Alma Mater Studiorum – Università di Bologna

DOTTORATO DI RICERCA IN

PSICOLOGIA

Ciclo XXXIII

Settore Concorsuale: 11/E3 – PSICOLOGIA SOCIALE, DEL LAVORO E DELLE ORGANIZZAZIONI

Settore Scientifico Disciplinare: M-PSI 05 – PSICOLOGIA SOCIALE

POSITIVE AND NEGATIVE INTERGROUP CONTACT FROM THE PERSPECTIVE OF IMMIGRANTS: THEIR IMPACT ON ACCULTURATION STRATEGIES AND PSYCHOLOGICAL ADJUSTMENT

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Esame finale anno 2021

Acknowledgments

I would like to first express my gratitude to my Supervisors, Prof. Monica Rubini and Prof. Silvia Moscatelli, for all the support and advice that they give to me. Undertaking and completing this Ph.D. course would not have been possible without the support and guidance they gave to me along this long journey. Further thanks go to Prof. Oliver Christ and Ph.D. Sarina Schäfer, for the confidence and the commitment they showed in my work and for the support and the valuable feedback they provided to me.

I would like to immensely thank Ph.D. Francesca Prati for the theoretical, practical, and human advice and support she gave me during these years. She encouraged me to overcome the difficulties that I encountered during this journey. She actively collaborated with me to achieve my goals and was always available when I needed her. I am truly grateful to her for what she has been with me.

This Ph.D. would not have been possible also without the support of my family and my friends. I will always be grateful to my father, Victor Kana, and my mother, Diane Pauline Pouffone, for all their love and encouragement. I could never thank them enough for the sacrifices they made, sending me far from them to continue my academic journey. I would like to thank Alberto Pederzoli for holding, encouraging, and supporting me in spite of everything. I thank him for all the love, encouragement, and to be a patient and faithful partner who supported me during all the stages of this Ph.D. I would like to thank Lalla Fabbri, Paola Fabbri, and Atos Pederzoli for welcoming me into their family, encouraging and advising me like parents. Thanks for making me feel at home.

A particular thanks go to Arouna Ngouloure Njoya, my “elder brother” from another mother. Thank you for holding my hand since the day I arrived in Cesena and for guiding me throughout my integration in Italy, both academically and socially. Finally, I would like to thank all my friends and my community. “Thank you for being there.”

Abstract

Social psychologists only recently started to examine the effects of both positive and negative intergroup contact on intergroup attitudes of minority groups. However, little is yet known about the joint and differential effects of these two forms of contact on immigrants' adaptation. Basing on this, it was examined the joint and differential effects of positive and negative contact on immigrants' acculturation and adjustment in their host society across four studies. Study 1 and Study 2 investigated the joint effect of positive and negative contact on immigrants' fear of being stereotyped, perceived symbolic threat, social avoidance, and anxiety in two different contexts (Italy and Turkey). Consistently across the samples, negative contact was a strong predictor of fear of being stereotyped, perceived symbolic threat, and social avoidance. Only in the Italian sample, where respondents reported negative contact experiences with native people to a greater extent, positive contact was not associated with reduced avoidance of them. Study 3 and Study 4 considered cross-sectionally and longitudinally other crucial aspects of the adaptation process, such as acculturation preferences and psychological adjustment of immigrants. Study 3 highlighted that positive contact strongly predicted positive outcomes (i.e., culture adoption and psychosocial well-being), whereas negative contact predicted negative outcomes (i.e., group discrimination and post-traumatic stress disorder). Study 4 displayed the role of negative contact as a stronger predictor of psychosocial well-being and culture maintenance over time. Overall, evidence highlighted the crucial role of both positive and negative intergroup contact, their interplay, and the underlying processes in shaping immigrants' adaptation to their contexts.

TABLE OF CONTENTS

Introduction

In the last decades, large groups of immigrants have increasingly arrived and/or transited across many Mediterranean countries (e.g., Italy, Greece, Spain, Turkey). In this vein, in these new multicultural societies, the relationship between locals and immigrants has become an urgent issue to promote social integration. Research has shown that face-to-face contact between majority and ethnic minority group members is one of the most effective strategies to facilitate positive intergroup relationships (Pettigrew & Tropp, 2006). However, most of the evidence collected up to now is focused on the effects of positive intergroup encounters according to the perspective of native people or the majority groups (Pettigrew & Hewstone, 2017). Only recently, research on intergroup contact has acknowledged the role of negative interactions between groups (Graf et al., 2014; Hayward et al., 2017). As pointed out in recent research (e.g., Dixon et al., 2005; Graf et al., 2014; Hayward et al., 2017), within interactions between members of different groups, individuals are more likely to face not only positive but also negative intergroup contacts. Indeed, some authors have argued about potential positive – negative contact asymmetry effect in which the increasing effect of negative contact in prejudice is stronger than the decreasing effect of positive contact in prejudice (Paolini et al., 2010; Barlow et al., 2012; Graf et al., 2014), due to a valence-salience effect. To date, even though recent evidence has also provided important preliminary results on the joint effect of positive and negative contact (see Árnadóttir et al., 2018), evidence of the effect of negative contact and its interplay with positive contact (e.g., McKeown & Dixon, 2017) as well as a potential direction of the effect on the integration and adjustment processes of the minority group of immigrant people are scarce and not yet unequivocally established. In this vein, it is urgent to understand the role of both positive and negative intergroup contact experiences of newly arrived

immigrants in leading to social avoidance of natives as the first form of segregation that prevents from building inclusive societies (e.g., Paolini, Harwood, Hewstone & Neumann, 2018) and on the subsequent adaptation process, as intergroup contact and adaptation are two-way processes (Dovidio et al., 2006; Eller & Abrams, 2004; Gaertner & Dovidio, 2000) that facilitate social inclusion in multicultural societies.

In the light of the above considerations, this thesis aimed at addressing issues on the joint and differential effects of positive and negative contact by considering the immigrants' perspective in the context of contact with the dominant majority of the native group. To examine the role of positive and negative contact on immigrants' adaptation process, the literature on intergroup contact theories' findings was reviewed, focusing on the relation and content of positive and negative intergroup contact. The available evidence on the joint effects of positive and negative intergroup contact on different outcomes was then presented. Building on this, an overview of the possible explanations for the diverse findings on the joint effects of positive and negative intergroup contact were described, as they are discussed in the current literature with a specific reference to (a) the positive-negative contact asymmetry, (b) the potential interactions of positive and negative contact and (c) the strength of the positive and negative contact effects. Current methodological critiques to research on intergroup contact from minority group perspectives were highlighted, mainly focusing on immigrants' adaptation process, which has been investigated in this work.

Study 1 and Study 2 investigated through a cross-sectional method the relationship between different valenced contact of immigrant people with native people and their interactions with natives. Study 1 was carried out in Italy and Study 2 in Turkey. These countries are both characterized by a recent history of increased immigration.

First, the different valence asymmetry assumption was tested, or in other words, whether negative compared to positive contact plays a stronger role in predicting affective and cognitive processes (i.e., fear of being stereotyped, perceived symbolic threat, anxiety) as well as behavioral intentions (i.e., social avoidance) of immigrant people towards the majority group. The moderating role of different valenced contact and the mediation of affective and cognitive processes in the relationship between immigrant people's contact and their behavioral intention to avoid native ones was also tested. Evidence highlights the crucial role of both positive and negative intergroup contact, their interplay, and the processes underlying their role in shaping behavioral intentions between immigrants and natives' groups from the perspective of immigrants. In study 3, it was found that negative compared to positive contact is a stronger predictor of perceived group discrimination and post-traumatic stress disorder. In contrast, positive compared to negative contact is a stronger predictor of psychosocial well-being and culture adoption preference.

Study 4 explored, longitudinally, the effects of positive and negative contact on immigrants' acculturation preferences and psychological adjustment in Italy. It was found that negative contact is a stronger predictor of psychosocial well-being over time, which in turn is a stronger predictor of positive contact. Evidence also supports the longitudinal association between negative contact and acculturation preferences. Overall, evidence confirmed the crucial role of both positive and negative intergroup contact in shaping acculturation preferences and immigrants' psychological adjustment in Italy. However, negative contact seemed to be the stronger predictor. The findings on the prominent role of positive and negative contact in shaping immigrants' adaptation to their host society are broadly discussed, and implications for theory and practice, as well as limitations and future study directions are outlined.

Theoretical Background

Intergroup Contact Theory

Improving intergroup attitudes and behaviours through intergroup experiences has long been and is still an important social psychology issue. Intergroup contact refers to those encounters that occur between individuals belonging to different groups. Consolidate by a large body of research on intergroup contact theory ever since its theorization by Gordon Allport (1954) about 70 years ago, optimal contact theory has been amongst the most important approaches seeking to improve intergroup relations (e.g., Brown & Hewstone, 2005; Pettigrew et al., 2011; Lemmer & Wagner, 2015; Pettigrew & Tropp, 2006).

This theory is based upon the idea that to promote harmonious intergroup relationships and improve intergroup attitudes, positive contact between individuals must be constantly encouraged. Indeed, Allport proposed that continuous interactions between members of different opposing groups are required to build harmonious intergroup relationships. Moreover, to get the best benefit from such interactions, they must take place under different conditions that Allport (1954) identified as equal status, common goals, institutional support, and cooperation among groups. Following in the footsteps of this intergroup contact theorization, decades of research have pointed out that these conditions are facilitating but not essential as the contact effects can be observed even in the absence of these conditions (Pettigrew & Tropp, 2006). People reporting that they have more frequent contact with the outgroup members also report lower levels of prejudice and significant improvement in intergroup relations. Moreover, the *contact effect model* contends that the continuous contact between members of different groups (i.e., friendship, socializing,

expressing gratitude, greeting) could help to promote close intergroup relationships (Brown & Hewstone, 2005; Pettigrew & Tropp, 2006), common in-group identity (Dovidio et al., 2006; Eller & Abrams, 2004; Gaertner & Dovidio, 2000; Pettigrew, 1998) and the reduction of social distance desire (see also Binder et al., 2009). In this vein, these relationships might lead to the transformation of a subordinate group category representation characterized by an "us" (i.e., majority status group) vs. "them" (i.e., minority status group) conception into a superordinate group category characterized by a more inclusive "we" cognitive representation (Gaertner & Dovidio, 2000).

In their meta-analysis, Pettigrew and Tropp (2006) showed that for ninety-four percent of the studies examined, greater contact predicted less prejudice, anxiety, individual threat, collective threat, and more intergroup identification, empathy, perspective-taking, outgroup knowledge, intergroup trust, and perception of outgroup variability. They showed that even though exposure to the outgroup enhances positive attitudes toward the outgroup and the effect can be generalized to other unknown social targets, these effects of contact are not the result of a "selection bias" of who has or does not have contact. Indeed, the authors highlighted that individuals' intention to get involved in contact experiences influences the causal relationship between intergroup contact and prejudice in the contact-prejudice reduction relationship. More specifically, they argued that individuals high in prejudice might tend to avoid intergroup contact, whereas "tolerant people" may seek intergroup contact. Along this line, Pettigrew and Tropp (2006) were able to highlight that intergroup contact, independently of whether it can be chosen by or not chosen by individuals, leads to prejudice reduction.

Moreover, Pettigrew and Tropp (2006) showed that intergroup contact improves attitudes toward both the specific individuals involved in the contact situation and the outgroup as a whole.

However, the generalization occurs if the individuals remain aware of their group's belonging. To further support the strong effect of intergroup contact based on a positive relationship such as friendship, on intergroup attitudes, Binder et al. (2009) in a longitudinal study have hypothesized two possible causal directions of the effects: the contact prejudice reduction (Allport, 1954, Amir, 1969; Pettigrew, 1997; Pettigrew & Tropp, 2006, 2008; Tropp & Pettigrew, 2005), in which intergroup contact reduces outgroup prejudice and the *prejudice effect* (Levin et al., 2003; Pettigrew, 1997, 1998) according to which the level of perceived prejudiced decreases the desire to have contact with the members of the outgroup, increases the possibility to avoid the contact and in the case that the contact is inevitable, maintains it at a superficial level. Binder et al. (2009) showed that the quantity of contact with friends is negatively associated with social distance desire and negative intergroup emotions, whereas evidence for the prejudice contact effect direction is weaker.

Different affective factors are at the basis of contact effects on intergroup attitudes. Investigating the affective factors that underline the relationship between intergroup contact and intergroup attitudes, studies have shown that, by making an outgroup more knowledgeable to another group, intergroup contact enhances individuals' awareness of others' feelings and enhances intergroup empathy. Through the enhancement of individual capacity to assume outgroup members' perspectives, one can increase in empathy, which in turn may drive changes in prejudice and intentions to establish intergroup contact (Pettigrew et al., 2011; Hayward et al., 2017). Pettigrew & Tropp (2008) further demonstrated that positive contact experiences reduce anxiety, foster further positive contact-seeking, and reduce individual discrimination and prejudice (Blascovich et al., 2001; Page-Gould et al., 2008). Researchers have shown that positive contact

promotes prejudice, discrimination, and stereotype threat reduction through a mechanism of intergroup anxiety reduction (Brewer & Miller, 1984; Brown & Hewstone, 2005; Brown et al., 2007; Gaertner & Dovidio, 2000; Pettigrew, 1998; Pettigrew & Tropp, 2008, 2006). Specifically, positive contact reduces the anxiety that individuals experience in response to outgroups vicinity, leading to more favourable attitudes toward outgroup members.

Furthermore, Aberson (2015) highlighted the important role of another affective factor, such as perceived threat as a mediator of the relation between contact and prejudice. In addition to the realistic threat, largely studied in the literature on intergroup relations, researchers have also emphasized the role of symbolic threat. Symbolic threat refers to the perceived threat toward the culture and way of life of the ingroup. It arises when individuals perceive intergroup disparities toward their group with regard to norms and values and believe that their way of life is threatened by the outgroup (Stephan and Stephan, 2000). Studies evidenced that for minority groups, symbolic threat is a consistent mediator of the relationship between contact and prejudice (Stephan, Diaz-Loving, and Duran 2000, see also Al Ramiah et al., 2014).

Thanks to this large body of research, the hypothesis that positive contact reduces prejudice, discrimination, and stereotype threat finds strong empirical support from different settings and studies, including a wide range of social groups (e.g., Lemmer & Wagner, 2015; Pettigrew & Tropp, 2006). Indeed, positive contact between groups is important as it dispels the feelings of mistrust that individuals hold towards the members of the outgroups and that are maintained by their lack of information about these outgroups. In this vein, evidence now unequivocally confirms that positive intergroup contact strongly improves intergroup attitudes through specific affective factors. However, as Pettigrew and Tropp (2006, see also Paolini et al., 2010) have pointed out,

previous researches are characterized by a severe "positivity bias," that is, the emphasis on positive contact as a way to *improve* intergroup relations has led to the progressive exclusion of negative contact from most research designs (Dixon et al., 2005; Pettigrew, 2008), thus limiting the investigation of negative aspects of the contact situation and the analysis of the differential effects of negative versus positive contact.

Positive and Negative Intergroup Contact

In everyday social interactions, encounters can be either positive and/or negative (Dijker, 1987). Therefore, a growing number of recent studies has paid attention to the negative features of intergroup interactions showing that negative intergroup interactions can increase prejudice and exacerbate negative attitudes, prejudice, perceived stereotype threat, and discrimination (Aberson & Gaffney, 2008; Dixon et a., 2012; Stephan et al., 2000; Wright & Baray, 2012; Wright & Lubensky, 2009).

Even though in everyday settings, individuals might face positive and negative contact, with positive contact decreasing negative intergroup attitudes (prejudice, discrimination, stereotype) whereas negative contact increasing them, these two forms of contact are to be considered as discrete experiences and do not necessarily represent two opposites poles of a continuum (e.g., Barlow et al., 2012; Graf et al., 2014; Pettigrew, 2008). In the context of interactions with outgroup members, some aspects of the contact experiences might be perceived positively, while others might be perceived negatively. Moreover, in a large number of studies, positive contact is reported as more frequent than negative contact (e.g., Aberson, 2015; Barlow et al., 2012 in the relationships between Whites and Blacks in the US; Graf et al., 2014 in the relationships between citizens of European countries, Hayward et al., 2017, Study 1, Reimer et al., 2017, in the relationship with the

minority group of LGBT). Yet, intergroup contact might vary in valence as well as frequency (Dixon et al., 2005). Thus, if the quantity or frequency of contact experiences with outgroup members allows for the establishment of favorable or unfavorable behavioral intentions, the contact's valence strengthens these effects. Thus, while many cross-group interactions negatively influence individuals' prejudice, the valence attributed to the interactions, positive or negative, further contributes to strengthening the contact effects on prejudice. The same effects are observable on discrimination and anxiety (Eller & Abrams, 2004; Pettigrew & Tropp, 2006). Through continuous interactions with outgroup members, individuals confront their preconceived ideas (prejudice and discrimination) with the information gathered in the contact situation and, basing on the valence attributed to this information, confirm or disconfirm their initial ideas by processing new ones. The contact effect model suggests a causal relationship where the frequency and the valence of the established contact produce effects on individuals' attitudes (Brown & Hewstone, 2005; Pettigrew & Tropp, 2006).

Dixon et al. (2005) put forward a call to overcome the positivity bias that characterized the majority of previous studies on intergroup contact in order to tackle also the effects of negative contact on intergroup attitudes. Responding to this call, studies have demonstrated the deleterious effects of negative contact on intergroup attitudes (Wright & Baray, 2012; Wright & Lubensky, 2009). However, the nascent field of negative contact research has embraced a method of theoretical and empirical separability of positive and negative contact experiences, neglecting that everyday interactions are not the two poles of a continuum in which positive contact and negative are at both ends being mutually exclusive. They can instead together affect intergroup attitudes to varying degrees, as both positive and negative experiences can characterize everyday interactions.

In order to fill this gap, recent studies have proposed different models of positive and negative contact based on the strength of the joint effects produced by the two forms of contact (Árnadóttir et al., 2017; Barlow et al., 2012; Paolini et al., 2010).

