



Ingroups, outgroups, and the gateway groups between: The potential of dual identities to improve intergroup relations[☆]



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ABSTRACT

Research on dual identity focuses mainly on how dual identifiers feel and behave, and on the reactions they elicit from others. In this article we test an unexplored aspect of dual identity: the dual identity group's potential to act as a possible gateway between the groups that represent the respective sources of the dual identity (e.g., Israeli Arabs as a gateway between Israelis and Palestinians). We predicted that to the extent that a group is perceived to have a dual identity, intergroup attitudes and behavior of the groups comprising that dual identity will be improved. This idea was tested across four studies. Study 1a and b were real-world correlational studies which revealed positive correlations between the perception of a dual identity and attitudes towards the outgroup. In Studies 2 and 3 we demonstrated experimentally that the mere presence of a group with a dual identity leads to improved outgroup orientations. In Study 4 we demonstrated how the manipulation of perceived dual identity can help improve attitudes towards the outgroup, and also provided initial indications regarding the mechanisms underlying the process at hand. We discuss the implications of the findings for the improvement of intergroup relations, and offer an outline for future research.

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The modern era of globalization and increasing rates of immigration have been accompanied by a massive growth in interconnections between groups, and have led to the sharing of multiple identities by individuals. A highly relevant notion in this regard is that of dual identity, which reflects the simultaneous identification with a distinct subgroup and a common superordinate group (e.g., the Turkish minority in Germany that identifies simultaneously as Turkish and as German; Simon, Reichert, & Grabow, 2013). Research on dual identity has mainly focused on how individuals who hold these complex forms of categorization feel and behave (Goćłowska & Crisp, 2014; see also Baysu, Phalet, & Brown, 2011), and on the reactions they elicit from members of the dominant group (González & Brown, 2006; Rodeheffer, Hill, & Lord, 2012; Scheepers, Saguy, Dovidio, & Gaertner, 2014). Dual identification is typically found to be positively related with well-being (Nguyen & Benet-Martínez, 2013; Sam & Berry, 2010). Furthermore, among majority group members endorsement of such forms of identification (as reflected in the notion of multiculturalism) have been found to promote more positive attitudes towards minority groups (Plaut, 2010; Scheepers et al., 2014; Wolsko, Park, Judd, & Wittenbrink, 2000).

Moreover, when minority group members maintain a dual identification, they are still viewed as connected to their original sub-group, which can foster the generalization of positive attitudes towards that original sub-group (Brown & Hewstone, 2005).

Notwithstanding the impressive line of research on dual identity and related concepts (such as integration, Sam & Berry, 2010 and multiculturalism, Richeson & Nussbaum, 2004; Wolsko et al., 2000), existing research has yet to address an integral aspect of dual identity: its potential to act as a possible gateway between the groups that represent the respective sources of the dual identity. In other words, dual identity groups can potentially serve as a gateway between two, otherwise separate, groups. For example, Turkish immigrants in Germany can impact the relations between Turks and Germans, by virtue of being perceived as identifying with both these entities. In the same manner, biracials in the United States can bridge relations between Blacks and Whites, and Arab citizens of Israel can bridge relations between Palestinians and Israeli-Jews. This prospect, of dual identity groups as potential gateways, can have far-reaching implications in terms of improving intergroup relations across domains including inter-racial, inter-national, inter-ethnic, and inter-religious relations. Additionally, while dual identity has primarily been linked with hierarchically-nested identities in the form of a superordinate (typically majority group) and the subgroup identity (typically minority group), the perspective offered above broadens the scope, and also incorporates situations in which there is no clear hierarchy between overlapping identities (or when identities are not nested).

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The goal of the current research was therefore to investigate the potential role of dual identity groups as a gateway between the two groups they are associated with. Through this new perspective, we seek to complement existing research on dual identity by testing whether the presence of dual identity groups positively influences intergroup relations between the groups that represent the respective sources of the dual identity. We provide a theoretical framework to support our gateway proposition, and report six studies that test the gateway hypothesis, which predicts that the presence of a group which is perceived as having a dual identity will improve intergroup attitudes and behavior between the two groups it is identified with.

Existing theory and research already provide a reasonable basis for considering dual identity groups as possible gateways. According to research on cross-categorization, given that individuals are members of several groups simultaneously (e.g., both Black and female), members of an outgroup on one dimension may be evaluated more positively if they are also ingroup members on another dimension (e.g., a Black woman evaluating a White woman). Under the right conditions, this crossing of categories was found to reduce intergroup prejudice and discrimination (Brewer & Campbell, 1976; Crisp & Hewstone, 1999; Deschamps & Doise, 1978; Hutter & Crisp, 2005; Migdal, Hewstone, & Mullen, 1998). More importantly, such category combination was found to confront stereotypical and heuristic modes of thinking, and generalize positively to other outgroups as well (Vasiljevic & Crisp, 2013). Since dual identity groups can be seen as social groups in which different identities cross each other, the positive effects of cross-categorization may be expected to resonate in scenarios involving such groups. Similarly, social identity complexity theory which deals with the extent of overlap between different social identities, posits that raising awareness to the partiality of overlap between social identities decreases the salience of social categories, and in turn raises tolerance for outgroups in general (Brewer & Pierce, 2005). Having that dual identity groups in a way embody a partial overlap of social categories, their potential to raise such awareness may be substantial.

Additionally, the extended contact hypothesis contends that knowledge about cross-group friendships (i.e., knowing that an ingroup member has a positive relationship with an outgroup member) can improve outgroup attitudes (Wright, Aron, McLaughlin-Volpe, & Ropp, 1997). Usually, in order for extended contact to have a positive effect, the process has to entail an ingroup exemplar having contact with an outgroup exemplar (Wright et al., 1997). Nonetheless, although dual identifiers are not classic ingroup exemplars, the frequency of their unmediated interaction with both counterparts holds the potential for effects similar to the ones observed in the extended contact literature. Along the same lines, following the logic of the common ingroup identity model (Gaetner & Dovidio, 2014), dual identities might signal to the respective communities that a superordinate identity, incorporating both groups, is possible. Again, this suggests that the perception of dual identity, in the eyes of others, can be quite positive and conducive to improving intergroup relations.

Taken together, it seems safe to assume that dual identity groups hold a unique potential when it comes to improving intergroup relations. Furthermore, the fleshing out of such dual identity groups may elicit several different processes, such as blurring intergroup categories, creating a more complex perception of group identities, or inducing a more inclusive and comprehensive social category that combines previously distinct social groups. Processes such as these can all be expected to positively impact intergroup relations. Additionally, on a more practical level, the interaction with a dual identity group can perhaps be seen as a form of continuous mediated contact with the outgroup if framed correctly, which can be very fruitful and far from trivial in the context of intergroup conflict.

So far we have made the theoretical case for the significant positive potential dual identity groups may have in improving intergroup relations. This of course raises the question as to why the potential of these groups, which are obviously present in many intergroup conflict

scenarios worldwide, has not been realized yet. One possible explanation for this is that even though these groups have been present throughout history, they are often overlooked, and simply annexed to one group or the other (Rodeheffer et al., 2012; Tajfel & Turner, 1979; Telles, 2002). Therefore based on the theory we have presented above, in order to realize the said potential, the dual identity attribute needs to be fleshed out and made present. Another possible explanation may be that although the discussion so far has presented the dual identity as being perceived as 'more positive' than the outgroup, in many cases, especially those of harsh conflict, these groups are actually perceived as 'less negative'. The distinction between 'more positive' and 'less negative' is an important distinction because a decrease of negativity towards the outgroup in the context of conflict may not be as noticeable as an extreme transformation into positive relations. In other words, such dual identity groups may already be partially inhibiting negativity in intergroup relations in cases where their presence is substantial, but this inhibition might be overlooked due to the severity of existing intergroup conflict dynamics.

One final and important reservation to make in this regard is the possible backlash the fleshing out of such a dual identity might have. On the one hand, based on the theories mentioned above, the positive potential of a dual identity in intergroup relations is evident. On the other hand however, it is clear that stressing the connection between a dual identity group and the outgroup can easily become detrimental, especially in the context of severe intergroup conflict. Other than the simple animosity that can arise from association with the outgroup, there has even been some work which has shown that people might react negatively to nonstandard 'hybrids' under certain circumstances (Wagner et al., 2010). Hence, the link between the dual identity group and the ingroup, which has so far been stressed as a positive attribute, might easily backfire and lead to having the dual identity group perceived as a fifth column, or raise issues of threat and betrayal. Accordingly, while we embarked on the studies at hand, it was clear that despite the fact that we were expecting to find a positive influence of the dual identity group, we had to be aware of this possible backlash. These studies would show if indeed such a process of fleshing out the dual identity actually had the accepted positive effect, and did not backfire.

