived loyalty to the minority group related to more devaluation as coalitional member, less approval for nondangerous and dangerous jobs, more expected support for Russia in a soccer

Table 2
Test Statistics for Planned Contrasts for the Main Study Variables in Study 3

Variable	Common		Dual		t	df[1]	p	d
	M	95% CI	M	95% CI				
Loyalty to majority group	4.71	[4.47, 4.95]	3.70	[3.51, 3.89]	6.52	283.40	<.001	.74
Identification with majority group	5.05	[4.84, 5.26]	4.31	[4.13, 4.49]	5.30	310	<.001	.60
Adherence to majority norms	5.06	[4.82, 5.29]	4.70	[4.52, 4.88]	2.37	282.21	.017	.28
Loyalty to minority group	2.28	[2.07, 2.50]	4.27	[4.05, 4.49]	−12.78	309	<.001	1.46
Identification with minority group	2.26	[2.05, 2.46]	4.93	[4.74, 5.12]	−19.09	310	<.001	2.16
Adherence to minority norms	2.56	[2.34, 2.78]	4.91	[4.73, 5.10]	−16.40	293.80	<.001	1.87
Devaluation as coalitional member	−4.83	[−7.36, −2.31]	2.33	[1.13, 3.53]	−5.06	209.87	<.001	.58
Approval for nondangerous jobs	88.93	[85.63, 92.23]	87.92	[84.70, 91.14]	.43	309	.668	.05
Approval for dangerous jobs	56.55	[51.41, 61.70]	54.26	[49.30, 59.23]	.63	309	.528	.07
Support for Russia in soccer game	31.76	[27.11, 36.41]	68.04	[64.86, 71.21]	−12.73	262.97	<.001	1.46
Fight for Russia in war	36.07	[31.31, 40.83]	62.41	[58.70, 66.12]	−8.63	283.58	<.001	.98
Ethnic persecution	2.11	[1.87, 2.35]	2.04	[1.83, 2.24]	.43	309	.668	.05

[1] When Levene's Test of Variance Equality was significant, corrected *dfs* are reported.

game, and more expected willingness to fight for Russia in a war against Poland (see Table 3). As a consequence, it mediated the indirect effects of the identity manipulation on all of these dependent variables, except for expected support for Russia in a soccer game.

In addition to these effects, perceived identification with the majority group was related to less, and perceived identification with the minority group to more, expected support for Russia in a soccer game (see Table 3). Perceived identification with the majority group was also related to less expected willingness to fight for Russia in a war against Poland. Moreover, perceived adherence to norms of the majority group was related to more approval for nondangerous jobs, and perceived adherence to minority norms to more expected support for Russia in a soccer game. All resulting indirect effects were significant (see Table 4), except for the indirect effect that was mediated by perceived identification with the minority group. As in the previous studies, we also tested an alternative mediation model, which showed

some evidence for indirect effects when the positions of the mediators and dependent variables were reversed (see SOM).

Discussion

The present study, conducted in Eastern Europe, partially supported our hypotheses. Although direct effects of the identity manipulation were only observed on half of the dependent variables (and not on the job measures as we had predicted), cross-sectional mediation analyses mostly supported the central role of loyalty perceptions for the coalitionally relevant dependent variables. Specifically, perceptions of loyalty most consistently mediated the indirect effects of the identity manipulation on devaluation of the immigrant as coalitional member, approval of him for dangerous jobs, and the expectation that he would fight for Russia in a war against Poland. Perceived norm

Table 3
Significant Direct Paths from Path Model in Study 3

Path	β	SE	p
Identity condition → support for Russia in soccer	.17	.09	.040
Identity condition → Approval nondangerous jobs	.17	.09	.040
Identity condition → Perceived loyalty to majority group	−.35	.05	<.001
Identity condition → Perceived identification with majority group	−.29	.05	<.001
Identity condition → Perceived adherence to majority norms	−.14	.06	.015
Identity condition → Perceived loyalty to minority group	.59	.04	<.001
Identity condition → Perceived identification with minority group	.74	.03	<.001
Identity condition → Perceived adherence to minority norms	.69	.03	<.001
Perceived loyalty to majority group → Devaluation as coalitional member	−.25	.07	<.001
Perceived loyalty to majority group → Approval for dangerous jobs	.25	.08	.001
Perceived loyalty to majority group → Expected support for Russia in soccer	−.14	.06	.012
Perceived loyalty to majority group → Expected willingness to fight for Russia in war	−.21	.07	.002
Perceived loyalty to minority group → Devaluation as coalitional member	.26	.08	.001
Perceived loyalty to minority group → Approval for nondangerous jobs	−.17	.08	.036
Perceived loyalty to minority group → Approval for dangerous jobs	−.24	.08	.002
Perceived loyalty to minority group → Expected support for Russia in soccer	.13	.06	.029
Perceived loyalty to minority group → Expected willingness to fight for Russia in war	.25	.07	<.001
Perceived identification with majority group → Expected support for Russia in soccer	−.14	.05	.009
Perceived identification with majority group → Expected willingness to fight for Russia in war	−.12	.06	.047
Perceived identification with minority group → Expected support for Russia in soccer	.18	.07	.008
Perceived adherence to majority norms → Approval for nondangerous jobs	.17	.07	.013
Perceived adherence to minority norms → Expected support for Russia in soccer	.21	.06	.001

Table 4

Significant Indirect Effects of Identity Condition (0 = Common, 1 = Dual) on the Dependent Variables in Study 3

| Mediator | Dependent variable | *B* | 95% CI[a] | |
			Lower	Upper
Perc. loyalty to majority group	Devaluation as coalitional member	2.22	.90	4.15
Perc. loyalty to majority group	Approval for dangerous jobs	−5.64	−9.72	−2.28
Perc. loyalty to majority group	Perc. support for Russia in soccer	3.04	.50	6.01
Perc. loyalty to majority group	Perc. fighting for Russia in war	4.26	1.44	7.64
Perc. loyalty to minority group	Devaluation as coalitional member	3.80	1.43	6.50
Perc. loyalty to minority group	Approval for nondangerous jobs	−.40	−7.89	−.34
Perc. loyalty to minority group	Approval for dangerous jobs	−9.07	−16.25	−2.51
Perc. loyalty to minority group	Perc. fighting for Russia in war	8.77	3.57	13.96
Perc. identification with majority	Perc. support for Russia in soccer	2.46	.64	4.97
Perc. identification with majority	Perc. fighting for Russia in war	2.10	.07	4.86
Perc. adherence to majority norms	Approval for nondangerous jobs	−.95	−2.47	−.16
Perc. adherence to minority norms	Perc. support for Russia in soccer	8.92	3.43	15.27

[a] Bias-corrected confidence intervals are calculated using bootstrapping with 5,000 random resamples.

adherence and identification played little of a role for these dependent variables.

Different to the previous studies, however, perceptions of loyalty to the minority group and perceptions of disloyalty to the majority group mediated the experimental effects in similar ways. This unexpected finding may be explained by Poland's history under Soviet oppression where tens of thousands Poles worked undercover in the communist secret service reporting to Russia (Zybertowicz, 2002). Hence, Poles may not only be wary of potential disloyalty to their Polish group but also to disguised loyalty to the high-power neighboring country.

No direct effects were found on the ethnic persecution measure that was framed toward Russian immigrants in Poland in general. This finding suggests that the effects of our manipulation did not lead to generalized, indiscriminative bias against Russians, but specifically targeted Russian immigrants with dual identification, once more underlining the decisive role immigrants' identity style plays for their evaluation (Kaiser & Wilkins, 2010).

In sum, the first three studies provide support for the role of loyalty perceptions for the evaluation of immigrants in different contexts. Yet, all studies so far share an important limitation. Whereas perceptions of (dis)loyalty tended to mediate the effects under the conditions which we had predicted, cross-sectional mediation involving measured variables cannot definitively identify the direction of causality between the mediator(s) and the dependent variable(s) (Bullock, Green, & Ha, 2010; MacKinnon, Fairchild, & Fritz, 2007). Hence, it is important to address the proposed effect of loyalty by experimentally manipulating it. The next study aimed to do so.

Study 4

The effects of whether an immigrant endorsed a dual or a common identity on more bias toward him were in the previous studies mediated by perceptions that the immigrant was less loyal to the common group. Although consistent with our predictions, because our mediation analyses used measured (i.e., not manipulated) mediators, the direction of the causal relationship cannot be firmly established (Spencer, Zanna, & Fong, 2005). Indeed, analyses with alternative models in which the positions of the mediators and dependent variables were reversed also gave some support for cross-sectional me-

diation in the previous studies. Thus, in Study 4 we directly manipulated an action intended to signal group loyalty, in addition to manipulating the identity of an immigrant in terms of a dual identity or a common (American) identity.

In a control condition in which loyalty was not explicitly manipulated, we expected to conceptually replicate the effect of the previous studies: In the absence of information to the contrary, majority-group members were expected to again infer that a dually identified immigrant may be disloyal to the socially dominant in-group. However, to the extent that the immigrant target's inferred disloyalty to the majority group in fact is what causes majority-group members to evaluate him negatively in potentially threatening contexts, we expected that experimentally manipulating his loyalty in such contexts should directly affect how the immigrant target is evaluated, but manipulating dual or common identity in addition should not (Spencer et al., 2005). Conversely, if the manipulation of dual versus common identity of the immigrant target in the previous studies predominantly made majority-group members evaluate him more negatively through some other intermediate (unmeasured) psychological processes that are not simply accounted for by loyalty, then experimentally manipulating dual versus common identity in the present study should still cause the dually identified immigrant to be evaluated more negatively, even in the presence of information about his loyalty.

To summarize, Study 4 employed a 2 (Target Identity: dual identity vs. common identity) × 3 (Loyalty-Related Behavior: loyal to the majority group, loyalty to the minority group, or control behavior). Moreover, we varied the immigrant target's ethnicity (Arab or Russian) and gender (male or female).[5] Participants read about an immigrant who was described as either Arab or Russian and as a man or woman who expressed either a dual identity or a common, American identity. Following this information, we manipulated loyalty, describing a behavior by the immigrant that signals loyalty to the majority or minority group (or neither in the control condition). Based on the definition of loyalty as behavior that "entails personal loss (or sacrifice) rather than

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[5] Please note that, given the lack of power to test three-way between-subjects interactions in this study, we did not test for the role of ethnicity or gender. Exploratory analyses can be found in SOM.

personal gain" and generally "greater concern for group welfare than for personal welfare" (Zdaniuk & Levine, 2001, p. 502), the immigrant was described as either risking his or her life for members of the majority or minority group. In the control condition, there was no mention of loyalty-signaling behavior by the immigrant. After reading the vignettes and similar to Study 3, participants rated how qualified they believed the immigrant to be for three occupations that would provide disloyal group members with means to inflict significant damage on the majority group (i.e., police officer, representative of the National Security Agency [NSA] or border patrol agent) and for three occupations representing a limited opportunity to harm the group (i.e., librarian, construction worker, landscape architect).

Our main prediction was that for ratings of qualifications of the immigrant for occupations that had the potential to inflict serious harm, we would observe a Target Identity $\times$ Loyalty Behavior interaction. In particular, if concern about the loyalty of the immigrant target is the key mechanism underlying majority-group members' more negative responses to dually identified immigrants, then information about a behavior that is directly indicative of loyalty to the majority group should override the proxy information about loyalty that dual or common identity implies in determining the evaluations of the immigrant. In other words, as long as people are loyal to the common in-group, they should not be negatively evaluated for also identifying with their minority group. Hence, we hypothesized that individuals who show loyalty to the majority group would be rated as qualified for jobs that potentially bring means to inflict damage to the majority group irrespective of their identity orientation (i.e., dual identity or common identity). Conversely, we also tested the possibility that, when an immigrant shows loyalty to the minority group, having a common identity may lose its benefits (i.e., becoming unrelated to how the immigrant is evaluated). However, given the fact that perceived loyalty to the minority group played a role for how immigrants were evaluated only in Study 3, we did not offer a specific prediction. Yet, when we did not provide information about a behavior that is diagnostic of loyalty (i.e., in the control condition), we expected that the immigrant who endorses a dual identity would be perceived as less qualified for positions that have high potential for damage to the majority group.