The Distinct Effects of Positive and Negative Contact

Even though few recent studies on intergroup contact have examined the effects of both positive and negative contact, the joint effects of positive and negative contact in shaping intergroup relationships are still unclear. Assuming that interactions are not only positive nor exclusively negative in everyday life, but a mixture of both, it is thus essential to examine the influence of positive contact on the effects of negative contact and vice versa to understand the phenomenon in its full complexity. When it comes to the joint effects of positive and negative contact, the evidence is less straightforward than with regard to the effects of positive and negative contact investigated separately. As a response to Pettigrew and Tropp's (2006) suggestion to consider the potential ambivalence effect of positive and negative contact, Paolini et al. (2010) provided preliminary evidence that negative contact increases category salience more than positive contact does. They referred to such effect as the *valence-salience effect of contact*. Specifically, they showed that negative contact tends to heighten category salience at a higher rate than the rate at which positive contact lowers it. These findings suggested that, because of a category salience effect, which drives the generalization of intergroup contact effects to the whole group, negative contact might have stronger effects on intergroup attitudes than positive contact.

Building on this theorizing, Barlow et al. (2012) suggested a *positive-negative asymmetry of intergroup contact effects*, stating that negative contact has stronger effects on intergroup attitudes than positive contact. In research conducted in diverse contexts, Barlow et al. (2012)

showed that not only do negative contact yield adverse outcomes (detrimental effects on intergroup attitudes), but those deleterious effects are consistently stronger than the beneficial effects of positive contact. However, the evidence in support of positive-negative asymmetry in intergroup contact is mixed. Even though the positive-negative contact asymmetry hypothesis finds strong support in the literature (e.g., Alperin et al., 2014; Barlow et al., 2012; Dhont & Van Hiel, 2009; Graf et al., 2014; Hayward et al., 2017; Labianca, Brass, & Gray, 1998; Paolini et al., 2010; Paolini et al., 2014; Techakesari et al., 2015), some studies found little, or no substantial differences in the strength of the effects of positive and negative contact (Árnadóttir et al., 2018; Mazziotta et al., 2015) and other studies even found larger effects for positive intergroup contact (Reimer et al., 2017). An explanation for these mixed results of the potential asymmetries of different valence contact assumes that positive and negative contact can have a different effect and strength depending on the intergroup attitudes with which these two forms of contact are associated. In line with this idea, Hayward et al. (2017) found a stronger effect for negative than for positive contact on negatively valenced measures, such as anti-outgroup attitudes, avoidance of relationship with outgroup members, and anger, but equal-size effects, or even larger effects for positive contact than for negative contact (Hayward et al., 2017), on positive outcomes such as empathy and positive evaluations. In line with Hayward et al. (2017), longitudinal evidence from a recent study of Barlow et al. (2019) argues about an "*affect-matching" hypothesis*. Their study postulates that positive contact experiences disproportionately predict positive feelings toward an outgroup, and negative contact disproportionately predicts negative feelings. They demonstrated that change in positive contact has a stronger effect in increasing positive outcomes (warmth) than negative contact in reducing it. Conversely, negative contact is a stronger predictor in increasing anger than positive contact in reducing anger.

The Joint Effect of Positive and Negative Contact

To understand the joint effects of different valence contact, researchers have argued about a positive-negative contact interaction effect. For instance, Fell et al. (unpublished data) proposed that the interaction between positive and negative contact could lead to four different patterns: a) '*buffering*,' in which positive contact mitigates the detrimental effects of negative contact, i.e., The detrimental effects of negative contact are weakened by the presence of positive contact, leading to the weakening of the strength of the negative contact-prejudice relationship; b) '*facilitation*,' where the benefits of positive contact are enhanced even in the presence of negative contact, i.e., The beneficial effects of positive contact can be augmented by experience of negative contact which augments the impact of positive contact by reducing prejudice through a revaluation of the negative experience; c) '*poisoning*,' in which negative contact reduces the benefits of positive contact because of its potential to increase the salience of group boundaries. The beneficial effects of positive contact can be reduced by negative contact, by inhibiting the strength of the impact of positive contact on intergroup prejudice reduction; and d) '*exacerbation*,' where positive contact exacerbates the harmful effects of negative contact. In a cross-sectional study on the contact between Icelandic and Polish people living in Iceland, Árnadóttir et al. (2018) tested the positive-negative interaction effect and found evidence for buffering and facilitation effect. Specifically, they found that higher positive contact neutralizes the detrimental effect of negative contact. On the other hand, when participants have greater negative contact, positive contact more strongly predicts intergroup attitudes, especially for the majority group.

Furthermore, a recent study by Prati et al. (2020), employing a linguistic approach, found evidence for buffering and facilitation effect. Through the analyses of the valence and abstraction

of the terms used to describe the contact experience, they showed for the first time an effect in recalling intergroup experiences. Specifically, the authors showed that individuals who recalled first positive contacts and then negative ones showed less linguistic negative prejudice toward the outgroup even when the last experiences recalled were negative ones (buffering effect). On the other hand, individuals who recalled first negative contacts and then positive contacts showed less linguistic negative prejudice against the outgroup (facilitation effect)

However, results are not conclusive. Further research is thus needed to understand when and how positive or negative contact yields stronger effects on intergroup attitudes and if/when different interactions can occur. Specifically, the literature is still lacking information about the longitudinal joint effects of positive and negative contact from the perspective of minority groups, especially immigrants.

Intergroup contact of Minority Groups

The contact literature has stated that the effects of contact are not the same for majority and minority group members, and the same contact situation can be interpreted quite differently (Dixon et al., 2005). Researchers have consistently shown that although the effects of contact are generally positive and beneficial for both the majority (often of higher status) and minority (usually of a lower status) group members, these effects are weaker for the minority group members relative to the majority group ones (Barlow et al., 2013; Binder et al., 2009; Pettigrew & Tropp, 2006). Because minority members often feel isolated, rejected and perceive discrimination to a greater extent (Pine, 2002) and engage in cross-group interactions, often without choice, for different reasons and motivation (Tropp & Bianchi, 2006), they are less likely to view contact in a good light and consequently are less likely to benefit from the effects of contact (Stathi & Crisp, 2008). As

these studies pointed out, this difference can be due to a "psychological asymmetry" between the two groups. Advantaged group members may be typically concerned with avoiding attitudes of discrimination against the disadvantaged group, while in contrast, disadvantaged group members are likely to be concerned about being stereotyped negatively and discriminated against by advantaged group members, as they are often aware of their group's devalued status (Binder et al., 2009; Crocker, Major, and Steele 1998).

Studies that have examined minority group perspectives showed that negative contact is experienced relatively frequently in the form of exposure to prejudice (Swim et al., 2003) and that experiencing prejudice can lead disadvantaged group members to feel hostile and anxious about future intergroup interactions (Tropp, 2003). Extending this evidence to outgroup attitudes, negative contact significantly predicts Blacks' minority group attitudes toward the Whites majority group (W. G. Stephan et al., 2002). These studies provide initial insights into the unfavourable effects of negative contact among disadvantaged group members. Tropp (2007) found that Black Americans reported more significantly perceived discrimination against their group than White Americans and that this greater amount of perceived discrimination restrained positive contact effects toward the White majority. Furthermore, Hayward et al. (2017) showed supporting evidence of the positive-negative contact asymmetry from the minority perspective. Indeed, they argued that negative contact is a stronger predictor of prejudice and avoidance among minority group members relative to positive contact.

Using both cross-sectional and experimental designs, Hayward et al. (2017) analysed simultaneously positive and negative direct contact between minority and majority group members. Across samples of African and Hispanic Americans, they found evidence that negative direct

contact predicts an increase in prejudice that is stronger than the decrease in negative attitudes towards the majority group predicted by positive contact. However, Árnadóttir et al. (2018) found no stronger impact of negative compared to positive contact in Polish immigrants in Iceland, regardless of whether the contact was direct (when the person experiences the interaction with the outgroup member in person) or extended (when contact with the outgroup happens through an ingroup member who has direct interactions with the outgroup members). Their studies showed that for both Icelandic majority members and Polish immigrants, there was no stronger effect of negative than positive contact on a range of different variables, such as outgroup orientation, outgroup trust, and perceived cultural differences.

However, in regard to the interaction of positive and negative contact, Árnadóttir et al. (2018) found the so-called exacerbation effect. For Polish immigrants who had a greater amount of positive intergroup contact, negative contact predicted more strongly perceived cultural differences (a subtle form of prejudice) compared to those reporting fewer positive interactions. However, those reporting more negative contact showed a weaker relationship between positive contact and fewer perceived cultural differences. In this vein, the effects of positive contact seemed to be 'canceled out' by the presence of negative contact (poisoning effect). Overall, these few studies relied on a cross-sectional dataset in specific countries, limiting the interpretation of the results. In this vein, more research is needed to understand the role of positive and negative contact in ethnic minorities' social adaptation to their host country.

Intergroup Contact and Social Avoidance of Minorities

One of the current most pervasive manifestations of negative intergroup relations, outgroup prejudice, and discrimination is the tendency to socially and/or physically distance oneself and

avoid outgroup members (e.g., Gaertner & Dovidio, 2000). Research in the recent contact literature indicates that opportunities for initiating intergroup contact are often avoided. People usually lack the motivation to engage in volitional intergroup contact, i.e., seek intergroup contact and actively choose to engage in contact with the novel outgroup members in the first place (Paolini et al., 2018). Considering ethnic minority groups' perspective, they avoid or escape intergroup interactions when they believe that their social identity is threatened (Tropp, 2003). To further support this evidence, Tropp and Bianchi (2006) research showed that minority group members expressed interest in having intergroup contact only when they believed that the majority group values diversity. More recently, Hayward et al. (2017) analyzed the relation between direct intergroup contact of African and Hispanic Americans and outgroup avoidance, showing a stronger effect of negative compared to positive contact. Moreover, they showed that three emotions, empathy, anger, and anxiety, all mediate the relationship between positive and negative contact and outgroup avoidance. In particular, Laurence and Bentley (2018) have argued that as the minority group size arises, the probabilities of contact also arise. That is, the size of the minority group makes contact between the minority and the majority group members inevitable, independently of the willingness to get in touch with the outgroup. Their study showed the moderating role of contact valence on the relationships between minority group size and attitudes of the majority group of natives toward immigration and immigrants, assuming a prior inevitable contact.

Interethnic contact: The Acculturation Process

The continuous exposure to cross-group interactions leads to changes not only in individuals' psychological settings but also in cultural ones. As Berry (2005) argued, interactions between individuals from different ethnic groups inevitably alter both groups' cultural structures.

Acculturation refers to modifications or changes in the basic cultural models of two or more groups of individuals, from different origins and ethnic groups, due to the direct and continuous contact between their different cultures (Berry, 2005). Thus, acculturation is a bidirectional process of changes derived from the contact among groups (Graves, 1967) who were in principle exposed and socialized in different cultural contexts. In this vein, both the minority and majority groups undergo changes, more or less pronounced, to adapt to the new cultural context (Berry, 1997).

According to Berry (1997; 2001), the process of acculturation is based on two main dimensions, that is, the degree to which members of different groups wish to maintain or relinquish their respective culture and how much intercultural contact they are willing to have. From these two dimensions, Berry highlighted four strategies of acculturation: integration (high desire for contact and culture maintenance), assimilation (high desire for contact and abandonment of own culture), separation (low desire for contact and culture maintenance), and marginalization (abandonment of own culture and low desire for contact). Evidence supports integration as the most beneficial strategy at the individual level (Brown & Zagefka, 2011; Celeste et al., 2014; Matera et al., 2011). At the intergroup level, though, as argued by Brown and Zagefka (2011), integration shows positive intergroup attitudes towards immigrants only if the majority group is supportive of multiculturalism and the minority group is perceived as highly determined to maintain its own culture and highly eager to have positive intergroup contacts (Matera et al. 2011). As a bidirectional process, acculturation is mostly influenced by the interdependence between immigrant and native people's attitudes. Studies have highlighted how the attitudes of native people affect how immigrant groups face their acculturation process and how in turn, immigrant group members' attitudes determine the majority group concern, endorsement, and commitment about

immigrant acculturation in the society (Berry, 2001; Kosic, Mannetti & Sam, 2005; Piontkowski, Rohmann & Florack, 2002; Zagefka & Brown, 2002). These results further highlight the important role of intergroup contact in defining social integration.

The research mentioned has considered acculturation as a global and unique process. In contrast, the acculturation process varies according to the spheres or areas and context of life, such as language, values, culture, and social relations (Berry & Sam, 1997; Eshel & Rosenthal-Sokolov, 2000). Since there is no single nor general acculturation attitudes, the Relative Acculturation Extended Model (RAEM, Navas et al., 2007) postulates that the acculturation process can be complex, as different options can be preferred and adopted, and relative, since the strategies adopted, and the options preferred vary according to the areas and context of life. For these reasons, this model distinguished seven areas divided into three groups: nearest areas to the world's material or peripheral elements (political, work, and economic), intermediates areas (social and family relationships) and farthest areas away such as symbolic representation, ideology, religion (religious beliefs and customs, ways of thinking, as principles and values). Navas et al. (2007) showed that due to the permanent pressures they receive from the host society members (natives), immigrants tend to adjust their acculturation strategies to adopt host society customs and reject their own. This tendency suggests the dominance of assimilation. However, the tendency to adopt an assimilation strategy is more evident and often unavoidable in the survival areas, as political and work areas, and in areas where the identity is not compromised. By contrast, in the other areas, less critical for social survival, although the permanent demand of host society, the rejection of their own culture is difficult for immigrants. In sum, the acculturation process, as suggested by studies, is complex and relative because the strategies adopted or the attitudes preferred may vary according to different

domains or contexts. Thus, integration may be the most adaptive strategy, but it may not be functional in each situation or sphere of life. In that case, assimilation showed to be an alternative solution. In other words, immigrants may build a general acculturation attitude, using assimilation in some domains and integration in others, according to where one fits better than the other.

Intergroup Contact and Immigrants' Acculturation Preferences

Migration poses important and multifaceted psychological challenges for immigrants in their host society. Though minority group members still encounter pervasive discrimination that represents an antecedent of negative psychological health outcomes (Schmitt et al., 2014), they have also to cope with complex psychosocial processes that involve merging into the host society by maintaining their cultural heritage and adopt the cultural pattern of the host group. These processes that are often referred to as "contact participation" and "culture maintenance," are involved in what is called the acculturation process (Berry, 1997; Bourhis et al., 1997). Specifically, Ramos et al. (2015) showed that positive contact of immigrants with members of the majority group (i.e., percentage of majority group friends) was positively associated with the desire to participate in the host community (i.e., cultural adoption). Badea et al. (2011) found that negative contact with the majority group was negatively related to the acculturation strategies of integration and assimilation (individuals seeking to connecting and adapting to the host culture while disconnecting from their culture of origin). In this vein, the type of interaction between members of minority and majority groups may strongly influence the minority group's acculturation preferences (González et al., 2017; Hässler et al., 2018). Directly testing the association between contact and acculturation preferences in a longitudinal study, González et al. (2017) demonstrated that cross-group friendships with Peruvians (minority group) increased the preference for minority

culture maintenance among Chilean students (majority group) through increased trust toward Peruvians. In particular, González et al. (2017), following a longitudinal approach, showed that the quality of positive intergroup contact at Time 1 predicted changes in support for the adoption of majority culture and maintenance of one's own minority culture at Time 2.

Recently, Sixtus et al. (2019) showed that immigrants' positive contact with the majority group members was positively related to cultural adoption, whereas negative contact was associated negatively with cultural adoption. Moreover, these associations were mediated by ingroup identification. Specifically, contact with the majority group members was related to identification with the majority group, which was associated with cultural adoption. Evidence for integration acculturation strategy showed that participants tended to pursue a dual approach in acculturation, engaging in both cultural adoption and cultural maintenance (see also Berry & Hou, 2016; Bourhis et al., 1997). However, these studies' evidence is cross-sectional, leaving open questions on the predicting role of contact on these immigrants' attitudes.

Intergroup Contact and Immigrants' Well-being

The dimensions that make up the acculturation process are suggested to be also strong indicators of minority groups' psychological and sociocultural adaptation (Berry, 1997; Ward, 2008; Ward & Kennedy, 1994)**.** Psychological adaptation refers to psychological or emotional well-being or satisfaction in the host society and is influenced by personality, life changes, and social support (Stone Feinstein & Ward, 1990; Ward & Kennedy, 1992), whereas sociocultural adaptation refers to the ability to fit in with the members and the interactive aspects of the host society and is influenced by the quantity of contact with the members of the host society, the time spent in the host society (length of residence), language proficiency and cultural distance (Searle & Ward, 1990;

Ward & Kennedy, 1992). Even though the main adaptation difficulties occur at the moment of arrival, when the individual has just entered the host society, psychological and sociocultural adaptation vary differently over time. Whereas sociocultural adaptation difficulties might decrease and gradually level off over time, psychological adaptation might be more unstable over time, and the variation might depend on sociocultural adaptation. Indeed, the strength of the relationship between psychological and sociocultural adjustment increases in the presence of greater integration and cultural proximity. The two dimensions of adaptation are highly related in sedentary groups and in groups in which culture is similar to that of the host society (Ward & Kennedy, 1996).

Specifically, the process of adapting to a new society can affect immigrants' psychological adjustment, including life satisfaction, depression, and loneliness. Disparities in economic security, political power, and opportunities for social advancement (Feagin, 2006; Sidanius & Pratto, 1999) produce different social realities, which substantially shape the everyday lives of members of disadvantaged groups (Demoulin, Leyens, & Dovidio, 2009). Nowadays, various scholars agree that one prerequisite for immigrants' successful and peaceful integration into their host society is developing social networks that include host culture contacts in central positions, as these contacts provide access to critically important social and informational resources (Damstra & Tillie, 2016). These host nationals may improve the immigrant's acculturation potential by helping with the acquisition of culturally appropriate skills and providing exposure to new norms and value systems (Kim, 2001; Jasinskaja-Lahti et al., 2006; Smith, 2005, 2013; Ward & Kennedy, 1993).

