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Conditional Secondary Transfer Effect: The Moderating Role of Moral Credentials and Prejudice

Research has provided impressive evidence for Allport's (1954) contact hypothesis, stating that positive interactions between members of different groups can lower prejudice. However, it is impossible that one has meaningful contacts with the myriads of groups (and also of stigmatized groups) in the society. Therefore, research has investigated whether the effects of contact with a primary (i.e., contacted) outgroup generalize to more positive attitudes towards secondary (i.e., uncontacted) outgroups, an effect that Pettigrew (1997, 1998, 2009) labelled 'secondary transfer effect' (from now on STE).

Despite converging evidence supporting the existence of STE across different contexts (see, e.g., Schmid, Hewstone, Kupper, Zick, & Wagner, 2012), research suffers from two important gaps. Scholars mostly focused on the processes driving the STE of positive contact, particularly attitudes towards the primary outgroup as the main mediator (Lolliot, Schmid, Hewstone, Al Ramiah, Tausch, & Swat, 2013; Vezzali & Stathi, in press), but overlooked the STE of negative contact as well as the boundary conditions of STEs in general (that is, the moderators) (e.g., Lolliot, 2017; Pettigrew & Hewstone, 2017). In this study, we account for these caveats by studying the STEs of both positive and negative contact, but also test two potential new moderators of STE.

Particularly, we introduce moral credentials as a moderator in research on STE. Research on contact and morality has been largely detached (for exceptions, see Brambilla, Hewstone, & Colucci, 2013; Vezzali, Brambilla, Giovannini, & Colucci, 2017; Vezzali, Di Bernardo, Birtel, Stathi, & Brambilla, 2019). In this study, we focus on moral licensing (Monin & Miller, 2001) that is the consequence of the acquisition of moral credentials from

a moral act (i.e., acting un-biasedly towards a minority target in a normative situation) that inhibits a subsequent moral act (i.e., displaying lower prejudice towards the target's outgroup). We further suggest that the ramifications of moral licensing can interfere with the transference of the outcomes of contact with an outgroup to a second, uncontacted outgroup.

Second, research shows that, in contrast with Allport's (1954) initial concerns, contact effects are stronger for individuals with more prejudice (Hodson, Turner, & Choma, 2017), but also moral licensing is rather a characteristic of prejudiced individuals (see Effron, Cameron, & Monin, 2009). In this study, we thus test initial prejudice as a factor that creates favorable conditions for moral licensing to prevent STE. Based on research on confirmation bias (Klayman & Ha, 1987), we acknowledge that individuals may use moral credentials as a means to confirm their pre-existing beliefs of being moral and un-biased towards minority group members. We tested our hypotheses with a survey experiment in a quota-randomized sample of Finnish adults.

The Secondary Transfer Effect

Allport (1954) suggested that a person who is prejudiced towards one outgroup is probably also prejudiced towards other outgroups – the phenomenon later recognized as generalized prejudice (e.g., Akrami, Ekerhammar, & Bergh, 2011; Duckitt & Sibley, 2007) – and that intergroup contact has a potential to reduce prejudice. These notions have given a rationale for Pettigrew (1998, 2009) to capitalize on the potential of intergroup contact not only to improve attitudes towards a primary outgroup but also to generalize to these positive attitudes towards secondary outgroups, leading to the introduction of 'secondary transfer effect' (STE).

Although the meta-analysis by Pettigrew and Tropp (2006) found that STE was an understudied topic, with only 18 tests from 12 studies, there is now solid evidence for STE provided by correlational (Brylka, Jasinskaja-Lahti, & Mähönen, 2016; Schmid, Hewstone, & Tausch, 2014; Schmid et al., 2012; Vezzali & Giovannini, 2012), longitudinal (Eller & Abrams, 2004; Study 1; Mähönen & Jasinskaja-Lahti, 2016; Tausch et al., 2010; Study 4; Van Laar, Levin, Sinclair, & Sidanius, 2005), and experimental studies (Shook, Opkins, & Koech, 2016). Moreover, STE is not limited to adults, but extend to child samples (Turner & Feddes, 2011; Vezzali et al., 2019; for reviews, see Lolliot et al., 2013; Vezzali & Stathi, in press).

Research has also investigated the main processes underlying the STE effect identifying attitudes towards the primary outgroup as the main mediator. This STE mechanism, labelled by Pettigrew (2009) as attitude generalization, has been attested in several correlational (Brylka et al., 2016; Lissitsa & Kushnirovich, 2018; Schmid et al., 2012, 2014; Tausch et al., 2010, Studies 1-3; Vezzali et al., 2019), longitudinal (Eller & Abrams, 2004; Mähönen & Jasinskaja-Lahti, 2016; Pettigrew, 2009; Tausch et al., 2010, Study 4), and experimental (Harwood, Paolini, Joyce, Rubin, & Arroyo, 2011) studies.

In this study, we test the conditional STE of both positive and (with exploratory purposes) negative contact. Lolliot (2017) has pointed out that with its focus on the beneficial effects of contact, contact theory, including STE research, has been characterized by positivity bias. The research on negative contact has been scarce. It showed that while the effect of negative contact seems to mirror the positive effect of positive contact, that is, to predispose to more prejudice (Aberson, 2015; Barlow et al., 2012; Stephan et al., 2002),

negative contact is, however, qualitatively different from positive contact (see Graf & Paolini, 2017).

Moreover, research on whether STE also occurs for negative contact is only emerging, although extant evidence seems to point to this direction. Brylka et al. (2016) found that both positive and negative contact with majority members (Finnish people) were associated with minority members' (Estonians and Russians) corresponding attitudes towards the other minority (Estonians, for Russians; Russians, for Estonians). Meleady and Forder (2018) found evidence for what they called 'avoidance generalization effect', whereby negative contact with a primary outgroup was associated with reduced intentions to have contact with secondary outgroups. Lissitsa and Kushnirovich (2018) found, however, evidence for the STE of positive but not negative online contact, when considering the relationship of Israeli Jews (majority) with Israeli Palestinians (minority) and by testing generalization to non-Israeli Palestinian (secondary outgroup). Similarly, the STE of positive but not of negative contact was found by Mähönen and Jasinskaja-Lahti (2016) with a longitudinal two-wave design, considering Russians' (minority) contact with Finnish people (majority) and generalization to other immigrant groups in Finland (secondary outgroup). Clearly, more research on STE from negative contact is needed.

