**ARTICLE**

# The role of individual differences in understanding and enhancing intergroup contact

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**Abstract**

In a world characterized by divisive rhetoric, heightened xenophobia, and other forms of prejudice, it is increasingly important to find effective ways of promoting functional intergroup relations. Research on the relationship between intergroup contact and individual differences substantially contributes to achieving this goal. We review research considering the role played by individual differences in moderating the relationship between contact and prejudice and predicting contact, but also as an outcome of contact. We then outline potential directions for future research, including identifying underlying mechanisms, examining the role of context at an intergroup and societal level, and considering how positive–negative contact asymmetry may be influenced by individual differences. We then call for a broader range of individual difference and contact outcomes to be explored and encourage utilization of new methodological advances in the study of intergroup contact.

With the sharp rise of far-right movements across Europe and Latin America, and to some extent in the US and UK, discovering and documenting robust means of fostering functional intergroup relations is paramount. Encouraging positive contact between members of different social groups can help to achieve this goal. Since the "contact hypothesis" was proposed by Allport (1954), over a thousand articles have been published on the topic, with an extensive evidence trail that positive intergroup contact reduces prejudice (Pettigrew & Tropp, 2006). We have learned much about the mechanisms underlying contact (e.g., reduced intergroup anxiety and threat; increased empathy and trust; Pettigrew & Tropp, 2008; Turner, Hewstone, & Voci, 2007), and the different types of contact

(e.g., cross-group friendships, extended contact, imagined contact, and online contact; Davies, Tropp, Aron, Pettigrew, & Wright, 2011; Crisp & Turner, 2009, 2012; Mazziotta, Mummendey, & Wright, 2011; Turner, Crisp, & Lambert, 2007; Turner, Hewstone, & Voci, 2007; White & Abu-Rayya, 2012; Wright, Aron, McLaughlin-Volpe, & Ropp, 1997). However, one topic that has been relatively understudied (Hodson, 2011), but on which research has recently flourished, is the role of individual differences in intergroup contact, particularly where that contact is positive in valence.

Individual differences refer to between-person variability in the levels of psychological constructs, including personality traits, ideologies, and constructs that influence information processing. Historically, individual differences have been viewed as an obstacle to overcoming prejudice (Hodson, 2009, 2011; Hodson, Costello, & MacInnis, 2013) that were overlooked by social psychologists favoring the study of contextual factors (see Hodson & Dhont, 2015). Yet there has been increasing recognition that a "person x situation" approach may be critical in identifying *who* engages in intergroup contact, and *how* different people react to contact situations (Hodson, 2009, 2011; Hodson & Dhont, 2015; Pettigrew, 1998). Here, we highlight the important role individual differences can play in understanding intergroup contact.

We begin this review by outlining the first wave of research on this topic which examines individual differences as a *moderator* of the contact–prejudice relationship. The value of this research is in identifying *for whom* intergroup contact is most effective, and why, which may feed into the development of targeted interventions. We next examine work on individual differences as *predictors* of intergroup contact. This research is important in identifying who might be most likely to seek out contact, and what we can learn from this in terms of promoting intergroup contact (Paolini, Harwood, Hewstone, & Neumann, 2018; Turner & Cameron, 2016). Finally, we consider recent findings which suggest that intergroup contact has the potential to change self-perceptions regarding personal traits.

# 1 | INDIVIDUAL DIFFERENCES AS MODERATORS OF THE CONTACT–PREJUDICE RELATIONSHIP

Studying individual differences in contact settings is important—if contact works among those characterized by higher prejudice (HP), this provides strong evidence for contact's practical value (Hodson, Turner, & Choma, 2017).

## 1.1 | Right-wing authoritarianism and social dominance orientation

Right-wing authoritarianism (RWA; Altemeyer, 1981) and social dominance orientation (SDO; Pratto, Sidanius, Stallworth, & Malle, 1994) are socio-ideological attitudes that are stable, endure over time, and influence how people view the social world (Duckitt & Sibley, 2007, 2010). RWA relates to an individual's preference for traditional norms and submission to authority. People higher in RWA desire order, social cohesion, and conformity, to cope with perceptions that the world is dangerous/threatening, meaning their prejudice is triggered by groups threatening social norms. SDO reflects desire for hierarchical intergroup relations and social inequality. People higher in SDO see the world as competitive, seek dominance/power over other groups, and are prejudiced toward groups considered inferior or in direct competition.