Given the importance of social networks for integration and acculturation, it is surprising that few studies have examined how intergroup contact relates to key acculturation variables (e.g., culture adoption preference, culture maintenance preference) and psychological adjustment of

immigrants in the host society (i.e., Matera et al., 2012). In particular, the relational perspective offered by the intergroup contact approach is perfectly suited for immigrants' acculturation and psychological adjustment, as it captures the concept that immigrants' social attitudes towards the majority group rely on having multiple contacts with them. Thus, those intergroup attitudes would be a good indicator of immigrants' cultural adjustment. In this regard, there have been very few empirical investigations of the effect of contact on minority group members' well-being. One exception is the work by Eller, Cakal, and Sirlopu' (2016). They observed positive associations between the physical and psychological health of indigenous minority groups in Chile and Mexico and the amount of direct and extended contact they had with the majority. Although these results are encouraging, the cross-sectional design provides limited insights into the direction of these effects. Tip et al. (2019) extended this evidence by focusing on the role of language knowledge as a tool of social adaptation of immigrants. They showed that proficiency in the majority language is positively associated with increases in contact with majority members one year later and that more contact with the majority is associated with increased well-being of minority members one year later. They also found that English language proficiency was positively linked to well-being two years later, via an increase in contact with the British majority. Even though the literature argued about the potential of contact to influence acculturation preferences and psychological adjustment such as well-being, the role of the valence of this contact has not been clearly established yet.

The Present Research

Intergroup contact remains a crucial factor that drives changes in intergroup attitudes, considering also the role of many individual factors (i.e., age, gender, degree of mastery of the host language, time spent in the host society, socio-economic situation, education). Socialization and integration in a new context inevitably involve contact with the host society's culture and particularly with its members. In this sense, the type of contact that is entertained, whether positive and/or negative, influences the newcomer's attitudes towards the majority group and the host society in general, but also the way in which they combine their culture of origin with the host culture.

As reviewed above, positive and negative contact affects differently and with different strength intergroup attitudes (e.g., Barlow et al., 2012, 2019; Graf et al., 2014; Hayward et al., 2017). However, their differential and joint effects on immigrants' integration process are still to be established. In this vein, the present research aims to expand the literature on this emerging field by providing evidence from the perspective of the minority group of immigrant people. Specifically, the present research investigates, for the first time to the author's knowledge, how positive and negative contact with host native members influence the cultural adaptation of immigrant people in their host society, including their willingness of future interactions and their psychological well-being. Based on the current literature on different valenced contact, across different studies, by adopting different methodologies, measures and respondents from different countries, a sequence of hypotheses on the joint effect of positive and negative contact on intergroup attitudes of minority group members of immigrants were tested. First, *the asymmetry of positive - negative contact hypothesis* (Barlow et al., 2012) which assumes that by considering both

positive and negative contact, negative contact predicts with greater strength the outcome variables than positive contact. Second, *the positive-negative contact interaction hypothesis* (Árnadóttir et al., 2018) which assumes that the interaction between positive and negative contact can have one of four effects - poisoning, buffering, exacerbation, and facilitation -, depending on whether either positive or negative contact has the stronger effect. Third, *the positive-negative contact affect matching hypothesis* (Barlow et al., 2019; Hayward et al., 2017), according to which positive contact strongly predicts positively valenced variables (i.e., Warmth, positive evaluation of the outgroup, empathy) compared to negative contact and negative contact strongly predicts negatively valenced variables (i.e., anger, outgroup avoidance) compared to positive contact. Furthermore, it was hypothesized *the indirect effect of positive and negative contact* of immigrants via different affective and cognitive mediators (i.e., anxiety, fear of being stereotyped, symbolic threat, acculturation preferences) on social adaptation outcomes, such as avoidance of majority group members and well-being of immigrant people. Finally, it has been explored the *longitudinal associations between positive and negative contact* of migrant people, their acculturation preferences and psychological adaptation.

To this aim, four studies were conducted. Study 1 and Study 2 investigated the effect of positive and negative contact on one of the central, antecedent factors of social integration, that is, the desire to avoid contact with host members. Considering two different host contexts (Italy and Turkey), this research investigated how positive and negative contact of Africans in Italy (Study 1) and Syrians in Turkey (Study 2) with the respective natives of their host countries affect immigrants' motivation to social avoidance, anxiety, fear of being stereotyped and symbolic threat. These studies addressed the positive-negative contact asymmetry and interaction hypotheses as

well as the mediating roles of anxiety, fear of being stereotyped and symbolic threat in the relationship between positive and negative contact and social avoidance towards host natives. Study 3 and Study 4 investigated the simultaneous and differential effect of immigrants' positive and negative contact with natives in Italy on acculturation and adaptation processes. Specifically, Study 3 tested the effect of positive and negative contact on immigrant people's perceived group discrimination, psychological adjustment, in terms of psychosocial well-being and post-traumatic stress disorder and immigrants' acculturation preferences, in terms of culture adoption and culture maintenance. Measuring the acculturation preferences with these two dimensions rather than on the four strategies (e.g., Berry et al., 2001) allowed to investigate the different effects of contact at the basis of the acculturation process. This cross-sectional study also investigated the positive-negative contact asymmetry hypothesis, the interaction hypothesis, and the affect matching hypothesis.

Furthermore, the mediation role of perceived group discrimination, culture adoption preferences, and culture maintenance preference was investigated in the relationship between positive and negative contact and psychological adjustment. Study 4 explored for the first time the longitudinal association between positive and negative contact of African immigrants in Italy with culture adoption preference, culture maintenance preference, and psychosocial well-being. This approach aimed to disentangle the causal association between intergroup contact and the acculturation preferences as well as the psychosocial well-being of immigrants.

Overview Study I and Study II

Study 1 and Study 2 investigated the role of positive and negative intergroup contact experiences in the social adaptation of newly arrived immigrant people. Specifically, both studies examined when and how positive and negative contact with native people shape immigrant people's social avoidance towards native people. In doing this, first, measures that capture the quantity of positive and negative interactions of immigrant people with the majority group were developed by adapting them from prior research (Hayward et al., 2017). Second, in line with previous evidence on contact asymmetry from the perspective of majority groups (Barlow et al., 2012), it was expected that negative contact of immigrant people would predict to greater extent anxiety, fear of being stereotyped, perceived threat from native people and motivation to avoid them than positive contact. Building upon preliminary findings of Árnadóttir et al. (2017), the interaction pattern of positive and negative contact with native people on immigrants' motivation to avoid interactions with natives was investigated in an exploratory way. Specifically, basing on the positive-negative contact interaction hypothesis, it might be expected that positive contact would moderate the effect of negative contact on social avoidance through the greater strength of positive contact (buffering hypothesis). It might also be expected that negative contact would moderate the effect of positive contact on social avoidance such that the effect of positive contact would be reduced by the greater impact of negative contact (poisoning hypothesis). Based on the evidence in the literature about the significant role of affective factors such as anxiety and perceived threat (Aberson, 2015; Hayward et al., 2017) as mediators of the relation between contact and prejudice, the research also aimed at examining the mediational role of these affective factors in the relationship between intergroup contact experiences and avoidance of outgroup, adding to this design the fear of being

stereotyped as an additional affective factor that can influence the contact – outgroup avoidance relationship. Indeed, the fear of being stereotyped as a less studied emotion can contribute to explaining the relationship between intergroup contact and social avoidance of minority and disadvantaged groups. Shelton and Richeson (2005) stated that the failure to initiate intergroup contact is closely linked to the fear of being rejected by the outgroup member.

It would be expected that positive contact would predict social avoidance to a lower extent through lower anxiety, lower fear of being stereotyped and lower perceived threat. It would also be expected that negative contact would predict social avoidance to a greater extent through greater anxiety, higher fear of being stereotyped and higher perceived threat.

In this regard, a strong base of empirical evidence has shown that positive intergroup contact is associated with reduction of intergroup anxiety that, in turn, is associated with increased positivity towards outgroups (Paolini et al., 2004; Tausch, Hewstone, & Roy, 2009; Turner et al., 2008). Though relatively understudied (Barlow et al., 2012; Dixon et al., 2005), negative effects of contact are especially likely to occur when intergroup encounters are associated with feelings of intergroup anxiety as well as fear of being stereotyped (Aberson, 2015; Hayward et al., 2017; Pettigrew, Wagner, & Christ, 2010; Pettigrew & Tropp, 2008). Specifically, Aberson (2015) showed a stronger role of perceived threat as a mediator of negative compared to positive contact of the majority group on prejudice. Given that past research has mainly focused separately on the distinct role of each of these affective and cognitive processes, assessing simultaneously the mediating role of anxiety, perceived threat, and fear of being stereotyped in the relationship of positive and negative contact on social avoidance was explored to establish the possible stronger mediating role of one of these factors over the others.

Overall, hypotheses were tested in two different contexts, such as Italy (Study 1) and Turkey (Study 2). Both these countries have seen increased immigration in the last few decades from nearby countries (such as Africa for Italy and Syria for Turkey), where poverty and war conditions have grown steadily. Thus, the recent history of immigration in both countries has highlighted urgent issues related to social integration and coexistence between natives and immigrants.

STUDY I

Study 1 aimed to test whether positive and negative contact experiences of newly arrived immigrant people with the majority group in Italy are associated with their willingness to further interactions with native Italians (reduced social avoidance). Secondly, the study aimed to test the interaction of positive and negative contact on immigrants' motivation to avoid interactions with the majority group. Moreover, it was tested which factors can better explain the relationship between both positive and negative contact with social avoidance by considering anxiety towards the majority group, fear of being stereotyped and perceived threat from the majority group.

Method

Participants and Procedure

The sample size was determined on the basis of an a priori power analysis using G*Power (Faul, Erdfelder, Buchner, & Lang, 2009), which specified a minimum required sample of 108 to achieve 90% power to detect small-to-medium effects within a multiple regression analysis with two predictors (negative contact and positive contact).

Data from 162 African immigrants living in the North-centre of Italy were collected. Twenty-four respondents were removed because they were not first-generation immigrants. The

final sample comprised 138 African immigrants (M_{age}= 30.91 years, *SD*= 8.13, and 34.2% women).

They completed an online survey on the platform Qualtrics. Before completing the study, they were first presented with a page where the study's goals were introduced and then asked to click on a box at the bottom of the page to give their consent. The questionnaire was first translated into their native languages and then back-translated into Italian, French and English. Respondents could choose the language they preferred to fill in the questionnaire. The study was previously approved by the University of Bologna's Ethics Research Committee.

Measures

Positive and negative intergroup contact. 8 items were used to measure intergroup interactions (4 positive: "being treated well", "being friendly with me", "make me feel accepted", "feel respected by them"; 4 negative: "being treated badly", "being excluded", "being judged", "make fun of me"). These items were adapted from Hayward et al. (2017). For each type of interaction, respondents rated how frequently they had experienced the interaction (1 = *never*, 7 = *extremely frequently*). Positive contact measure had good reliability (α= .86), as well as negative contact (α= .87).

Fear of being stereotyped. Four items assessed the extent to which respondents perceive the fear of being considered as: "incapable," "dishonest," "not understood," "refused", (α= .84) when they meet native Italian people. This was done repeatedly on a 5-points scale ranging from 1 = *not at all*, to 5 = *very much.*

Anxiety. Four items were adapted from Stephan and Stephan (1985) to assess the extent to which respondents feel each of the following emotional states when they meet with native Italian people: "worried," "frightened," "defensive," and "suspicious" (1 = *not at all*, 5 = *very much*; α= .92).

Perceived threat. Two items were adapted from Stephan et al. (2002) to measure symbolic threat: "People from Italian background threaten immigrant people's way of life," and "People from Italian background and people of my ethnic background have very different values." (1 = *strongly disagree*, 5 = *strongly agree*; α= .91).

Social avoidance. Three items adapted from Barlow et al. (2012) were used to measure immigrants' motivations to avoid relationships with natives: "I would rather pretend not to see my neighbour native people rather than having a chat with them" "I would be comfortable being asked to work in a group which include native people of this country" and "I would rather spend my free time alone than go out with native people of this country." (1= *completely disagree*, 5= *completely agree*; α= .84).

Demographic measures. Respondents reported information about their citizenship, religion, familial status, economic situation, instruction, occupation, permanence in the host country, and language proficiency level.

The survey included other measures that were not used in the present study.

Results

Preliminary results

Descriptive analyses suggest that 9.6% of the respondents considered their socio-economic situation as worse than most, 22.8% as poor, 32.5% as mediocre, 29.8% as good, 3.5% as better than most people, and 0.9% as wealthy. One respondent information is missing. Moreover, 2.6% of the respondents stated they have no instruction, 4.4% hold an elementary school diploma, 32.5% hold a high school diploma, 57% University titles, and 3.5% reported other education certifications. 84.2% reported living in Italy for more than a year, 15.8% for a year, and none less than a year. 23.7% reported to speak very well the host language, 49.1% speak well, 17.5% neither well nor poorly, 7.9% poorly, and 1.8% speak not well at all the host country language. Means and standard deviations of all variables are reported in Table 1 (see also for Study 2), whereas bivariate correlations among variables are reported in Table 2 (see also for Study 2).

Positive and Negative Contact Asymmetry and Interaction Analyses

To assess contact asymmetry, Barlow et al.'s (2012) analytic procedure was followed. A series of hierarchical linear regressions were conducted. Control variables of age, sex, SES, and education were entered in Step 1, and the predictors of positive and negative contact scores were entered at Step 2. Positive and negative contact was regressed on stereotype fear, anxiety, perceived threat, and social avoidance. As shown in Table 3 (see also for Study 2), negative contact was a stronger predictor of stereotype fear, perceived threat and social avoidance compared to positive contact. Moreover, positive contact was a stronger predictor of anxiety compared to negative contact.

Hayes' (2013) PROCESS macro (model 1) was then used to conducted moderation analysis. All variables were centered before their interaction terms were created (1 standard deviation above and below the moderator variable). A significant interaction between positive and negative contact

on social avoidance was found (see Table 4, see also for Study 2). For respondents reporting relatively more negative contact experiences with native Italian people, positive contact was not associated with reduced avoidance of them, whereas positive contact was associated with reduced social avoidance at low negative contact. Specifically, the results showed that negative contact remained a stronger predictor in increasing outgroup avoidance, even in the presence of more positive contact. Thus, even when positive contact is high, negative contact still predicts outgroup avoidance. The results also showed that positive contact decreased outgroup avoidance when negative contact is low. This suggests that when individuals have lower negative contact, positive interaction decreased outgroup avoidance. These results implied that taken together, negative contact compared to positive contact is a consistent predictor of outgroup avoidance.

Mediational Analyses

In Table 3, the strong correlations between the mediator and outcome variables (relative to the correlations between contact and the outcomes) provide supporting evidence for mediational models. Thus, fear of being stereotyped, anxiety and perceived threat were tested as parallel mediators of positive and negative contact (simultaneously) predicting social avoidance. The indirect effects were estimated and tested using bootstrapping procedures that allow multiple parallel mediators and multiple predictors (using PROCESS; model 4 Hayes, 2013). All bias-corrected percentile bootstrap confidence intervals were reported at the 95% confidence level. PROCESS only allows one variable to be specified as a predictor. Thus, a model (as recommended by Hayes, 2013) where negative contact was specified as the predictor and positive contact a covariate was run. This procedure is mathematically equivalent to a model with multiple predictors.

Results are outlined in Table 5 (see also for Study 2). In line with previous research (Barlow et al., 2009; Stephan & Stephan, 1985) focused on the majority group, anxiety was an important mediator of both positive and negative contact effects on avoidance of the minority group of immigrants. Fear of being stereotyped also significantly mediated the relationship between both positive and negative contact with social avoidance.

Extending previous studies on positive-negative contact asymmetry, Study 1 showed that negative compared to positive contact of immigrant people was a stronger predictor of fear of being stereotyped, perceived threat and social avoidance of native people. However, positive contact moderated the detrimental effect of negative contact on immigrant people's motivation to avoid natives. Furthermore, both anxiety and stereotype fear but not perceived threat mediated the relationship between both positive and negative contact with social avoidance.

STUDY II

Strengthened by the results of study 1, which investigated the Italian context,, Study 2 sought to further test the relationship between intergroup contact experiences and social avoidance of immigrant people in the Turkish context. First, in line with the intergroup contact literature, which emphasizes that positive contact is more frequent than negative contact (Barlow et al., 2012; Graf et al., 2014), it was expected that positive contact is less strong than negative contact in predicting social avoidance, perceived threat and emotional prejudice. The interplay between positive and negative contact in predicting the intergroup outcomes considered was also examined. Moreover, it was tested whether anxiety, perceived threat, and fear of being stereotyped from the majority group would mediate the relationship between intergroup contact and social avoidance.

Method

Participants and Procedure

One hundred and fourteen immigrants in Turkey completed the survey. Three of them were removed because they were not first-generation immigrants. The final sample was composed of 111 participants (M_{age}= 25.62 years, *SD*= 6.35, and 32.4% women).

Respondents were recruited among the population of Syrians under temporary protection (SuTP) living in different cities of Turkey, but the majority of respondents participated from Istanbul and Gaziantep at the time of the research. They completed an online survey on the platform Qualtrics following the same procedure used in Study 1. The survey was formulated in English and then translated and back-translated from Arabic and Turkish to suit each participant's linguistic competence. The study was conducted after getting approval from the Koç University's Ethics

Research Committee. Data were collected thanks to Prof. Akcapar and her colleagues of Koc University in Istanbul (Turkey), who collaborated in a joint Erasmus Plus program in 2018-2020.

Measures

The same measures used in Study 1 were employed in this study: positive (α = .81) and negative intergroup contact (α = .74), anxiety (α = .88), perceived threat from the majority group members (α = .78), stereotype fear (α = .82), and social avoidance (α = .92).