Overall, we anticipated a Target Identity (dual identity, common identity) $\times$ Loyalty-Related Behavior (loyalty to the majority group, loyalty to the minority group, control behavior) interaction on approvals for jobs with high potential to inflict damage. Following our coalitional framework (Tooby & Cosmides, 2010), we did not expect this interaction for jobs with limited potential to inflict damage.

Method

Participants. A power analysis in G*Power 3.1.9.2 indicated that 320 participants would provide a 90% probability to observe a small to medium interaction effect ($f = .20$; Numerator $df = 2$) at a significance criterion of .05. Given our focus on majority-group members, we recruited 552 participants on Amazon Mechanical Turk in January 2018 to meet this criterion when excluding minority-group and inattentive participants. Excluding 163 minority-group participants and 43 participants (11%) who did not pass the attention check (see description below), the final sample comprised 346 White Americans ($M_{age} = 37.77$, $SD_{age} = 12.05$; 50.9% women).

Procedure. Participants were asked to take part in a study about "ratings of applicants for different types of jobs." At the beginning of the survey, they were informed that they would be asked to assume the role of a recruiter who has to evaluate an applicant for different jobs. We further told them that they would read a description of the applicant and encouraged them to attend carefully to this information because they may be asked questions about it later in the survey. This was done to ensure attention to the experimental stimuli, without revealing its connection to the task of interest (i.e., the job ratings).

The information presented in the vignette was varied to produce a 2 (Target Identity: common vs. dual) $\times$ 3 (Loyalty Behavior: loyalty to majority group, loyalty to minority group, control) design. We also experimentally manipulated the ethnic background and gender of the immigrant based on information about where the immigrant was from and the immigrant's name. Specifically, in the vignette, we varied the applicant's ethnic group (Russian or Arab) and surname (for Russian men: Ivan or Vladimir; for Russian women; Anastasiya or Elizaveta; for Arab men: Farid or Ali; for Arab women: Fatima or Aisha). The complete texts for all scenarios are included in the SOM.

The first part of the vignette text, similar to the materials in Studies 1 and 2, presented information representing the common versus dual identity manipulation. Participants read the following about the applicant, in this case the Russian male immigrant "Ivan:"

> Ivan is a Russian who is living in the U.S. When Ivan is asked how he would describe himself, he says [common identity condition: "I identify with being American only and not with being Russian. Hence, the American group is the only group I identify with;" dual identity condition: "I identify with being American but equally so with being Russian. Hence, I identify with two groups at the same time."]

The second part of the text aimed to manipulate the loyalty of the immigrant by describing the applicant as risking his or her life for (a) members of the majority group or (b) members of his or her minority group, while the control group (c) described neither type of behavior. To be able to generalize across different contexts, we varied the type of scenario in which the applicant risked (or did not risk) his or her life: Protecting children from an armed robber in a city nearby, saving children from drowning at a beach resort despite not being a good swimmer, saving a family and transporting their injured son to the hospital during a hurricane disaster instead of leaving the area to save oneself.

For example, for the hurricane disaster scenario, the initial text was identical for all three loyalty conditions (loyal to the majority group, loyalty to the minority group, control condition): "During a hurricane disaster some years ago, Ivan spent his vacation in a village 10 miles west from the area that was devastated the most." This was all of the text presented to participants in the control condition. For the other two conditions, the text continued:

> Despite the fact that the authorities urged him to drive as far away as possible to save his own life, he stayed and was able to rescue [dependent on loyalty condition: an American/a Russian] family, transporting their injured son to the hospital. When Ivan is inter-

viewed about what had happened some days later, he say, "There is no doubt that I would sacrifice my life again as long as it means saving other [dependent on loyalty condition: Americans'/Russians'] lives."

Next, with the vignettes displayed on the top of the page, participants completed, in order, measures of (a) ratings of how well qualified they considered the individual from the vignette to be for several different occupations, and (b) checks on the manipulations of group identification and group loyalty.

On 7-point scales ranging from 0 (*not at all*) to 6 (*very much*), participants rated the extent to which they saw the applicant as being qualified for different occupations in the U.S. that were *either high or low in the potential to inflict damage on the majority group*. These positions included three occupations that would give a disloyal individual the possibility to inflict serious damage on the majority group (i.e., Agent at the United States Border Control, U.S. Police Officer, Agent at the U.S. National Security Agency [NSA]) and three occupations without such potential (i.e., librarian, construction worker, landscape architect). To establish whether ratings for both types of jobs could be statistically distinguished, we used structural equation modeling in Mplus 7.2 to compare the fit of a unifactorial solution (i.e., all items loading on one factor) to a hypothesized two-factor solution (i.e., ratings for each job type loading on separate factors). Results favored the two-factor solution, $\chi^2/df = 5.14$, CFI = .949, RMSEA = .109, sRMR = .052, over the unifactorial solution, $\chi^2/df = 33.60$, CFI = .549, RMSEA = .307, sRMR = .237. Hence, each one mean scale was computed for occupations with high ($\alpha = .91$) and with low ($\alpha = .89$) potential to inflict serious damage on the majority group. The scales were only weakly correlated, $r(344) = .19$, $p < .001$.

Participants next completed items to assess the impact of the identity manipulation (dual or common identity) and the loyalty manipulation (sacrifice for the majority group, sacrifice for the minority group, or no-sacrifice control group). Although we planned to investigate the role of the manipulation checks as mediators in the control condition (see SOM), they were presented at the end of the study to prevent demand characteristics from influencing the experimental effects on the dependent variables (e.g., that participants would sense that we aimed to manipulate loyalty). Whether the identity and loyalty measures first assessed perceptions in terms of the minority or majority group was randomized. In random order, participants indicated the degree to which they perceived the target as being (a) identified with, and (b) loyal to, the majority group and his or her minority group. In terms of *perceived identification*, we as in the previous study, used an adapted version of the three-item scale developed by Ellemers et al. (1999). Participants rated three items ($\alpha = .90$) on 7-point scales ranging from 1 (*strongly disagree*) to 7 (*strongly agree*). One example item includes "Ivan identifies with other American people." Three matched items, replacing American with Russian or Arab depending on the immigrant's ethnic group, were used to measure perceived identification with the applicant's minority group ($\alpha = .94$).

In terms of *perceived loyalty* to the majority group, participants completed the same five items as in the previous study adapted to the present context (e.g., "Ivan would make any sacrifice necessary to support the American people" or "Ivan is loyal to the American people;" $\alpha = .95$). Five matched items, replacing American with

the immigrant's ethnic group (Russian or Arab) were used to measure loyalty toward the applicant's minority group ($\alpha = .97$).

Because it was important to establish whether perceived identification and loyalty could be statistically distinguished, we as in the previous study compared different factor solutions using structural equation modeling. Specifically, we compared a hypothesized four-factorial model in which perceived identification with the majority group, perceived identification with the minority group, perceived loyalty to the majority group and perceived loyalty to the minority group each represented separate factors, $\chi^2/df = 3.15$, CFI = .941, RMSEA = .079, sRMR = .048, to (a) a unifactorial model in which all items loaded on one factor, $\chi^2/df = 21.15$, CFI = .414, RMSEA = .241, sRMR = .270; (b) a two-factor model in which the items measuring identification with, and loyalty to, the minority group loaded on the first factor and the items measuring identification with, and loyalty to, the majority group loaded on the second factor, $\chi^2/df = 7.26$, CFI = .820, RMSEA = .135, sRMR = .071; and (c) a two-factorial model in which all identification items loaded on the first factor and all loyalty items on the second factor, $\chi^2/df = 20.60$, CFI = .435, RMSEA = .238, sRMR = .290. Results favored the four-factor solution, supporting our distinction between loyalty toward, and identification with, the majority and minority group, respectively.

After completing the main dependent measure and the manipulations checks, participants completed an attention check section and reported demographic information. In the *attention check* section, participants were asked to report how the applicant had described herself or himself. In addition to the answers "as identifying only with being American" (the correct response for the common identity condition) and "as identifying with being American and Russian" (the correct response for the dual identity condition), four false response options (e.g., "as identifying with being Russian only" or "as identifying with no specific group") were provided. Participants who did not correctly recall that the target identified as American only in the common identity condition or with both groups in the dual identity condition were excluded from analyses. The demographic section assessed the age, gender, political orientation and ethnicity of the participants.

Results

Means, standard deviations, and correlations between the variables across conditions are presented in Table 5. Because the type of loyalty scenario presented to participants did not moderate the interaction between the identity and loyalty manipulations, this additional factor was not included in the main omnibus analyses we report below (see SOM for details).

Manipulation checks. If the identity manipulation was successful, we would expect it to predict perceived identification in interaction with the target group of this identification (i.e., with the minority group or the majority group), so that the common identifier would be perceived as having relatively weak identification with the minority group and relatively strong identification with the majority group, but the dual identifier to be identified relatively strongly with both groups. To test the effectiveness of our identity manipulation controlling for the loyalty manipulation, we, hence, ran a 2 (Between Subjects: identity manipulation) × 2 (Within-Subjects: target of identification, majority vs. minority group) × 3 (Between Subjects: loyalty manipulation) mixed model. Support-

Table 5
Correlations Between Variables in Study 4 Across Conditions

Variable	M (SD)	2	3	4	5	6
1. Perceived loyalty to majority group	4.70 (1.60)	−.29***	.76***	−.34***	.64***	.18**
2. Perceived loyalty to minority group	4.43 (1.76)		−.34***	.80***	−.15**	.07
3. Perceived identification with majority group	5.37 (1.39)			−.30***	.55***	.25***
4. Perceived identification with minority group	4.63 (1.99)				−.13*	.03
5. Jobs with potential to inflict damage	3.20 (1.90)					.19***
6. Jobs without potential to inflict damage	4.49 (1.57)					

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

ing its effectiveness, the identity manipulation significantly interacted with the target group, $F(1, 680) = 216.27$, $p < .001$, controlling for all other main effects and potential interactions. Post hoc comparisons revealed that participants perceived the applicant in the common identity condition to be more strongly identified with the majority group, $M = 5.53$, 95% CI [5.34, 5.71], than with his or her minority group, $M = 3.48$, 95% CI [3.30, 3.67], $t(680) = 15.54$, $p < .001$, $d_r = 1.68$. By contrast, the applicant in the dual identity condition was perceived as identifying strongly with both the majority group, $M = 5.20$, 95% CI [5.01, 5.38], and his or her minority group, $M = 5.88$, 95% CI [5.70, 6.07]. However, while both scores were clearly above the midpoint of the scale (i.e., 4), supporting a dual identity interpretation, the applicant was still perceived as identifying more with the minority group than with the majority group in the dual identity condition, $t(680) = -5.24$, $p < .001$, $d_r = .56$.

If the loyalty manipulation successfully altered perceptions of loyalty to the majority group, we would expect it to have a main effect on the latter variable, controlling for the identity manipulation. Supporting the effectiveness of the loyalty manipulation, a 2 (Between Subjects: identity manipulation) × 3 (Between Subjects: loyalty manipulation) ANOVA revealed a main effect of the loyalty manipulation on perceived loyalty to the majority group, $F(2, 340) = 53.32$, $p < .001$, $\eta_p^2 = .24$, controlling for the main effect of the identity manipulation and its interaction with the loyalty manipulation. Participants perceived the applicant who had risked the life for Americans to be more loyal to the majority group, $M = 5.70$, 95% CI [5.45, 5.96], as compared with the applicant risking the life for members of the minority group, $M = 3.82$, 95% CI [3.56, 4.08], $t(340) = 10.22$, $p < .001$, $d = 1.11$; or the applicant in the control condition, $M = 4.55$, 95% CI [4.30, 4.80], $t(340) = -6.38$, $p < .001$, $d = .69$.