Research on the moderators of STE, especially those of the STE of negative contact, is even more in its infancy. In this study, we suggest to take a closer look at moral licensing and initial prejudice as factors influencing the secondary transfer effect of both positive and negative contact.

The Acquisition of Moral Credentials through a Moral Act: the Moral Licensing Effect

Recent research has shown the central role that morality information plays in the impression formation (Brambilla, Rusconi, Sacchi, & Cherubini, 2011; Brambilla, Sacchi, Rusconi, Cherubini, & Yzerbyt, 2012; Pagliaro, Brambilla, Sacchi, D'Angelo, & Ellemers, 2013). In, addition, morality seems to play a fundamental role in self-presentation, as a means to communicate one's positive image in the eyes of others. Individuals fear being considered immoral and untrustworthy (Rodriguez Mosquera, Manstead, & Fischer, 2002) more than being considered, for instance, incompetent or unsociable (Pagliaro, Ellemers, Barreto, & Di Cesare, 2016).

Morality also affects interpersonal (Brambilla, Sacchi, Menegatti, & Moscatelli, 2016) and intergroup behavior (Brambilla, Sacchi, Pagliaro, & Ellemers, 2013; Vezzali et al., 2019). Brambilla and colleagues (2013b) have shown that people are less motivated to interact with targets depicted as lacking moral qualities than those depicted as highly moral. Moreover, morality has been increasingly connected with prejudice. For example, Pacilli, Roccato, Pagliaro, and Russo (2016) found that, in the political domain, ingroup identification predicts the animalistic dehumanization of the outgroup through the mediation of perceived moral distance between the ingroup and the outgroup. Further, Forsberg, Nilsson, and Jørgensen (2019) have suggested that generalized prejudice is rooted in a tendency to engage in moral dichotomization (i.e., a tendency to divide people into distinctly moral categories). This provides a rationale to expect morality to also play a role in the effect of intergroup contact (for initial evidence, see Brambilla et al., 2013a; Vezzali et al., 2019).

The inclusion of moral considerations as a factor modifying contact effects may significantly contribute to the understanding of the intention to behave in a moral way,

particularly in highly normative intergroup situations (see, e.g., Kaiser & Scheuthle, 2003). Moral outlook is a reflection of internalized and perceived social norms, and the more morally relevant a situation is, the more pronounced is its role in the prediction of intergroup outcomes (Kaiser & Scheuthle, 2003). In order to gain moral accountability and to align to the norms of fairness, people not only justify their prejudices to themselves (Crandall & Eshleman, 2003), but are also motivated and skilled to suppress prejudice (Crandall, Eshleman, & O'Brien, 2002).

In line with this, Monin and colleagues suggested that people are particularly worried about their own *moral self-regard* – that part of the self-concept that indicates the extent to which people think of themselves as a moral person in a particular situation (e.g., Monin & Jordan, 2009). Nevertheless, Monin and Miller (2001) documented that bolstering people's moral self-regard can also liberate them to act in morally more problematic ways in the future (see also, Monin & Jordan, 2009). In their work on the so-called *moral credentials*, participants had the opportunity to engage publicly in moral behavior on one relevant dimension (prejudice). For example, they allowed participants to select an outstanding African American applicant (compared to other White applicants) in a job-selection task. In this way, people could acquire moral credentials as non-racist. Interestingly, the authors noticed that this acquired token liberated participants to display an otherwise problematic response later on. In fact, in a second and unrelated job application task, they were more likely to show prejudicial tendencies by not selecting the African American applicant. This indicates that a former moral act may be detrimental for subsequent behavior, by licensing ethically questionable behavior. This phenomenon has

later been referred to as *the moral licensing effect* (Blanken, van de Ven, & Zeelenberg, 2015).

The research evidence supporting the moral licensing phenomenon starts to accumulate (also in domains unrelated to intergroup relations; for a meta-analysis, see Blanken et al., 2015). For example, Effron and colleagues (2009) have studied moral licensing using the same design as in Monin and Miller's (2001) study. The respondents who identified as Democrats were first asked whether they would support Barack Obama instead of John McCain in presidential elections. In the next task, they were to appoint a black or white police officer to a vacant position in a police department. Respondents who supported Obama subsequently showed more ingroup favoritism as they hired a white police officer more often than they hired a black police officer. The same tendency to favor one's ingroup was not observed for the control group that had not the possibility to acquire moral credentials in the first task.

However, the results of two meta-analyses have shown that the effect size of moral licensing is quite modest (Blanken et al., 2015; Simbrunner & Schlegelmilch, 2017). It has also been noted that in some of the studies, initial imagined or actual moral behavior led consequently to more and not less moral behavior (e.g., Carrico, Raimi, Truelove, & Eby, 2018; Simbrunner & Schlegelmilch, 2017; Tasimi & Young, 2016; Young, Chakroff, & Tom, 2012). Contradictory to moral licensing effect, this research rather supports the notion of *moral consistency* (Mullen & Monin, 2016) or even suggests the possibility of a reverse effect of moral act called by Young et al. (2012) as *moral reinforcement* (for a review, see Mullen & Monin, 2016).

Considering, difficulties in some previous studies to replicate moral licensing effects (e.g., Blanken, van de Ven, Zeelenberg, & Meijers, 2014) and the publication bias in the field (Blanken et al., 2015), there is a need to better understand the conditions under which moral licensing (or moral reinforcement) occurs, as well as its consequences for intergroup relations. In this study, we consider the extent to which moral licensing depends on prejudice and shapes (i.e., moderates) contact effects in terms of attitude generalization to uninvolved outgroups (i.e., STE). It should be noted that this test is not in contrast with the few studies that merged contact and morality research (Brambilla et al., 2013 a&b; Vezzali, et al., 2017, 2019). In these studies, in fact, contact changed perceived morality of the outgroup. In other words, contact experiences allowed to change the morality attributions for outgroup members. In this study, in turn, we consider the consequences of a personal act of morality. In other words, we do not test whether contact changes perceived morality (of the self or of the outgroup); rather, we examine whether an intervening act of morality acted by the individual changes the direction of contact effects.