1. Overview of current research

Based on all of the above, we hypothesized that the presence of groups who are perceived to have a dual identity in the eyes of others, will lead to improved intergroup orientations among the groups comprising the dual identity. To test this hypothesis, we first conducted a preliminary study in order to substantiate our premise that the dual identity group is indeed perceived more positively (or less negatively) than the outgroup. Next we conducted five studies to test our main hypothesis. Study 1a and b were correlational studies meant to test the predicted positive correlation between the perception of a group as having a dual identity and intergroup attitudes and behavior. These studies were performed using two distinct and unrelated dual identity groups in Israel, Arab citizens (who can be identified and thereby perceived as both Israeli and Palestinian), and the Liberal Religious Jewish community (who can be identified as both secular and religious). Studies 2 through 4 were designed to experimentally test our hypothesis. In Study 2 we tested the influence of the mere presence of a dual identity group on resource allocation towards the outgroup using artificial groups in an online paradigm. Study 3 employed artificial groups situated in a more intense setting of actual interpersonal interactions. Finally, in Study 4 we returned to the real world context of the Israeli Palestinian conflict, manipulated the perceived dual identity level of the Arab citizens of Israel, and tested the effect of the manipulation on behavior and attitudes towards the Palestinian outgroup. Additionally, Study 4 also examined several possible mediators in order to shed some light on the underlying mechanism at hand. Thus, all the different studies

test the same hypothesis in different ways, which should corroborate both the internal and external validity of our findings.

2. Preliminary study

The hypothesis described above is partially based on the premise that the dual identity group is perceived more positively than the outgroup. Therefore, before we began the studies examining the effect of the dual identity group on intergroup relations, we wanted to rule out the possibility that the dual identity group members were actually perceived more negatively than the outgroup due to their potential to be treated as part of the outgroup or even as a fifth column. In order to rule out this possibility we ran a correlational survey in the Israeli Palestinian context. From the Jewish Israeli perspective, Arab citizens of Israel are affiliated with both the Israeli Jewish ingroup with whom they share their citizenship as well as with the Palestinian outgroup residing in the West-bank and Gaza, with whom they share their national identity. Based on this identity structure in the preliminary study we compared the ingroup (Israeli Jews) members' attitudes towards the dual identity group (Arab citizens of Israel) on the one hand, to their attitudes towards the outgroup (Palestinians from the west bank) on the other hand.

2.1. Participants

We recruited 180 Jewish-Israeli participants (81 males; $M_{age} = 48.30$ years, $SD = 15.60$) via an internet survey company, to take part in a two-wave study (in each wave we assessed attitudes towards one distinct group). Twenty-four participants dropped out between the first and the second waves which left us with a sample size of 156 that was estimated to be able to detect a medium effect (i.e. $d = 0.30$).

2.2. Procedure and measures

Participants were asked to fill out an extensive questionnaire regarding their emotions, perceptions, and policy preferences towards the dually identified Arab citizens of Israel. Approximately two weeks later, the same participants were contacted with an almost identical questionnaire, only this time all the questions were about the Palestinian outgroup. The questionnaire consisted of the following items: discrete negative emotions: *anger, hate, and fear* (Halperin, 2016); negative stereotypes (six items, e.g., “to what extent do you perceive a typical member of the group to be violent/ignorant/not trustworthy”, $\alpha = 0.93$, Kimel, Huesmann, Kunst, & Halperin, 2016); perceived similarity with the ingroup (three items, e.g., “to what extent do you feel that Israelis and Palestinians are similar”, $\alpha = 0.79$); contact motivation (three items, e.g., “To what extent would you like to have a member of the group as friend/neighbor/partner”, $\alpha = 0.85$, Bogardus, 1933; Owen, 1981); and finally, support for aggression towards the group, which included items regarding support for the use of violence against the group and support for deprivation of the groups' rights. All variables mentioned above were measured on a 1 (*not at all*) to 6 (*to a very high extent*) scale.

3. Results

As expected the dual identified group was assessed more positively than the outgroup in almost every single parameter: anger ($M = 4.26$, $SD = 1.23$ vs. $M = 4.54$, $SD = 1.14$), $t(155) = -3.32$, $p = 0.001$, $d = 0.24$; hate ($M = 2.79$, $SD = 1.37$ vs. $M = 3.24$, $SD = 1.50$), $t(155) = -6.41$, $p < 0.001$, $d = 0.31$; stereotypes ($M = 4.76$, $SD = 1.38$ vs. $M = 5.14$, $SD = 1.43$), $t(155) = -4.61$, $p < 0.001$, $d = 0.27$; perceived similarity with the ingroup ($M = 3.62$, $SD = 1.00$ vs. $M = 3.51$, $SD = 1.06$), $t(155) = 2.56$, $p = 0.01$, $d = 0.11$; contact motivation ($M = 3.50$, $SD = 1.34$ vs. $M = 3.06$, $SD = 1.39$), $t(155) = 7.35$, $p < 0.001$, $d = 0.32$; support for aggression against the group ($M = 2.73$, $SD = 1.26$ vs. $M = 3.41$, $SD = 1.29$), $t(155) = -8.73$, $p < 0.001$, $d = 0.53$. The one exception was that there was not a significant

difference in fear, ($M = 3.52$, $SD = 1.35$ vs. $M = 3.59$, $SD = 1.37$), $t(155) = -0.84$; $p = 0.4$; $d = 0.05$. These findings verified our initial assumption regarding the positive potential of the dual identity groups. While the dual identity group at hand is not necessarily perceived ‘positively’, it is regarded as significantly more positive than the outgroup in almost every variable we examined, and this enabled us to move on to the studies described here on out.

4. Study 1a and b

In Studies 1a and 1b we sought to provide initial evidence for our gateway hypothesis in a correlational design across two distinct cases of dual identity groups. If the perception of a dual identity group would indeed act as a potential gateway between its counterparts, we would expect to see more positive attitudes between the groups that make up the dual identity, to the extent that they indeed view the intermediate group as having a dual identity. We therefore assessed group members' attitudes towards a relevant outgroup (e.g., Jews perceptions towards Palestinians), and examined whether the extent to which a third, intermediate group (Arab-Israeli citizens) is perceived to have a dual identity would be positively associated with those attitudes. Establishing this link across different contexts would then serve as a robust basis on which to design experimental Studies 2, 3 and 4.

Two separate intergroup contexts in Israel were selected to test this hypothesis, Liberal Religious Jewish community (Study 1a) and Arab citizens in Israel (Study 1b). The Liberal Religious Jewish community in Israel represents a group that is situated in between two separate, often conflicting, categories: Secular Jews, who are a relatively standard westernized secular society, and Ultra-Orthodox Jews who are a zealous religious society which adamantly separates itself from the non-religious Jewish world in all walks of life. On the one hand, Liberal Religious Jews still abide to Jewish religious law but are, on the other hand, immersed in their local secular cultures as well. This enables them to be identified with both Secular and Orthodox societies, and possibly act as a gateway between them. As mentioned above, Arab citizens in Israel, which are the case study of Study 1b, are affiliated with both the Israeli Jews with whom they share their citizenship as well as with the Palestinians residing in the West-bank and Gaza with whom they share their national identity. This case study addresses a violent intractable conflict between the Israeli and Palestinian counterparts. Both case studies enabled us to examine our predictions across diverse contexts, which vary in conflict intensity and nature.

4.1. Study 1a method

4.1.1. Participants

We recruited 356 Secular Jewish participants (144 males; $M_{age} = 38.25$ years, $SD = 13.40$) via an internet survey company in Israel. The participants were randomly selected from a nationwide panel and requested to fill out a 15-minute survey in exchange for monetary compensation. The sample sizes for Study 1a and b were estimated conservatively to be able to detect a small-to-medium effect (i.e., a correlation of 0.20). Additionally, a post hoc power analysis (using G*Power, Faul, Erdfelder, Buchner, & Lang, 2009) suggested that the Study 1a sample size ($N = 356$) provided a statistical power of 0.97, and the Study 1b sample size ($N = 355$; see below) a power of 0.96, to identify small-to-medium-sized effects

4.1.2. Procedure and measures

Participants were first asked to assess the level of dual identification of the intermediate Liberal Religious community, based on Simon et al. (2013), on a scale ranging from 1 (*not at all*) to 6 (*to a very high extent*) using four items such as: “I see Religious Liberals as related to both the Secular society and the Ultra-Orthodox society”, “Religious Liberals have many similarities with Seculars as well as with the Ultra-Orthodox”, ($\alpha = 0.85$). Following the dual identity measure participants received

three “dictator game” (Kahneman, Knetsch, & Thaler, 1986) resource allocation exercises, each addressing a different issue: welfare stipends (allocation of the child support welfare budget), educational budget (allocation of new classrooms in different schools), and neighborhood infrastructure development (allocation of municipal development in different neighborhoods). In each of these issues participants were asked how they think the resources should be allocated between their secular ingroup and the ultra-orthodox outgroup. Once the resource allocation was completed, we measured contact motivation on a scale ranging from 1 (*not at all*) to 6 (*to a very high extent*) using the following items: “To what extent would you like to have an Ultra Orthodox friend/neighbor/partner, ($\alpha = 0.82$)” (Bogardus, 1933; Owen, 1981); and general feelings towards the outgroup using a scale ranging from 0 (very negative feeling), to 100 (very positive feeling; Saguy & Halperin, 2014). Participants’ political ideology on a 1 (extreme right) to 7 (extreme left) scale, and demographics were provided by the survey company.