Running the same ANOVA with perceived minority-group loyalty as dependent variable also revealed a main effect for the loyalty manipulation, $F(2, 340) = 80.56$, $p < .001$, $\eta_p^2 = .32$. As expected, the applicant who risked the life for members of his or her ethnic group was perceived as more loyal to the minority group, $M = 5.69$, 95% CI [5.45, 5.92], as compared with the applicant risking his or her life for Americans, $M = 3.93$, 95% CI [3.70, 4.16], $t(340) = -10.50$, $p < .001$, $d = 1.14$; or the applicant in the control condition, $M = 3.78$, 95% CI [3.55, 4.01], $t(340) = -11.49$, $p < .001$, $d = 1.25$.

Perceptions of how qualified the immigrant was for jobs with high potential to inflict damage. Having established the effectiveness of the manipulations, employing a 2 × 3 ANOVA, we tested the effects of the identity and loyalty manipulations and their interaction on perceived qualification for jobs that would give a disloyal individual the potential to inflict damage on the majority group. While the identity manipulation did not have a significant main effect, $F(1, 340) = 0.59$, $p = .442$, $\eta_p^2 < .01$, the loyalty manipulation did, $F(2, 340) = 14.19$, $p < .001$, $\eta_p^2 = .07$. Participants in the majority-group loyalty condition rated the applicant as more qualified for jobs with high potential to inflict damage, $M = 3.94$, 95% CI [3.60, 4.27], than did participants in the minority-group loyalty condition, $M = 2.73$, 95% CI [2.40, 3.08], $t(340) = 4.96$, $p < .001$, $d = .54$, or in the control condition, $M = 2.94$, 95% CI [2.61, 3.27], $t(340) = 4.16$, $p < .001$, $d = .45$.

Most important for our predictions, the interaction between the loyalty and identity manipulations was statistically significant, $F(2, 340) = 3.58$, $p = .029$, $\eta_p^2 = .02$. As displayed in Figure 3 and conceptually replicating the findings from previous studies, having a dual identity as compared to common identity led to lower ratings of the applicant being qualified for these high-risk jobs in the control condition, $t(340) = 2.29$, $p = .023$, $d = .25$. However, ratings of the dual and common identifier did not differ in the majority-loyalty condition, $t(340) = -1.50$, $p = .136$, $d = .16$, or minority-loyalty condi-
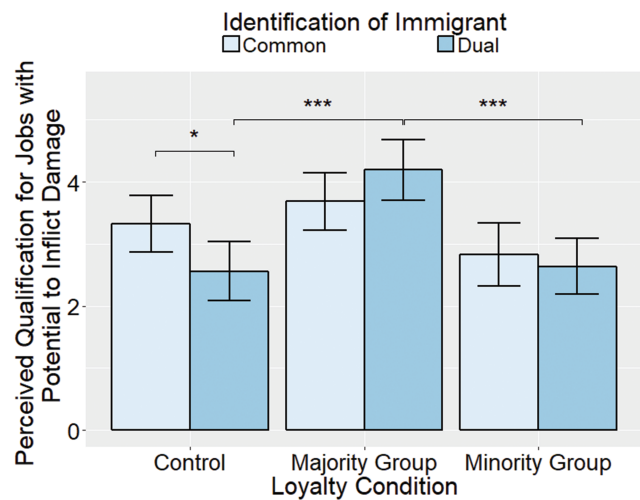

Figure 3. In Study 4, the degree to which the applicant was rated as qualified for jobs, which give disloyal individuals the potential to inflict damage on the majority group, was moderated by the type of loyalty the applicant showed. * $p < .05$. ** $p < .01$. ** $p < .001$. See the online article for the color version of this figure.

tion, $t(340) = .56$, $p = .576$, $d = .06$. Furthermore, Holm-corrected post hoc comparisons indicated that the dually identified applicant who showed loyalty to the majority group was rated as more qualified than the dually identified applicant who showed loyalty to the minority group, $t(340) = 4.60$, $p < .001$, $d = .50$, or the dually identified applicant in the control condition, $t(340) = 4.70$, $p < .001$, $d = .51$. No significant difference was observed between evaluations of the dual identifier in the control condition and in the minority-group loyalty condition, $t(340) = -.24$, $p > .999$, $d = .03$, again suggesting the limited role of loyalty to the minority group.

Perceptions of how qualified the immigrant was for jobs with low potential to inflict damage. In terms of jobs whose responsibilities had limited potential to harm the majority group, the pattern of results differed: The effect of the identity manipulation was not significant, $F(1, 340) = 1.79$, $p = .182$, $\eta_p^2 < .01$, whereas the effect of the loyalty manipulation was statistically significant, $F(2, 340) = 3.44$, $p = .033$, $\eta_p^2 = .02$. Holm-corrected comparisons showed that participants in fact perceived the applicant to be less qualified when he or she showed loyalty to the majority group, $M = 4.23$, 95% CI [3.94, 4.51], than in the control condition, $M = 4.76$, 95% CI [4.48, 5.04], $t(340) = 2.62$, $p = .027$, $d = .28$. Ratings did not differ between the loyalty to the minority group condition, $M = 4.50$, 95% CI [4.21, 4.49], and loyalty to the majority group condition, $t(340) = -1.34$, $p = .364$, $d = .15$, or between the loyalty to the minority group condition and the control condition, $t(340) = 1.26$, $p = .364$, $d = .14$. The Identity × Loyalty interaction on perceived qualifications for jobs with limited potential to harm the majority group was not significant, $F(2, 340) = 1.72$, $p = .181$, $\eta_p^2 < .01$.[6]

We also conducted mediation analyses within the control group. These results, which are presented in the SOM, replicated and extended the cross-sectional mediation findings from the previous studies, again showing that perceived loyalty to the majority group mediated effects on perceived qualifications for jobs with the potential to inflict damage but not for jobs without such potential. In the SOM, we also report some evidence for indirect effects when the positions of the mediators and dependent variables were reversed.

Discussion

As Dovidio, Gaertner, Mayville, and Perry (2013) proposed, general social identity processes may play a foundational role in intergroup relations, but functional dynamics also have important, often complementary specific influence under high-stakes conditions of conflict (see also Brewer, 1979). Supporting such a functional, specific role of loyalty, Study 4 extended the previous studies by demonstrating causal evidence for the proposed relationship between the mediator and dependent variables. Moreover, it did so with an outcome for which loyalty to the majority group could be critical—perception of how qualified the immigrant was for jobs that had the potential to inflict high harm on the majority group.

Study 4 triangulated the previous studies to again demonstrate that perceived loyalty to the majority group is a critical mediator of the effect of manipulating immigrants' common versus dual identity on how they are evaluated. Following Spencer, Zanna, and Fong's (2005) methodological recommendation for establishing

the causal role of mediators, we directly manipulated loyalty. Dual identifiers were perceived as *more* qualified for jobs that provide the potential to threaten the majority group's security when they showed loyalty to the majority group as compared with loyalty to the minority group or no such behavior. This finding again highlights that evaluations of dual identifiers in potentially dangerous situations are influenced by perceptions of disloyalty to the majority group at least in the U.S. The pattern of effects applied uniquely for perceptions of qualifications of the immigrant for positions with the capacity to inflict high harm (police officer, representative of the NSA, or border patrol agent) but not for positions with limited potential to cause harm (librarian, construction worker, landscape architect). Moreover, this effect for positions with high potential to cause harm remained significant even in analyses that controlled for endorsement of the immigrant for positions with low potential to cause harm (see Footnote 5).

We note that whereas the manipulation of loyalty to the majority group had a distinctive effect compared to the minority-loyalty condition and the control condition, producing greater endorsement of the immigrant for high potential-harm jobs, this condition led to distinctively lower endorsement for low-potential harm jobs. The latter effect was not anticipated but might suggest that individuals perceive applicants who are loyal to the majority group as being best suited for jobs for which loyalty is a strong asset, while seeing it as unprofitable to place them in jobs where loyalty provides no apparent benefit.

Thus far, we have demonstrated the role of loyalty within contexts of immigration between different ethnic groups that may be rivals in situations of high intergroup threat or conflict. But, how does dual identification impact the evaluation of individuals from allied rather than rival groups, and can the same process be observed also in terms of entirely different coalitional contexts? In our final study, we aimed to test our loyalty framework within a context of allied versus rivaling sports teams.

Study 5

The previous studies demonstrated the role of loyalty perceptions for the evaluation of Arab and Russian dual identifiers to the U.S. and Russian immigrants to Poland. However, it is important to note that both Arabs and Russians belong to groups that have been involved in international conflicts with the U.S. (e.g., the Iraqi wars, the Cold War) and often are perceived as wishing to harm the U.S. more than other groups (Lyons, Kenworthy, & Popan, 2010). Similarly, also Russia and Poland have been involved in various conflicts in the past (Cheremushkin, 2002). Whereas threat may be physical or material, it can also be symbolic (Stephan, Ybarra, & Rios, 2016). Symbolic threats involve "concerns about the integrity or validity of the ingroup's meaning system . . . The essence of symbolic threat is that the system of meaning could be challenged, changed, supplanted, or destroyed by the outgroup" (Stephan et al., 2016, p. 256).

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[6] When treating job-type as within-subjects factor in a within-between subjects ANOVA, the three-way Identity × Loyalty × Job Type interaction did not reach significance, $p = .139$. Yet, findings from the between-subjects ANOVA that are reported in text were robust to inclusion of the jobs without the potential to inflict damage variable as a covariate.

Study 5 extended the previous findings and applications of our paradigm in two ways. One way that it potentially expanded the scope of the previous studies is in terms of generalizability by examining the role of loyalty in an entirely different context—how people respond to a new member of their group when the group boundary is not defined by national or ethnic conflict but by primary affinity to a particular sports team. Sports "fandom" has been defined as a social identity that involves seeing fellow fans as the in-group and rival fans as the out-group (Rees, Alexander Haslam, Coffee, & Lavallee, 2015; Wann, 2006). Indeed, just as other types of social identification, sport fans who show a strong sense of shared identification derive positive self-esteem through membership in fan groups that they evaluate positively, show conformity to group norms, experience symbolic threat when the integrity and meaning of their group is threatened, and often show prejudice and negative behavior toward rival out-groups (Rees et al., 2015; Wann, 2006; Wann et al., 2012; Wann, Royalty, & Roberts, 2000).

The psychological processes underlying the sense of common identity and connection among fans of a particular sports team have also been linked directly to evolved, coalitional processes. Winegard and Deaner (2010) posit that sports fandom is a "by-product of an evolved coalitional psychology" that explains why fans are "allying with teams in a manner that is similar to how they would have allied with coalitions during human evolutionary history" (p. 433). Indeed, in support of the notion that sport fandom mirrors processes evolved in the context of small-scale warfare, violence is a common part of sports spectacles within many types of team sports (i.e., soccer, rugby, ice hockey, basketball), and the stronger fans identify with their team, the more verbal and physical violent intentions and actual behavior they show (Wann, Carlson, & Schrader, 1999; Wann, Peterson, Cothran, & Dykes, 1999). Strikingly, in terms of moral values, greater team identification has been found to be associated with a higher concern for loyalty among male and female fans alike (Winegard & Deaner, 2010). Hence, we expected that our basic finding that perceived (dis)loyalty underpins negative evaluations of dual identifiers would generalize to intergroup relations between rival sport teams.