Results

Preliminary Results

In this sample, 6.5% of the respondents considered their socioeconomic situation worse than most, 14.8% as poor, 44.4% as mediocre, 30.6% as good, 3.7% as better than most people, and none rate wealthy. 5.6% attended only elementary school, 50% high school, 37% University, 7.4% reported other education certification. 91.7% stated to live in Turkey for more than a year, 8.3% for a year, none for less than a year. 41.7% stated they speak very well the host language, 30.6% speak well, 13.9% neither well nor poorly, 7.4% poorly, and 6.5% speak not well at all the host country language.

As in the previous study, paired-samples *t* tests revealed that positive contact was higher (M = 10.57, SD= 4.63) overall than negative contact (M = 5.64, SD= 2.96, $t(110) = 10.56$, $p < .001$, d = 1.26). Means and standard deviations are reported in Table 1, whereas bivariate correlations among variables are reported in Table 2.

Positive and Negative Contact Asymmetry and Interaction Analyses

To assess contact asymmetry, as in the previous study, Barlow et al. (2012) procedure was followed. Positive and negative contact was regressed on stereotype fear, anxiety, perceived threat, and social avoidance. As shown in Table 3, negative contact was a stronger predictor of all variables except for anxiety.

Hayes' (2012) PROCESS macro model 1 was then used to conduct a moderation analysis of positive and negative contact on social avoidance. As shown in Table 6, there was no moderation effect in contrast to Study 1 results.

Mediational Analyses

As in Study 1, fear of being stereotyped, anxiety, and perceived threat were tested as parallel mediators of positive and negative contact (simultaneously) predicting social avoidance (using PROCESS; model 1, Hayes, 2013). Results are outlined in Table 5. In line with Study 1 results, anxiety was the stronger mediator of both positive and negative contact effects on avoidance of the minority group of immigrants. Contrary to Study 1 results, there was no significant mediating effect of stereotype fear.

Study 2 replicated and extended the results of Study 1 in the Turkish context. Evidence showed that the effect of negative contact with native people was stronger than the effect of positive contact on stereotype fear, perceived threat, and social avoidance of native people. Moreover, the anxiety of immigrant people in intergroup encounters mediated the relationship between both negative and positive contact with the social avoidance of native people.

Discussion

The present research examined how the different valenced contact experienced by ethnic minority groups was associated with their willingness of future interactions with the majority group. In two different contexts, Italy and Turkey, characterized by different immigration policies and social situations, similar results were found. Specifically, both positive and negative contact increased and reduced, respectively, the desire for future interactions with the majority group, contributing to their good adaptation to the host country. Findings also showed in both countries that the effect of negative contact on social avoidance was stronger than the effect of positive contact. Consistently across the two countries, it was found that anxiety mediated the relationship between the quantity of intergroup contact and people's future behavioural intentions of social avoidance, independently of contact's valence. Furthermore, the beneficial effect of positive contact was poisoned by negative contact in the Italian context. Findings of Study 1 and Study 2 are consistent with the findings of Hayward et al. (2017) that have shown that negative contact, compared to positive contact, was a stronger predictor of prejudice and outgroup avoidance among minority groups (see also Barlow et al., 2012; Alperin et al., 2014). The fear of being stereotyped emerged as a significant mediator of the relationship between positive contact and negative contact and outgroup avoidance in the Italian context, but the same pattern was not observed in the Turkish context. Such difference could be due, on the one hand, to geographical and political proximity. Syria and Turkey are neighbouring countries and due to this proximity, Turkey represents one of the first gateways for people under forced migration situation from Syria. For instance, in February 2021, there were about 3.6 million Syrian refugees in Turkey. On the other hand, the different effects of fear of being stereotyped may be due to the cultural similarities between the host country

and country of origin. Sharing the same religion and sectarian belonging (as is the case for Syrian and Turkish) might represent a commonality factor that inhibits the fear of being stereotyped.

This evidence suggests that when promoting intergroup encounters as a strategy to build social integration, it should keep into account the role of negative contact in shaping minority group reactions.

Table 1.

Means and standard deviations of main variables (Italian and Turkish samples).

	Italian Sample		**Turkish Sample**	
Variables	*Mean*	*SD*	*Mean*	*SD*
Positive contact	3.42	0.87	3.59	0.88
Negative contact	2.24	0.94	2.00	0.78
Fear of being stereotyped	2.42	0.92	2.59	0.84
Anxiety	2.67	1.13	2.54	0.96
Perceived threat	3.27	1.22	3.26	1.15
Social avoidance	3.21	0.99	3.49	1.04

Table 2.

Intercorrelations among variables (Italian and Turkish samples).

Variables	1.	2.	3.	4.	5.	6.
1.Positive contact	-	-.158	-.209*	-.327**	-.014	-.189*
2.Negative contact	-.024	-	.367**	.258*	.324**	.254**
3.Fear of being stereotyped	-.212*	. 369**	-	.222*	.095	.344*
4. Anxiety	-.361**	.209*	.254**	-	.271**	.406**
5.Perceived threat	-.201*	.281**	.149	.049	-	.009
6.Social avoidance	-.224*	.312**	.242**	.297**	.211*	-

Note. Correlations are reported below the diagonal for *Immigrants in Italy* and above the diagonal for *immigrants in Turkey*. *p < .05; **p < .01.

Table 3.

Positive and negative contact asymmetry analyses (Italian sample).

	Positive contact		Negative contact			
Outcome	β	*b* (*SE*)	β	*b* (*SE*)	t value[a]	Model change statistics
Fear of being stereotyped	-0.16*	-0.17 (0.08)	0.34***	0.34 (0.07)	$t(136) = -4.47$**	$R^2 = .17$, $F(5, 136) = 7.17$***
Anxiety	-0.28**	-0.37** (0.10)	0.22**	0.26 (0.09)	$t(136) = 2.50$*	$R^2 = .16$, $F(5, 136) = 6.45$***
Perceived threat	0.042	0.060 (0.12)	0.33***	0.43 (0.11)	$t(136) = -7.87$***	$R^2 = .13$, $F(5, 136) = 4.82$***
Social avoidance	-0.16	-0.18 (0.09)	0.23**	0.24 (0.08)	$t(136) = -13.65$***	$R^2 = .10$, $F(5, 136) = 3.86$**

a. The *t*-test refers to tests of asymmetry in the magnitude of positive and negative contact predictions, calculated using the equation $t = (b1 - b2) / SE(b1 - b2)$.
*p < .05. **p < .01. ***p < .001.

Table 4.

Moderation results for the interaction between positive direct and negative contact.

DV = Social avoidance	Pos × Neg Contact Interaction	IV = Negative Contact		IV = Positive Contact	
		High Positive	Low Positive	High Negative	Low Negative
Italy	0.25 (0.05)***	0.48 (0.12)***	0.05 (0.11)	0.05 (0.12)	-0.41 (0.13)***
Turkey	0.06 (0.12)	0.46 (0.16)**	0.34 (0.16)*	-0.19 (0.15)	-0.29 (0.13)*

Note. *p < .05, ** p < .01, *** p < .001. Interaction terms are unstandardized regression coefficients. Numbers in brackets are standard errors. IV = independent variable; DV = dependent variable; high positive = 1 standard deviation (SD) above mean positive contact; low positive = 1 SD below mean positive contact; high negative = 1 SD above mean negative contact; low negative = 1 SD below mean negative contact.

Table 5.

Points of estimates and confidence intervals for mediated (indirect) effects.

	Social avoidance			
	Italy		Turkey	
	b (*SE*)	95% CIs	*b* (*SE*)	95% CIs
Positive contact				
M = fear of being stereotyped	0.29 (0.08)	[0.123, 0.457]	0.17 (0.11)	[-0.051, 0.410]
M = anxiety	0.32 (0.07)	[0.183, 0.476]	0.24 (0.10)	[0.031, 0.451]
M = perceived threat	-0.013 (0.09)	[-0.221, 0.030]	0.15 (0.08)	[-0.018, 0.310]
Negative contact				
M = fear of being stereotyped	0.25 (0.08)	[0.076, 0.423]	0.11 (0.12)	[-0.121, 0.354]
M = anxiety	0.32 (0.07)	[0.181, 0.459]	0.24 (0.09)	[0.047, 0.441]
M = perceived threat	-0.12 (0.06)	[-0.252, 0.006]	0.12 (0.08)	[-0.046, 0.282]

Note. M = mediator. All bias-corrected percentile bootstrap confidence intervals are reported at the 95% confidence level, and all results are reported based on 5,000 bootstrapped samples.

Table 6.

Positive and negative contact asymmetry analyses (Turkish sample).

	Positive contact		Negative contact			
Outcome	β	*b* (*SE*)	β	*b* (*SE*)	t value[a]	Model change statistics
Fear of being stereotyped	-0.20*	-0.19 (0.08)	0.36**	0.39 (0.09)	$t(109) = -4.87^{***}$	$R^2 = .18$, $F(5, 109) = 6.00^{***}$
Anxiety	-0.34***	-0.38 (0.09)	0.21*	0.26 (0.11)	$t(109) = 1.09^{*}$	$R^2 = .19$, $F(5, 109) = 6.30^{***}$
Perceived threat	-0.19*	-0.25 (0.12)	0.27**	0.40 (0.13)	$t(109) = -3^{***}$	$R^2 = .12$, $F(5, 109) = 3.40^{**}$
Social avoidance	-0.20*	-0.25 (0.11)	0.31***	0.41 (0.12)	$t(109) = -3.40^{***}$	$R^2 = .16$, $F(5, 109) = 5.09^{**}$

a. The *t*-test refers to tests of asymmetry in the magnitude of positive and negative contact predictions, calculated using the equation $t = (b1 - b2) / SE(b1 - b2)$.
*$p < .05$. **$p < .01$. ***$p < .001$.

Overview Study III and Study IV

Study 3 and Study 4 illustrate the short and long-term effects of positive and negative contact with host natives on immigrant people's acculturation preferences and psychological adjustment.

Past research shows that positive contact is an important sociocultural component of minority group acculturation and adjustment in the host society (Berry, 1997; Ward & Kennedy, 1992). On one hand, research on acculturation process has underlined the quantity of contact as one main predictor of the strategies of acculturation adopted by the group members that are called to adapt to a new context (Berry, 2001, 1997). Even though the literature argued about the potential of contact to influence acculturation preferences and psychological adjustment (Badea et al., 2011; Tip et al., 2019), there is a lack of evidence about the joint and longitudinal effect of positive and negative contact on the acculturation process and the psychological adjustment of immigrants in their host society. Therefore, Study 3 and Study 4 aimed to provide evidence to fill this gap in the literature. They investigated the relations between intergroup contact, acculturation preferences, and psychological adjustment of immigrants in a cross-sectional (Study 3) and a longitudinal approach (Study 4). Specifically, in Study 3, it was hypothesized that negative contact would negatively predict culture adoption preference and psychosocial well-being and positively predict perceived group discrimination, culture maintenance preference, and post-traumatic stress disorder. Positive contact would positively predict psychosocial well-being and culture adoption preference and negatively predict perceived group discrimination, culture maintenance preference, and post-traumatic stress disorder. Along the line of studies that argues about acculturation preference as predictors of psychosocial well-being (e.g., Berry & Hou, 2017), the potential mediation effect of

acculturation preference on the relationship between positive and negative contact and psychosocial well-being and post-traumatic stress disorder was examined while exploring the potential effect of positive and negative contact interaction pattern. Study 4 explored for the first time the direct and longitudinal association between positive and negative contact of immigrant people with native Italians, their acculturation preferences, and psychosocial well-being in order to disentangle the causal direction of these relationships.

STUDY III

Study 3 investigated how positive and negative intergroup contact shaped immigrant people's integration and adjustment in Italy. The study examined the relationship between positive and negative contact as well as their interaction on immigrants' perceived discrimination, acculturation preferences (culture maintenance and culture adoption preferences), and psychological adjustment (psychosocial well-being and post-traumatic stress disorder).

Furthermore, this study aimed at further extending evidence on the asymmetry effect, by showing whether negative compared to positive contact of immigrant people with Italian is a stronger predictor of perceived group discrimination, post-traumatic stress disorder, psychosocial well-being and culture adoption preference. Based on studies of Tip et al. (2019) that suggest that intergroup contacts are positively related to well-being and of Barlow et al. (2019) that suggest an effect in which positive contact strongly predicts positive intergroup outcomes whereas negative contact strongly predicts negative intergroup outcomes, it was expected that positive contact would predict greater psychosocial well-being and culture adoption preference compared to negative contact. Negative contact would predict to a higher extent perceived group discrimination and post-traumatic stress disorder compared to positive contact. In line with previous research (Árnadóttir et al., 2018) on the interplay between positive and negative contact, an interaction effect of positive and negative contact on the outcome variables of the study was explored. The beneficial effect of positive contact could be enhanced (facilitation) or could be diminished for immigrant people who have higher negative contact (poisoning hypothesis). Moreover, the detrimental effect of negative contact could be diminished (buffering hypothesis) or could be enhanced when positive contact is higher (exacerbation).

In addition, given the evidence on the role of acculturation strategies and that of perceived discrimination on psychological well-being (e.g., Berry & Hou, 2016; Hayward et al., 2018; Schmitt et al., 2014), this study also aimed at analyzing the potential mediation of acculturation preferences and perceived group discrimination in the relationship between difference valence contact and both psychosocial well-being and post-traumatic stress disorder. Thus, it was tested a parallel mediation of perceived group discrimination, culture adoption, and culture maintenance on the relationship between positive and negative contact and psychosocial well-being and post-traumatic stress disorder.

Method

Participants

The data of this study were collected between October and November 2018 and included 423 immigrants who agreed and participated in the study. This sample size exceeded the estimated required *N* as specified by G*Power software (Faul, Erdfelder, Buchner, & Lang, 2009) to detect medium effects size within a multiple regression analysis with two predictors (negative contact and positive contact) with 95% power. Of the total sample of immigrants, 231 were men, and 179 were women. Thirteen participants did not indicate their gender. Participants' age ranged from 18 to 70, with the majority of the sample age ranging from 18 to 50 years old. They emigrated from Europe (n= 66), North and South America (n= 21), Africa (n= 240) and Asia (n=83). Thirteen participants did not indicate their provenience. 309 declared they belong to a religion, while 85 declared they did not belong to any religion, and 20 declared they did not know. The majority of the participants declared they had no political orientation (n= 262). Referring to the socio-economic situation, 83 participants declared to perceive their economic situation as poor, 44 as worse than most, 124 as

mediocre, 135 as a good one, 22 as better than others, and only 2 perceived their situation as wealthy. The sample was comprised of immigrants that had no school degree (n= 20), elementary school diploma (n= 78), high school diploma (n= 137), university title (n= 148) other education certification (n= 31). The majority of immigrants were living in Italy for more than a year (n= 310). Participants' immigration reasons were different among each other, as 99 declared they immigrated for economic reasons, 86 for family reasons, 93 to escape from difficulties, 85 for study reasons and 54 for other reasons.

Procedure

The Ethics Committee of Alma Mater Studiorum University of Bologna (Italy) approved the study. Participants for this study were recruited from different areas in Emilia-Romagna in Italy, specifically in Cesena, Ravenna, and Bologna. Informant consent was obtained from the participant before they started with the survey. At the starting point of the data collection, immigrants were contacted among the population of immigrants communities or association (i.e., Cameroonian, Senegalese, Ivorian Coast .etc) and in Cultural Centers (CPIA - Centri Per l'Istruzione Degli Adulti, Zonnarelli) and a "Welcome Centre" (*CAS – Centro d'accoglienza straordinario*) and (Associazione Piccola Carovana) with the approval and the collaboration of the different institutions. Data were collected in loco, that is, during the association sessions, during the Italian classes, and the participants' cultural activities. This was part of a larger research project, and the questionnaire used for data collection had other measures that were not relevant for the present work and were not reported here.

Measures

Positive and negative contact. A series of items were used to measure three forms of positive and negative contact (intimate, superficial, and extended). Thinking of their encounters with Italian people during the last month, participants rated how often the experiences were positive (3 items: "positive", "friendly", "polite") and how often the experiences were negative contacts with host majority group members (3 items: "negative", "unfriendly", "rude"). Participants rated both positive and negative contact items separately for intimate contact (i.e., with a close Italian person) and superficial direct contact (i.e., with a stranger Italian person). Items are adapted from Hayward et al. (2017). For the extended contact measure, participants rated "How many of your close friends and family members…" "have had [positive/negative] experiences when encountering Italian people?". All items were rated on a 5-point scale (1=*never*; 5=*a lot*). These items formed reliable indices for both positive (α= .86), and negative (α = .86) contact.

Psychosocial well-being. This measure was assessed with a subscale of the Mental Health Continuum–Short Form (MHC–SF; Keyes 2005; Italian validation by Petrillo et al. 2015). The psychosocial well-being subscale used in this study consisted of eleven items referred to the last month. Some of the items included in this measure were: "How often in the last month": "did you feel happy?"; "were you interested in life?"; "did you feel satisfied with your life?". Ratings were expressed on 6-point Likert-type scales from 1 (*never*) to 6 (*daily*). Cronbach's Alpha was α= .78.

Culture adoption preference and culture maintenance preference. Six items for each preference were used to measure immigrants' desire for culture adoption (e.g., "I like to go to public celebrations of Italian traditions."; "I would enjoy inviting Italian people at my home.") and culture maintenance (i.e., "I would enjoy inviting immigrant people of my cultural background at my

home."; "I would like to go out with immigrant people of my cultural background."). Items were adapted from Tip et al., 2018. Ratings were expressed on 5-point Likert-type scales from 1 (*disagree strongly*) to 5 (*agree strongly*). Cronbach's Alphas were α= .74 for culture adoption preference and α = .67 for culture maintenance preference.

Perceived group discrimination. Four items were used to measure immigrants' perceived group discrimination. Participants were asked to indicate their agreement with the statements: "I think that immigrants are undervalued in the Italian society," "In the Italian society, people often despise immigrants," "Immigrants meet with more obstacles in their daily life than native Italians," and "Immigrants are often confronted with discrimination." Items were adapted from Yzerbit et al., 2006. Ratings were expressed on 5-point Likert-type scales from 1 (*disagree strongly*) to 5 (*agree strongly*). Cronbach's Alpha was α= .83.