Importantly, we expect this moderation to occur depending on the initial level of prejudice displayed by participants. In other words, prejudice may moderate the effects of contact and of moral credentials.

The Role of Initial Prejudice

There is some preliminary evidence of initial prejudice being a moderator of the effect of moral credentials. In Effron et al.'s (2009) study, moral licensing (racial bias in charity after showing the support for Obama) was obtained only among the most prejudiced individuals, while the support for racial minorities of moderately prejudiced individuals did not differ from that in the control group. In addition, there was a trend towards the finding

that unprejudiced individuals showed more support for racial minorities after the task. These results suggest that the same moral actions may enable individuals to exhibit later behaviors consistent with their initial attitudes. Specifically, acting morally translates in moral licensing for prejudiced individuals, who hold the underlying goal to discredit outgroups, and in moral consistency or reinforcement for unprejudiced individuals, who confirm their moral identity.

There also is consistent research showing that prejudice (or variables closely associated with it, such as social dominance orientation) exacerbates the effects of both positive and negative contact (Hodson et al., 2017; Wang, Huang, Stathi, & Vezzali, 2019). However, note that literature in this regard is mixed, with some studies showing similar effects across initial levels of prejudice (Kteily, Hodson, Dhont, & Ho, 2019). It is therefore important to conduct further studies to understand how contact and prejudice interact in determining attitudes. In this study, we take one step further and suggest that initial prejudice and moral licensing work in concert in shaping STEs of both positive and negative contact.

The Present Study

This study builds on current research on secondary transfer effect of intergroup contact (STE; Pettigrew, 2009), and on research on moral licensing (Monin & Miller, 2001), consistency (Mullen & Monin, 2016) and reinforcement (Young et al., 2012), and examines the joint effect of initial prejudice and moral act on STE. The theoretical model of the study is presented in Figure 1.

First, we investigated the role of the main mediator emerged from the STE research, that is attitude generalization (Lolliot et al., 2013; Vezzali & Stathi, in press). Based on the

literature presented above, positive contact should lead to more positive attitudes towards the secondary outgroup via improved attitudes towards the primary outgroup (H1a), whereas negative contact should lead to more negative attitudes towards the secondary outgroup via worsened attitudes towards the primary outgroup (H1b).

Second, as the main research question, we studied whether STEs of positive and negative contact are moderated by initial prejudice and morality exhibited in a moral act. Note that, in contrast to research on contact assessing moderation of initial prejudice in the path from contact to mediator (or dependent variable), we assessed moderation (of moral behavior and initial prejudice) in the path from mediator to dependent variable. In this study, in fact, we were not interested in contact effects *per se*, but on whether they generalize to uninvolved outgroups, depending on our two hypothesized moderators. Therefore, once established the effects of contact with the primary outgroup on attitudes towards the secondary outgroup, we tested generalization of these attitudes stemming from contact would occur depending on moral behavior, whose effects might in turn be determined by initial levels of prejudice.

As regards the STE of positive contact, we thus investigated whether a moral act, i.e., a task of choosing the best-qualified job applicant with an immigrant origin, would result among prejudiced individuals in moral licensing, thereby limiting the positive effect of contact to attitudes towards the primary outgroup only (i.e., inhibiting the generalization of the positive effects of positive intergroup contact). In contrast, moral credentials among those with lower initial prejudice would serve as a means to increase expectancy-based attitude accessibility (Descheemaeker, Spruyt, Fazio, & Hermans, 2017) and so to show moral consistency or reinforcement (H2a). In other words, we expect that STE will occur

among less prejudiced individuals, and among high-prejudiced individuals in the control condition.

Concerning the conditional STE of negative contact, it was difficult to make specific predictions as previous research on the STE of negative contact in general and conditional STE of negative contact, in particular, is almost non-existing. Following the rationale provided for positive contact, we argue that acquisition of moral credentials may provide the normative contact that determines the direction of effects for high- and low-prejudiced individuals. Specifically, for high-prejudiced individuals, acquiring moral credentials may provide means for perceiving the self as non-racist, in some way "clearing" the self and allowing negative contact to exert stronger effects. In other words, moral licensing should lead to stronger effects of negative contact for individuals high in prejudice. In contrast, for low-prejudice people, moral licensing would make social norms against prejudice accessible, this way blocking the effects of negative contact. In other words, we expect that low-prejudiced individuals will show a lower generalization of the effects of negative contact when they acquire moral credentials (H2b). Therefore, we expect that STE will occur among high-prejudiced individuals, and among low-prejudiced individuals in the control condition.

Moreover, considering that negative contact has also been shown to affect the relation between positive contact and outgroup attitudes (Graf & Paolini, 2017) and vice versa (Paolini & McIntyre, 2019), ignoring it might lead to a single factor fallacy and distort the results (Pettigrew & Tropp, 2016). To account for this, we conducted tests of the STE of positive and negative contact, by including a) negative contact as a control variable in the model of the STE of positive contact and b) positive contact in the model of the STE

of negative contact, with both models being mediated by attitude generalization and moderated by moral act and initial prejudice. In order to further provide a more conservative test of our hypotheses, we also controlled for the quantity of initial contact with the secondary outgroup. As stated above, one important critique to STE is that the effects are driven by a process of self-selection, whereby individuals with more contact with the primary outgroup also have more contact with the secondary outgroup (which may explain at least in part attitudes towards the secondary outgroup) (e.g., Lolliot et al., 2013; Lolliot, 2017). By partialling out the effects of contact with the secondary outgroup, our findings will reflect the 'pure' effect of contact with the primary outgroup and of the other variables investigated.

Finally, we also acknowledge that attitude generalization in STE may depend on the outgroups in question (Harwood et al., 2011; Pettigrew, 2009). In this study, Finnish adults (i.e., majority group) served as the participants, whereas the primary and secondary outgroups were two of the most prominent immigrant groups in Finland (i.e., minority groups). Specifically, we considered immigrants with Russian and African background, which are culturally different but quite similarly (negatively) viewed by the Finnish majority in terms of status (Jaakkola, 2009). By counterbalancing the outgroups, we were able to rule out the possibility that our findings would be dependent on group-specific attitudes.