Moreover, the present study extended the previous experiments by directly comparing the effects of dual identification on how loyal and how positively newcomers to the majority group are viewed when they come from rival versus allied groups. Specifically, the present study investigated how differences in the preexisting relationship between the in-group and the newcomer's previous group affect the role of loyalty concerns in response to a dual identifier (a fan of the new team *and* the old team) or common identifier (a fan of the new team only). The type of other groups that newcomers maintain affiliation with influences how reliable they are perceived to be by members of the new group (Moreland & Levine, 2002). Newcomers would be expected to be met with suspicion especially when they remain members of, or identified with, a rival group (Tooby et al., 2006). By contrast, for individuals maintaining membership with groups that are allied with the new team, dual identifiers may be more valued than common identifiers because they build bridges and strengthen the cohesion between both allied groups (Levy, Saguy, Halperin, & van Zomeren, 2017; Levy, Saguy, van Zomeren, & Halperin, 2017).

Against this background and based on coalitional and error management perspectives (Haselton & Buss, 2000; Tooby & Cos-

mides, 2010), we hypothesized that loyalty concerns would be particularly marked toward dually identified targets who maintain identification with a hostile (as compared to allied) group because these targets pose the biggest risk to the in-group in case of divided loyalties. By contrast, because this risk is comparably small for targets from allied groups, we did not predict that dual identification would lead to devaluation of the allied target. Indeed, following the notion that people use the perceived benefits and contributions of others to assess their value as coalitional members (Kurzban & Neuberg, 2005; Neuberg & Cottrell, 2006; Tooby & Cosmides, 2010), dual identification might even be seen as an asset for allied individuals because they strengthen the bonds of the broader, mutually beneficial coalition between both groups (also see Levy, Saguy, Halperin et al., 2017; Levy, Saguy, van Zomeren et al., 2017).

We tested these predictions in a context of allied and rival soccer teams. Specifically, we conducted an experiment with fans of the German soccer club Schalke 04. The team is located in Gelsenkirchen, North Rhine-Westphalia in near proximity to its arch-rival, Borussia Dortmund, which is located in Dortmund, North Rhine-Westphalia and statistically has the most violent fans among German soccer teams (Bild, 2014). Fans of Schalke 04 and Borussia Dortmund are known for their long history of extremely negative and hostile relationships and arguably for being the biggest rivals in the German first soccer division (Heck, Nierhaus, & Luh, 2012). In fact, during matches between both teams, fans are regularly involved in violent, often even armed, conflicts leading to mass arrests and stadium bans (DerWesten, 2014; Süddeutsche Zeitung, 2012; Westfälische Rundschau, 2013). At the same time, Schalke 04 has a 35-year old history of fan friendship with 1. FC Nürnberg, a team located in Bavaria. This fan friendship involves a symbolic alliance and mutual sympathies between fans of both teams. For instance, it is common that 1. FC Nürnberg fans actively support Schalke 04 fans during away matches (Der-Westen, 2016). In sum, the extreme rivalry with Borussia Dortmund and strong alliance with 1. FC Nürnberg made up for a good intergroup scenario to test our predictions.

We hypothesized that the nature of the group with which a newcomer previously was a member (i.e., a fan of a rival or an allied team) would moderate the extent to which Schalke 04 supporters show more negativity toward a dually identified target than a common-identified target. Specifically, we predicted that Schalke 04 supporters would respond more favorably to a newcomer fan who holds a common, socially dominant rather than a dual identity when he comes from a rival team (Borussia Dortmund) than from an allied team (1. FC Nürnberg). This we expected because concerns about disloyalty likely would be more prominent when the newcomer remains affiliated with a rival team. In contrast, and following an error management perspective (Haselton & Buss, 2000), when the target comes from the allied team (1. FC Nürnberg), we expected that participants would not devaluate a dual identifier, because allied groups presumably do not generally pose dangerous risks to one's in-group. In fact, Schalke 04 newcomers who also identify with their ally 1. FC Nürnberg may be evaluated *more* positively insofar as an evolved coalitional psychology takes into account that allied dual identifiers not only pose no immediate risk, but indeed strengthen the coalitional bonds between the allied groups (Levy, Saguy, van Zomeren et al., 2017).

We also considered four potential mediating variables. As in Study 3, we measured perceived loyalty, perceived group identification and perceived norm adherence. In addition, we also measured how positively the target was perceived to evaluate the new and old team (i.e., equivalent to the majority and minority group distinction in the previous studies). These additional measures allowed us to test another underlying, alternative process, in addition to the ones considered thus far in our research. Specifically, a social identity theory perspective might argue that participants would dislike the dual identifier because they perceive him as having less positive feelings toward the in-group, which, in turn, threatens their social identity (Riek, Mania, & Gaertner, 2006; Voci, 2006). For instance, Schalke 04 fans may think that a dually identified fan who keeps affiliated with their biggest rival likely retains a negative stance toward Schalke 04. To restore their group's value, they may respond to this perceived devaluation by directing bias toward the dually identified fan.

Method

Participants. A total of 267 participants were recruited (men = 77.2%; M_{age} = 37.44, SD_{age} = 15.76, age range = 18–78) through online fan clubs and supporter pages for Schalke 04 soccer fans on Facebook in May 2016, providing a 90% probability to observe a small to medium interaction effect (f = .20; numerator df = 1) at a significance criterion of .05. To ensure that all participants considered Schalke 04 as their primary in-group, which was important for the validity of our paradigm, nine participants were excluded because they indicated that Schalke 04 was not their favorite soccer team.

Procedure. Participants were invited to take part in a "Schalke 04 study" that had the aim to "learn about the experiences and preferences of Schalke 04 fans." After asking some general demographic questions intended to bolster the cover story (e.g., their age, gender, whether Schalke 04 was their favorite team, whether they belonged to the "Ultras"—a particularly dedicated fan club—and whether they would define themselves as "hooligans"—a group of violent fans), participants were randomly assigned to provide their impressions of another person, "Thomas Schmidt," as a function of two independent variables representing a 2 × 2 factorial design. One factor, *out-group type*, involved the person's original affiliation with an allied soccer team (i.e., 1. FC Nürnberg) or rival soccer team (i.e., Borussia Dortmund). The second independent factor represented, as in our previous studies, the *target identity* conditions (i.e., common vs. dual). Participants read about "Thomas Schmidt," who recently had become a fan of the Schalke 04 soccer team. In the *common identity condition*, he was described as follows:

> Now imagine Thomas Schmidt a former [dependent on the out-group type condition: 1. FC Nürnberg/Borussia Dortmund] supporter who now has become fond of Schalke 04. Asked about how he would describe himself, he says that from now on he identifies *only* with being a Schalke 04 supporter and *not* with being a [dependent on the out-group type condition: 1. FC Nürnberg or Borussia Dortmund] supporter anymore.

In the *dual identity condition*, he was described as follows:

> Now imagine Thomas Schmidt a former [dependent on the out-group type condition: 1. FC Nurnberg/Borussia Dortmund] supporter who now has become fond of Schalke 04. Asked about how he would describe himself, he says that from now on he identifies with being a Schalke 04 supporter as well as with being a [dependent on the out-group type condition: 1. FC Nürnberg or Borussia Dortmund] supporter.

The text was presented on top throughout the survey except for the informed consent and the demographics section. Participants completed the following set of mediators (presented in random order), before completing the dependent variables described later on, rated on 7-point Likert scales from 1 (*totally disagree*) to 7 (*totally agree*) unless stated otherwise.

Mediators. As in the previous two studies, we assessed *perceived loyalty* to the new and old soccer team with separate multi-item scales. One item (i.e., "Thomas Schmidt would be loyal to (Schalke 04/old team name) in good as in bad times") was added to the five-item scale from the previous studies to measure perceived loyalty to the new team (α = .98) and perceived loyalty to the old team (α = .97).

In addition to our proposed mediator, perceived loyalty, we measured three mediators that we aimed to control for in cross-sectional mediation analyses: (a) perceived identification, (b) perceived norm adherence, and (c) perceived evaluation. The same scale as in the previous two studies was used to measure *perceived identification*, in terms of the degree to which participants perceived that the target person identified with the new team (i.e., Schalke 04; α = .89) and the old team (either Borussia Dortmund or 1. FC Nürnberg; α = .92). As in Study 3, two items each measured *perceived norm adherence*—specifically, the degree to which participants perceived the target person as adhering to the norms of participants' new team, $r(255)$ = .95, $p < .001$, and those of the old team, $r(255)$ = .93, $p < .001$. These items were: "To what degree do you think that Thomas Schmidt follows (Schalke 04/Name of old team)'s norms and values?" and "To what degree do you think that Thomas Schmidt follows (Schalke 04's/Name of old team)'s traditions?" Responses were rated on 7-point scales ranging from 1 (*not at all*) to 7 (*to a large extent*).

While loyalty scores were highly correlated with the alternative mediators (see Table 6), factor analyses supported that new team loyalty and old team loyalty were statistically distinct from perceived identification with the new and old team and adherence to the norms of both teams. A six-factorial solution (i.e., perceived loyalty, identification and norm adherence to the old and new team loading on separate factors), χ^2/df = 2.46, CFI = .947, RMSEA = .075, sRMR = .051, showed closer fit to the data than (a) a unifactorial solution, χ^2/df = 16.95, CFI = .376, RMSEA = .249, sRMR = .302; (b) a two-factorial solution in which all items regarding the old team loaded on one factor and all items regarding the new team loaded on another factor, χ^2/df = 5.70, CFI = .817, RMSEA = .135, sRMR = .069; and (c) a three-factorial solution in which loyalty to the old and new team, identification with the old and new team, and adherence to the norms of the old and new team loaded on separate factors, χ^2/df = 15.95, CFI = .423, RMSEA = .241, sRMR = .316. It also showed closer fit than (d) a four-factorial solution (i.e., as the six-factor solution but with loyalty and norm adherence in terms of the new team loading on the same factor, and loyalty and norm adherence in terms of the old team loading on the same factor), χ^2/df = 4.72, CFI = .858, RMSEA = .120, sRMR = .059; and (e) than another four-factorial

Table 6

Correlations Between Main Variables in Study 5

Variable	2	3	4	5	6	7	8	9	10	11	12	13
1. Loyalty to new team	.82***	.84***	.37***	.33***	.16*	.26***	.13*	.73***	−.55***	.74***	.75***	−.40**
2. Identification with new team		.82***	.39***	.26***	.14*	.20**	.13*	.67***	−.48***	.66***	.75***	−.37***
3. Adherence to new team norms			.35***	.31***	.16*	.33***	.11	.69***	−.52***	.70***	.76***	−.34***
4. Positive evaluation new team				.10	.09	.10	.85***	.56***	−.42***	.27***	.35***	−.48***
5. Loyalty to old team					.76***	.81***	.34***	.37***	−.24***	.33***	.32***	.41***
6. Identification with old team						.79***	.38***	.24***	−.14*	.24***	.20**	.47***
7. Adherence to old team norms							.34***	.33***	−.24***	.30***	.30***	.41***
8. Positive evaluation old team								.20***	−.14*	.13*	.17**	.40***
9. Positive emotions									−.45***	.74***	.65***	−.21**
10. Negative emotions										−.45***	−.51***	.20**
11. Vote for target											.63***	−.24***
12. Trust in target												−.23***
13. Zero-sum support												

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

solution (i.e., as the six-factor solution but with loyalty to and identification with the new team loading on the same factor, and loyalty to and identification with the old team loading on the same factor), $\chi^2/df = 4.01$, CFI $= .885$, RMSEA $= .108$, sRMR $= .067$.