Post-traumatic stress disorder. Six items were adapted from DSM VI, a short version of PTSD, to measure immigrants' post-traumatic stress disorder. Participants rated, "How much have you been bothered by these experiences in the last month?" "repeated, disturbing memories, thoughts, or images of a stressful experience from the past," "feeling very upset when something reminded you of a stressful experience from the past," "avoid thinking about or talking about a stressful experience from the past or avoid having feelings related to it," "feeling distant or cut off from other people," "having difficulty concentrating" and "being super alert/watchful on guard." Ratings were expressed on 5-point Likert-type scales from 1 (*disagree strongly*) to 5 (*agree strongly*). Cronbach's Alpha was α= .82.

Results and discussion

Preliminary analyses

Paired-samples t-tests revealed that participants reported overall higher positive (M = 3.64, SD = 0.73) than negative contact (M = 2.15, SD = 0.74); $t(415) = 25.056$, $p < .001$. This finding was consistent with previous research findings (Barlow et al., 2012; Graf, Paolini, & Rubin, 2014; Pettigrew, 2008). Means, standard deviations, and bivariate correlations for all variables are reported in Table 7. As can be observed, positive contact was positively correlated with well-being and culture adoption preference and negatively correlated with negative contact and perceived ingroup discrimination. There was no significant correlation between positive contact and culture maintenance preference and post-traumatic stress disorder. Negative contact was significantly negatively correlated with psychosocial well-being and culture adoption preference and positively correlated with perceived group discrimination and post-traumatic stress disorder.

A series of hierarchical linear regressions were conducted to compare the effect of positive and negative contact on psychosocial well-being, perceived group discrimination, culture maintenance preference and culture adoption preference and post-traumatic stress disorder. Control variables of age, gender, SES, immigration reasons, language proficiency, time spent in Italy, education level, and the nation of provenience were entered at Step 1. The predictors positive and negative contact were entered at Step 2. To test the positive-negative contact asymmetry as proposed by Barlow et al. (2012), the absolute values of the positive and negative contact coefficients and the correlation between predictors were entered into a t-test that examined the difference between two *related* coefficients, using the equation $t = (b1 - b2) / SE(b1 - b2)$. As seen in Table 8, negative contact and positive contact both predicted well-being and culture adoption

preference. Positive contact had a higher effect in predicting psychosocial well-being and outgroup social interaction compared to negative contact. Referring to the other outcome variables, only negative contact was a significant predictor of perceived group discrimination and post-traumatic stress. There were no significant effects of positive and negative contact on culture maintenance preference. Moreover, the asymmetry effect in favour of negative contact was found for perceived group discrimination and post-traumatic stress disorder

Interactions between positive-negative contact. Moderation analyses were conducted using *PROCESS* (Hayes, 2013). To test the hypothesis, two moderation models were run for each outcome variable. One model in which positive contact was entered as the predictor variable, negative contact as the moderator and age, gender, SES, immigration reasons, language proficiency, time spent in Italy, education level and the nation of provenience as control variables and the other model in which negative contact was entered as the predictor variable, positive contact as the moderator and age, gender, SES, immigration reasons, language proficiency, time spent in Italy, education level and the nation of provenience as control variables. Significant interactions between positive and negative contact only emerged for culture adoption preference and culture maintenance preference (see Table 9).

Referring to culture maintenance preference, the model showed that having high compared to low negative contact increased culture maintenance preference for immigrant people who have high positive contact with natives, whereas no significant difference was found for those who have low positive contact. Moreover, positive contact decreased culture maintenance when negative contact was low. These results might suggest the exacerbation effect of positive contact, as positive contact exacerbates the beneficial effects of negative contact on culture maintenance preference.

The literature on integration acculturation strategy suggests that individuals must pursue a dual approach based on both maintaining their own culture and adopting host culture. Basing-on this evidence, these results suggest that negative contact has a beneficial effect on culture maintenance, as it countervailed the detrimental effects of positive contact that could lead to a less culture maintenance desire by increasing culture maintenance preference which is an important dimension for immigrants' integration.

For culture adoption preference, the model showed that having high compared to low positive contact increased the culture adoption preference for immigrant people who have high negative contact with natives, whereas no significant difference was found for those who have low negative contact. This is a facilitation effect of negative contact, as positive contact yields enhanced benefits in the presence of negative contact(see Figures 1 and 2).

Mediation analyses. A series of parallel mediation models were tested using PROCESS (Model 4; Hayes, 2013). In the first model (Figure 3), the relationship of positive and negative contact with psychosocial well-being was tested simultaneously through the mediation of culture maintenance preference, culture adoption preference, and perceived group discrimination. In the second model (Figure 4), the relationship between positive and negative contact with post-traumatic stress disorder was tested simultaneously using the same mediators. PROCESS was used because it provides an estimation of specific indirect effects. These indirect effects were tested using a bootstrap estimation approach with 5,000 samples. All bias-corrected percentile bootstrap confidence intervals are reported at the 95% confidence level. PROCESS only allows one variable to be specified as a predictor. Two analyses were run for each model (as recommended by Hayes, 2013) – one where negative contact was specified as the predictor and positive contact a covariate,

and one where positive contact was the predictor and negative contact a covariate. This is mathematically equivalent to a model with multiple predictors because, by default, the covariate is set to predict all mediators and outcomes in the model (and so estimates direct, indirect, and total effects).

Psychosocial well-being

The total effect of negative contact on psychosocial well-being was significant and negative (b = -0.22, SE = 0.05, $p < .001$; see Figure 3. This relationship was mediated by culture adoption preference (b = -0.03, SE = 0.01, CIs[-.062, -.012]) and perceived group discrimination (b = -0.05, SE = 0.02, CIs[-.103, -.015]). Culture maintenance preference did not mediate the relationship (b = 0.02, SE = 0.01, CIs[-.001, .044]). Negative contact remained a significant direct predictor of psycho-social well-being after taking into account the mediators. Positive contact had a significant and positive total effect on psychosocial well-being (b = 0.25, SE = 0.05, $p < .001$). There was also a positive indirect effect through culture adoption preference, such that more positive contact predicted higher culture adoption preference, which in turn was associated with higher psychosocial well-being (b = 0.02, SE = 0.01, CIs[.000, .051]). Culture maintenance preference and perceived group discrimination did not mediate the relationship between positive contact and well-being. Positive contact remained a significant direct predictor of psychosocial well-being after taking into account the mediators. The full model depicted in Figure 3, including both positive and negative contact as predictors and culture maintenance preference, culture adoption preference, and perceived group discrimination as mediators, accounted for approximately 16% of the variance psychosocial well-being, R^2 = 0.16, F (10, 342) = 6.574, $p < .001$.

Post-traumatic stress disorder

The total effect of negative contact on post-traumatic was significant and positive ($b = 0.21$, $SE = 0.06$, $p < .01$; see Figure 4). This relationship was mediated by perceived group discrimination ($b = 0.07$, $SE = 0.02$, CIs[.022, .123]). Culture maintenance preference and culture adoption preference did not mediate the relationship. Negative contact remained a significant direct predictor of post-traumatic stress after taking into account the mediators. Total effect of positive contact on post-traumatic stress was not significant ($b = 0.03$, $SE = 0.06$, $p = .62$). There was also no significant indirect effect of perceived group discrimination, culture adoption preference, and culture maintenance preference on post-traumatic stress. The full model depicted in Figure 4, including both positive and negative contact as predictors and culture maintenance preference, culture adoption preference, and perceived group discrimination as mediators, accounted for approximately 15% of the variance in post-traumatic stress, $R^2 = .15$, $F(10, 339) = 6.065$, $p < .001$.

Table 7.

Means (*M*), Standard Deviations (*SD*), and Bivariate Correlations between Study Variables

	M	***SD***	**1.**	**2.**	**3.**	**4.**	**5.**	**6.**	**7.**
1. Positive contact	3.64	0.73	-	-.359**	.324**	-.101*	.048	.242**	-.022
2. Negative contact	2.15	0.74		-	-.255**	.285**	.073	-.223**	.206**
3. Psychosocial well-being	4.32	0.80			-	-.193**	.143**	.229**	-.047
4. Perceived group discrimination	3.56	0.93				-	.096	-.234**	.243**
5. Culture maintenance preference	3.41	0.74					-	-.021	.289**
6. Culture adoption preference	3.85	0.66						-	-.090
7. Post-traumatic stress	3.02	0.91							-

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

Table 8.

Hierarchical Regression Coefficients and Tests of Asymmetry for Positive and Negative Contact.

	Positive contact		Negative contact			
Outcome	β	*b* (*SE*)	β	*b* (*SE*)	t value	Model change statistics (step2)
Psychosocial well-being	.258***	.283 (0.056)	-.186***	-.201 (0.055)	t (388) = 1.26	R^2 = .13, F(2, 380) = 29.573***
Perceived group discrimination	-.014	-.018 (0.064)	.268***	.337 (0.063)	t (396) = -4.08***	R^2 = .07 F(2, 388) = 16.944***
Culture maintenance preference	.087	.087 (0.051)	.074	.073 (.050)	t (396) = 0.23	R^2 = .01 F(2, 388) = 1.907
Culture adoption preference	.185***	.168 (0.046)	-.152**	-.135 (0.046)	t (396) = 0.70	R^2 = .07 F(2, 388) = 16.640***
Post-traumatic stress disorder	.067	.083 (0.064)	.172**	.210 (.063)	t (384) = 1.63*	R^2 = .03 F(2, 376) = 5.504**

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

Table 9. Moderation results for the interaction between positive and negative contact.

		IV = Negative Contact		**IV = Positive Contact**	
DV	Pos × Neg Contact Interaction	High Positive	Low Positive	High Negative	Low Negative
Culture maintenance preference	0.29 (0.06)***	0.33 (0.08)***	-0.09 (0.06)	0.25 (0.07)***	-0.18 (0.07)**
Culture adoption preference	0.10 (0.05)*	-0.07 (0.07)	-0.22 (0.05)***	0.21 (0.06)***	0.06 (0.06)

Note. *p < .05, ** p < .01, *** p < .001. Interaction terms are unstandardized regression coefficients. Numbers in brackets are standard errors. IV = independent variable; high positive = 1 standard deviation (SD) above mean positive contact; low positive = 1 SD below mean positive contact; high negative = 1 SD above mean negative contact; low negative = 1 SD below mean negative contact.

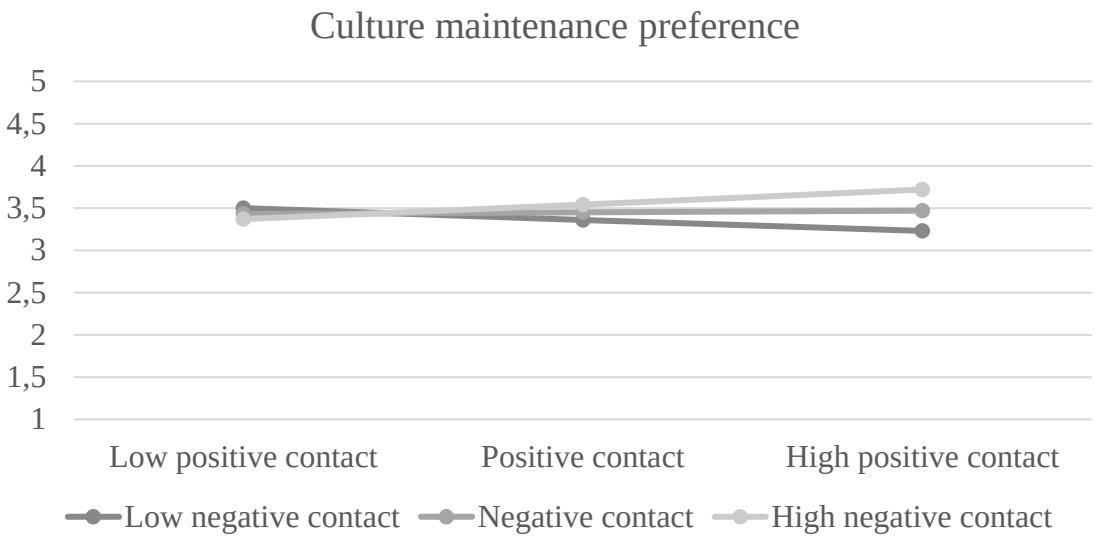

Figure 1. Results for the moderation effect of negative contact on the relation between positive contact and willingness of culture maintenance preference

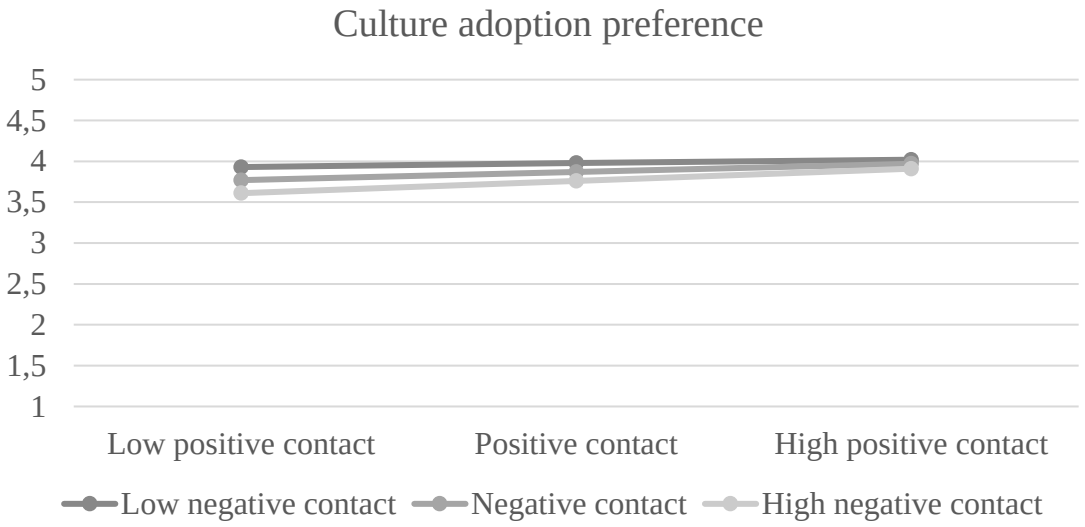

Figure 2. Results for the moderation effect of negative contact on the relation between positive contact and willingness of culture adoption preference.

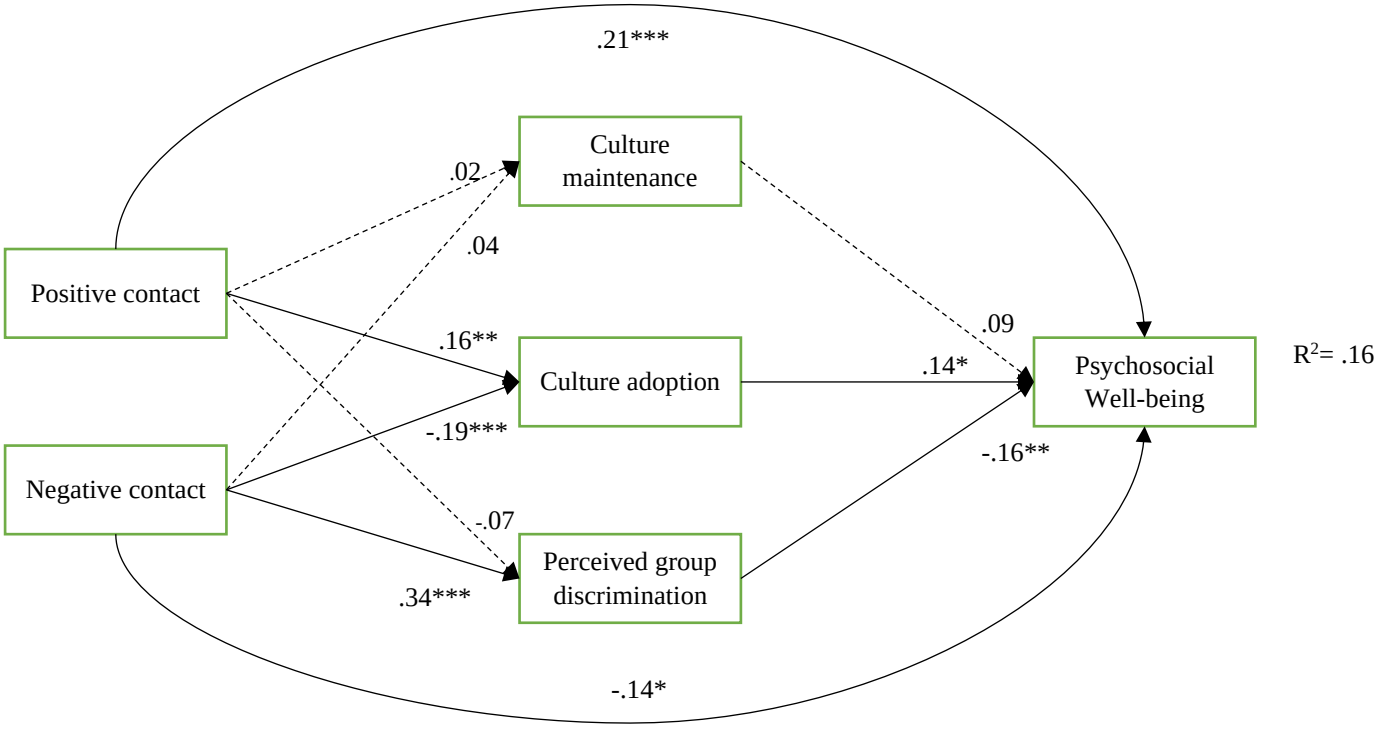

Figure 3. Parallel mediation model of positive and negative contact psychosocial well-being through culture maintenance preference, culture adoption preference and perceived discrimination.
Note. *p < .05; **p < .01; ***p < .001.