4.2. Study 1a results

Table 1 presents the bivariate correlations between all variables. We created a single measure out of the three resource allocation assignments ($\alpha = 0.81$). As predicted, the more participants viewed the intermediate group as having a dual identity, their resource allocation towards the outgroup was more generous ($r = 0.20, p < 0.001$), and they also reported higher motivation to interact with the outgroup ($r = 0.25, p < 0.001$). Importantly, these correlations remained significant also after controlling for political ideology (resource allocation: $r_{\text{partial}} = 0.17, p = 0.003$; contact motivation: $r_{\text{partial}} = 0.20, p = 0.001$). There was no significant correlation with the general feeling measure ($p = 0.71$). Thus, the findings from Study 1a provide initial support for the gateway hypothesis.

4.3. Study 1b method

4.3.1. Participants

We recruited 355 Jewish Israeli participants (186 males; $M_{\text{age}} = 42.10$ years, $SD = 14.40$) via an internet survey company in Israel. The participants were randomly selected from a nationwide panel and requested to fill out a 15-minute survey in exchange for monetary compensation.

4.3.2. Procedure and measures

Study 1b was a replication of Study 1a only this time the dual identity group were the Arab citizens of Israel, and the outgroup were Palestinians in the West-bank. The resource allocation assignments were adjusted accordingly and in this study they addressed the issues of humanitarian aid (allocation of a UNICEF budget for child welfare), international science funding (allocation of higher education development grants), and the job market (location of job creating factories), which were more relevant to the new context.

Table 1

Simple correlations between Liberal Religious communities’ dual identity, resource allocation unified scale, contact motivation, general feelings, and political ideology (1-extreme right, 7-extreme left).

Item	Mean (SD)	1	2	3	4
1. Dual identity	4.1 (0.8)				
2. Unified resource allocation scale ($\alpha = 0.81$)	34.59 (14.8)	0.20**			
3. Contact motivation	3.72 (1.4)	0.25**	0.40**		
4. General feelings	31.39 (17.9)	−0.04	0.49**	0.57**	
5. Political ideology	4.02 (1.4)	−0.10	−0.10	−0.01	0.01

* $p < 0.05$.

** $p < 0.01$.

4.4. Study 1b results

Table 2 presents the bivariate correlations between our key variables. We created a single measure out of the three resource allocation assignments ($\alpha = 0.83$). As predicted and replicating Study 1a, the more participants viewed the intermediate group as having a dual identity, their resources allocation towards the outgroup was more generous ($r = 0.49, p < 0.001$), they had higher contact motivation ($r = 0.43, p < 0.001$), and their general feelings towards the outgroup were more positive ($r = 0.45, p < 0.001$). Importantly, these correlations remained significant also after controlling for political ideology (resource allocation: $r_{\text{partial}} = 0.36, p < 0.001$; contact motivation: $r_{\text{partial}} = 0.32, p < 0.001$; General feelings: $r_{\text{partial}} = 0.33, p = 0.001$). This analysis is of particular significance given the strong correlation between political ideology and a range of attitudes towards Palestinians (in our sample, resource allocation: $r = 0.48, p < 0.001$; contact motivation: $r = 0.46, p < 0.001$; General feelings: $r = 0.64, p < 0.001$). Thus, even after partialing out the effect of political ideology, perceptions regarding the intermediate group as having a dual identity still played a significant role in predicting attitudes towards the respective outgroup, once more supporting the gateway hypothesis.

4.5. Discussion

Study 1a and b showed that, across different intergroup contexts, the more people perceived intermediate groups to have a dual identity, the more positive were their intergroup attitudes and behavior. Importantly, this association remained significant after controlling for political orientation. Of course, the studies were correlational and for that reason it is possible that other factors, such as general tolerance towards outgroups, might account for the observed effects. To rule out such potential third-variable explanations, we conducted three experimental studies. In these studies, an intermediate group, that shared identity element with both the ingroup and the outgroup, was artificially created (in the artificial group studies) or fleshed out (in the real world study), and we tested whether the presence of such a group would advance more positive (i.e., egalitarian) resource allocation towards the outgroup.

5. Study 2

Study 2 aimed to experimentally test whether the presence of a group that clearly encompasses a dual identity, would improve intergroup behavior under highly controlled settings. Participants were first assigned to artificially created groups, based on personal inconsequential preferences (Tajfel, 1978), and the key outcome was the amount of resources they allocated to the outgroup vs. the ingroup. In the control condition, the groups were created in a dichotomous manner, reflecting a more traditional two-group context. In the experimental condition, the groups were created such that there was an ingroup, an outgroup, and an intermediate group that shared attributes with both the ingroup and the outgroup, and was thus perceived as having a dual identity. According to our predictions, and to the findings from Study 1a and b, we expected that the perception of a dual identity

Table 2

Simple correlations between Arab Israeli citizens’ dual identity, resource allocation unified scale, contact motivation, general feelings, and political ideology (1-extreme right, 7-extreme left).

Item	Mean (SD)	1	2	3	4
1. Dual identity	3.8 (1.16)				
2. Unified resource allocation scale ($\alpha = 0.83$)	34.73 (21.2)	0.49**			
3. Contact motivation	2.87 (1.3)	0.43**	0.59**		
4. General feelings	29.44 (21.8)	0.45**	0.61**	0.71**	
5. Political ideology	3.27 (1.3)	0.37**	0.48**	0.46**	0.64**

* $p < 0.05$.

** $p < 0.01$.



Fig. 1. The participants in the experimental condition in Study 2 were told that the mixed group shared part of their preferences with the ingroup and part of their preferences with the outgroup.

(i.e., in the experimental condition) would improve intergroup attitudes and behavior, as compared to a control condition.

5.1. Method

5.1.1. Participants

Eighty-two participants (35 males; $M_{age} = 39.15$ years, $SD = 15.80$) were recruited via an internet survey company in Israel. The participants, who were selected from a nationwide panel, were randomly assigned to either the control condition or the experimental (dual identity) condition. Because this manipulation had an unknown effect size and reflected somewhat of a different comparison (presence versus absence of a dual identity group) than the key correlations reported in Study 1a and b (extent to which one perceived the dual identity of another group) that also varied per sample (Study 1a: $r = 0.20$, Study 1b: $r = 0.49$), we based our decision to determine sample size on a power analysis (through G*Power, Faul et al., 2009) that assumed we wanted to be able to achieve a statistical power of 0.80 to detect a medium-sized effect ($r = 0.30$, which equals Cohen's $d = 0.63$). This analysis suggested a required sample size of 41 participants per condition.

5.1.2. Procedure and measures

In order to divide participants into groups, they were asked to state their preferences regarding issues with no significance to intergroup relations (cats vs. dogs, basketball vs. soccer, ice-cream vs. burgers, etc.). After filling out the preference questionnaire the participants were told that they have been assigned to the “blue” group according to their preference. Additionally, participants were told that other participants that shared their preferences were assigned to the blue group with them, and that participants that shared none of their preferences were assigned to the “red” group (in practice, all participants were assigned to the blue group no matter what their preferences were). In the experimental condition, participants were further told that others who shared part of their preferences and part of the red group preferences were assigned to the “mixed” group which was labeled with a blue-red gradient, thus serving as an intermediate, dual identity group (Fig. 1). To control for the 3-groups structure, participants in the control condition were informed that another group (the green group) exists in the study. No additional information was given regarding the green group.¹

The participants were then asked to divide 100 points between their blue ingroup and the red outgroup in a simple dictator game fashion (Kahneman et al., 1986). The points did not have any real value; although in order to elicit competition the participants were told that the more points the better, and that they must divide all 100 points in a zero sum manner. Both in the control condition, and the experimental condition, the allocation of points in the dictator game was dichotomous, between the blue group and the red group only.²

¹ We also had a pilot condition in which the control group was dichotomous (only a red group and blue group). We found the same trends in both control conditions and therefore in Study 2 we used this form of control condition.

² Although Hartstone and Augoustinos (1995) have studied the minimal group paradigm with three groups, our study only includes dichotomous allocations and is therefore inherently different. Moreover, the control condition showed clear signs of ingroup favoritism despite the presence of a third group which also sets this study apart from that of Hartstone and Augoustinos.

Following the allocation exercise, participants filled out a questionnaire with measures regarding their perception and evaluation of the red group. These measures included a three item contact motivation scale (e.g., “to what extent would you be interested in meeting someone from the red group/make a new friend from the outgroup” tested on a 1 (not at all) to 6 (to a very high extent) scale, based on the Bogardus social distance scale ($\alpha = 0.81$, Bogardus, 1933; Owen, 1981); and a feelings measure towards the outgroup which was more elaborated than in Study 1 (measure included: *warmth, positiveness, friendliness, trust, and admiration*, on a 1 (not at all) to 6 (to a very high extent); Shehori, 2006).

5.2. Results

Replicating classic findings in social psychology, participants tended to favor their ingroup over the outgroup, as reflected in the mean of the points allocated to the ingroup and to the outgroup respectively ($M = 75.1$, $SD = 18.65$ vs. $M = 24.9$, $SD = 18.56$), $t(80) = 12.19$, $p < 0.001$, $d = 0.80$. To test our prediction that participants in the experimental condition would allocate the resources more generously than those in the control condition, we compared the points allocated in each condition. Results showed that participants in the experimental condition allocated more points to the outgroup than those in the control condition ($M = 28.84$, $SD = 18.26$ vs. $M = 20.96$, $SD = 18.39$), $t(80) = 1.95$, $p = 0.05$, $d = 0.43$ (see Fig. 3). Thus, replicating the findings in Study 1a and b, but this time using a highly controlled experimental setting, the presence of a third group which shares identity elements with both groups led to more generous resource allocation towards the outgroup.