As a measure of *perceived evaluation*, we asked participants what kind of feelings they thought that the target person had toward the new team (i.e., Schalke 04) and toward the respective old team. Responses were rated on a sliding-response scale ranging from 0 (*extremely negative*) to 100 (*extremely positive*).[7]

Dependent variables. The dependent variables were (a) positive emotions toward the target, (b) negative emotions toward the target, (c) intentions to vote for the target for fan club presidency, (d) perceived support in a zero-sum situation, and (e) trust in the target.

We used a scale developed by Stephan et al. (1999), validated in Germany by Kunst, Thomsen, and Sam (2014), to measure *positive and negative emotions*. These items assessed the degree to which participants felt four positive (i.e., affection, approval, sympathy, and warmth; $\alpha = .98$) and four negative emotions (i.e., hostility, dislike, disdain, and hatred; $\alpha = .89$) toward "people like Thomas Schmidt." Responses were rated on a 9-point scale ranging from 1 (*not at all*) to 9 (*extremely*).

For the measure of *intentions to vote for the target for fan club presidency*, we instructed participants to imagine that the target individual was to candidate for presidency at the official Schalke 04 fan club and asked them to indicate how likely they were to vote for the person on a scale ranging from 0% to 100%.

To assess *perceived support in a zero-sum situation*, we asked participants to indicate on a scale from 0 (*Schalke 04*) to 100 ([*old team's name*]) which team they thought the target would support if his new team (i.e., Schalke 04) and respective old team would play against each other.

Finally, three items were adapted from the European Social Survey (2016) to measure *trust in the target*, specifically, the degree to which participants perceived the target person to be trustworthy ($\alpha = .93$). Participants completed the questions "Do you think Thomas Schmidt can be trusted or that you can't be too careful?," "Do you think that Thomas Schmidt would try to take advantage of you if he got the chance, or would he try to be fair?" and, "Would you say that most of the time Thomas Schmidt tries to be helpful or that he is mostly looking out for himself?" Similar to the ESS, responses were scored on 10-point scales ranging from

1(*you cannot be too careful/he would try to take advantage of me/he is mostly looking out for himself*) to 10 (*he can be trusted/he would try to be fair/he mostly tries to be helpful*).

Manipulation check. To ensure that participants indeed perceived Borussia Dortmund as a rival team and 1.FC Nürnberg as an allied team, at the end of the questionnaire we asked them to rate the relationship between the new team and the respective old team on a sliding-response scale ranging from 0 (*very friendly*) to 100 (*very hostile*).[8]

Results

Manipulation check. As expected, participants rated the relationship between Schalke 04 and 1. FC Nürnberg as friendly, $M = 17.73$, 95% CI [13.54, 21.92], and the relationship with Borussia Dortmund as hostile, $M = 80.15$, 95% CI [75.66, 84.64], $F(1, 254) = 400.79$, $p < .001$, $\eta^2 = .61$.

Interaction between target identity and out-group type. We ran 2×2 ANOVAs to test for the main effects of the target identity manipulation and the out-group type manipulation and the interaction between both on perceptions of loyalty (i.e., the proposed mediators) and the dependent variables. For all variables except for the zero-sum support variable, the two-way interaction was significant. For sake of brevity and to keep the presentation as parsimonious as possible, means and standard errors for the main effects are presented in SOM. However, we present F test results for all tests in Tables 7 and 8; group differences, confidence intervals and p values obtained from planned contrasts in Figure 4; and t-statistics (for contrasts) in Table 9.

Generally, findings were most consistent when the target came from the allied team. Here, significant differences were observed for all variables. Participants had more positive and less negative emotions toward the allied dual identifier than the allied common identifier and reported to be more likely to vote for him and trust him. The allied dual identifier was also

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[7] Due to single-item indicators being used for perceived evaluation, factor analyses could not be conducted with these items.

[8] The study did not include any attention checks.

Table 7
ANOVA Results for Main Study Variables in Study 5

Dependent variable	Predictor variable	Df1	F	p	η²
Perceived loyalty to new team	Target identity	1	.41	.520	.00
	Group manipulation	1	66.59	<.001	.19
	Interaction	1	20.49	<.001	.06
Perceived loyalty to old team	Target identity	1	39.39	<.001	.13
	Group manipulation	1	14.85	<.001	.04
	Interaction	1	15.80	<.001	.05
Positive emotions toward target	Target identity	1	.77	.383	.00
	Group manipulation	1	58.70	<.001	.18
	Interaction	1	17.71	<.001	.05
Negative emotions toward target	Target identity	1	7.49	.007	.03
	Group manipulation	1	30.74	<.001	.10
	Interaction	1	6.70	.010	.02
Willingness to vote for target	Target identity	1	1.00	.318	.01
	Group manipulation	1	49.58	<.001	.15
	Interaction	1	18.33	<.001	.06
Perceptions of zero-sum support	Target identity	1	19.03	<.001	.07
	Group manipulation	1	7.41	.007	.03
	Interaction	1	.06	.811	.00
Trust in target	Target identity	1	10.70	<.001	.04
	Group manipulation	1	57.96	.007	.17
	Interaction	1	15.04	<.001	.04

perceived as more loyal to the new team *and* the old team than the allied common identifier.

When the target was from the rival team, three out of six possible contrasts were significant (see Table 9). Specifically, participants perceived the rival dual identifier as less loyal to the new team and had less positive emotions toward him. They also reported that they would be less likely to vote for the dual identifier than the common identifier from the rival team, but this effect was comparably small, possibly due to a floor effect in ratings of the rival dual identifier (see Figure 4). That is, the mean voting score for the rival dual identifier ($M = 4.71$, 95% CI [−2.29, 11.71]) was very close to, and its confidence intervals included, the lower scale anchor. No systematic interactions with participants' gender were observed (see SOM).

Moderated mediation model. Having established these effects, we set out to test a multigroup path model in which out-group type (i.e., the moderator) was the grouping variable. Specifically, the model tested whether the target identity manipulation (dual vs. common) would indirectly lead to generally less positive attitudes toward a target from a rival team but to generally more positive attitudes toward a target from an allied team. As before, we expected such indirect effects to be mediated by perceived loyalty to the new team. In addition, we included perceived identification, perceived norm adherence, and perceived evaluation in terms of the new and old team as parallel mediators. As dependent variables, we included all but the zero-sum support measure (for which no direct effects had been observed). Given that all variables in the model were

Table 8
ANOVA Results for Additional Mediators in Study 5

| Dependent variable	Predictor variable	Df1	F	p	η²
Perceived identification with new team	Target identity	1	1.28	.258	.01
	Group manipulation	1	74.24	<.001	.21
	Interaction	1	17.02	<.001	.05
Perceived identification with old team	Target identity	1	32.79	<.001	.12
	Group manipulation	1	3.50	.063	.01
	Interaction	1	13.21	<.001	.04
Perceived evaluation of new team	Target identity	1	.11	.736	.00
	Group manipulation	1	76.47	<.001	.23
	Interaction	1	4.76	.030	.01
Perceived evaluation of old team	Target identity	1	44.13	<.001	.15
	Group manipulation	1	4.29	.039	.01
	Interaction	1	3.69	.055	.01
Perceived adherence to norms of new team	Target identity	1	1.77	.184	.01
	Group manipulation	1	62.96	<.001	.19
	Interaction	1	13.26	<.001	.04
Perceived adherence to norms of old team	Target identity	1	35.49	<.001	.12
	Group manipulation	1	11.79	<.001	.04
	Interaction	1	8.11	.005	.03
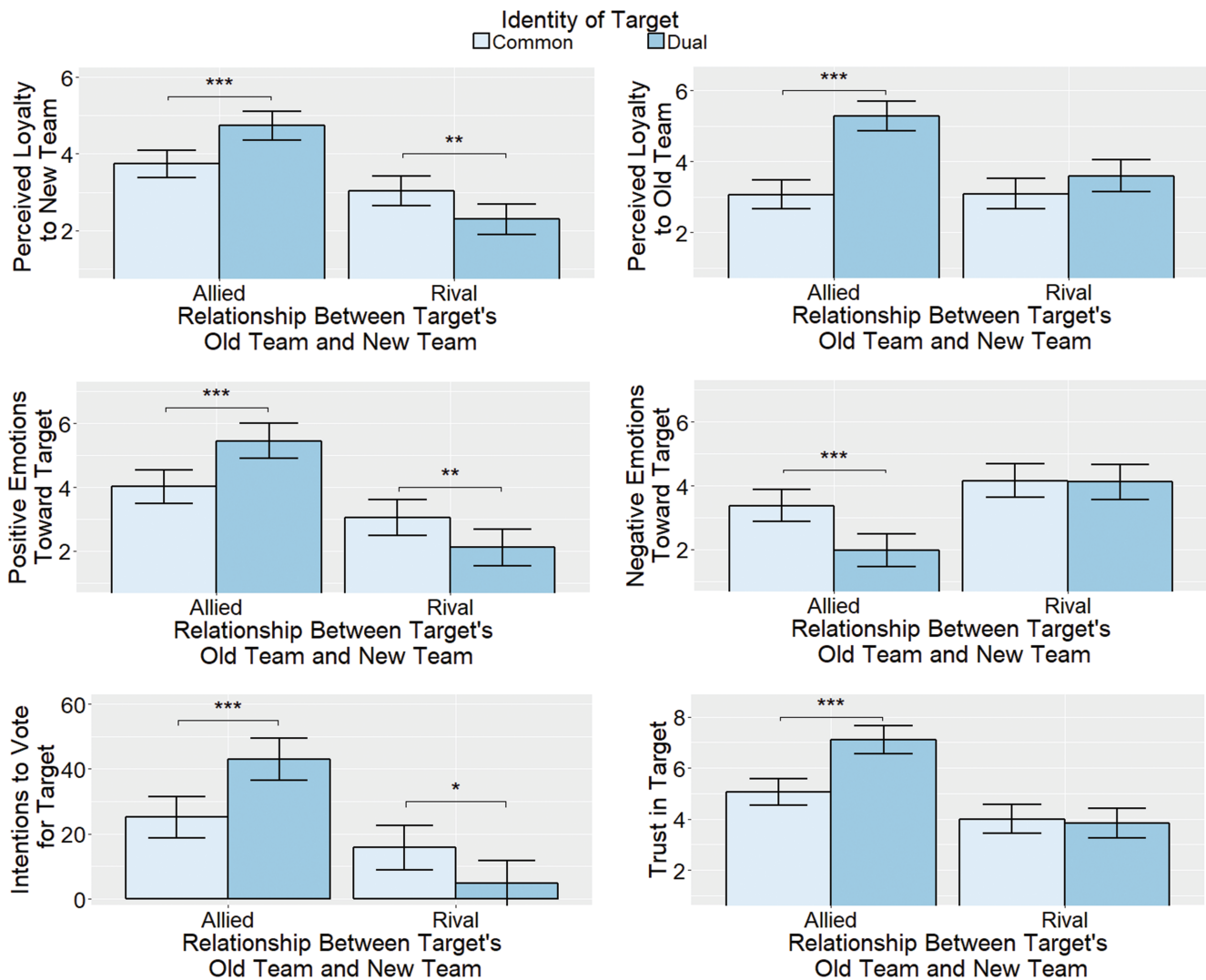
Figure 4. Interactions between the target-identity manipulation (common vs. dual) and the outgroup manipulation (allied vs. rival team) in Study 4 are displayed. Error bars represent 95% confidence intervals. See the online article for the color version of this figure.

either framed toward an allied fan (moderator Group 1), or a rival fan (moderator Group 2), we did not constrain any effects, but simply estimated a fully saturated multigroup path model. To keep presentation parsimonious, the presented figure only includes mediators that had a significant effect on at least one dependent variable, and only shows significant paths.