[INSERT FIGURE 1]

Method

Participants. In December 2018, 361 majority Finns (i.e., Finnish citizens with either Finnish or Swedish as their mother tongue; 52.6 % females; M_{age} = 47.01 years, *SD* = 10.59) completed an online survey in exchange for a small amount of money (approx. one euro) redeemable for gift cards. The data was collected by a private research company with a comprehensive respondent pool consisting of Finnish people. Since we planned to use multiple regressions with up to 11 predictors (including covariates and interactions) in order to test our predictions, the number of participants was set between 200 and 350 for obtaining a sample allowing a power of .80 to detect a small (f^2 = .05) to medium (f^2 = .10) effect size. Quota randomization (i.e., the demographically matched sub-samples) was applied to allocate participants into the different conditions. After some exclusions (see details below), the final sample consisted of 299 respondents (54.5 % females; M_{age} = 46.87 years, *SD* = 10.62).

Design and procedure. Participants filled in measures of initial attitudes towards the primary outgroup as well as measures of positive and negative contact with the primary outgroup. Then, they engaged in the experimental manipulation. Participants in the experimental group could acquire moral credentials by hiring an individual belonging to the primary outgroup, while participants in the control group did not have this possibility. Finally, they completed measures of attitudes towards primary and secondary outgroup. Primary and secondary outgroup were counterbalanced, so that both outgroups served as primary outgroup for half of the sample and as secondary outgroup for the other half.

In the moral task, participants had to make a hiring decision where they indicated which of five presented applicants they would choose for a position in a large IT company. The task was similar to the one used in Monin and Miller's (2001) study number 2. Respondents received a brief description of male candidates including their names, mother tongues, ages, degrees, and previous experiences in the field in years. In all conditions, the fourth applicant was the most qualified: He had a doctoral degree in economics and IT as well as 6 years of experience in the field. The manipulated variable was the ethnic background of the star candidate: in the control condition, the star applicant was a candidate with a traditional Finnish name and Finnish as their mother tongue, whereas in the experimental condition, the star applicant was a member of the assigned primary outgroup with a traditional Somalian [Russian] name and Somalian [Russian] as their mother tongue. All other applicants were prototypical Finns. Since in moral licensing effect individuals feel that they are licensed to behave dubiously after a moral act (Effron & Conway, 2015), we assessed the effectiveness of the manipulation by asking the respondents to report how moral they felt after the experimental manipulation. Finally, we measured attitudes towards the primary and the secondary outgroup.

Final sample. Due to the fact that only participants who chose the immigrant candidate could be credentialed by choosing him, we excluded 46 participants ($n_{\text{POGAfrican}}$ = 22; $n_{\text{POGRussian}}$ = 24) who did not choose the star applicant in the experimental condition (no difference by condition, ($\chi^2(1, n = 361) = 0.81, p = .37$). After this, we further removed 16 participants due to responding not feeling moral in the manipulation check question. The retained sample thus consisted of 299 respondents, of whom 118 were in the experimental and 181 in the control condition.

Measures. Unless otherwise indicated, all items were measured using Likert scales, ranging from one (*not at all*) to five (*very much*).

Initial attitudes towards the primary outgroup (administered before the experimental manipulation). We used the *General Evaluation Scale* (Wright, Aron, McLaughlin-Volpe, & Ropp, 1997) in which we asked participants to evaluate the outgroup on six pairs of adjectives: negative–positive, cold–warm, suspicious–trusting, hostile–friendly, contemptible–respectable, disgusting–admirable]". The response scale varied from 1 (*very much*) [negative adjective] to 5 (*very much*) [positive adjective]. The items were averaged, with higher scores reflecting more positive initial attitudes towards the primary outgroup ($\alpha = .93$).

Contact with the primary outgroup. Four items measured the quantity of prior positive contact and four items the quantity of prior negative contact. The contact was measured as follows (see Kauff, Green, Schmid, Hewstone, & Christ, 2016): How much positive [negative] contact do you have with immigrants with African [Russian] origins [at home, in your free time, at school or working place]? For positive contact, the four items were averaged, with higher scores reflecting more contact with the primary outgroup ($\alpha = .86$). Due to the high skewness ($g_1 = 0.99$) of the negative contact scale, the scale was recoded into a dummy variable (0 = *no negative contact*, 1 = *some negative contact*).[1]

Attitudes towards primary and secondary outgroups. We employed a single item, the widely used *feeling thermometer* (Converse, Dotson, Hoag, & McGee, 1980).

[1] We conducted the analyses also with an averaged sum variable of negative contact. The analyses yielded similar results.

Participants were asked about their general feelings towards the primary outgroup (immigrants with African [Russian] origins) and the secondary outgroup (immigrants with Russian [African] origins). The response scale ranged from 0 (*extremely negative*) to 100 (*extremely positive*). The measure reflects the affective dimension of prejudice, which is central to the concept of attitudes (Dixon, Levine, Reicher, & Durrheim, 2012) and to the prediction of actual discrimination (see meta-analysis by Talaska, Fiske, & Chaiken, 2008), and which is also the most responsive to the effect of intergroup contact (Tropp & Pettigrew, 2005).

Control variables. Contact with the secondary outgroup was controlled for as suggested by many researchers (see, e.g., Lolliot et al., 2013; Pettigrew, 2009; Tausch et al., 2010). In order to avoid the multicollinearity caused by the overlap of two contact measures, we measured the quantity and not the quality of contact with secondary outgroup with a single item: "In your everyday life, how much contact do you have with immigrants with African [Russian] origins?" In addition, the opposite quality of contact with the primary outgroup (see the measure above) was controlled in the analyses. Finally, educational level (0 = *no university degree*, 1 = *university degree*) was controlled for as it has been shown to have an impact on prejudice (e.g., Wagner & Zick, 1995).

Data analysis. We conducted the mediation analyses (for STE) as well as and multiplicated moderated mediation process analyses (for STE moderated by moral act and initial prejudice) using the PROCESS tool for SPSS (Model 4 and 18, respectively, see Hayes, 2017, 2018). We assessed the strength and significance of the indirect effects with 95% bias-corrected bootstrap confidence intervals based on 10,000 bootstrapped resamples (see Hayes, 2018). Preliminary checking of the data indicated a violation of the

homoscedasticity assumption, which is why we conducted the analyses with heteroskedastic-consistent standard error estimators (HC3, see Hayes, 2018; Hayes & Cai, 2007).