We further explored specific patterns of allocation behavior. Our premise was that allocating zero points to the outgroup constitutes a clearly discriminatory behavior, while allocating 50 points is a clear-cut egalitarian strategy (Bogaert, Boone, & Declerck, 2008; Tajfel, 1970). We examined the frequency of these two strategies in each condition. Interestingly, the population proportion test results showed that as opposed to only 14.6% of participants that divided the points equally in the control condition, twice as many participants 26.8%, divided the points equally in the dual identity condition (marginally significant, $Z = 1.36$, $p = 0.08$). In terms of blatant discriminations, in the control condition twice as many participants 24.4% blatantly discriminated by giving their ingroup all 100 points leaving the outgroup with nothing at all, as opposed to only 12.2% in the dual identity condition (marginally significant, $Z = 1.42$, $p = 0.07$; see Fig. 4).³ These patterns illustrate seemingly different patterns of allocation as a function of the presence of the dual identity group in the context of intergroup competition.

We then analyzed the effects of the presence of the intermediate group on the rest of the outcome measures. As for the feelings measure, participant felt marginally more friendliness emotions towards the outgroup in the dual identity condition than in the control condition ($M = 4.35$, $SD = 0.74$ vs. $M = 4.02$, $SD = 0.79$), $t(80) = 1.90$, $p = 0.06$, $d = 0.43$; we did not find significant effects for the other feelings. Furthermore, the contact motivation towards the outgroup was also significantly higher in the dual identity condition than in the control

³ In the dual identity condition there was one participant that gave the outgroup 50.5 points (reverse favoritism) and his division is treated as an equal one.



Fig. 2. The participants in the experimental condition in Study 2 were told that the mixed group over-estimated some of the time and under-estimated as well the rest of the time.

condition ($M = 4.95, SD = 0.79$ vs. $M = 4.34, SD = 1.21$), $t(80) = 2.65$, $p = 0.01$, $d = 0.60$.

5.3. Discussion

Study 2 provided the first experimental support for our prediction that the presence of a group that encompasses a dual identity, leads to more positive intergroup attitudes and behavior. Participants in the dual identity condition, compared to those in the control condition, allocated more resources to the outgroup, had greater contact motivation, and showed higher tendency (marginally significant) for equal division and a lower tendency for complete discrimination. Our goal in Study 3 was to replicate the findings in a more meaningful and interactive context.

6. Study 3

In Study 3 we sought to replicate Study 2 while adding two additional elements: first, the experiment was carried out in groups. Studies have shown that intergroup interactions are generally more competitive than interpersonal interactions (Insko et al., 1992; Wildschut, Pinter, Vevea, Insko, & Schopler, 2003). This suggested to us that allowing individuals to make allocation decisions in groups would put them in a stronger intergroup conflict situation thus enabling us to increase conflict intensity without losing experimental control. Second, Study 2 was performed in the lab rather than on-line so that we would have better control over the participants' environment and thus a better ability to simulate the dual identity condition.

6.1. Method

6.1.1. Participants

Eighty-one first year psychology students (16 males; $M_{age} = 22.85$ years, $SD = 1.65$) were recruited at an Israeli college. The participants took part in the study as part of their course requirements. They were enrolled in the assignment separately but knew in advance that it was a group interaction study, and assembled in groups that were divided dichotomously or trichotomously depending on the condition. Participants were randomly assigned to either the control or the experimental condition. Compared to Study 2, for Study 3 we expected the effect size to be stronger because the meaning of the presence of the dual identity group should be more pronounced in the more interactive/real-life nature of the study, which led us to maintain the same sample size per condition.

6.1.2. Procedure and measures

In order to divide the participants into minimal groups, upon arrival to the laboratory they were asked to perform a dot estimation exercise (Gerard & Hoyt, 1974; Saguy, Dovidio, & Pratto, 2008, Study 1). The participants were then told that they would be divided according to their estimation to groups of under-estimators and over-estimators (in

practice the participants were randomly assigned to the groups in advance, so that there were three participants in each group).⁴ In order to avoid the estimation information from influencing the rest of the experiment, the participants were not told which group was the under/over-estimator group, instead they were assigned to either the red or the blue group and each participant received a shirt in the color of her group which they were asked to wear from thereon out.⁵

In the experimental dual identity condition, participants were further told that those who over-estimated some of the time but underestimated as well the rest of time, were assigned to a third group (referred to as the mixed group).⁶ Participants in the mixed group received shirts that were half blue and half red and served as the dual identity group (Fig. 2).

Next, the blue group and the red group were separated from each other and transferred to two separate rooms. In the experimental condition the dual identity group stayed in the original room and was debriefed after the other groups left. Once in separate rooms, the participants in the blue and red groups were asked to play a round of the dictator game as in Study 1, but this time there were two resource allocation tasks. First, participants allocated the points individually and handed in their allocation proposal. Next, the participants were requested to perform the allocation again this time together with the rest of the group, and the decision had to be unanimous. Both in the control condition and in the experimental condition, the groups allocated points dichotomously between the blue and red groups only. Following the resource allocation tasks, participants' contact motivation was tested using the same scale as in Study 2.

6.2. Results

The division of participants into small groups of three participants in Study 3 created potential interdependence between individuals' responses. For this reason we performed an ICC test using the SSI HLM7 software (Raudenbush, Bryk, Cheong, Congdon, & du Toit, 2011), to test for degrees of interdependence. The ICC analysis revealed that the between-group variance accounted for <1% of the individual allocation variance ($\sigma^2 = 313.65$; $\tau = 3.04$), rendering the HLM analysis unnecessary.

As in Study 2, the pattern of resource allocation indicated that participants in the dual identity condition allocated more points individually to the outgroup than those in the control condition (although not significantly: $M = 32.02, SD = 17.70$ vs. $M = 26.33, SD = 17.70$), $t(79) =$

⁴ In one round there were two groups of 4 participants due to logistic constraints.

⁵ One red group was dropped because a member of the group was literally called "light blue" (which is actually not an uncommon name in Hebrew) and as a result she displayed an antagonistic attitude towards her assigned ingroup which affected the other group members as well. It was assumed that this would influence group identification and the data from this group was not integrated into the study.

⁶ In order to make sure that these participants were not perceived as a third "accurate" estimator group but a mixed group, we emphasized the point that they too both underestimated and overestimated.

1.45, $p = 0.15$, $d = 0.32$. We then went on to conduct follow-up tests that separated allocations by strategy. Discriminating and egalitarian allocations were measured as in Study 2 and the population proportion test results showed that as opposed to only 15.4% of participants that divided the points equally in the control condition, twice as many participants 33.3% divided the points equally in the dual identity condition, $Z = 1.87$, $p = 0.03$. In terms of blatant discrimination there was no difference in between conditions, $p = 0.44$ (see Fig. 4). Further replicating the results of Study 2, the contact motivation towards the outgroup in the dual identity condition, was also significantly higher ($M = 4.69$, $SD = 0.74$ vs. $M = 4.21$, $SD = 0.83$), $t(79) = 2.77$, $p = 0.007$, $d = 0.61$.

We next examined whether the group decision allocations were also influenced by the presence of a dual identity. Results of the group decision allocation showed that groups in the experimental condition allocated more points to the outgroup than those in the control condition ($M = 39.5$, $SD = 11.8$ vs. $M = 28.36$, $SD = 14.68$), $t(79) = 3.78$, $p < 0.001$, $d = 0.84$. Since the group allocation had to be unanimous we analyzed the group allocations as individual allocations made in a group context. However, in order to make sure that the results were not only significant due to the seemingly enlarged number of participants, we performed the same analyses using the groups ($N = 27$) and still found significant results ($M = 39.5$, $SD = 11.8$ vs. $M = 28.36$, $SD = 14.68$), $t(25) = 2.13$, $p = 0.04$, $d = 0.84$. The population proportion of discrimination and egalitarian orientation results also showed the expected effects. In the dual identity condition, 42.9% of the participants chose to divide the points equally between the two groups and none of the control condition groups chose an equal division, $Z = 4.99$, $p < 0.001$. In terms of complete outgroup discrimination, in the control condition 15.4% of participants gave their ingroup all 100 points leaving the outgroup with nothing at all, as opposed to the dual identity condition groups which none of whom displayed blatant discrimination, and gave at least 15 points to the outgroup, $Z = 2.64$, $p = 0.004$. Thus, the group allocation findings in the current group interaction context replicated the individual allocation findings of Study 2 (see Figs. 3 and 4). Additionally, in order to rule out any licensing effects the first individual allocation might have had on the second group allocation (i.e. to make sure participants didn't change their behavioral tendency towards the outgroup as a result of allocating points to the outgroup individually in the first round), we also tested and found that there was a significant correlation between both allocations ($r = 0.47$, $p < 0.001$).⁷

6.3. Discussion

Study 3 replicated the results of Study 2 in a more meaningful and interactive context by showing that the presence of a dual identity leads to more positive intergroup attitudes and behavior. As in Study 2, which employed artificial groups and individual allocation decisions, in Study 3 participants in the experimental condition collectively allocated more resources to the outgroup, had a higher tendency for equal division, a lower tendency for complete discrimination, and also showed greater contact motivation.