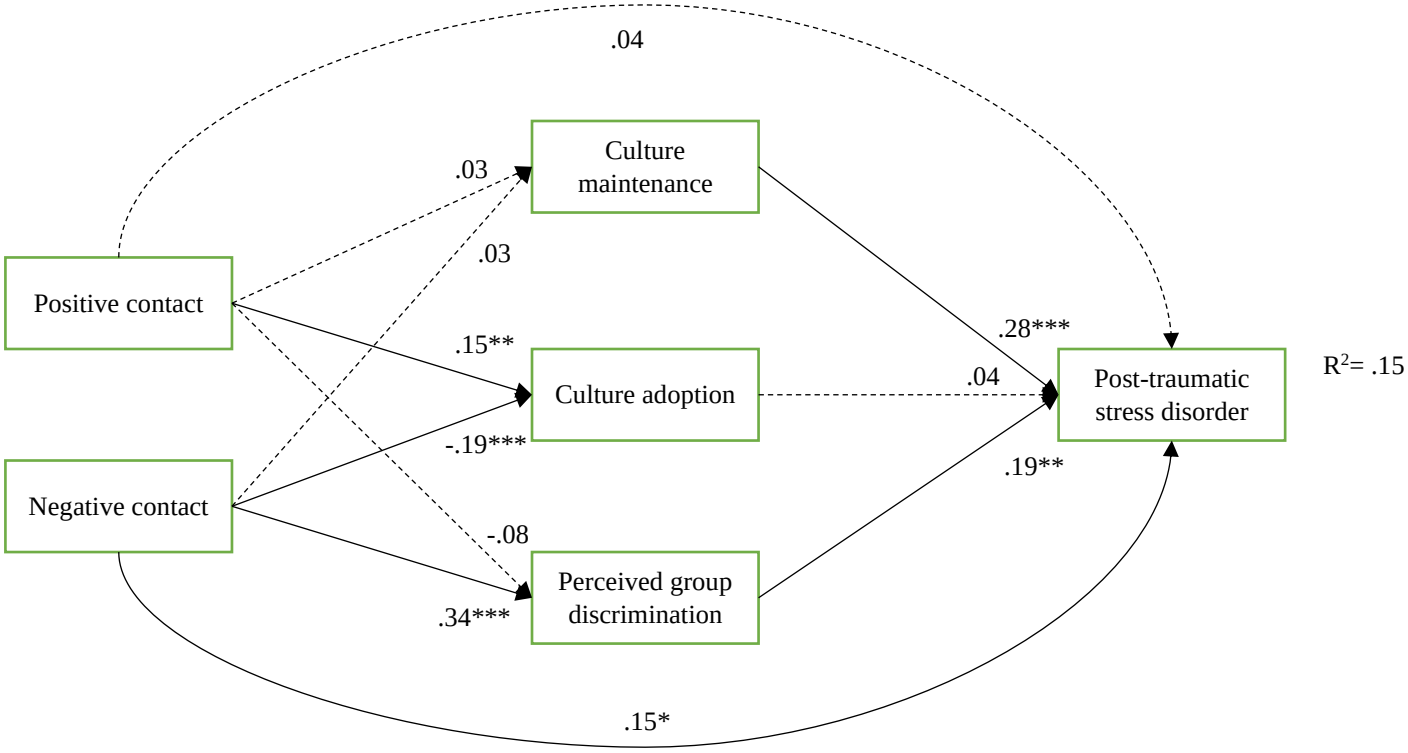

Figure 4. Parallel mediation model of positive and negative contact psychosocial post-traumatic stress through culture maintenance preference, culture adoption preference and perceived discrimination.
Note. *p < .05; **p < .01; ***p < .001.

STUDY IV

The purpose of Study 4 was to explore longitudinally the association between intergroup contact and cultural adjustment and, therefore, to unfold bidirectional associations between intergroup contact and acculturation adjustment of immigrants. It was explored longitudinally the mechanisms that underpin the impact of positive and negative contact of immigrants with native Italians on their acculturation preferences and psychosocial well-being. Specifically, the study investigated two dimensions important for immigrants' social acculturation (e.g., the willingness of culture maintenance and willingness of host culture adoption) and psychosocial well-being as indicators of immigrants' psychosocial adjustment in the host society.

Based on the evidence of study 3 that suggested that positive contact was positively related to wellbeing and culture adoption, whereas negative contact was negatively related to wellbeing and culture adoption, it would be expected that positive contact would be positively related to psychosocial well-being, culture adoption, it would also be expected that negative contact would be negatively related to well-being, culture adoption. The reverse association would also be explored. Moreover, basing on evidence from study 3 that also evidenced that culture maintenance was well predicted by the interaction effect of positive and negative contact, the causal relationship between positive and negative contact and culture maintenance preference will be explored. In order to advance the understanding of this phenomenon, a three-wave longitudinal design was employed. Using this approach, the bidirectional direction between positive contact, negative contact, acculturation preferences, and psychosocial well-being could be explored.

Method

Participants

At the T1 data collection, 423 immigrants agreed and participated in the study. Of the 423 immigrants that took part in the T1 data collection, 260 participated in the second wave and 200 in the third wave. Of the total sample of immigrants of the T1, participants came from Europe (n= 66), North and south America (n= 21), Africa (n= 240), and Asia (n=83). Given these differences among the samples, the subgroup of African (n= 240) was considered for this study. This sub-sample represents the majority of the sample and the most homogeneous and the part of the sample that continue the study in the successive waves.

The sample selected for this study was composed of 240 African immigrants (n= 148 men), with 87.8% of the participants' age ranging from 18 to 40 years old. Of the participants, 83.5 declared themselves to belong to a specific religion. The majority of the participants (74.2%) declared they had no political orientation. Referring to the socio-economic situation, 26.6% declared to perceive their economic situation as good, 30.9% as mediocre, 12% as worse than most, 26% as poor and 3.9% as wealthy or better than most. The sample was comprised of immigrants that had no school degree (5.9%), elementary school diploma (26.3%), high school diploma (35.6%), university title (26.3%) and other education certification (5.9%). Among the participants, 86% declared they were living in Italy for more than a year, 9.7% for a year, and 4.2% for less than a year. Participants' immigration reasons were different among each other, as 29.1%declared they immigrated for economic reasons, 10.3% for family reasons, 31.2% to escape from difficulties, 22.6% for study, and 6.8% for other reasons. At T2, 76.4% of respondents had also participated at T1, and at T3, 67.5% of respondents had also participated at T1. The results of Little's (1988)

Missing Completely at Random (MCAR) test conducted on the study variables yielded a significant result, X^2 (73) = 144.318 $p < .001$. However, the normed χ^2, which can be used to correct for the sensitivity of the χ^2 to sample size (Bollen 1989), was lower than 3 ($\chi 2/df$=1.97), indicating that data were likely missing at random. Therefore, all participants were included in the analyses, and missing data patterns on one or more variables were handled with the Full Information Maximum Likelihood procedure (FIML).

Procedure

The Ethics Committee of Alma Mater Studiorum University of Bologna (Italy) approved the study. Participants for this study were recruited from different areas in Emilia-Romagna in Italy, specifically in Cesena, Ravenna, and Bologna, and also through an online procedure. Data were collected on three-time points (T1–T3), each time point 6 months apart. The T1 data collection took place between October and November 2018, and the T3 data collection ended between December and January 2020. Participants at T1 were adult immigrants (at least 18 years old) living in Italy for a maximum of 5 years. Informant consent was obtained from the participant before they start with the survey. At the starting point of the data collection, immigrants were contacted among the population of immigrants communities or association (i.e., Cameroonian, Senegalese, Ivorian Coast .etc) and in Cultural Centers (CPIA - Centri Per l'Istruzione Degli Adulti, Zonnarelli) and a "Welcome Centre" (*CAS – Centro d'accoglienza straordinario* and Associazione Piccola Carovana) with the approval and the collaboration of the different institutions. Data for the T1 were collected in loco, that is, during the association sessions, during the Italian lessons, and the participants' cultural activities. For the second and third data collection, the participants who agreed to continue the study were contacted again through the same procedure, but given the participant's different

daily commitment, and in order to ensure maximum participation, individual meetings and appointments were fixed with the participants to collect the data. The data were collected where it was more comfortable for them and according to their availability and consent. Therefore, the data collection took place in their home, during the associations' session, during the classes or in the Welcome Centre. In order to link participants' responses across the three waves while ensuring their confidentiality, each participant generated a unique code with five digits (i.e., the third letter of respondent's name; day of birth of the respondent; the first letter of mother's name). This was part of a larger research project, and the questionnaire used for data collection had other measures that are not relevant for the present work and were not reported here.

Measures

The same measures used in Study 1 were employed in this study.

Positive and negative contact. A series of items were used to measure three forms of positive and negative contact (intimate, superficial, and extended). Participants rated in the last month when they have encountered Italian people how often the experiences were positive (3 items: "positive", "friendly", "polite") and how often the experiences were negative contacts with host majority group members (3 items: "negative", "unfriendly", "rude"). Participants rated both positive and negative contact items separately for intimate contact (i.e., with a close Italian person) and superficial direct contact (i.e., with a stranger Italian person). Items are adapted from Hayward et al. (2017). For the extended contact measure, participants rated "How many of your close friends and family members…" "have had [positive/negative] experiences when encountering Italian people?". All items were rated on a 5-point scale (1 = *never*; 5 = *a lot*). These items formed reliable

indices for both positive (α_{T1} = .86; α_{T2} = .84; α_{T3} = .78), and negative (α_{T1} = .86; α_{T2} = .87; α_{T3} = .67) contact.

Psychosocial well-being with a subscale of the Mental Health Continuum–Short Form (MHC–SF; Keyes 2005; Italian validation by Petrillo et al. 2015). The psychosocial well-being subscale used in this study consists of eleven items referred to the last month. Some of the items included in this measure were: "How often in the last month": "did you feel happy?"; "were you interested in life?"; "did you feel satisfied with your life?". Ratings were expressed on 6-point Likert-type scales from 1 (*never*) to 6 (*daily*). Cronbach's Alphas were α_{T1}= .78; α_{T2}= .75; α_{T3}= .88.

Culture adoption preference and culture maintenance preference. Six items each were used to measure immigrants' desire for culture adoption (i.e., "I like to go to public celebrations of Italian traditions."; "I would enjoy inviting Italian people at my home.") and culture maintenance (i.e., "I would enjoy inviting immigrant people of my cultural background at my home."; "I would like to go out with immigrant people of my cultural background."). Items were adapted from Tip et al., 2018. Ratings were expressed on 5-point Likert-type scales from 1 (*disagree strongly*) to 5 (*agree strongly*). Cronbach's Alphas were α_{T1} = .74; α_{T2} = .74; α_{T3} = .77 for Culture adoption preference and α_{T1} = .67; α_{T2} = .73; α_{T3} = .77 for Culture maintenance preference.

Results and discussion

Preliminary analyses

Means, standard deviations, and correlations among study variables are reported in Table 10 (see appendix).

Cross-Lagged Analyses

To achieve the goal of examining the longitudinal associations between positive and negative contact and well-being, Cross-lagged analyses in Mplus with the MLR estimator were conducted. To keep a proper balance between the sample size and the number of parameters in the model (Bentler and Chou 1987; Kelloway 2015), the model using observed variables were tested. For all models, scale scores were used (i.e., mean scores across items included in a measure) to measure the constructs. Thus, the constructs were examined as observed variables, not latent variables, corresponding to how the new cross-lagged models have been described in the literature. Specifically, As is common in cross-lagged analyses, it was tested whether stability paths and cross-lagged associations could be constrained to be equal over time in all models (i.e., whether the stability and cross-lagged effects from T1 to T2 were equal to the same associations from T2 to T3). Thus, to model the longitudinal associations as parsimoniously as possible, time-invariance of (a) stability paths (T1→T2, T2→T3); (b) cross-lagged effects (T1→T2, T2→T3) was tested differences between models were established when two out of these three criteria were matched: $\Delta\chi_{SB}^2$ significant at $p < 0.05$ (Satorra and Bentler 2001), $\Delta CFI \geq -0.010$, and $\Delta RMSEA \geq 0.015$ (Chen 2007). Moreover, using assessments that are equally spaced across time allows constraining structural coefficients (i.e., autoregressive and cross-lagged effects) to be equal across intervals, which increases the precision of estimates and keeps the models simple. Therefore, two CLPM were modeled, one model in which age, gender, SES, immigration reasons, language proficiency, time spent in Italy, and education level were regressed as control variables on the variables of the study and a model without control variables. Using a step-back method, the results for the two models (see Table 11 and 12) confirmed that partial time-invariance could be established for stability paths and cross-lagged effects. Thus, the more parsimonious model (M7) could be retained as the final one. The fit of this model was good. Complete model results are reported in Tables 13

and 14 (see appendix), and the significant cross-lagged paths are reported in Figures 5 and 6 (see appendix).

Model with control variables. Negative contact was negatively related to positive contact, but not in the other direction. Negative contact negatively predicted psychosocial well-being at both time points. Culture maintenance preference was positively related with negative contact from T1 to T2, but not from T2 to T3, and negatively related to culture adoption from T2 to T3 but not from T1 to T2. Referring to the control variables' effect, positive contact was predicted positively by time spent in Italy from T1 to T2, negatively by Socio-economic status from T2 to T3. Negative contact was negatively predicted by language level from T1 to T2 and positively by education level from T2 to T3. Psychosocial well-being was predicted positively by age from T1 to T2. Culture adoption preference was predicted positively by gender and language level from T1 to T2. Culture maintenance was predicted positively by time spent in Italy from T1 to T2 and negatively by gender and language level from T2 to T3.

Model without control variables. Positive contact negatively predicted culture adoption preference from T2 to T3. Negative contact predicted culture maintenance positively from T2 to T3, and willingness of culture maintenance predicted positively negative contact from T1 to T2. Psychosocial Well-being was positively related to positive contact at both time points, and negative contact was negatively related to well-being at both time points.

Discussion

Understanding the role that positive and negative intergroup contact in shaping immigrant acculturation and psychological adjustment represented the core of this study. In recent decades, the field of intergroup contact has highlighted the importance of considering the beneficial and detrimental effects of intergroup contact on intergroup attitudes. In the current work, results from one cross-sectional study (Study 3) and one longitudinal study (Study 4) tackled and expanded this emerging literature in the field of joint effects of positive and negative contact. Findings showed that in line with Barlow et al. (2019), negative contact strongly predicted negative outcomes such as perceived group discrimination and post-traumatic stress disorder, whereas positive contact strongly predicted positive outcomes such as culture adoption preference and psychosocial well-being (Study 3). Moreover, negative contact was associated with less psychosocial well-being over time and psychosocial well-being with more positive contact over time (Study 4).

In Study 3, evidence for asymmetry was found in favor of negative compared to positive contact on perceived group discrimination and post-traumatic stress disorder. Specifically, there was a significant and positive association between negative contact and perceived group discrimination and between negative contact and post-traumatic stress, whereas positive contact did not show a significant decreasing effect on these variables. Furthermore, positive contact was a stronger predictor of positive outcome variables, as its significant effect in increasing psychosocial well-being and culture adoption preference was stronger than the significant effect of negative contact in decreasing them. The findings support previous evidence about the strength of positive contact in predicting positive outcomes and negative contact in predicting negative outcomes (Barlow et al., 2019; Hayward et al., 2017).

Moreover, positive contact exacerbated the beneficial effects of negative contact in increasing culture maintenance preference. As it might be expected that positive contact with members of the outgroup yield to the reduction of the willingness to exclusively maintain own culture, these effects were buffered such that whereas in the presence of lower negative contact, positive contact led to a decrease in culture maintenance, higher negative contact led to the opposite effect, that is increased in culture maintenance preference even when positive contact was high. By contrast, positive contact exacerbated the association between negative contact and willingness of culture maintenance such that negative contact increased willingness of culture maintenance even when positive contact was high. These effects of positive and negative contact can be read under different light regarding the culture maintenance preference. The evidence on integration highlights a bi-dimensional process in which individuals should keep higher their willingness to maintain their culture and their willingness to adopt the host culture. Considering the culture maintenance dimension solely, the results of study 3 might suggest that positive contact reduces culture maintenance, preventing individuals from relying exclusively on their culture of origin. However, considering that individuals must keep high the culture maintenance preference, positive contact might become an obstacle to this aim, reducing culture maintenance. In contrast, negative contact has a beneficial effect as it increases individuals' culture maintenance preference. But this increase in culture maintenance is beneficial for the integration process if it is also associated with an increase in culture adoption preference.

Evidence for this effect of contact in increasing culture adoption preference was also supported. Indeed, for culture adoption preference, evidence for facilitation was found such that positive contact increased culture adoption preference at a higher negative contact. Finally, the

results also showed that negative contact strongly weakened culture adoption preference when positive contact was lower.

The results of study 3 suggest that positive and negative contact influence the acculturation process in a way that fosters integration strategy. If positive contact seems to be a stronger predictor that increases the culture adoption preference, to keep balanced or higher the second dimension of integration, positive and negative contact are necessary.

Perceived group discrimination was an important mediator of the relationships of negative contact with both well-being and post-traumatic stress disorder. Perceived group discrimination explained the relationship between negative contact and decreased psychosocial well-being as well as between negative contact and increased post-traumatic stress disorder.

Culture adoption preference also explained the relationship between positive and negative contact and psychosocial well-being. Positive contact increased culture adoption preference leading to an increase in psychosocial well-being, and negative contact decreased culture adoption, leading to a decrease in psychosocial well-being. These results suggested the prominent role of negative contact in shaping immigrants' adaptation. Though positive contact also showed significant effects on the outcome variables, negative contact more strongly affected the outcome variables, supporting the call of different studies to account for both positive and negative contact in the intergroup contact research design.

Findings of Study 4 indicated that negative contact was a stronger predictor of psychosocial well-being over time, independently of individual factors. Interestingly, when testing the model without control variables, psychosocial well-being was a strong predictor of positive contact over

time as it increased positive contact with Italians at later times. These findings showed that intergroup contact could be linked longitudinally to the well-being of minority members. In this regard, Tip et al. (2019) found that intergroup contact with the majority group was associated with better well-being of minority group members at a later time by considering the effect of positive and negative contact. The evidence in this study showed a reverse causal link, relying on the role of psychosocial well-being as a proxy of positive interactions over time (see also Eller et al., 2016). The findings also showed that negatively valenced contact undermined positively valenced contact in such a way that over time experiences perceived as negative have a stronger detrimental effect on experiences perceived as positive, reducing them. This implies a strong effect of negative contact over time even though positively valenced contact was reported as higher than negatively valenced contact.