Before testing our hypotheses, we checked whether STE (PROCESS Model 14) and the effect of moral act on STE (PROCESS Model 18) depend on the outgroups (0 = immigrants with African background, 1 = immigrants with Russian background) studied The results did not reveal statistically significant effects of the counterbalancement of primary and secondary outgroups on the STEs of positive contact (B = 1.12, *SE* = 1.52, CI: [-1.85, 4.11]) and negative contact (B = -0.91, *SE* = 1.97, CI: [-4.85, 3.05]) nor on the effect of moral act on positive (B = -4.43, *SE* = 3.68, CI: [-12.24, 2.31]) and negative (B = 3.99, *SE* = 4.70, CI: [-4.54, 13.98]) contact. Based on these results, this variable is not discussed further.

In order to test the main research question, moderated mediation analyses with multiple moderators (moral credentials and initial prejudice) were conducted (PROCESS Model 18). The models represented multiplicative moderation models, in which the interaction between the two moderators is included (Hayes, 2018). This is considered to be a more parsimonious way to show how the moderators together interact with the focal predictor and each other to predict the outcome and to avoid confounding of interaction effects as compared to using separate models or subgroups analysis (Hayes, 2018).

The effects resulting from expected 3-way interactions were interpreted based on the bootstrap confidence intervals using the percentile method. Three values along the moderator (i.e., initial prejudice) are probed corresponding to the 16th (negative attitudes), 50th (neutral attitudes), and 84th (positive attitudes) percentile of the distribution as

recommended by Hayes (2018). As compared to +/- 1*SD* comparison points, examining percentiles gives us the opportunity to test the hypotheses related to the role of high prejudice in conditional STE, guarantees that the probing points are always within the observed range of the data, and it also enables to quantify more precisely the steepness of the bend in the regression line in subsamples with low, medium and high values on the moderator, which may also evidence curvilinearity (Hayes, 2017).

Results

The means, standard deviations and standard errors of the variables are shown in Table 1. The percentage of participants with some experiences of negative contact with the primary outgroup was 63.7% (experimental group 66.7%; control group 60.8%) with the rest of the participants reporting no experiences of negative contact.

Table 1
Means, standard deviations and standard errors by condition.

	Experimental condition (n = 118)		Control condition (n = 181)	
	M (SD)	*SE*	*M (SD)*	*SE*
Attitudes towards the primary outgroup	55.31 (19.98)	1.84	48.03 (22.32)	1.66
Attitudes towards the secondary outgroup	50.11 (21.93)	2.02	39.93 (23.41)	1.74
Initial attitudes towards the primary outgroup	3.27 (0.67)	0.06	3.07 (0.74)	0.05
Positive contact with the primary outgroup	2.78 (0.94)	0.04	2.41 (0.49)	0.04
Contact with secondary outgroup	2.25 (1.08)	0.10	2.25 (1.09)	0.08

The preliminary tests of the effect of the manipulation showed that after the manipulation, participants in the experimental condition had more positive attitudes towards the primary ($t(297) = 2.87$, $p = .004$) and the secondary outgroup ($t(297) = 3.77$, $p < .001$) than participants in the control condition. In Table 2, we present Pearson correlations and the point-biserial correlations (for a binary variable of negative contact) computed for the experimental and the control condition separately.

Table 2

Correlations (Pearson r) and point-biserial correaltions (r_{pb} for negative contact with the primary outgroup) between the variables studied in the experimental and control group separately.

		Experimental condition (n = 118)						Control condition (n = 181)					
		1.	2.	3.	4.	5.	6.	1.	2.	3.	4.	5.	6.
1.	Attitudes towards the primary outgroup	1	.51***	.75***	.52***	-.26**	.14	1	.46***	.68***	.45***	-.22**	.17*
2.	Attitudes towards the secondary outgroup		1	.45***	.31**	-.25**	.10		1	.31***	.26***	-.04	.22**
3.	Initial attitudes towards the primary outgroup			1	.55***	-.23*	.00			1	.43***	-.27***	.15
4.	Positive contact with the primary outgroup				1	.20*	.20*				1	.17*	-.27***
5.	Negative contact with the primary outgroup					1	.10					1	.11
6.	Contact with secondary outgroup						1						1

Note. *p < .05; **p < .01; ***p < .001, two-tailed.

STE. The results of mediation analyses (PROCESS Model 4 with attitudes towards the secondary outgroup (y) being regressed on contact (x) mediated by attitudes towards the primary outgroup (m) and (with the opposite quality of contact with primary outgroup, quantity with secondary outgroup and education as covariates) replicated the STE of both

positive and negative contact through the mechanism of attitude generalization (see Table 3).

Table 3

STEs of positive and negative Contact with Primary Outgroup (CPOG) via attitude generalization - from Attitude towards Primary Outgroup (APOG) to Attitude towards Secondary Outgroup (ASOG) - controlled for the Opposite quality of Contact with Primary Outgroup (OCPOG), Contact with Secondary Outgroup (CSOG) and education.

	Positive contact (n = 295)				Negative contact (n = 297)			
	Attitudes towards POG (Me)		Attitudes towards SOG (Y)		Attitudes towards POG (Me)		Attitudes towards SOG (Y)	
	B	*SE*	B	*SE*	B	*SE*	B	*SE*
Constant	25.11***	3.85	10.08*	17.97	27.21***	3.89	7.97	4.87
CPOG	11.34***	1.15	1.89	1.32	-15.11***	2.15	-0.97	2.63
Attitudes POG			0.45***	0.08			0.48***	0.78
OCPOG	-13.46***	2.15	-2.33	-1.81	2.66	1.12	1.70	1.34
CSOG	1.17	1.00	1.80	1.73	1.24	2.11	1.88	1.25
Education	3.58	2.09	5.97*	2.41	3.04	2.10	5.49*	2.41
R^2	.32***				.15***			

Note. *$p < .05$; ***$p < .001$.

Specifically, controlling for negative contact, prior positive contact associated with more positive attitudes towards the primary outgroup, which further associated with more positive attitudes towards the secondary outgroup. Controlling for positive contact, prior negative contact, in turn, associated with more negative attitudes towards the primary outgroup, which further predicted more negative attitudes towards the secondary outgroup.