Thus Studies 2 and 3 provided experimental evidence for our gateway hypothesis in a controlled environment. However, since the emulation of dual identity in an artificial group context cannot completely

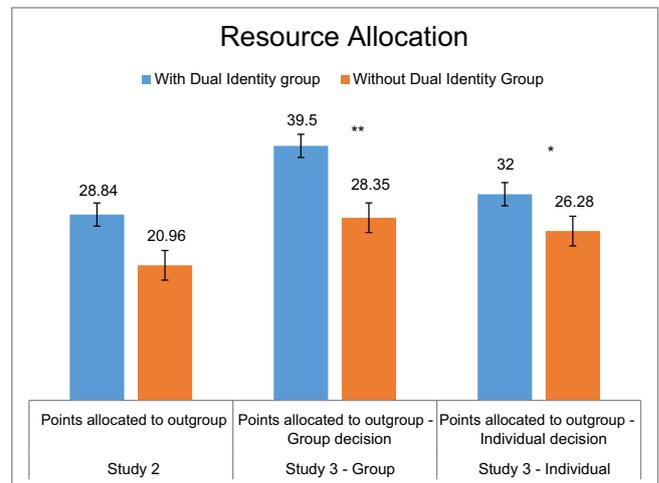


Fig. 3. Differences in resource allocation between the experimental and the control condition * $p < 0.05$, ** $p < 0.01$.

convey the complexity of real world dual identity scenarios, the external validity of the hypothesis still needed to be put to the test. Additionally, all the studies mentioned above have not yet provided any evidence as to why the reoccurring effects actually occur. Based on the theory mentioned in the introduction, and in the real world context of the Israeli Palestinian conflict, Study 4 was designed to address both these limitations.

7. Study 4

In this section we sought to replicate the findings of the previous studies but with three important additions. First, in Study 4 we went back to the field and tested the hypothesis with an experimental design in the real world context of the Israeli Palestinian conflict. This enabled us to raise the external validity of our findings in a very conservative setting. Second, in Study 4 we attempted to raise the internal validity of the findings as well by manipulating the level of perceived dual identity and examining the effects of such a manipulation on behavior and attitudes towards the outgroup. Finally, in Study 4 we introduced mediating variables in order to try and shed some light on the underlying mechanism at hand.

According to the theories mentioned in the introduction, there are several possible explanations for the positive effect dual identity groups may have on intergroup relations. As dual identity was found to be a facilitator of common ingroup identity (Dovidio, Gaertner, & Saguy, 2009), perhaps the presence of such a group induces a sense of common identity with the outgroup. Additionally, in line with cross categorization theory, the fleshing out of the complex identity which the dual identity group embodies, can foster a more humane perception of the dual identity group (Vasiljevic & Crisp, 2013). Finally, according to social identity complexity theory, the accentuation of social category overlap may lead to both a reduction of stereotypical representation of social groups, and a reduction in the evaluative significance of the group for the self (Brewer & Pierce, 2005). Accordingly, in Study 4 we added the following measures in order to test these possible mechanisms: common ingroup identity with the outgroup, humanization of the dual identity group, negative stereotypes of the dual identity group, and ingroup identification. Additionally, based on the literature that has shown that elements of identity and intergroup interactions are often mediated by emotional processes (Halperin, 2016; Shuman, Cohen-Chen, Hirsch-Hoefler, & Halperin, 2016; Van Zomeren, Postmes, & Spears, 2008), we also added an emotion measure. Given that the current context was of intergroup violent and provocative conflict, we assumed that anger was the most relevant emotion, and therefore we

⁷ We also examined perceived competition with the outgroup as a possible mediator in this study ($M = 3.79$, $SD = 0.98$ vs. $M = 3.19$, $SD = 1.35$, $t(79) = -2.29$, $p = 0.024$, $d = 0.51$), and found that it did indeed act as a mediator of the described effects. The independent variable was the experimental/control condition variable, the mediator was competition with the outgroup and the dependent variable was group resource allocation. The dual identity presence predicted less competition ($b = 0.6$, $SE = 0.26$, $t = 2.29$, $p = 0.02$). In addition, competition was negatively associated with resource allocation ($b = -3.08$, $SE = 1.21$, $t = -2.53$, $p = 0.013$). Moreover, the effect of the dual identity presence on resource allocation was reduced after competition was entered into the model ($b = -9.27$, $SE = 2.94$, $t = -3.15$, $p = 0.002$) such that the indirect path through competition was significant ($a \times b = -1.86$, 95% confidence interval [CI] = [-5.17, -0.4]).

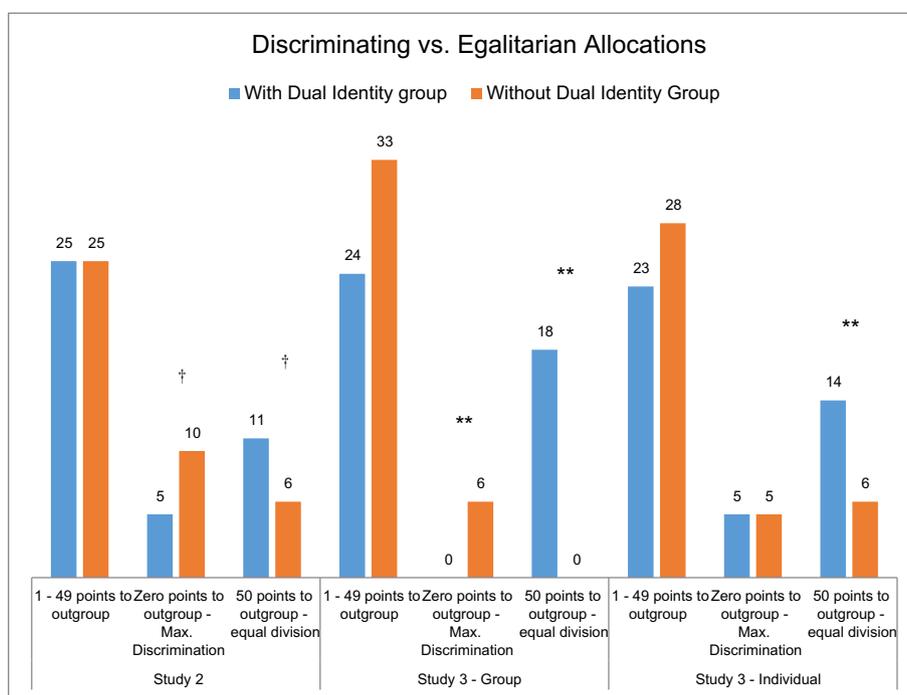


Fig. 4. Population proportion test results comparing equal distribution or discriminatory distribution across conditions † $p < 0.1$, * $p < 0.05$, ** $p < 0.01$.

hypothesized that the positive influence of the dual identity group might also be mediated by a decrease in levels of intergroup anger.

7.1. Method

7.1.1. Participants

One hundred and seventy-five participants (73 males; $M_{age} = 40.74$ years, $SD = 14.61$) were recruited via an internet survey company in Israel. The participants, who were selected from a nationwide panel, were randomly assigned to either the control condition or the experimental (dual identity) condition. Since we found medium size effects throughout the different studies, we based our decision to determine sample size on a power analysis (through G*Power, Faul et al., 2009) that assumed we wanted to be able to detect a medium-sized effect ($d = 0.50$). This analysis suggested a required sample size of 176 participants to achieve a statistical power of 0.80. Three participants who claimed they did not believe the manipulation article (see below) was real, and two outliers were removed from the sample.

7.1.2. Procedure and measures

In order to manipulate the level of perceived dual identity of the Arab citizens of Israel, participants in the experimental condition read an article describing a survey which asked the Arabs in Israel questions about their identity. The results of the survey described in the article showed that the majority of Arabs living in Israel identify both with Palestine and with Israel, and don't necessarily see a contradiction between their two identities. Participants in the control condition read an article about agronomy. After reading the article, participants were asked questions about their ingroup, about the dual identity group, and about the Palestinian outgroup. In order to make sure that the questions addressing the dual identity group did not act as a manipulation themselves in the control condition (by enhancing the presence of the dual identity before reaching the dependent variables regarding the outgroup), half of the participants in the control conditions were asked about the dual identity group in the order presented above, while the other half answered the questions regarding the dual identity group at the very end of the questionnaire. A post hoc analysis found that indeed there was no significant difference between both control

condition designs (all t 's < 0.77 , and all p 's > 0.44), and therefore all the participants in the control condition were analyzed as one group.

7.1.2.1. Manipulation check. In order to measure the effect our manipulation had on perceived dual identity level, participants were asked to rate the extent to which they perceive the dual identity group as Israeli on a scale of 1 (not all) to 100 (to a very high extent), and then to rate the extent to which they perceive the dual identity group as Palestinian on a similar scale of 1–100. We used the following formula to create a unified score which describes both the overall level of identification with both groups, and the perception of clash between the identities: $(ID_{ingroup} + ID_{outgroup}) - ABS(ID_{ingroup} - ID_{outgroup})$. We then divided the results dichotomously at the midpoint in order to have a distinction between participants who perceived the group as having a high level of dual identity and participants who perceived them as having a low level of dual identity. Other than the manipulation check, all variables were measured on a 1 (not at all) to 6 (to a very high extent) scale.