As displayed in Figure 5, in terms of attitudes toward the *target fan from the rival team*, perceived loyalty to the new team predicted less negative and more positive emotions toward the target, as well as higher intentions to vote for him. In addition, both perceived identification with the new team and perceived adherence to its norms predicted more trust in the target. Unexpectedly, perceived positive evaluation of the new team predicted more negative emotions toward the target, possibly reflecting a suppressor effect. Effects of all remaining mediators were nonsignificant (*p*s > .127). Bootstrapping with 5,000 random resamples indicated a significant indirect effect

such that participants showed less positive emotions, more negative emotions, and less willingness to vote for the dually identified rival team target because they perceived him as less loyal to the new team (see Table 10). Moreover, significant indirect effects indicated that participants also trusted the dually identified rival team target less because they perceived him to identify less with the new team and adhere less to its norms. Hence, we found unique effects of both perceived loyalty as well as group evaluation and norm adherence that a classical social identity perspective might predict would shape evaluations of group members.

In terms of *the allied target*, perceived loyalty to the new team predicted higher levels of trust as well as intentions to vote for him. In addition, perceived adherence to norms of the new team predicted higher intentions to vote for the target, and perceived positive evaluation of the new team predicted more trust. Effects of all remaining mediators were nonsignificant (*p*s >

Table 9
Test Statistics for Planned Contrasts in Study 5 Are Displayed for the Main Study Variables

Variable	Allied team				Rival team			
	t	*df*	*p*	*d*	*t*	*df*	*p*	*d*
Perceived loyalty to new team	3.81	254	<.001	.48	−2.65	254	.009	.33
Perceived loyalty to old team	7.55	254	<.001	.95	1.57	254	.118	.20
Positive emotions toward target	3.74	251	<.001	.47	−2.27	251	.024	.29
Negative emotions toward target	−3.91	253	<.001	.49	−.10	253	.919	.01
Intentions to vote for target	3.89	254	<.001	.49	−2.24	254	.026	.28
Trust in target	5.26	254	<.001	.66	−.41	254	.679	.05

.089). Bootstrapping showed that participants were more willing to vote for the allied target and more willing to trust him because he was perceived as more loyal to the majority group and, in terms of intentions to vote for him, also because they perceived him as adhering more to norms of the new team (see Table 10). As in the previous studies, we also estimated a model in which the positions of the mediators and dependent variables were reversed, providing evidence for some reversed, indirect effects (see SOM).

Results for Target from Rival Team
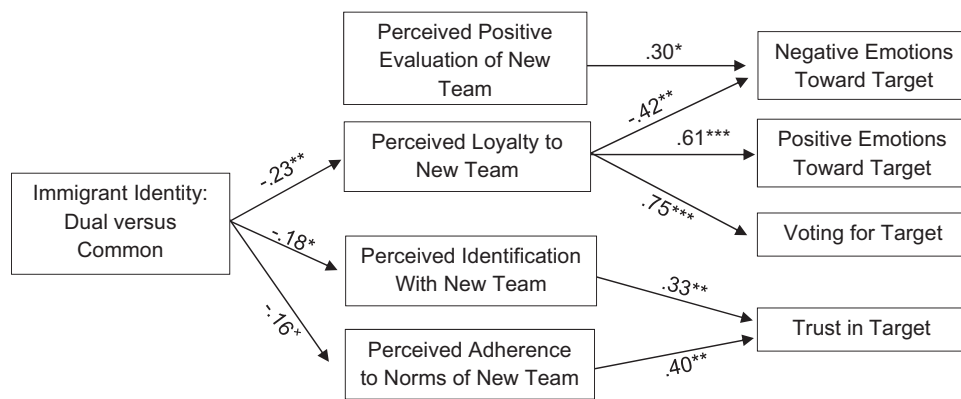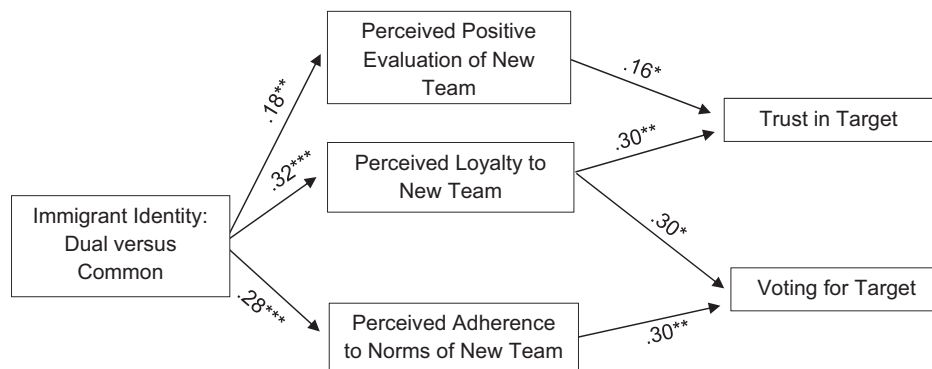

Results for Target from Allied Team

Figure 5. Multigroup path model results for Study 4 are displayed. Standardized coefficients are presented. For purposes of presentation, nonsignificant paths, correlations between mediators, correlations between dependent variables, and main effects of the identity manipulations on the dependent variables are not presented. Moreover, mediators and dependent variables without significant effects on any dependent variable are not presented. [×] *p* = .072. [*] *p* < .05. [**] *p* < .01. [***] *p* < .001.

Table 10

Significant Indirect Effects of Identity Condition (0 = Common, 1 = Dual) on the Dependent Variables When the Target Came From the Rival Team and Allied Team in Study 5

Group condition	Mediator	Dependent variable	B	95% CI[a]	
				Lower	Upper
Rival	Loyalty to new team	Positive emotions	−.57	−1.31	−.12
Rival	Loyalty to new team	Negative emotions	.47	.13	1.09
Rival	Loyalty to new team	Voting for target	−7.66	−17.95	−1.34
Rival	Identification with new team	Trust in target	−.26	−.70	−.05
Rival	Adherence to norms of new team	Trust in target	−.27	−.84	−.01
Allied	Loyalty to new team	Voting for target	6.03	1.79	13.66
Allied	Loyalty to new team	Trust in target	.48	.12	1.12
Allied	Adherence to norms of new team	Voting for target	5.47	.87	13.20

[a] Bias-corrected confidence intervals are calculated using bootstrapping with 5,000 random resamples.

Discussion

This last study replicated the general pattern of results supporting the coalitional aspect of our loyalty framework in a group context defined by team affiliations (fandom) rather than ethnicity. When the dually identified Schalke 04 newcomer came from the rival Dortmund team, participants were more biased toward him because they perceived him as less loyal to the new team (i.e., participants' in-group). In contrast, when the Schalke 04 newcomer came from the allied 1. FC Nürnberg team, having a dual identity favorably shaped Schalke 04 fans' evaluations of him because it increased their perceptions that he was loyal to the in-group. Alternative mediators generally played a lesser role than did loyalty. Yet, in terms of trust in the target and willingness to vote for him as dependent variables, our manipulations had effects that were mediated by perceptions of lower identification with the new team and lower perceived adherence to the new team's norms. Hence, the results indicated that loyalty and social identity processes often simultaneously are at play and complement each other in explaining intergroup bias. One suppressor effect was observed. Perceived positive evaluation of the new team, which in zero-order terms was related to less negative emotions, predicted more negative emotions toward the rival target in the path model. However, the indirect effect mediated by this variable was nonsignificant.

Although significant interactions were observed between the identity manipulation and out-group type for all but one measure, planned contrasts suggested that these interactions were primarily driven by differences in ratings of the target from the allied team. There may be different explanations for the less pronounced effects on ratings of the rival target. It is possible that the identity manipulation simply was less believable when the target came from a rival team. Because of the enduring and extremely negative relationship between both teams, participants may have had difficulties imagining a fan from the rival team who simply switches to the team he previously may have had strong aversion against (as in common identities), whereas this may arguably have been more believable in terms of an allied fan. Participants may have had even more difficulties imagining that the rival target now holds two seemingly irreconcilable and conflicting identities at the same time (as in dually identifying with both rival teams). Future studies may circumvent this problem, for instance, by using fans from a neutral team as targets and rather modulate the intensity of team

rivalry by asking participants to imagine that both teams play against each other in a friendly game or a game for which stakes are high (i.e., for which a lost game may threaten the team's future).

Nevertheless, the current results point to the important role that dual identities also play for intergroup relations between allies, in addition and in contrast to those between rivals: Whereas results from the present series of studies suggest that rival dual identifiers are generally seen as less loyal, the current results demonstrated that a dual identifier from an allied group is in fact perceived as *more* loyal to both the current majority in-group as well as his group of origin. This may be a fruitful avenue for future research with potential important societal implications for reconciling acculturation preferences between groups, where members of majority-groups tend to prefer that minority-group members hold common identities, but minority-group members themselves prefer to hold dual identities (Dovidio et al., 2016; Hehman et al., 2012; Verkuyten & Thijs, 2002).

Meta-Analyses

To gauge the robustness of the effects observed in the studies presented in this article, we conducted a set of meta-analyses.

Method

We used the *metafor* package (Viechtbauer, 2010) in R to conduct random-effects meta-analyses. When the design of the studies included a coalitionally relevant condition in which we predicted loyalty effects in particular, effect sizes were taken from this condition (i.e., the threat condition in Study 1 and the rival group condition in Study 5). In Study 4, effects are taken from the control condition because the design here is comparable with the other studies. In terms of the dependent variables, in Study 3, we included the average effect on the four coalitionally relevant variables (i.e., devaluation as coalitional member, approval for jobs with the potential to inflict harm, perceived willingness to fight for Russia in a war against Poland, support of ethnic persecution). In Study 4, effects on the coalitionally relevant variable (i.e., approval for jobs with the potential to inflict damage) were included. In Study 5, all effects on the dependent variables were averaged as the study did not include a distinction between coalitionally relevant or irrelevant

variables. Please note that all effects of the mediators (i.e., perceived loyalty) on the dependent variables were extracted from the regression or path models that controlled for alternative mediators. Effects were recoded so that higher values meant more bias and were converted to standardized r when necessary.