With direct effects of positive and negative contact with primary outgroup on attitudes towards secondary outgroup being not significant, significant indirect effects of contact on attitudes towards the secondary outgroup via attitudes towards the primary outgroup emerged for both positive (B = 5.08, *SE* = 0.93, 95% Cl: [3.32, 6.95]) and negative (B = -7.32, *SE* = 1.52, 95% Cl: [-10.51, -4.52]) contact mediation models, supporting both H1a and H1b. As regards control variables, there was only a significant effect of education on attitudes towards the secondary outgroup in positive and negative contact models, indicating that higher educated participants had more positive attitudes towards the secondary outgroup.

Conditional STE. In our main analysis (PROCESS Model 18), we tested whether STEs of positive and negative contact depend on the condition (moral act) and the participants' initial attitudes towards the primary outgroup. The results are presented in Table 4 and the conditional indirect effects of contact, which shed light on the boundaries of STE, are presented in Tables 5 and 6 for positive and negative contact respectively.

Contact with the primary outgroup was the only significant predictor of the attitudes towards primary outgroup. The expected three-way interaction between contact, condition, and initial attitudes towards primary outgroup was nonsignificant for both positive and negative contact. This may depend on the sample size that just reached the minimal requirements to reach the determined effect size, the non-linearity involved in the associations as well on the difficulty to find interactions when using measured variables (McClelland & Judd, 1993). Because of specific hypothesis-driven research, we decided to decompose the three-way product and look at the indirect effects of contact via attitude

generalization among participants with three different levels of initial prejudice (low, moderate, high) in two study conditions.

Table 4

Conditional STEs of positive and negative Contact with Primary Outgroup (CPOG) via attitude generalization - from Attitude towards Primary Outgroup (APOG) to Attitude towards Secondary Outgroup (ASOG) by Condition (C; Moral Licensing) and Initial Prejudice (IP) controlled for the Opposite quality of Contact with Primary Outgroup (OCPOG), Contact with Secondary Outgroup (CSOG) and education

	Positive contact (n = 295)				Negative contact (n = 294)			
	Attitudes towards POG (Me)		Attitudes towards SOG (Y)		Attitudes towards POG (Me)		Attitudes towards SOG (Y)	
	B	*SE*	B	*SE*	B	*SE*	B	*SE*
Constant	25.02***	3.84	25.28***	17.97	26.91***	3.88	25.79***	18.00
CPOG	11.82***	1.11	1.45	1.45	-14.60***	2.14	-1.90	2.73
Attitudes POG			0.16	0.35			0.10	0.35
Condition (C)			44.52	32.24			44.43	32.30
Prejudice (IP)			-5.26	6.11			-5.55	6.17
APOG*C			-0.95	0.58			-0.88	0.58
APOG*IP			0.09	0.11			0.12	0.11
C*IP			-10.01	10.04			-9.70	10.07
APOG*C*IP			0.25	0.16			0.22	0.15
OCPOG	-3.66***	2.11	-2.33	2.74	11.46***	1.11	1.09	1.48
CSOG	0.84	0.97	1.80	1.33	1.00	0.97	1.63	1.35
Education	3.63	2.08	5.06	2.41	3.04	2.10	5.12	2.43
R^2	.32***				.33***			

Note. ***p < .001.

Table 5

Attitudes towards the secondary outgroup via STE of positive contact moderated by moral licensing and initial attitudes (n = 295).

		B	*SE*	95 % CI	
				Lower limit	Upper limit
Index of moderated mediation		2.90	1.76	-0.76	6.18
Experimental group	High prejudice (16. percentile: 2.67)	1.30	2.07	-2.66	5.44
	Moderate prejudice (50. percentile: 3.00)	2.62	1.82	-.95	6.22
	Low prejudice (84. percentile: 3.67)	5.27	1.63	1.98	8.40
Control group	High prejudice (16. percentile: 2.67)	4.76	1.32	2.13	7.29
	Moderate prejudice (50. percentile: 3.00)	5.12	1.22	2.66	7.44
	Low prejudice (84. percentile: 3.67)	5.83	1.40	3.03	8.54

Note. Bootstrapped *SE*s and CIs based on 10,000 bootstrap samples.

In the model with positive contact as an independent variable (see Table 5), the positive effect of prior positive contact with the primary outgroup generalized to attitudes towards the secondary outgroup in both conditions except for participants in the experimental group (moral act) with initially moderate-high prejudice (50. percentile and

below) towards the primary outgroup. In these subgroups, moral licensing effect was evident as the positive effect of contact was limited only to the attitudes towards the primary outgroup, which was also the target group of the moral act. All other participants exhibited intergroup attitudes consistent with their positive contact experiences despite whether they had a possibility to obtain moral credentials or not (i.e., they showed moral consistency). Thus, results are generally consistent with hypothesis H2a, although full support would have been provided by a significant 3-way interaction. The model explained 37% of variance in attitudes towards the secondary outgroup.

In contrast with expectations, we found similar results for the STE of negative contact (see Table 6). Again, the negative effect of prior negative contact with the primary outgroup generalized to attitudes towards the secondary outgroup in both conditions except for the participants in the experimental group with initially moderate-high prejudice (50. percentile and below) towards the primary outgroup. In these subgroups, similarly to positive STE and against our hypothesis H2b, STE of negative contact was also blocked by the performed moral act. In other words, the attitudes towards the secondary uncontacted outgroup among more prejudiced individuals with moral credentials detached from their negative contact experiences with the primary outgroup. The model explained again 37% of variance in attitudes towards the secondary outgroup.

Finally, the models of unconditional and conditional STE produced the same results also without controlling for the effects of education, opposite quality of contact with the primary outgroup, and contact with the secondary outgroup.

Table 6

Attitudes towards secondary outgroup via STE of negative contact moderated by moral licensing and initial attitudes (n = 294).