7.1.2.2. Mediators. As described above, the mediation variables included: Common ingroup identity with the outgroup (three items, e.g., "I see Israelis and Palestinians as one social group", "Israelis and Palestinians are two completely separate and distinct social groups (R)", $\alpha = 0.75$, based on Gaertner et al., 2000); humanization (measured by sentience: "to what extent do you think that having compassion for someone else's suffering is a typical trait of the average Israeli Arab", Leidner, Castano, & Ginges, 2013); negative stereotypes (six items, e.g., "to what extent do you perceive a typical member of the group to be violent/ignorant/not trustworthy", $\alpha = 0.93$, Kimel et al., 2016); ingroup identification (three items, e.g., "I identify with other Jewish Israelis", "Being a Jewish Israeli is an important part of my identity", $\alpha = 0.71$, based on Ellemers, Spears, & Doosje, 1997); and anger towards the outgroup ("to what extent do you feel anger towards the Palestinians for their actions", Halperin, 2016).

7.1.2.3. Dependent variables. Besides the resource allocation task which was similar to the task in Study 1b, in Study 4 we also introduced a measure regarding the support for governmental aggressive policies towards to the outgroup. The items of the aggressive policy measure

included minimizing the outgroup's freedom of religion, increasing military activities against the outgroup, legitimacy of outgroup civilian casualties, and unwillingness to negotiate with the outgroup ($\alpha = 0.79$).

7.2. Results

7.2.1. Manipulation check

The manipulation had the expected effect, and participants in the experimental condition rated higher on perception of the Arab citizens of Israel as dually identified ($M = 0.21, SD = 0.41$) as opposed to the participants in the control condition ($M = 0.09, SD = 0.29$), $t(169) = 2.13, p = 0.03, d = 0.33$.

Analysis of variance (ANOVA) was conducted to determine whether there was an effect of the manipulation on the prospective mediating variables. As expected, participants in the experimental condition perceived the dual identity group as marginally more human ($M = 3.60, SD = 1.30$) than in the control condition ($M = 3.19, SD = 1.34$), $F(1, 169) = 3.41, p = 0.06, d = 0.31$. Additionally, participants in the experimental condition displayed marginally lower levels of negative stereotyping of the dual identity group ($M = 3.66, SD = 1.14$) compared to the control condition ($M = 4.01, SD = 1.14$), $F(1, 169) = 3.40, p = 0.06, d = 0.31$. Ingroup identification also displayed the anticipated results in which participants in the experimental condition displayed lower levels of ingroup identification ($M = 4.58, SD = 0.84$) than participants in the control condition ($M = 5.00, SD = 0.77$), $F(1, 169) = 9.60, p = 0.002, d = 0.51$. Finally, in regards to anger, participants in the experimental condition displayed a significantly lower level of anger towards the outgroup ($M = 4.69, SD = 1.06$) than in the control condition ($M = 5.15, SD = 0.87$), $F(1, 169) = 8.78, p = 0.003, d = 0.47$. There was no significant difference between conditions in terms of common ingroup identity with the outgroup ($p = 0.58, d = 0.05$).

In regard to the dependent variables, the ANOVA analysis found that Study 4 replicated the results of the previous studies regarding the resource allocation task, and participants in the experimental condition allocated more resources to the outgroup ($M = 41.74, SD = 20.36$)

than the participants in the control condition ($M = 34.94, SD = 18.26$), $F(1, 169) = 4.67, p = 0.03, d = 0.35$. Moreover, the same pattern was found in regards to the aggressive policy measure introduced in Study 4 where as expected, participants in the experimental condition displayed less support for aggressive policy against the outgroup ($M = 2.93, SD = 1.07$) than participants in the control condition ($M = 3.30, SD = 1.10$), $F(1, 169) = 4.02, p = 0.04, d = 0.33$.

Following the analyses of the main effects, we examined possible mechanisms which we hypothesized might explain the observed phenomena. We first tested the correlation between the mediation variables and the dependent variables, and found that both dependent variables were highly correlated with all mediating variables. Resource allocation was correlated with humanization ($r = 0.38, p < 0.001$), stereotyping ($r = 0.38, p < 0.001$), identification ($r = 0.31, p < 0.001$), and anger ($r = 0.41, p < 0.001$). Similarly, Support for aggressive policy was correlated with humanization ($r = 0.38, p < 0.001$), stereotyping ($r = 0.47, p < 0.001$), identification ($r = 0.31, p < 0.001$), and anger ($r = 0.44, p < 0.001$).

To determine if the effect of our manipulation on the dependent variables could be explained by humanization, stereotyping, identification, or anger (or all four), we employed Baron and Kenny's (1986) procedure for testing mediation. Because we knew from the ANOVAs that the dual identity level manipulation (coded as 1 = dual identity, 2 = control) predicted humanization, stereotyping, identification, anger, resource allocation, and support for aggressive policy, we proceeded to test the full mediation model using Preacher and Hayes' (2012) PROCESS macro Model 4. When all five predictors were entered simultaneously, the regression equation accounted for substantial variance in resource allocation, $R^2 = 0.03, F(5, 164) = 4.67, p = 0.03$. With all four mediators in the model, as shown in Fig. 5, all of the coefficients associated with stereotyping ($b = -3.44, SE = 1.37, t = -2.51, p = 0.01$), identification ($b = -3.42, SE = 1.74, t = -1.97, p = 0.05$), and anger ($b = -4.81, SE = 1.52, t = -3.17, p = 0.002$) remained significant, and neither the dual identity manipulation ($b = -1.24, SE = 2.88, t = -0.43, p = 0.67$), nor humanization ($b = -1.81, SE = 1.21, t = 1.50, p = 0.13$), significantly predicted resource allocation. The

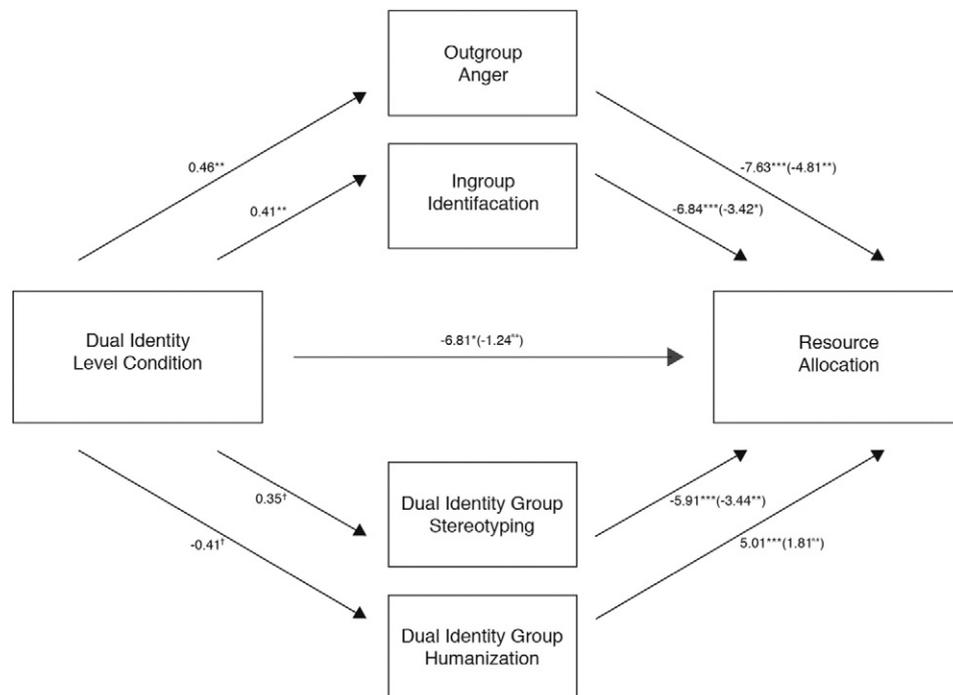


Fig. 5. Mediation model with the dual identity manipulation as the independent variable, outgroup anger, ingroup identification, dual identity group stereotyping, and dual identity group humanization as the mediators, and resource allocation as the dependent variable: Study 4. The coefficients shown in parentheses reflect the inclusion of the mediators in the equation. $†p < 0.1$, $*p < 0.05$, $**p < 0.01$, $***p < 0.001$.

same pattern was found with support for aggressive policy and when all five predictors were entered simultaneously, the regression equation accounted for substantial variance in support for aggressive policy, $R^2 = 0.02$, $F(5, 164) = 4.02$, $p = 0.04$. With all four mediators in the model, as shown in Fig. 6, all of the coefficients associated with stereotyping ($b = 0.30$, $SE = 0.08$, $t = 4.03$, $p < 0.001$), identification ($b = 0.18$, $SE = 0.10$, $t = 1.85$, $p = 0.06$), and anger ($b = 0.31$, $SE = 0.08$, $t = 3.64$, $p < 0.001$) remained significant, and neither the dual identity manipulation ($b = 0.02$, $SE = 0.16$, $t = 0.11$, $p = 0.91$), nor humanization ($b = -0.07$, $SE = 0.07$, $t = -1.01$, $p = 0.31$), significantly predicted support for aggressive policy. We then used the bootstrapping technique (with 5000 iterations) to determine whether the indirect effect of the dual identity manipulation on resource allocation was due to reduced stereotyping, identification, or anger. The indirect effect was estimated to lie between -3.58 and -0.06 (stereotyping), -3.73 and -0.010 (identification), -4.67 and -0.74 (anger) with 95% confidence. Additionally, the indirect effect on support for aggressive policy was similarly estimated to lie between 0.01 and 0.29 (stereotyping), 0.01 and 0.20 (identification), 0.04 and 0.31 (anger) with 95% confidence. Because zero is not in any of the 95% confidence intervals, the indirect effect is indeed significantly different from zero at $p = 0.05$ (two tailed). In sum, the effect of dual identity perception on resource allocation and support for aggressive policy was mediated through stereotyping, identification, and anger.