When considering the model without individual factors, thus without control variables, culture maintenance preference at T1 remained a significant predictor of negative contact at T2, but negative contact at T2 significantly increased culture maintenance preference at T3. However, positive contact led to a decrease in cultural adoption over time. The study also highlighted that culture maintenance was directly associated with psychosocial well-being among immigrants over time. Indeed, culture maintenance preference predicted higher negative contact and psychosocial well-being (from T1 to T3), and the latter predicted decreased culture adoption preference and psychosocial well-being (T2-T3). These results suggest that maintaining their own culture increased immigrants' negative experiences with native Italians but served as anchor sources for their psychosocial well-being. However, these results tend to reverse in the long run, as high culture maintenance led to decreased psychosocial well-being. Such effect can be explained by the fact

that being exclusively connected with the members of the ingroup might prevent individuals from becoming adapted to the society in which they are living and might increase their likelihood of feeling isolated or alienated by the members of the host society, resulting in worse psychosocial well-being and more negative experiences. This effect can also find support in studies that show that high involvement with the country of origin has a negative effect on immigrants' psychological well-being, as immigrants who prefer to be involved only in their group of origin feel unwelcome, discriminated and excluded from the host society (Antoniou & Dalla 2011). Moreover, as stated by studies on integration, a certain amount of culture maintenance is necessary for immigrants to favour a good integration. This necessity can explain the longitudinal association between negative contact and culture maintenance preference. The results seem to suggest that negative contact is necessary for immigrants to maintain their desire to maintain their own culture in the host society.

General Discussion

The current findings allow drawing several conclusions that advance the understanding of the effects of positive and negative contact on immigrants' attitudes and adaptation in their host society. Across four studies, it was demonstrated that positive and negative contact has joint and differential effects on the different outcomes that affect the acculturation process, such as social avoidance, anxiety, symbolic threat, acculturation preferences, and psychological adjustment. Overall, the findings provide further evidence that differences in the joint effect of positive and negative contact vary across these different outcomes.

Study 1 and Study 2 showed that negative contact is a consistent predictor of immigrants' motivation to avoid relationships with natives. In contrast, positive contact is a consistent predictor of the decrease in the attitudes of social avoidance toward the majority group of natives.

Moreover, evidence yielded that intergroup anxiety explained the association between intergroup contact and immigrants' attitudes of avoidance. In particular, analyses on the two samples of immigrants in Italy and Turkey revealed that positive and negative contact had indirect effects on respectively decreased and increased attitudes of avoidance via respectively decreased and increased anxiety about interacting with outgroup members. Thus, the findings of the studies enlarge the evidence that intergroup anxiety is a critical mediator of not just positive but also negative contact - attitudes of social avoidance relationship. Although past research indicated that positive contact directly predicts positive intergroup attitudes (see Pettigrew & Tropp, 2006), the data analyzed in this work revealed mixed support for this notion when accounting for negative contact. It was found that positive contact was directly associated with reduced intergroup attitudes of avoidance when negative contact was not taken into account. But when it was considered,

positive contact became a less reliable predictor of intergroup attitudes. In particular, when accounting for negative contact, the beneficial effects of positive contact were poisoned by the negative contact. These findings were also consistent when tapping into the effects of positive and negative contact on other outcomes related to immigrant people adaptation, such as culture preference and psychological adjustment. Indeed, findings in Study 3 support the evidence that positive contact strongly predicts positive outcomes, and negative contact strongly predicts negative outcomes (e.g., Barlow et al., 2019).

Furthermore, evidence for the joint effect of positive and negative contact was also found (Study 3). Findings suggest an exacerbating effect of positive contact on culture maintenance and a facilitation effect of positive contact on culture adoption. The findings of Study 3 also revealed for the first time that positive and negative contact had indirect effects on psychological adjustment via respectively perceived group discrimination and culture adoption preference. However, negative contact emerged as a more consistent and stronger predictor. Exploring these associations longitudinally in Study 4, the gathered evidence supports the role of positive and negative contact in the association with acculturation preference and psychosocial well-being. The evidence of this study revealed a prominent role of negative contact in influencing these outcomes.

Overall, the results provide further information on the long-standing assumption that positive contact directly improves intergroup attitudes. Instead, the findings of the studies carried out are in line with contract theorists who have posited that negative contact can weaken the beneficial effects of positive contact and that positive contact may be a less stable predictor of intergroup attitudes (Barlow et al., 2012). They further highlight the importance of considering negative contact when examining the benefits of positive contact.

These results highlighted the impact of intergroup contact in facilitating the adaptation of individuals to a new social context. As various scholars have shown, the adequate adaptation of immigrants to their host society needs to find the right balance between the sense of belonging to their group of origin and the need to adopt cultural aspects of the host society, which are indispensable for an adequate integration and for the development of resources that tend to increase individual well-being. In this process, the type of interactions that immigrant people develop with the members of the host society are of great importance. Indeed, in multicultural societies, the need to integrate new members, with the aim of promoting social cohesion, implies as a first important step to control their desire to come into contact with their host society by reducing factors such as anxiety, fear of being stereotyped that lead to increase the motivation to e social avoidance. Thus, new evidence was provided that intergroup contact is at the basis of changes that might occur, for better or for worse, in immigrants' attitudes and adaptation to their host society. Here, the findings demonstrated that contact effects might be more robust than originally anticipated, especially for immigrants.

Theoretical Implications

Recent research in the contact literature has noted that it is critical to define factors that motivate individuals to engage in volitional contact and to take on opportunities for novel cross-group interactions (Paolini et al., 2018; Turner & Cameron, 2016). Study 1 and Study 2 contributed to this current lack in the literature by showing in two different contexts, such as Italy and Turkey, the relationship between the quantity of positive and negative contact of immigrant people and their desire to avoid interactions with native people. Evidence consistently showed the stronger role of negative compared to positive contact in predicting minority group behavioural intentions.

On the one hand, this result further supports previous research indicating the strength of negative compared to positive contact (Barlow et al., 2012; Hayward et al., 2017). On the other hand, it extends previous research by using a measure of intergroup contact that includes different behaviours toward outgroup members, focussing on the less studied perspective of immigrant people in two countries currently facing immigration issues, such as Italy and Turkey. Specifically, drawing from previous research (Hayward et al., 2017), evidence has been collected on the frequency of positive and negative intergroup contact experiences to cover the complexity of intergroup contact.

Overall, Studies 1 and 2 addressed relevant issues related to reciprocal adaptation and integration between native and immigrant people in current modern societies. The studies focused on the impact of daily intergroup encounters of immigrant people on social avoidance in order to provide useful information on when and how immigrant people are driven to segregate themselves from the rest of the host society as a first step leading to prevent the construction of harmonious intergroup relationships. Evidence highlights that the way in which immigrant people perceive to be treated by the majority group in their encounters affects their motivation to have future interactions with them and the possibility of building positive relationships. This motivation represents the first step for their integration into the host society.

Acculturation preferences, such as culture adoption and culture maintenance, and psychological adjustment represent the second stage in the immigrants' adaptation process to their host society. Although most research argues that acculturation strategies (integration, assimilation, marginalisation and segregation) play a crucial role in determining the psychological adjustment of individuals (e.g., Berry et al., 2006), Study 3 and Study 4 showed the importance of

distinguishing between individual preferences of maintaining own group culture and adopt host group culture and, more importantly, how contact with the members of the outgroup shape these preferences and the way in which individuals psychosocially adjust to the host society. Study 3 contributed to this literature by showing the relationship between the positive and negative contact of immigrant people in Italy and their acculturation preferences. The evidence consistently showed the stronger role of positive contact in predicting positively valenced outcome variables such as culture adoption and psychosocial well-being when negative contact was also accounted for. The evidence further consistently showed the stronger role of negative contact in predicting negatively valenced outcomes variables such as post-traumatic stress disorder, when positive contact was also accounted for. This result support previous research indicating the strength of positive and negative contact in predicting outcome variables that matched their valence (Barlow et al., 2019).

Moreover, the results expand previous literature (Ramos et al., 2016; Tip et al., 2019) by integrating positive and negative contact in the research design on immigrants' acculturation preferences and psychological adjustment. Third the results expand the preliminary evidence in the literature (Árnadóttir et al., 2017) on the interaction of positive and negative contact, showing for the first time that positive contact exacerbated the effect of negative contact on culture maintenance preference. Moreover, negative contact facilitates the effect of positive contact on culture adoption preference. These results are relevant as they suggest that in the process of adapting to a new society, when immigrants are confronted with only negative experiences, they tend to anchor mainly with their own group, favoring culture maintenance preference and avoidance of integrating with the host society. However, once immigrants experience positive interactions (even in conjunction with negative interactions), these positive interactions are enough to increase seeking

for contact with the host culture, thus favoring the preference for host group culture adoption. Negative experiences have a further beneficial effect in facilitating host culture adoption, as they enhance the effects of positive experiences on immigrants' seeking contact with the host culture. Furthermore, it was shown that culture adoption explained the relationship between positive and negative contact and psychosocial well-being. These results highlight that intergroup contact affects the behavioural intention of integrating with the host culture, which contributes to explaining immigrants' psychological adjustment.

Study 4 showed consistent results of positive and negative valence contact on immigrants' adaptation over time. Positive contact was positively related to psychosocial well-being over time, and the findings supported a causal direction from psychosocial well-being to positive contact over time. This result is theoretically important as it suggests that immigrants' psychosocial well-being in the host society represents a proxy to perceive interactions with the natives in a positive light. The findings also highlighted the notion that immigrants' negative experiences with host natives strongly decrease their psychosocial well-being over time and, to some extent, undermines their desire to adopt host native culture and but favor the increase of the desire to remain anchored to the ingroup. Thus, this research supports the assumption that "bad is stronger than good" (Baumeister et al., 2001; Paolini et al., 2012), but also that bad can have a good purpose. These results are relevant to the literature on intergroup contact and cultural adaptation of immigrants, explaining the impact of both positive and negative contact over time.

For example, if individuals endorsing participation in the host society see their preferences thwarted, it is likely that this will foster attitudes that lead to intergroup distance. In societies where cultural groups endorse separation and live segregated from the majority, there also might be few

opportunities to counteract this tendency toward mutual distancing. This evidence is particularly relevant given that the segregation and marginalization of cultural groups often result in reciprocal problematic relationships among immigrants and the dominant group. Indeed, as the study findings suggested, if culture maintenance preference represents a proxy that promotes psychosocial well-being, in the long run remaining mainly anchored to own group becomes a double-edged sword that leads to the deterioration of well-being in the host societies.

The present work contributes to the literature also by showing the importance of monitoring the effects of negative contact in promoting culture maintenance as one of the dimensions that foster integration, accounting for the balance between maintenance and adoption of the host culture.

Therefore, future research should adopt a different approach in which the focus will be on the impact of the daily interactions between immigrants and the natives, as a prerequisite for successful integration in the host society, characterized by immigrants' anchoring to both their group (i.e., to the end of achieving identity stability and facilitation in coping with the acculturative stress) and the group of natives group (i.e., as an important point of reference to get information and get familiar with the norms and values at the bases of the society).

Practical Implications

Practices aiming to aid immigrant populations are often not sensitive to the findings highlighted in this work and try to promote social contact with host social networks to facilitate the integration process. This effort can be seen as a valuable means of reducing the cultural gap and promoting contact between host and other culturally diverse groups. However, our research

suggests that as a prerequisite, it is important to understand acculturation preferences and promote intergroup interactions according to these preferences. Namely, intervention practices need to display sensitivity to individual acculturation preferences and their association with contact with different natives.

Furthermore, it has been found that the integration strategy is often associated with the best adaptation and well-being outcomes (Berry et al., 2006). In the light of the literature, it might be that the two acculturation preferences - culture adoption and culture maintenance -, are important for the successful adaptation because it allows acculturating individuals to benefit from both in groupers and host friendship networks (see for a similar argument, Benet-Martínez, 2010; Berry, 1997, 2005). This means that if, for example, individuals experience discrepancies in their participation in the host society, they are still able to find social support from their cultural group. If intervention practices seek to promote contact with different friendship networks, it is also important for them to support contact with immigrants' cultural groups. At a societal level, this reasoning provides some support for the endorsement of *multicultural* policies under which immigrants are encouraged both to have contact with the receiving country and to maintain their cultural background, and in turn, dominant groups are encouraged on a social level to adopt more integrative attitudes rather assimilation attitudes toward immigrants. Therefore, it seems particularly important to pay attention to negative contact experiences, which can be linked to immigrants' intention to maintain their cultural heritage. Careful monitoring of these situations could help to favor culture maintenance among immigrants, without this resulting in lower levels of well-being.

In light of the evidence highlighted in this work, Allport's proposal to put the active support of institutions at the center of the considerations aiming at improving intergroup relations represent a fundamental intervention that should be taken into account to promote immigrants' integration in their host society and reduce the deleterious effects of negative experiences in their integration process. Immigrants' integration process takes place within the interactions between groups, and one of the fundamental environments that facilitate this process is the school. Indeed, the school promotes everyday interactions within which individuals share a common purpose, cooperate and interact on equal status. Such interactions promote the establishment of mutual knowledge between immigrants and natives and the development of positive interactions, facilitating social integration. Therefore, it is important that institutions and formal authorities become aware of the fundamental role of the environment based on intergroup interactions, such as school, in promoting integration.

Limitations and Directions for Future Research

Some limitations to this research are acknowledged. Overall, studies 1 and 2 were cross-sectional, thereby offering limited assumptions about the causality of the relationship between intergroup contact and social avoidance. One can think of other possible pathways between the suggested variables, such that behavioral intentions may lead to more or less negative intergroup contact. Nevertheless, reversed models were tested and showed that these were not significant. Hence, preliminary experimental studies have already shown the efficacy of contact in affecting behavioral intentions, such as social avoidance (Hayward et al., 2017).

It is also acknowledged that in Study 4, the attrition rate of the sample is not ideal. However, considering the "hard-to-reach" and somewhat transient nature of the sample considered in this work, a higher than usual attrition rate was to be expected. Another limitation relies on the fact that the sample was ethnically quite heterogeneous regarding the nation of provenience, which doubtless added some complexity, not to say "noise," to the data. Even though immigrants' provenience in the samples of the study was always controlled for, the specific social context of their country of provenience could not be addressed, as it was mainly referred to their continent of provenience.

However, the restricted sample size made it impossible to properly control all individual factors in the analyses. Future research must consider these factors as they determine the way in which individuals interact with the host context and how this is associated with the integration process and the well-being in the host society. One of those factors is the time spent in the host society. The studies carried out took into account individuals who were in Italy for a maximum of 5 years. However, in that time span, acculturation preferences might have already been established and deepening, which might explain the scarce effects of positive and negative contact on acculturation preference. Directions for future research would be to study the acculturation process longitudinally, starting from the arrival of immigrants in their host society. This procedure would allow not only having clear evidence on the effect of positive and negative contact on immigrants' acculturation process and psychosocial adjustment, but it also tackles how those effects vary according to individual characteristics such as age, gender, immigration reason, country of provenience, immigration motivations and education level.

Although important findings in the present work were shown, it is acknowledged that the intergroup contact field is still in the first-fruit in the research on negative contact from immigrants people's perspective. Further investigation of negative contact and how it may undermine positive contact's beneficial effects is needed, especially on a contextual level. A future line of research should investigate how positive and negative contact affects immigrants' acculturation preferences and well-being in different spheres of life. As suggested by Navas et al. (2007), individuals' acculturation strategies vary according to the spheres of life. Another future research could investigate positive and negative contact effects on immigrants' adaptation in the light of factors such as immigrants' expectations toward the host society at the moment of arrival (whether their expectations were met or not), background, and cultural similarities. For instance, in Study 4, immigrants from Africa were mainly from French-speaking Africa, supposing a French cultural background. It could be interesting to investigate the adaptation process in the light of cultural similarities between immigrant people and host natives.

Conclusion

The current work contributes to intergroup contact literature by providing evidence on the perspective of minority groups' positive and negative experiences on their adaptation to everyday intergroup encounters.

In many societies facing important migratory flows, immigration is often a source of "shock of the culture" and often leads to the "integration crisis." Integration crisis can be defined as the conflictual situation that arises when groups of individuals with different geographical, cultural, or ethnic backgrounds meet and interact with one another. Such crisis is often caused, on the one hand, by the exposure of individuals accustomed to a particular cultural environment to another, sometimes diametrically opposed, cultural context and on the other hand by the necessity for individuals to redefine social interactions and norms that are adaptive for all social groups. In this vein, the "integration crisis" is considered a central issue in a growing number of European countries, with a particular focus on minority group integration (http://www.oecd.org/migration/integration-of-migrants-and-refugees-challenges-and-opportunities.htm). Therefore, "Integration policies" seem to be part of the administrative and social landscape of the classic governmental arsenal of European countries.

In most cases, however, not only the implementation and achievement of social integration projects are still far from being reached, but they are not even classified as urgent essential issues in host countries. During the last decades, while economic and financial crises, unemployment, wars, and famine, just to name a few, have increased the migratory phenomenon, admittedly the necessity for the European Union governments to cope with the "living together and intergroup contact" issues have become relevant, but not properly solved. In this "melting pot" environment,

whereas the inclusion of the new members in the host societies is the basis for social integration (Fleras, 2009), immigration policies based on optimal contact approach (Allport, 1954; Pettigrew & Tropp, 2008; Pettigrew & Tropp, 2006; Brown & Hewstone, 2005, Gaertner & Dovidio, 2000) must be pursued to countervail the deleterious effect of negative contact. Indeed intergroup contact based on positive features increases people's knowledge about the outgroup and then breaks prejudices and stereotypes, facilitating reciprocal integration.