		B	*SE*	95 % CI	
				Lower limit	Upper limit
Index of moderated mediation		-3.19	2.18	-7.26	1.34
Experimental group	High prejudice (16. percentile: 2.67)	-1.74	2.63	-7.20	3.28
	Moderate prejudice (50. percentile: 3.00)	-3.38	2.35	-8.31	1.09
	Low prejudice (84. percentile: 3.67)	-6.67	2.22	-11.21	-2.45
Control group	High prejudice (16. percentile: 2.67)	-6.06	1.84	-9.76	-2.50
	Moderate prejudice (50. percentile: 3.00)	-6.64	1.81	-10.37	-3.25
	Low prejudice (84. percentile: 3.67)	-7.80	2.13	-12.22	-3.89

Note. Bootstrapped *SE*s and CIs based on 10,000 bootstrap samples.

General discussion

The aim of this study was to test the processes that may inhibit or fuel the emergence of STE of positive and negative contact. In particular, we focused on morality (and specifically on the phenomenon of moral licensing) and on initial prejudice. First,

consistent with existing literature (see Lolliot et al., 2013; Vezzali & Stathi, in press), we found evidence for STE via the process of attitude generalization for both positive and negative contact. In other words, we found an indirect association between positive contact and positive attitudes towards the secondary outgroup, and between negative contact and negative attitudes towards the secondary outgroup, through positive and negative attitudes towards the primary outgroup respectively. This result particularly adds to the scarce evidence on the STE of negative contact (see Lolliot, 2017), and on attitudes towards the primary outgroup as the underlying process (see Brylka et al., 2016).

Moreover, we identified the important boundary conditions of STE. Namely, we obtained indications that a moral act, in concert with initial prejudice towards the primary outgroup, can intevene into STE. Specifically, STE via attitude generalization does not seem to emerge when participants hold more negative attitudes towards the primary outgroup and have a chance to obtain moral credentials by favoring the outgroup member. Instead, STE occurs in all the other conditions, that is for low-prejudiced individuals, and for high-prejudiced individuals when there is no possibility for moral licensing.

The interpretation of these findings depends on whether the STE of positive or negative contact is in question. In the case of positive contact, more prevented individuals (that is, individuals more prejudiced) can use the acquisition of moral credentials to impression formation and to justify why they do not generalize contact experiences outside the categories actually involved in contact. There is evidence that individuals may harbor ambivalent attitudes towards the outgroup, and manifest prejudice in socially acceptable ways (Mucchi-Faina, Pacilli, Pagliaro, & Alparone, 2009; Pettigrew & Meertens, 1995). According to the aversive racism framework (Dovidio & Gaertner, 2004), individuals reject

blatant prejudice and do not discriminate when a social norm against discrimination is salient. When, however, a social norm against discrimination is not salient, and individuals can attribute discriminatory attitudes or behaviors to something other than racism, they feel legitimate to discriminate. This is in line with Monin and colleagues' (e.g., Monin & Jordan, 2009) suggestions that individuals are worried about own moral self-regard, and that particularly prejudiced individuals may rely on moral licensing as means to appear non-prejudiced: when a social norm of fairness is not salient, individuals do not need to preserve their moral regard as non-prejudiced person and are 'allowed' to discriminate. Therefore, moral licensing, 'frees' prejudiced individuals from social norms, favoring discrimination. This also corresponds to the research on the suppression of prejudice. For example, Crandall et al. (2002) argued that high suppressors of prejudice are acute norm followers: being hypersensitive to perceived cultural norms, they express prejudice when the norms allow them to do so and suppress prejudice when it is not allowed.

Our results concerning the conditional negative STE showed that the mechanism and boundaries are similar to those in positive STE, though with different ramifications for intergroup relations. Namely, against our expectations, there were indications that also the STE of negative contact was blocked by moral licensing among high-prejudiced individuals indicating an asymmetrical influence of assuming a moral act on STE: moral licensing for positive STE and moral reinforcement or consistency for negative STE. Namely, prejudiced individuals may search for confirmation of their negative expectancies when they have negative contact worsening attitudes towards the primary outgroup to a greater extent, but the strong moral norm and subsequent moral behavior favoring outgroup member may intervene and act against the effect of negative contact, thereby also inhibiting negative

STE. Meleady, Crip, Hodson and Earle (2019) argued that contact that challenges stereotypic expectations (i.e., atypical, counterstereotypical, unprototypical or expectancy incongruent) should train a processing style that avoids the use of immediately and habitually accessible knowledge and so promotes cognitive growth. It seems that moral norms and instigated moral intergroup behavior challenge the intergroup attitudes of prejudiced individuals and prevent the STE of their negative contact experiences.

These are very tentative results as previous research on moderators of negative contact is scarce (Lolliot, 2017), and did not take into consideration initial prejudice. Graf and Paolini (2017; see also Paolini, Harwood, & Rubin, 2010; Paolini et al., 2014) argued that membership salience might be a key factor to understand the effects of negative contact. According to these authors, negative contact might increase membership salience, and this also helps explaining the stronger effects that have sometimes been found for negative rather than for positive contact (e.g., Barlow et al., 2012; but see Árnadóttir, Lolliot, Brown, & Hewstone, 2018; Bagci & Turnuklu, 2019; Reimer et al., 2017). But individuals may also rely on negative contact to a greater extent, with consequential detrimental effects on prejudice, depending on initial group salience, such that when group salience is higher, negative contact has stronger effects. Considering that negative contact is associated with category salience and other related factors (such as ingroup identification, outgroup typicality, social dominance orientation, and right-wing authoritarianism; see e.g., Árnadóttir et al., 2018; Dhont & Van Hiel, 2009, Study 2; Mähönen, Ihalainen, & Jasinskaja-Lahti, 2013; Wang, Huang, Stathi, & Vezzali, 2019) more than positive contact, it is possible that moral licensing prevents attitude generalization of negative STE among

prejudiced individuals: they are tuned in regarding group memberships but find themselves in intergroup situation contradicting their experiences and experience-based expectations.

This study adds to literature on moderators of negative contact and shows that effects of negative contact are conditional upon outgroup attitudes (and morality), such that when intergroup interactions and outgroup attitudes are more negative (and, we speculate, category salience is higher), instigating moral behavior towards the negatively contacted primary group may prevent the accumulation of generalized prejudice. These findings refer to moral reinforecent or restoration of the prejudiced individuals equipped with negative intergroup contact history. It may, however, also be possible that moral act just enabled moral consistency so that prejudiced individuals with negative contact experiences detach their attitudes towards primary and secondary outgroup from each other in order to keep the latter unchanged. Future research should focus on this perhaps dual role of moral licensing in more detail before we make too far-reaching conclusions.