Results

Forest plots for all effects are displayed in Figure 6. The identity manipulation (0 = common identity, 1 = dual identity) had a significant, positive effect on the bias variables, $r = .13$, $SE = .03$, $p < .001$, 95% CI [.08, .18]. The test of heterogeneity was
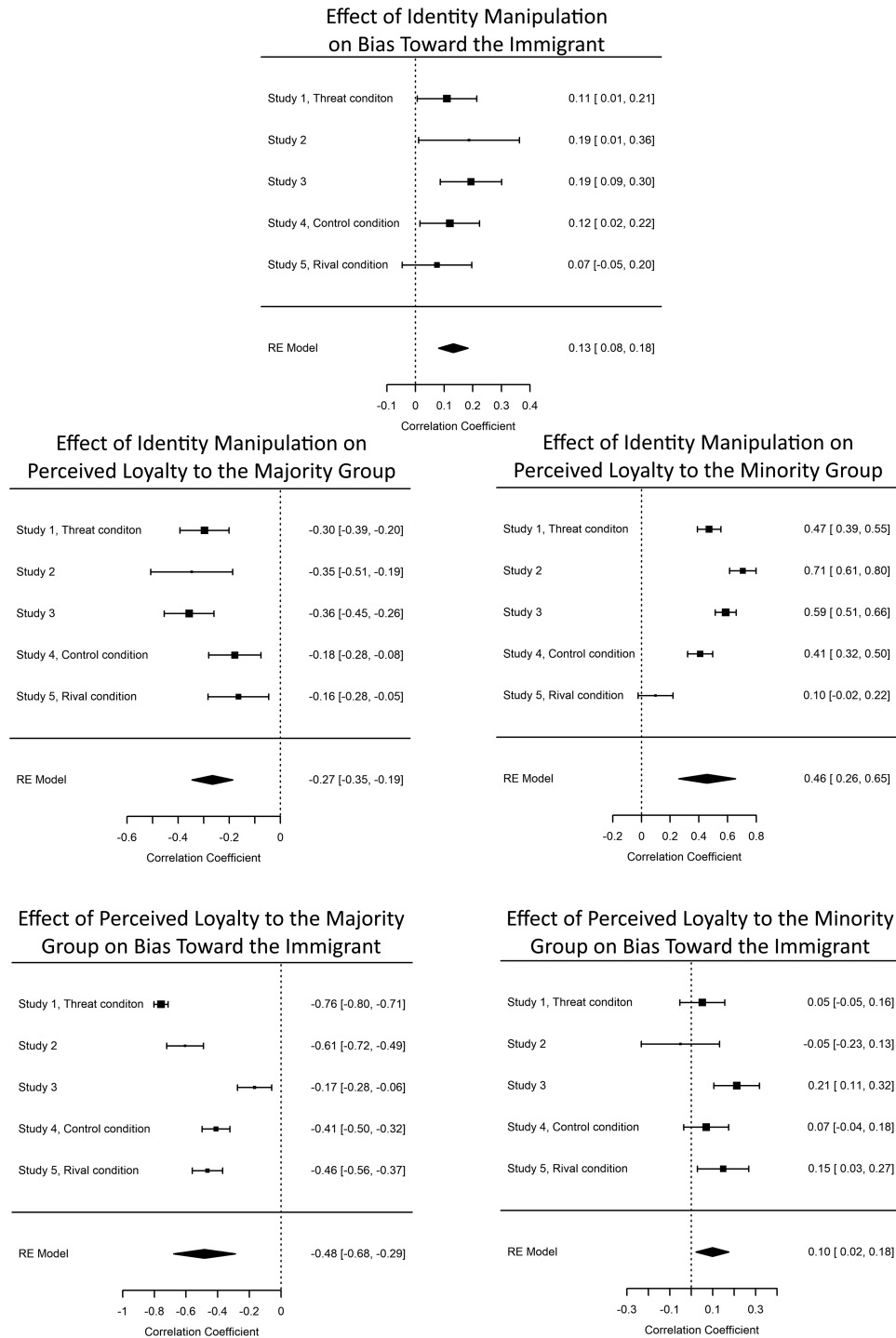
Figure 6.   Results from meta analyses of Studies 1 to 5.

nonsignificant, $Q(4) = 2.72$, $p = .605$, suggesting very little variation in effects across studies ($I^2 = 0.00\%$).

Next, the identity manipulation had a significant, negative overall effect on perceived loyalty to the majority group, $r = -.27$, $SE = .04$, $p < .001$, 95% CI $[-.35, -.19]$. The test of heterogeneity was significant, $Q(4) = 10.41$, $p = .034$, indicating variation in effect sizes ($I^2 = 61.55\%$). Similar results were observed for effects of the identity manipulation on perceived loyalty to the minority group. The identity manipulation here had a positive effect in the meta-analysis, $r = .46$, $SE = .10$, $p < .001$, 95% CI $[.26, .65]$, and the test of heterogeneity was highly significant, $Q(4) = 71.74$, $p < .001$, suggesting large variation between the effects ($I^2 = 95.97\%$).

In terms of effects of the mediators on the bias variables, perceived loyalty to the majority group was substantially related to less bias, $r = -.48$, $SE = .10$, $p < .001$, 95% CI $[-.68, -.29]$, and perceived loyalty to the minority group to more bias, $r = .10$, $SE = .04$, $p < .001$, 95% CI $[.02, .18]$. The heterogeneity test was significant for perceived loyalty to the majority group as predictor, $Q(4) = 134.73$, $p < .001$, suggesting high variation between the studies ($I^2 = 96.30\%$). When perceived loyalty to the minority group was the predictor, the heterogeneity test was nonsignificant, $Q(4) = 8.62$, $p = .071$, suggesting less variation ($I^2 = 52.80\%$).

Discussion

Meta-analyzing the studies, the identity manipulation ($0 = $ common identity, $1 = $ dual identity) overall predicted more bias toward the immigrant, more perceived loyalty to the minority group and less perceived loyalty to the majority group. Perceived loyalty to the majority group, in turn, predicted less bias toward the immigrant, while the opposite was true for perceived loyalty to the minority group (although the latter overall effect was relatively small in size). No heterogeneity was observed for the effects of the identity manipulation on bias toward the immigrant, and little heterogeneity in effects of perceived loyalty to the minority group on bias toward the immigrant. Significant heterogeneity was observed for the remaining effects. First, the effects of the identity manipulation on perceived loyalty to the majority group varied between studies. An inspection of the respective forest plot suggested that this variation was primarily driven by the relatively weak effect sizes in the last two studies. Next, the effect of the identity manipulation on perceived loyalty to the minority group varied in size, and the forest plot suggested that this was driven by the nonsignificant effect in Study 5. Finally, substantial effect size variation was observed in terms of effects of perceived loyalty to the majority group on bias toward the immigrant. An inspection of the forest plot suggested that this heterogeneity was driven in particular by the strong effect in Study 1 and the comparably weak effect in Study 3.

We intentionally investigated our framework in different contexts that varied in many respects. While the meta-analyses demonstrated overall effects of the identity manipulation and the loyalty mediators across studies, suggesting the generalizability of our hypothesized effects, the presence of heterogeneity implies that that there may be additional factors that could systematically moderate the magnitude of these effects. For example, our studies varied in terms of the country in which the work was conducted, the specific intergroup context of interest, and the way loyalty and

intergroup bias were measured. Whereas the number of studies does not allow us to test for such moderators statistically, we suspect that these factors may explain some of the heterogeneity observed.

General Discussion

Although most minority-group members prefer to identify with their minority group while simultaneously identifying with the majority group, majority-group members tend to expect them to relinquish their minority-group identity in favor of identifying with the common majority group only (Dovidio, Gaertner, & Saguy, 2007; Hehman et al., 2012; Verkuyten & Thijs, 2002). This clash in identity preferences, in turn, can have detrimental effects on intergroup relations because majority-group members often respond negatively to dually identified minority-group members (Bourhis et al., 1997; Dovidio, Gaertner, Shnabel, Saguy, & Johnson, 2009; Scheepers et al., 2014). The overarching goal of the present research was to propose and investigate perceptions of divided loyalties as a potential explanation for why majority-group members respond negatively to dually identified minority members, identifying factors that mediate and moderate their responses. Integrating evolutionary perspectives on coalitional psychology (Delton & Cimino, 2010; Sidanius & Pratto, 1999; Tooby & Cosmides, 1988, 2010) with social identity, self-categorization (Gaertner et al., 2016; Tajfel & Turner, 1986; Turner et al., 1987), and acculturation perspectives (Berry, 1997; Bourhis et al., 1997), we demonstrated that perception of disloyalty to the majority group is a central process underpinning bias toward dual identifiers, especially under conditions of intergroup threat. The effect of perceived disloyalty generalized across specific scenario contexts and group distinctions (national contexts, ethnic groups, sports fan clubs), as well as across target ethnicity and gender, and across participant gender.

Whereas previous research has documented the bias that majority-group members show toward immigrants who adopt a different acculturation ideology (Bourhis et al., 1997; Horenczyk et al., 2013) or social identity (Scheepers et al., 2014) than the one the majority group prefers, understanding the psychological dynamics underlying this effect is important both practically and theoretically. Practically, a more comprehensive understanding of these processes can inform appropriate and effective interventions to reduce intergroup conflict and tension and promote more positive intergroup and intercultural relations. Theoretically, efforts to identify key mediating processes, such as perceived loyalty, and moderating factors, such as intergroup threat or competition, helps illuminate key elements that determine how groups relate to each other. In this respect, conceptually, the present research drew on work in the tradition of both social identity theory and evolutionary theory.

Although social identity and evolutionary perspectives often offer different (and potentially conflicting) views on social phenomena, in the context of the current work they provided complementary insights (also see Brewer, 2004; Brewer & Caporael, 2006). Brewer (1999b), who encouraged an integration of social and evolutionary perspectives generally, also specifically implicated the potentially influential role that loyalty plays in group processes and intergroup relations. She argued that in complex social environments "groups at different levels of inclusiveness

and degrees of boundedness can compete for member identification and loyalties" (Brewer, 1999b, p. 80). Well-functioning groups tend to possess strong norms of altruism, trust, and reciprocity (Boyd & Richerson, 2004) and loyalty cuts to the heart of these demands of the in-groups with which people appear to universally identify. In line with this notion, the present research demonstrated that majority-group members are wary of minority-group members who show dual group affiliations especially when the costs of potential disloyalty are high. Hence, the overall pattern of findings across four studies suggests that a coalitional psychology perspective (Delton & Cimino, 2010; Sidanius & Pratto, 1999; Tooby & Cosmides, 1988, 2010) may complement self-categorization and social identity perspectives on intergroup behavior in general (see Brewer, 2004), and specifically with respect to the common in-group identity model (Gaertner & Dovidio, 2000; Gaertner, Dovidio, Anastasio, Bachman, & Rust, 1993) and acculturation frameworks (Berry, 1997; Bourhis et al., 1997) by highlighting the important role of perceived group loyalty. The present line of research thus integrates coalitional psychology and common identity perspectives to suggest (a) that humans are acutely attuned to the loyalty of newcomers, and (b) use their identity styles as prominent loyalty cues to react psychologically in functionally specific and distinct ways depending on the coalitional threats and affordances of the social context.

Across five studies, using experimental scenario-manipulations in which (intergroup) coalitional psychology and, consequently, the importance of loyalty should be particularly pronounced, majority-group participants showed the most bias toward a dually identified minority-group member which, in turn, was explained for most parts by perceived disloyalty to the majority group. We predicted this effect based on the proposal that the human tendency to form group-based coalitions has roots in a history of frequent and tense intergroup conflicts in which loyalty is vital (Sidanius & Pratto, 1999; Tooby & Cosmides, 1988; Van Vugt & Hart, 2004). Falsely perceiving out-group members as loyal to the in-group is especially costly in contexts of intergroup conflict where it may have fatal consequences, while falsely perceiving them to be disloyal may be comparatively less costly in high-stakes conflict. Hence, a functional error-management perspective (Haselton & Buss, 2000, 2003) suggests that majority-group members should question dual identifiers' loyalty—"just to be on the safe side"—in order to minimize the costs of erroneous loyalty perceptions (also see Neuberg & Cottrell, 2006). Consistent with this prediction, when we primed the December 2, 2015 terror attack in San Bernardino in Study 1, participants were more negative toward a dually identified immigrant because they questioned his loyalty to the majority group. In Study 2, we conceptually replicated this finding using a different scenario in which coalitional loyalty should again be vital. Here, participants agreed less with a dually identified than common-identified minority-group member enlisting in the majority group's army—a position that would allow disloyal group members to inflict damage on the majority group. Again, this result was explained by the fact that they questioned the protagonist's loyalty to the majority group. Although the identity manipulation itself did not affect all dependent variables in Study 3 conducted in Poland, cross-sectional mediation analyses supported the role of perceived loyalty to the majority group in explaining the effects of the identity manipulation on coalitionally relevant variables in particular.

Demonstrating the causal role of loyalty, in Study 4, we replicated and extended our general pattern of results by experimentally varying both an immigrant's identity and loyalty. Again, results highlighted the importance of perceived loyalty to the majority group as a factor underlying the evaluation of dual identifiers. Finally, Study 5, conducted with soccer fans in Germany, replicated our paradigm in an entirely different context. Again, it demonstrated that the ways in which dual-identifiers are perceived depends crucially on the potential threat they may pose to the majority group in case of disloyalty: While a dual identifier from an allied team was viewed more favorably and as more loyal to both sports teams than a common identifier, a dual identifier from a rival team was viewed less favorably because he was seen as disloyal to the new team. This distinction gives further credence to the coalitional grounding of our framework, again demonstrating that perceptions of disloyalty primarily lead to devaluation of dual identifiers within high-stakes contexts (in this case involving rival groups). Moreover, in Studies 3, 4, and 5, using mediation analyses, we also showed effects of loyalty controlling for alternative mediators that self-categorization (Turner et al., 1987) and integrated threat theory perspectives (Stephan, Lausanne, Esses, White Stephan, & Martin, 2005; Stephan et al., 1998) would suggest may drive dislike of dually identified minorities. Finally, a meta-analyses of the five studies supported the robustness of the predicted effects.