7.3. Discussion

Study 4 replicated the results of Studies 2 and 3 by showing that the perception of a dual identity leads to more positive intergroup attitudes and behavior, and this time in a real world context. As in the previous studies, participants in the experimental condition allocated more resources to the outgroup, and in Study 4 they also displayed decreased support for aggressive policies towards the outgroup. Study 4 also suggests initial evidence for why this may be the case, as the presence of a dual identity led to reduced negative stereotyping of the dual identity group, reduced ingroup identification, and reduced intergroup anger.

These mediations are in line with our gateway hypothesis, which suggests that perceiving an intermediary group as dually identified with both the ingroup and the outgroup should have positive effects on intergroup attitudes and behavior.

8. General discussion

In the era of globalization, clear-cut and distinct social categorization is becoming a thing of the past. The modern complexity of social boundaries and social identity calls for the development of innovative theory in the realm of social psychology. Dual identity and cross-categorization processes offer such innovative approaches to complex social identities (Brewer & Pierce, 2005; Crisp & Hewstone, 1999; Migdal et al., 1998; Nguyen & Benet-Martínez, 2013; Sam & Berry, 2010) and their development and elaboration will enable a more complex and accurate theorization of reality. In the current article, we fleshed out both the theoretical and application potential of the dual identity group as a gateway for improving intergroup relations. This gateway hypothesis predicts that perceiving a group as having a dual identity will improve intergroup attitudes and behavior, which is indeed what we found in terms of correlations (Study 1a and b), and in terms of experimental findings (Studies 2, 3, and 4).

8.1. Implications

The studies reported in this article are the first to focus on this new perspective on dual identity. By suggesting that perceiving a dual identity in others will improve intergroup attitudes and behavior, our findings broaden the theoretical scope of the notion of dual identity, including issues that are not addressed by existing theory and research. Another novel aspect of the studies above is the explication of the potential of dual identity to be perceived and thus act as a gateway in intergroup relations. Specifically, we added value to the literature by carrying out a set of correlational and experimental studies with artificial and real-life groups, which lends support for both the internal and external validity of our findings. As expected, the perception of an

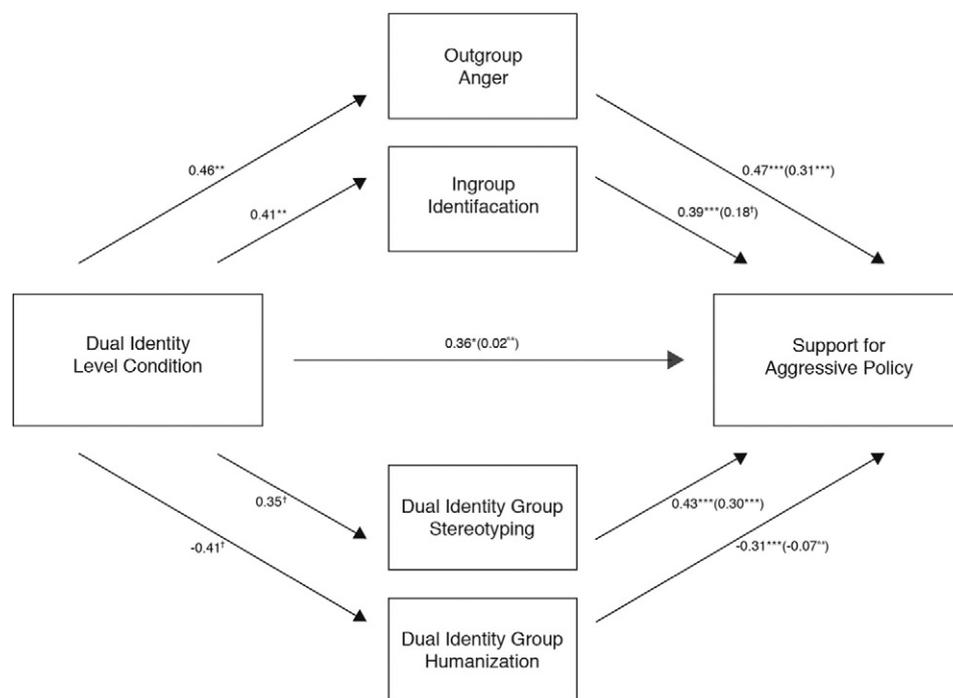


Fig. 6. Mediation model with the dual identity manipulation as the independent variable, outgroup anger, ingroup identification, dual identity group stereotyping, and dual identity group humanization as the mediators, and support for aggressive policy as the dependent variable: Study 4. The coefficients shown in parentheses reflect the inclusion of the mediators in the equation. $\dagger p < 0.1$, $*p < 0.05$, $**p < 0.01$, $***p < 0.001$

intermediate group as having a dual identity was significantly correlated with positive behavior and attitudes towards the outgroup, and the presence of a dual identity in three experiments led to a more positive allocation behavior, and more positive intergroup attitudes, all supporting the gateway hypothesis.

Although theory and research on dual identity has documented many positive implications of a dual identity (Brewer & Pierce, 2005; Brown & Hewstone, 2005; Nguyen & Benet-Martínez, 2013; Plaut, 2010; Scheepers et al., 2014; Sam & Berry, 2010; Simon & Ruhs, 2008; Wolsko et al., 2000), our findings clearly point to another type of implication, namely that perceiving a group as having a dual identity may help to reduce intergroup conflict. The current set of studies also begin to unravel the underlying mechanism. Three possible routes for mediation were discovered in Study 4, through ingroup identification, through a complex perception of the dual identity group, and through decreased negative emotions towards the outgroup.

Furthermore, it may be possible to conceive of “gateway groups” (Levy et al., *under review*) as dual identity groups that move beyond the traditional focus of hierarchically nested identities. For instance, biracials may be a good example of such a gateway group. Indeed, Levy et al. (*under review*) found that presenting participants most likely to have racist attitudes with pictures of biracials decreased their experience of intergroup threat. To us, this suggests that thinking more and more deeply about how dual identities are perceived by others may be very fruitful in coming up with new and effective ways to improve intergroup relations.

8.2. Limitations

Although the studies above have all found that the presence of a dual identity group holds a potential for positively effecting intergroup relations, when examining real world case studies which include such groups, this potential may seem to be absent. As mentioned in the introduction, this absence might be a result of the marginalization of such groups, and future research should look into possible ways to flesh out these groups and their unique attributes.

As for the risk of backlash we feared might be triggered by the dual identity group, all the studies above have consistently found only positive outcomes as a result of exposure to these groups. Nonetheless, the process of framing dual identity groups as linked to the outgroup can still theoretically also have detrimental effects especially in the context of violent conflict. Stressing the connection of the dual identity group to the ‘enemy’ outgroup may raise a sense of betrayal or frame the dual identity group as a fifth column. This concern becomes even graver when considering that all the studies so far have examined the effects of the passive presence of the dual identity groups, and if such groups were to take a more active role this threat may even increase. Future studies should address this point, and thoroughly analyze the distinction between when dual identity groups elicit the positive effects we have found in our studies, and when they might they evoke a negative backlash of threat or betrayal.

In regard to the underlying mechanism, given that these are the first studies to test the gateway hypothesis, the studies above only offer an initial analysis of possible mediation routes of the underlying process. Since these routes seem to coexist, future research should systematically test how these mediators operate both separately and together, while devising a more accurate and complex model to account for the underlying process at hand.

As for external validity and real-world applicability of the current findings, we studied different intergroup relations in the studies, and this affords at least some generalizability. Nevertheless, future research should seek to replicate the reported effects in different contexts in order to get a better sense of their generalizability. In this respect, we note that our notion of dual identities as gateways should apply to many different groups and contexts, including ethnic, national, racial and cultural groups.

8.3. Conclusion

In conclusion, the current set of studies provided the first evidence that dual identities may have a positive role to play in reducing intergroup conflict. As such, we hope our work will stimulate future research to replicate our findings in other contexts, with the next steps being to tackle the underlying mechanism(s), and to develop a more integrative and comprehensive framework for how dual identities, perceived or experienced, can improve intergroup relations.

Appendix A. Supplementary data

Supplementary data to this article can be found online at <http://dx.doi.org/10.1016/j.jesp.2016.09.011>.