Our study sheds some light on and clarifies the dynamics involved in the moral licensing phenomenon. It seems that moral licensing could have extended ramifications. While in Monin and Miller's (2001) study and also other studies following the same design (e.g., Effron et al., 2009; Effron, Miller, & Monin, 2012; Kouchaki, 2011; Merritt, Effron, Fein, Savitsky, Tuller, & Monin, 2012) moral licensing was evidenced to concern the primary outgroup and right after moral credentials were obtained, we obtained indications that moral licensing can only occurr when generalized prejudice steps in. In our study, the moral credentials act first did the opposite: it reinforced positive attitudes towards both primary and secondary outgroups (diminished specific prejudices) among participants. Though controversial to Monin and Miller's (2001) study, this result is in line with previous

studies suggesting that moral credentials do not necessarily lead to more negative attitudes and behaviors, as they might serve as a prime of positive intergroup relations and improve group-specific attitudes (Nelson & Norton, 2005; Tasimi & Young, 2016; Young et al., 2012). It should be noted that, also in light of mixed literature, we were not interested in attitudes resulting from moral licensing; rather, we examined how (positive and negative) contact differentially result in STE depending on moral licensing (and initial prejudice). Our results show that the moral licensing effect may be far more reaching as its ramifications could be seen in reactions towards the groups beyond the primary contact: moral licensing counteracted the effects of contact and prevented (for high-prejudiced individuals) attitude generalization to uninvolved (secondary) outgroups. We are inclined to suggest that our results show the instability of attitude generalization in both positive and negative STE among highly prejudiced individuals and the potential of a moral act to intervene into generalized prejudice. This could explain why it is not uncommon that people justify their prejudices by referring to their prior positive encounters with and acts towards some particular minority groups.

The discourse above may lead to the conclusion that high-prejudiced individuals (those who want to appear egalitarian) are more subject to the effects of moral licensing. Moreover, that initial outgroup attitudes were on average neutral-moderately positive (cf. Table 1), therefore participants declared themselves as egalitarian and all qualified as potentially aversive racists: in this case, we may speculate that, being all egalitarian, those more prejudiced are those that expressed a lower initial evaluation of the primary outgroup.

More generally, our findings add to the scarce literature on the integration between contact research and research on morality. Although both literatures are directly relevant to

intergroup relations and prejudice, they have rarely been considered jointly, and when they have done so, they have used morality as a contact mediator (Brambilla et al., 2013b; Vezzali et al., 2017, 2019). In this study, we show that the interplay between contact and morality can be more complex and the two constructs can interact, also in unexpected ways. Literature has shown that generally contact benefits more high-prejudiced individuals, such that contact effects on reduced prejudice are stronger for individuals with more negative outgroup attitudes (Hodson et al., 2017). The present findings add to this literature in a novel way, by showing a specific condition (moral licensing) that instead can prevent effects for more prejudiced individuals (but also can prevent *negative* effects of negative contact among this group of people). Based on the present results, we argue that, although contact can be more beneficial for more prejudiced individuals, these individuals are also those that may find subtle ways to avoid these beneficial effects, such as using the acquisition of moral credentials as an excuse not to reduce generalized prejudice. The present findings also sensibly extend literature on morality and, specifically, on moral licensing. In addition to providing converging evidence for the relevance of moral licensing in the intergroup relations domain, they show that moral licensing is relevant to prejudice reduction (in this case, in terms of preventing it), and provide a bridge between literature on morality and research on subtle and modern prejudice, such as aversive racism (Dovidio & Gaertner, 2004).

This study is not without limitations. First, data do not represent randomized trial experiment and therefore causal inferences are not allowed. Second, although the pattern of findings was generally consisted with our expectations, the expected moderated mediation indices did not reach statistical significance. Possibly, larger samples would be more likely

to detect complex three-way interactions, which are especially difficult to obtain with the use of measured variables (McClelland & Judd, 1993). Also, for both positive and negative contact, we expected a difference in only one out of six cells (three levels of prejudice by two experimental conditions), which may also run against the likelihood of finding a significant interaction. Note that we decomposed interactions justified by very specific theory-driven hypotheses (at least, in the case of positive contact). The absence of a significant moderated mediation effect does not detract from the fact that STE was blocked in four out of the 12 possible combinations of results.

Third, we considered similar rather than dissimilar primary and secondary outgroups. Although this is in line with literature on STE (cf. Lolliot et al., 2013; Vezzali & Stathi, in press), there is evidence that STE also occurs when primary and secondary outgroups are dissimilar (Pettigrew, 2009; Schmid et al., 2012; Vezzali et al., 2019). This choice may be a problem to the present study because, since the association between primary and secondary outgroups is less immediate when these are dissimilar rather than similar, possibly in this case moral licensing and initial prejudice do not act as moderators. In fact, the acquisition of moral credentials gives high-prejudiced individuals an excuse to avoid generalization to secondary outgroups when these are clearly connected with the primary outgroup. But when the association is less obvious, these individuals may fail to use the acquisition of moral credentials for generalization to a distant, unrelated attitude object. Therefore, generalization of the present findings to STE involving dissimilar primary and secondary outgroups is not possible. A further limitation is that we assessed contact towards the secondary outgroup with a measure of contact quantity, without including a measure of contact quality. This was done for conceptual and methodological

reasons. Conceptually, we aimed to partial out previous exposure to the secondary outgroup independently of its valence and contact quantity should provide this measure. Second, we aimed to avoid the multicollinearity of the independent measures. However, in order to be more conservative, future studies might consider including a measure of both positive and negative contact towards the secondary outgroup.

Prejudiced individuals are motivated to limit, reduce (or discard) all information that can shed a positive light on outgroups in general. In some cases, this might clash with their regard for one's own moral status. Acquiring moral credentials can be a powerful tool to conserve the prejudiced view of the world while preserving moral identity, and one that can prevent STE. Future research is needed to understand the boundary conditions of STE, to expand research on the STE of negative contact, and how morality can fuel it or instead being instrumentally used to justify existing discrimination and inequality.

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