Theoretical Implications and Future Research

Together, the converging empirical evidence across five studies supports the significant role that loyalty perceptions play for the ways majority-group members respond to minority-group members depending on their expressions of group identity. Theoretically, whereas work from a variety of conceptual perspectives (e.g., social identity theory) helps explain why dually identified immigrants may be responded to more negatively than immigrants who identify solely with the national group, our coalitional perspective highlights the functional role of perceptions of an immigrants' loyalty as a mediating variable in this process. Moreover, this coalitional perspective identifies potential moderating conditions, such as the level of threat experienced by the group and the preexisting relationship with an immigrant's group of origin. Our research thus contributes in a way that complements previous work in this area and suggests how the study of orientations toward immigrants based on social identity, self-categorization, and acculturation theories (Dovidio et al., 2007; Kunst, Thomsen, Sam, & Berry, 2015) may be integrated with evolutionary theory, in this case a coalitional psychology framework (Tooby & Cosmides, 1988, 2010).

A coalitional psychology framework offers a broad, overarching perspective for the study of responses to immigrants, not in terms of a biological aversion to others based on their race or ethnicity but rather based on how they are perceived to affect the functioning of one's group. Archeological, historical, and ethnographic records suggest that coalitional intergroup competition and warfare may have been present widely and long enough for psychological adaptations to evolve that support the formation of group coali-

tions (Richerson et al., 2016; Tooby & Cosmides, 2010; Zefferman & Mathew, 2015). Social identity-related processes, as suggested by decades of social psychological research, may represent one such psychological adaptation. Moreover, a coalitional psychology perspective does not suggest that responses to immigrants are necessarily negative. Selective immigration from less to more successful coalitional groups (and the adoption of their practices and norms) can be beneficial for the group, when immigrants are loyal to it, as well as for the individual (for a review, see Boyd & Richerson, 2009; Richerson et al., 2016).

Indeed, although the focus of the present research was on contexts within which perceptions of disloyalty were expected to lead to more negative evaluations of dual identifiers, it also provides insights into conditions under which the expression of a dual identity by a member of a nondominant group might *not* elicit more negative feelings or even have positive consequences. First, we found that only when intergroup threat was made salient did participants view the dually identified immigrant more negatively and as less loyal compared with when the immigrant endorsed a common identity. Second, when loyalty-concerns were mitigated by describing dual identifiers as loyal to the majority group, they were in fact positively evaluated and, when the target individual belonged to an allied/friendly out-group, he was evaluated even *more* positively and perceived as *more* loyal than a common identifier. Thus, emphasizing the positive interdependence of groups, rather than competitive or conflictual relations, may reduce the social penalty imposed by dominant-group members on minorities for expressing a dual identity by turning perceptions of disloyalty into perceptions of particularly high loyalty to the majority group. Under such circumstances, dual identifiers may become important assets by building "bridges" and increasing cohesion between coalitional groups (Levy, Saguy, Halperin et al., 2017; Levy, Saguy, van Zomeren et al., 2017). We regard this as an important avenue for future research, ripe with potential societal consequences.

Also of importance, especially the perception that the dually identified immigrants were disloyal to participants' own majority in-group, rather than that they showed loyalty to their own group of origin, affected participants' feelings toward them. This pattern of results is consistent with the observation that intergroup bias is primarily a product of in-group love rather than out-group hate (Brewer, 1999a; Yamagishi & Mifune, 2009). Importantly, it implies that highlighting how people can maintain their loyalty to the socially dominant group and culture while still retaining an affinity for their ethnic or racial heritage may also alleviate zero-sum perceptions of loyalty and thereby the negativity often shown toward individuals who express a dual identity (Dovidio, Gaertner, & Saguy, 2009) or strong identification with their racial group (Kaiser & Pratt-Hyatt, 2009). Such interventions—framing intergroup relations as positively interdependent and explaining that identification with one's minority racial or ethnic heritage does not necessarily imply weaker loyalty with the socially dominant culture—may reduce bias against members of nondominant groups who hold multiple identities or endorse multicultural ideologies, while also securing the psychological benefits that a dual identity may offer to them (Berry, 1997; Sam, Vedder, Ward, & Horenczyk, 2006).

We only tested the role of loyalty perceptions for relations between common and dual identifiers because these are the iden-

tity styles most frequently endorsed by majority- and minority-group members, supporting the ecologic validity of our paradigm. Yet, both the common in-group identity model and models of acculturation distinguish between additional identity styles/acculturation strategies such as separate identity (Dovidio et al., 2007) or the respective acculturation strategy of separation (Berry, 1997). Previously, it has been argued that clashes between identity preferences should result in especially conflictual intergroup relations when majority-group members prefer assimilative common identities but minority-group members prefer to hold separate identities (Bourhis et al., 1997). Supporting this, Kaiser and Pratt-Hyatt (2009) found that majority-group members especially disliked minority-group members when they were highly identified with their minority group.

How do the present results relate to these prior findings? On the one hand, perceptions of disloyalty to the majority group may also have contributed to the bias observed in this previous research, although it was not measured there. Because Kaiser and Pratt-Hyatt (2009) manipulated a minority out-group member's ethnic identity but provided no information about, or measures of, his (perceived) national identity, participants may have inferred that the minority-group member who was strongly identified with his ethnic group was weakly identified with, and hence presumably disloyal to, the common national group. Yet, we also note that we only tested our paradigm with relatively recent immigrants as targets here. Hence, whether our findings can be generalized to attitudes toward members of more established minority groups such as African Americans in the U.S. (i.e., one of the target groups investigated by Kaiser & Pratt-Hyatt, 2009) is still an open empirical question.

On the other hand, one might also argue that loyalty may be a less relevant mediator for evaluating individuals with a separate group identity. Members of another, separate group are not generally expected to show loyalty toward another (e.g., the perceiver's) group. For this evaluation, other plausible mediators might include the extent to which perceivers view identification with another group and the perceiver's group as incompatible or oppositional (e.g., as in beliefs about hypodescent; Ho, Sidanius, Levin, & Banaji, 2011) and the extent to which they perceive group boundaries as impermeable (e.g., as in essentialist or group malleability beliefs; Halperin, Russell, Trzesniewski, Gross, & Dweck, 2011; Ho, Roberts, & Gelman, 2015; Pehrson, Brown, & Zagefka, 2009; Verkuyten & Brug, 2004). Future studies could directly test these competing hypotheses, for instance within contexts involving European majority and Muslim minority populations because the latter often show a relatively strong separation profile (Berry, Phinney, Sam, & Vedder, 2006). Given the recent increase in Islamist terror in European countries and violence against Muslim asylum seekers, this may be a high-stakes context of threat in which loyalty perceptions may play a role according to the coalitional loyalty-framework presented here.

Future studies might also investigate how coalitional loyalty perceptions drive *minority-group members*' acculturation and identity preferences. Minority-group members can find themselves torn between majority-group members' expectations to assimilate and their ethnic peers' expectations to separate (Horenczyk & Munayer, 2007; Kunst & Sam, 2013b). Here, loyalty perceptions may again play an important role. In particular,

individuals belonging to minority groups may be less willing to identify with the majority group precisely because their ethnic peers may perceive it as a sign of disloyalty and therefore sanction them (see also Castillo, Conoley, Brossart, & Quiros, 2007).

While the fourth study experimentally manipulated the proposed loyalty mediator, the remaining studies relied on cross-sectional mediation analyses. Results from such analyses cannot confirm a causal relationship between the mediating and dependent variables (Bullock et al., 2010; Spencer et al., 2005). Indeed, tests of alternative, reversed models presented in the SOM showed that variables that we conceptually treated as dependent outcomes in this article (i.e., bias toward the target in the vignettes) also cross-sectionally mediated, to varying extents, the effect of the identity manipulations on the variables we had treated as mediators (i.e., perceptions of loyalty). In other words, based on these results, it is also possible that the dual identity of an immigrant itself increases bias, which in turn causes perceptions that he is disloyal. Hence, further studies experimentally manipulating the mediator or using longitudinal designs are needed to determine the causal direction(s) between loyalty perceptions and bias toward immigrants.

We would also like to note another important limitation of this first line of research. In all studies, we used vignettes that very explicitly described the target individual's identity style. Because a number of factors in naturalistic settings can affect the salience of individuals' social identities, our findings may be limited in their generalizability and, thus, ecological validity. Future research should therefore aim to replicate our research with less explicit cues of the target's identities. Moreover, due to our reliance on online samples and self-report measures, it is important to replicate our findings in field experiments and with behavioral dependent outcomes (see Doliński, 2018 for a recent critique). Such designs would provide insights into potential consequences of the present research for intergroup relations in naturalistic settings.

Throughout the present research, we found little evidence of participant gender effects, indicating that group loyalty is equally important for men and women. We note that Thomsen et al. (2008) and Guimond, De Oliveira, Kamiesjki, and Sidanius (2010) also did not find such effects in their studies of responses to immigrants' acculturation preferences, using similar scenario experiments. Why might this be the case? Functional perspectives on intergroup relations have suggested that men generally are more hostile than women toward out-group males, ultimately because prevailing in intergroup conflict benefits men's reproductive fitness the most (e.g., McDonald, Navarrete, & Sidanius, 2011; Sidanius & Pratto, 1999; Van Vugt, Cremer, & Janssen, 2007). However, while women in fact may engage in less direct and explicit forms of out-group aggression (Campbell, 1999, 2013), they often show comparable degrees of implicit bias in threat-related situations (Navarrete et al., 2009), and sometimes even more bias (Ekehammar, Akrami, & Araya, 2003). Indeed, one may argue that it is as crucial for women as it is for men to correctly probe the loyalty of group members in order to forecast whether they will free-ride or altruistically cooperate, protect in-group members and contribute to the greater common good in terms of scarce resources and efforts.

Finally, future research should aim to replicate our findings cross-culturally. Although we showed effects across different countries, all our participants lived in relatively individualist and industrialized societies. Given that loyalty concerns arguably have evolved, coalitional roots, we would expect to replicate our results also in collectivist as well as small-scale societies.

Conclusion

In conclusion, the present set of five studies offers a novel perspective on research that has consistently argued and demonstrated that clashes between the different identity/acculturation preferences held by majority and minority groups impair their intergroup relations (Bourhis et al., 1997; Dovidio, Gaertner, Shnabel et al., 2009; Horenczyk et al., 2013). Our research highlights the importance of loyalty in this process. In general, monitoring group members' loyalty can be seen as functional both in terms of intergroup conflict (to differentiate friends from foes) and within-group cooperation (to forecast who will cooperate even at the expense of personal loss). In the context of responding to members of other groups who express a common or dual identity specifically, the current research suggests that the perception of disloyalty to the majority group is one central, underlying process explaining why such clashes lead to bias and why majority-group members tend to be less supportive of minority-group members who hold bicultural identities. Our findings also highlighted factors that moderate the influence of disloyalty to the majority group in responses to immigrants and members of other groups. Illuminating the role of perceived loyalty and identifying factors that affect the influence of this perception provides a more comprehensive understanding of the underlying causes of intergroup bias and conflict in multicultural contexts. This may inform further ways to promote more positive intergroup relations.

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