This work highlighted how the type of interactions, particularly negative ones, with members of the host group could represent an obstacle to the inclusion and adaptation of immigrants in the host society. This result highlights how intergroup contact is fundamental in explaining why the difficulties persist for immigrants to integrate into society, leading to maintaining group segregation, and potentially fueling intergroup avoidance or conflicts. Therefore, it appears important that social inclusion policies pay attention to the type of intergroup contact between natives and immigrants, promoting positive interactions. To facilitate their adaptation, immigrants must try as much as possible to develop social networks composed of members of the host society, but also members of their own group, and within which interactions are positive.

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Appendix

Table 10. Means (M), Standard Deviations (SD) and Bivariate correlations among variables of the study

	M	SD	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.	13.	14.	15.
1. Positive contact T1	3.61	0.71	-.289**	.313**	.129*	.109	.451**	-.284**	.244**	.213**	.125	.383**	-.272**	.092	-.036	-.075
2. Negative contact T1	2.26	0.72	-	-.366**	-.188**	.039	-.331**	.412**	-.352**	-.126	-.081	-.143	.267**	-.094	.121	.044
3. Well-being T1	4.39	0.70		-	.269**	-.009	.343**	-.208**	.254**	.318**	.088	.089	-.108	.241**	.027	-.013
4. Culture adoption preference T1	3.79	0.67			-	-.095	.165*	-.256**	.094	.647**	-.173*	.053	.011	.161*	.331**	-.118
5. Culture maintenance preference T1	3.56	0.67				-	.115	.187*	.124	-.069	.734**	.052	-.083	-.157*	-.270**	.479**
6. Positive contact T2	3.89	0.55					-	-.421**	.298**	.322**	.201**	.309**	-.076	.131	-.109	-.081
7. Negative contact T2	2.12	0.54						-	-.214**	-.366**	.251**	-.193*	.236**	-.260**	-.062	.303**
8. Well-being T2	4.27	0.72							-	.270**	.035	.110	.016	.121	-.115	.009
9. Culture adoption preference T2	3.79	0.57								-	-.120	.094	-.041	.222**	.269**	-.135
10. Culture maintenance preference T2	3.62	0.64									-	.101	-.022	-.214**	-.266**	.441**
11. Positive contact T3	3.51	0.55										-	-.448**	.419**	.140	.041
12. Negative contact T3	2.34	0.49											-	-.242**	-.025	.119
13. Well-being T3	4.04	0.83												-	.399**	-.072
14. Culture adoption preference T3	3.53	0.74													-	-.037
15. Culture maintenance preference T3	3.45	0.71														-

T = time; M = Mean, SD = Standard deviation

*p < 0.05, **p < 0.01, ***p < 0.001

Table 11. Cross-Lagged Models: Fit Indices and Model Comparisons (model including control variables – age, gender, Socio economic status, education level, time spent in Italy, immigration reasons, language level).

	Model fit indices					Model comparison					
	χ_{SB}^2	*df*	CFI	TLI	RMSEA [90% CI]	Models	$\Delta\chi_{SB}^2$	Δdf	*p*	ΔCFI	ΔRMSEA
M1. Baseline model	117.638	60	.902	.731	.066 [.048, .084]						
M2. Model with stability constrained	121.948	65	.903	.755	.063 [.046, .081]	M2-M1	5.036	5	.411	.001	-.003
M3. Model with stability + cross-lagged constrained	160.077	85	873	.753	.064 [.048, .079]	M3-M2	38.125	20	.009	-.03	.001
M4. Model fully constrain – constrain maintenance on well-being	153.536	84	.882	.768	.062 [.046, .077]	M3-M4	8.523	1	.004	-.009	.002
						M4-M2	31.660	19	.034	-.021	-.001
M5. Model 4 - constrain positive contact on adoption	146.366	83	.892	.786	.059 [.043, .075]	M4-M5	8.917	1	.003	-.01	.003
						M5-M2	24.688	18	.134	-.011	-.004
M6. Model 5 -constrain maintenance on negative contact	142.560	82	.897	.793	.058 [.042, .074]	M5-M6	3.839	1	.050	-.005	.001
						M6-M2	20.964	17	.228	-.006	-.005
M7. Model 6 -constrain maintenance on adoption	139.075	81	.901	.799	.057 [.041, .073]	M6-M7	4.734	1	.030	-.004	.001
						M7-M2	17.796	16	.336	-.002	-.006

Table 12. Cross-Lagged Models: Fit Indices and Model Comparisons (model without control variables).

	Model fit indices					Model comparison					
	χ_{SB}^2	*df*	CFI	TLI	RMSEA [90% CI]	Models	$\Delta\chi_{SB}^2$	Δdf	*p*	ΔCFI	ΔRMSEA
M1. Baseline model	51.460	25	.949	.804	.066 [.040, .092]						
M2. Model with stability constrained	52.040	35	.957	.864	.055 [.028, .080]	M2-M1	2.626	5	.76	.008	-.011
M3. Model with stability + cross-lagged constrained	101.078	50	.901	.811	.065 [.047, .084]	M3-M2	47.940	20	.00	-.056	.010
M4. Model fully constrain -constrain positive contact on adoption	90.431	49	.919	.844	.059 [.040, .078]	M3-M4	15.017	1	.000	-.018	.006
						M4-M2	37.909	19	.01	-.038	.004
M5. M4 -constrain maintenance on negative contact	82.176	48	.934	.868	.054 [.034, .074]	M4-M5	7.635	1	.01	-.015	.005
						M5-M2	30.234	18	.04	-.023	-.001
M6. M5 -constrain maintenance on well-being	77.705	47	.940	.879	.052 [.030, .072]	M5-M6	5.339	1	.02	-.006	.002
						M6-M2	26.054	17	.07	-.017	-.003
M7. M6 -constrain negative contact on maintenance	69.887	46	.954	.904	.047 [.022, .068]	M6-M7	7.471	1	.01	-.014	.005
						M7-M2	18.895	16	.27	-.003	-.008

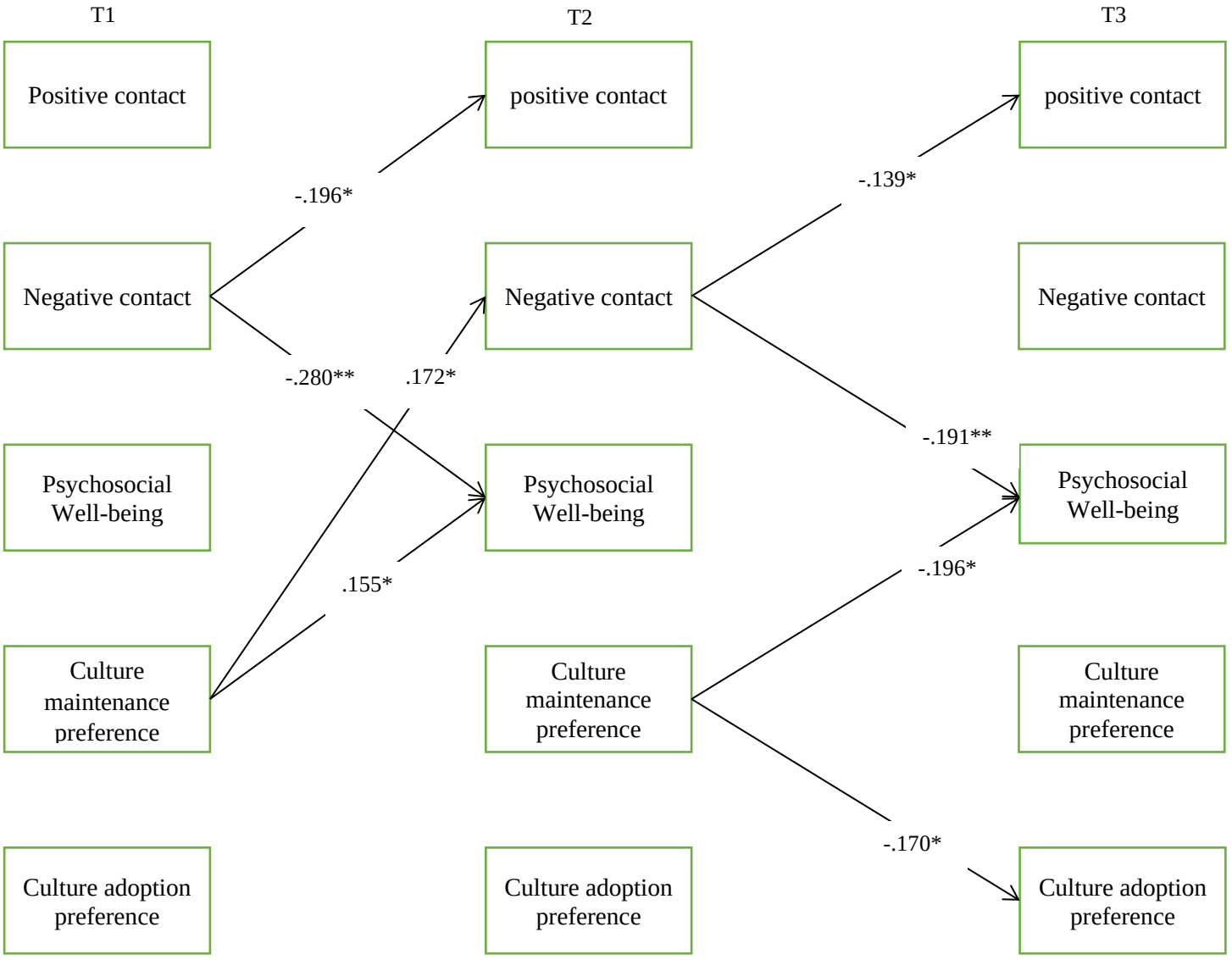

Figure 4. Significant standardized results of the cross-lagged model with control variables. For the sake of clarity, stability paths and correlations are not reported.
*p < .05. **p < .01.

Table 13. Standardized results of the cross lagged model with control variables

Stability paths	**T1 →T2**	**T2 →T3**
Positive contact	.273*	.184*
Negative contact	.408***	.341***
Psychosocial well-being	.189*	.181*
Culture adoption preference	.574***	.334***
Culture maintenance preference	.685***	.503***
Cross lagged	**T1 →T2**	**T2 →T3**
Positive contact →negative contact	-.111	-.088
Positive contact → psychosocial well-being	.071	.046
Positive contact → culture adoption preference	.133	-.135
Positive contact → culture maintenance preference	-.042	-.025
Negative contact → positive contact	-.196*	-.139*
Negative contact → psychosocial well-being	-.280**	-.191**
Negative contact → culture adoption preference	.052	.029
Negative contact → culture maintenance preference	-.025	-.016
Psychosocial well-being → positive contact	.122	.122
Psychosocial well-being →negative contact	-.046	-.054
Psychosocial well-being → culture adoption preference	.035	.027
Psychosocial well-being → culture maintenance preference	.056	.049
Culture adoption preference →positive contact	.044	.033
Culture adoption preference → negative contact	.005	.004

Culture adoption preference →psychosocial well-being	.042	.030	
Culture adoption preference →culture maintenance preference	-.068	-.045	
Culture maintenance preference →positive contact	.042	.035	
Culture maintenance preference → negative contact	.172*	-.030	
Culture maintenance preference →psychosocial well-being	.155*	-.196*	
Culture maintenance preference → culture adoption preference	-.001	-.170*	
Correlations	**T1**	**T2**	**T3**
Positive contact ↔ negative contact	-.346***	-.365***	-.390***
Positive contact ↔ psychosocial well-being	.308***	.088	.406***
Positive contact ↔ culture adoption preference	.133*	.264***	.299***
Positive contact ↔ culture maintenance preference	.090	.108	.045
Negative contact ↔ psychosocial well-being	-.396***	-.133	-.163
Negative contact ↔ culture adoption preference	-.286***	-.428***	-.113
Negative contact ↔ culture maintenance preference	-.010	.188*	.055
Psychosocial well-being ↔ culture adoption preference	.258***	.263***	.413***
Psychosocial well-being ↔ culture maintenance preference	-.081	-.155	.048
Culture adoption preference ↔ culture maintenance preference	-.188*	-.157	.061

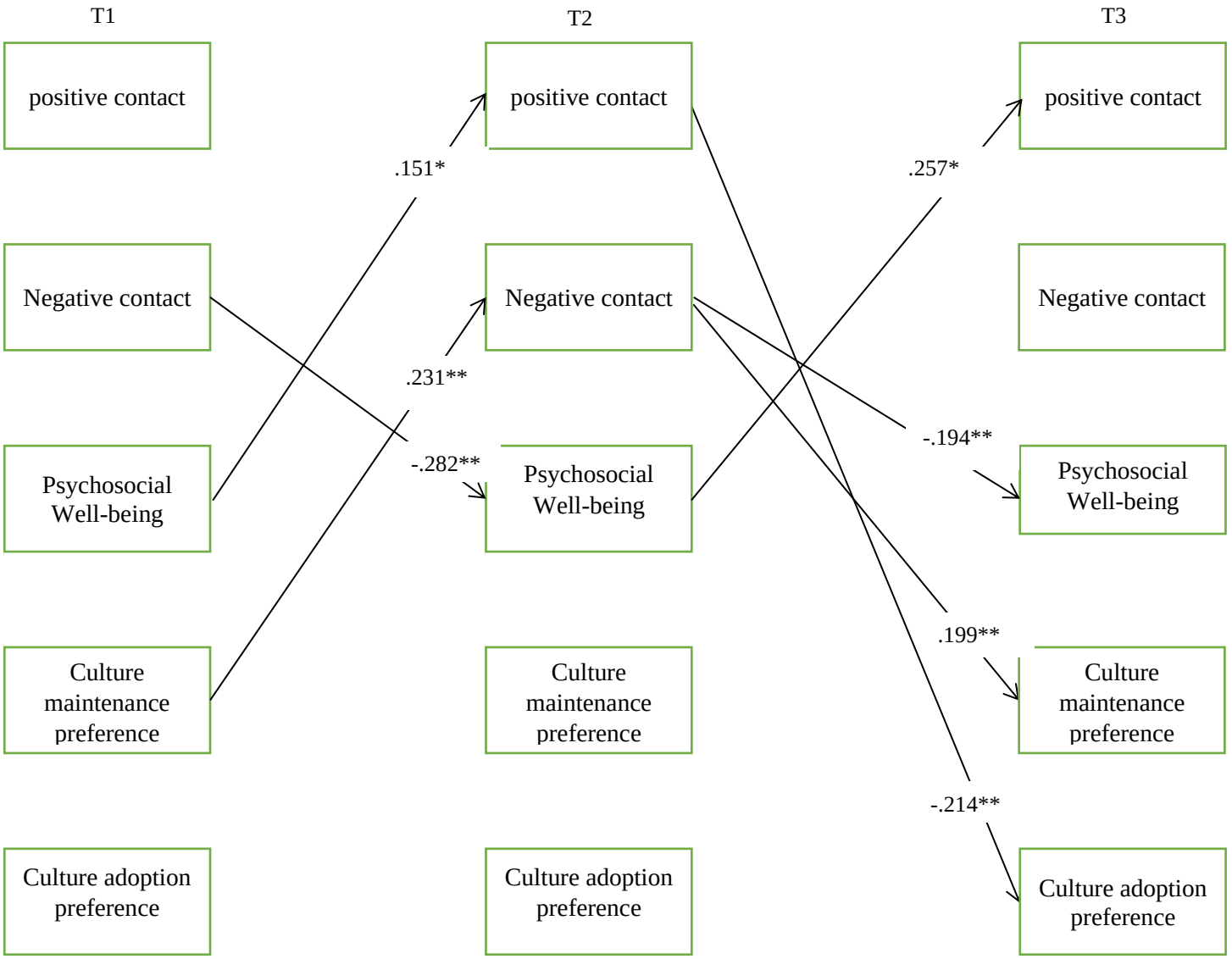

Figure 6. Significant standardized results of the cross-lagged model without control variables. For the sake of clarity, stability paths and correlations are not reported.
*p < .05. **p < .01.

Table 14. Standardized results of the cross lagged model without control variables

Stability paths	**T1 →T2**	**T2 →T3**
Positive contact	.385***	.298***
Negative contact	.400***	.337***
Psychosocial well-being	.179*	.170*
Culture adoption preference	.657***	.425***
Culture maintenance preference	.731***	.549***
Cross lagged	**T1 →T2**	**T2 →T3**
Positive contact →negative contact	-.138	-.120
Positive contact → psychosocial well-being	.107	.076
Positive contact → culture adoption preference	.113	-.214**
Positive contact → culture maintenance preference	.004	.002
Negative contact → positive contact	-.157	-.118
Negative contact → psychosocial well-being	-.282**	-.194**
Negative contact → culture adoption preference	.081	.048
Negative contact → culture maintenance preference	-.039	.199**
Psychosocial well-being → positive contact	.151*	.257*

Psychosocial well-being →negative contact	-.035	-.040	
Psychosocial well-being → culture adoption preference	.042	.034	
Psychosocial well-being → culture maintenance preference	.068	.057	
Culture adoption preference →positive contact	.018	.015	
Culture adoption preference → negative contact	.021	.019	
Culture adoption preference →psychosocial well-being	.055	.042	
Culture adoption preference →culture maintenance preference	-.036	-.024	
Culture maintenance preference →positive contact	.071	.066	
Culture maintenance preference → negative contact	.231**	-.077	
Culture maintenance preference →psychosocial well-being	.096	-.118	
Culture maintenance preference → culture adoption preference	-.038	-.028	
Correlations	**T1**	**T2**	**T3**
Positive contact ↔ negative contact	-.289***	-.318***	-.406***
Positive contact ↔ psychosocial well-being	.324***	.135	.383***
Positive contact ↔ culture adoption preference	.154*	.228*	.248**
Positive contact ↔ culture maintenance preference	.109	.168	.047
Negative contact ↔ psychosocial well-being	-.375***	-.079	-.184*

	Negative contact ↔ culture adoption preference	-.187**	-.354***	-.068
	Negative contact ↔ culture maintenance preference	.039	.216*	.103
	Psychosocial well-being ↔ culture adoption preference	.282***	.243***	.399***
	Psychosocial well-being ↔ culture maintenance preference	-.019	.216*	.076
	Culture adoption preference ↔ culture maintenance preference	-.086	-.157	.114