References

- Baron, R. M., & Kenny, D. A. (1986). The moderator–mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations. *Journal of Personality and Social Psychology*, 51(6), 1173–1182.
- Baysu, G., Phalet, K., & Brown, R. (2011). Dual identity as a two-edged sword: Identity threat and minority school performance. *Social Psychology Quarterly*, 74(2), 121–143.
- Bogaert, S., Boone, C., & Declerck, C. (2008). Social value orientation and cooperation in social dilemmas: A review and conceptual model. *British Journal of Social Psychology*, 47(3), 453–480.
- Bogardus, E. S. (1933). A social distance scale. *Sociology and Social Research*, 17, 265–271.
- Brewer, M. B., & Campbell, D. T. (1976). *Ethnocentrism and intergroup attitudes: East African evidence*. New York: John Wiley & Sons Inc.
- Brewer, M. B., & Pierce, K. P. (2005). Social identity complexity and outgroup tolerance. *Personality and Social Psychology Bulletin*, 31(3), 428–437.
- Brown, R., & Hewstone, M. (2005). An integrative theory of intergroup contact. *Advances in Experimental Social Psychology*, 37, 255–343.
- Crisp, R. J., & Hewstone, M. (1999). Differential evaluation of crossed category groups: Patterns, processes, and reducing intergroup bias. *Group Processes & Intergroup Relations*, 2(4), 307–333.
- Deschamps, J.-C., & Doise, W. (1978). Crossed category memberships in intergroup relations. In H. Tajfel (Ed.), *Differentiation between social groups* (pp. 141–158). Cambridge: Cambridge University Press.
- Dovidio, J. F., Gaertner, S. L., & Saguy, T. (2009). Commonality and the complexity of “we”: Social attitudes and social change. *Personality and Social Psychology Review*, 13(1), 3–20.
- Ellemers, N., Spears, R., & Doosje, B. (1997). Sticking together or falling apart: In-group identification as a psychological determinant of group commitment versus individual mobility. *Journal of Personality and Social Psychology*, 72(3), 617–628.
- Faul, F., Erdfelder, E., Buchner, A., & Lang, A.-G. (2009). Statistical power analyses using G*Power 3.1: Tests for correlation and regression analyses. *Behavior Research Methods*, 41, 1149–1160.
- Gaertner, S. L., & Dovidio, J. F. (2014). *Reducing intergroup bias: The common ingroup identity model*. New York: Psychology Press.
- Gaertner, S. L., Dovidio, J. F., Nier, J. A., Banker, B. S., Ward, C. M., Houlette, M., & Loux, S. (2000). The common ingroup identity model for reducing intergroup bias: Progress and challenges. In D. Capozza, & R. Brown (Eds.), *Social identity processes: Trends in theory and research* (pp. 133–148). Los Angeles: Sage Publications.
- Gerard, H. B., & Hoyt, M. F. (1974). Distinctiveness of social categorization and attitude toward ingroup members. *Journal of Personality and Social Psychology*, 29(6), 836–845.
- Gołowska, M. A., & Crisp, R. J. (2014). How dual-identity processes foster creativity. *Review of General Psychology*, 18(3), 216–237.
- González, R., & Brown, R. (2006). Dual identities in intergroup contact: Group status and size moderate the generalization of positive attitude change. *Journal of Experimental Social Psychology*, 42(6), 753–767.
- Halperin, E. (2016). *Emotions in conflict: Inhibitors and facilitators of peace making*. New York: Routledge.
- Hartstone, M., & Augoustinos, M. (1995). The minimal group paradigm: Categorization into two versus three groups. *European Journal of Social Psychology*, 25(2), 179–193.
- Hayes, A. F. (2012). *PROCESS: A versatile computational tool for observed variable mediation, moderation, and conditional process modeling [white paper]*.
- Hutter, R. R., & Crisp, R. J. (2005). The composition of category conjunctions. *Personality and Social Psychology Bulletin*, 31(5), 647–657.
- Insko, C. A., Schopler, J., Kennedy, J. F., Dahl, K. R., Graetz, K. A., & Drigotas, S. M. (1992). Individual-group discontinuity from the differing perspectives of Campbell's realistic group conflict theory and Tajfel and Turner's social identity theory. *Social Psychology Quarterly*, 55(3), 272–291.
- Kahneman, D., Knetsch, J. L., & Thaler, R. H. (1986). Fairness and the assumptions of economics. *Journal of Business*, 59(4), S285–S300.
- Kimel, S. Y., Huesmann, L. R., Kunst, J., & Halperin, E. (2016). Living in a genetic world: How learning about interethnic genetic similarities and differences affects peace and conflict. *Personality and Social Psychology Bulletin*, 42(5), 688–700.
- Leidner, B., Castano, E., & Ginges, J. (2013). Dehumanization, retributive and restorative justice, and aggressive versus diplomatic intergroup conflict resolution strategies. *Personality and Social Psychology Bulletin*, 39(2), 181–192.

- Levy, A., Halperin, E., Van Zomeren, M., & Saguy, T. (2016). *Inter racial gateways: The potential of biracials to reduce threat and prejudice in inter racial dynamics.* (under review).
- Migdal, M. J., Hewstone, M., & Mullen, B. (1998). The effects of crossed categorization on intergroup evaluations: A meta-analysis. *British Journal of Social Psychology, 37*(3), 303–324.
- Nguyen, A. -M. D., & Benet-Martínez, V. (2013). Biculturalism and adjustment: A meta-analysis. *Journal of Cross-Cultural Psychology, 44*, 122–159.
- Owen, C. A. (1981). A half-century of social distance research: National Replication of the Bogardus' Studies. *Sociology and Social Research, 66*(1), 80–98.
- Plaut, V. C. (2010). Diversity science: Why and how difference makes a difference. *Psychological Inquiry, 21*(2), 77–99.
- Raudenbush, S. W., Bryk, A. S., Cheong, Y. F., Congdon, R. T., & du Toit, M. (2011). *HLM 7*. Lincolnwood: Chicago, IL: Scientific Software International Inc.
- Richeson, J. A., & Nussbaum, R. J. (2004). The impact of multiculturalism versus color-blindness on racial bias. *Journal of Experimental Social Psychology, 40*(3), 417–423.
- Rodeheffer, C. D., Hill, S. E., & Lord, C. G. (2012). Does this recession make me look black? The effect of resource scarcity on the categorization of biracial faces. *Psychological Science, 23*(12), 1476–1478.
- Saguy, T., & Halperin, E. (2014). Exposure to outgroup members criticizing their own group facilitates intergroup openness. *Personality and Social Psychology Bulletin, 40*(6), 791–802.
- Saguy, T., Dovidio, J. F., & Pratto, F. (2008). Beyond contact: Intergroup contact in the context of power relations. *Personality and Social Psychology Bulletin, 34*, 432–445.
- Sam, D. L., & Berry, J. W. (2010). Acculturation: When individuals and groups of different cultural backgrounds meet. *Perspectives on Psychological Science, 5*(4), 472–481.
- Scheepers, D., Saguy, T., Dovidio, J. F., & Gaertner, S. L. (2014). A shared dual identity promotes a cardiovascular challenge response during interethnic interactions. *Group Processes & Intergroup Relations, 17*(3), 324–341.
- Shehori, M. (2006). Ethnic stereotypes and social distance in the Israeli society. *Social Issues in Israel, 1*, 64–88.
- Shuman, E., Cohen-Chen, S., Hirsch-Hoefler, S., & Halperin, E. (2016). Explaining normative versus nonnormative action: The role of implicit theories. *Political Psychology* (in press).
- Simon, B., & Ruhs, D. (2008). Identity and politicization among Turkish migrants in Germany: The role of dual identification. *Journal of Personality and Social Psychology, 95*(6), 1354.
- Simon, B., Reichert, F., & Grabow, O. (2013). When dual identity becomes a liability identity and political radicalism among migrants. *Psychological Science, 24*(3), 251–257.
- Tajfel, H. (1970). Experiments in intergroup discrimination. *Scientific American, 223*(5), 96–102.
- Tajfel, H. (1978). *Differentiation between social groups: Studies in the social psychology of intergroup relations*. London: Academic Press.
- Tajfel, H., & Turner, J. C. (1979). An integrative theory of intergroup conflict. *The social psychology of intergroup relations, 33* (47). (pp. 74).
- Telles, E. E. (2002). Racial ambiguity among the Brazilian population. *Ethnic and Racial Studies, 25*(3), 415–441.
- Van Zomeren, M., Postmes, T., & Spears, R. (2008). Toward an integrative social identity model of collective action: A quantitative research synthesis of three socio-psychological perspectives. *Psychological Bulletin, 134*(4), 504.
- Vasiljevic, M., & Crisp, R. J. (2013). Tolerance by surprise: Evidence for a generalized reduction in prejudice and increased egalitarianism through novel category combination. *PLoS One, 8*(3), e57106.
- Wagner, W., Kronberger, N., Nagata, M., Sen, R., Holtz, P., & Palacios, F. F. (2010). Essentialist theory of 'hybrids': From animal kinds to ethnic categories and race. *Asian Journal of Social Psychology, 13*(4), 232–246.
- Wildschut, T., Pinter, B., Vevea, J. L., Insko, C. A., & Schopler, J. (2003). Beyond the group mind: A quantitative review of the interindividual-intergroup discontinuity effect. *Psychological Bulletin, 129*(5), 698.
- Wolsko, C., Park, B., Judd, C. M., & Wittenbrink, B. (2000). Framing interethnic ideology: Effects of multicultural and color-blind perspectives on judgments of groups and individuals. *Journal of Personality and Social Psychology, 78*, 635–654.
- Wright, S. C., Aron, A., McLaughlin-Volpe, T., & Ropp, S. A. (1997). The extended contact effect: Knowledge of cross-group friendships and prejudice. *Journal of Personality and Social Psychology, 73*(1), 73.