Although individuals higher in RWA or SDO generally avoid outgroup interactions (Dhont & Van Hiel, 2009; Hodson, 2008; Hodson, Harry, & Mitchell, 2009; Pettigrew, 2017; Pettigrew & Tropp, 2011), they nonetheless benefit from contact. Hodson et al. (2013), for example, found that contact was associated with less prejudice across a variety of outgroups for those lower *and* higher in SDO or RWA. Moreover, some evidence suggests that contact *works better* for HPs. Hodson (2008) found that White British prison inmates who experienced contact with Black inmates exhibited lower intergroup bias if higher (vs. lower) in SDO, an effect explained by increased outgroup

empathy. In two Flemish samples, Dhont and Van Hiel (2009) found a stronger negative relationship between positive contact with immigrants and racism toward immigrants among people higher in SDO or RWA. Visintin, Berent, Green, and Falomir-Pichastor (2019) similarly found that Swiss nationals' contact (and imagined contact) with immigrants predicted greater multiculturalism support, but only among individuals higher in SDO. Contact may be particularly effective among HPs because it reduces intergroup anxiety and perceived threats while promoting empathy, trust, and inclusion of the other in the self (Hodson et al., 2017; Hodson, Costello, et al., 2013). These outcomes directly correspond to factors underpinning biases among HPs (Dhont & Van Hiel, 2011). Although some have argued that contact works among those higher in RWA but not SDO (Asbrock, Christ, Duckitt, & Sibley, 2012), several recent studies support contact benefits among higher SDOs (Kauff, Schmid, Lolliot, Al Ramiah, & Hewstone, 2016), even when simultaneously considering RWA (Kteily, Hodson, Dhont, & Ho, 2019).

## 1.2 | Need for closure

Need for closure (NFC) is a motivated cognitive style characterized by a desire for quick and definite answers, and a desire to protect obtained answers from contradictory information (Roets, Kruglanski, Kossowska, Pierro, & Hong, 2015; Webster & Kruglanski, 1994). NFC predisposes prejudicial attitudes by promoting essentialist thinking, a preference to see outgroup members as sharing defining characteristics, in order to form quick and stable inferences. It also predicts authoritarian beliefs, because imposing a clear hierarchy helps to satisfy higher NFC's psychological needs for order and predictability (Roets & Van Hiel, 2006; Van Hiel, Pandelaere, & Duriez, 2004). Dhont, Roets, and Van Hiel (2011) found that those higher (vs. lower) in NFC were more likely to hold positive attitudes following an intergroup contact intervention, due to reduced intergroup anxiety. They argued that this is because such individuals desire familiarity and seize upon salient and easily accessible information during contact.

## 1.3 | Conservatism

Conservatism is a generalized orientation toward resistance to change and acceptance of inequality (Jost, Glaser, Kruglanski, & Sulloway, 2003) that predicts HP toward various minority and low status groups (Hodson & Busseri, 2012; Hodson, Costello, et al., 2013). This is in part because conservatives employ legitimizing beliefs that justify the status quo and favor Whites and elites (Hodson & Dhont, 2015). A number of studies have examined various aspects of conservatism as a moderator of the contact–attitude association, with mixed results.

Maoz (2003) examined a two-day intergroup contact program between Israeli and Palestinian adolescents classified as "doves" (preferring negotiation and cooperation) or "hawks" (preferring tough-minded defense of ingroup interests). Although doves were more open to contact, their positive attitudes did not improve more from contact. By contrast, hawks showed more favorable attitudes following contact. In a different context, Graf and Sczesny (2019) found that political orientation moderated the relationship between both positive and negative intergroup contact and self-reported support for African immigrants among a sample of 861 Swiss participants. While there was a stronger relationship between positive intergroup contact and supportive attitudes for right-oriented participants, negative intergroup contact was more strongly associated with less support for African Immigrants among right-oriented (vs. left-oriented) participants.

Other studies have shown the reverse, that contact associations are stronger for left-oriented than right-oriented individuals. Across two large surveys in the USA (N = 1,592) and Germany (N = 2,021), Homola and Tavits (2018) found that although contact predicted reduced perception of immigrant-related threats for left-oriented individuals, contact either had no effect or slightly increased threat perceptions among right-oriented

individuals. Utilizing the 2014 European Social Survey ($N$ = 32,196 from 21 countries), Thomsen and Rafiqi (2019) found that while contact was associated with less opposition to immigrants among left- and right-oriented individuals, this relationship was considerably weaker for right-oriented individuals. The authors of both articles argue that people are motivated to favor arguments and evidence that support their existing views (Kunda, 1990). Accordingly, left-oriented individuals, who tend to be more open and tolerant, are likely to respond to contact by positively updating their views of immigrants in general, whereas right-oriented individuals are likely to reject attitude change in response to contact experiences because they contradict their existing negative attitudes.

Given these contrasting findings, it is important to identify what factors may explain *when* contact is effective (or indeed, more effective) among right-oriented individuals, and when it is less effective or ineffective. Moreover, none of these studies consider mediating variables. Studies examining conservatism as a moderator of contact–attitude associations should in future include measures that may explain *why* conservatism influences the effectiveness of intergroup contact.

## 1.4 | Ingroup identification

People meaningfully differ in the degree to which they identify with groups (see Hodson, Dovidio, & Esses, 2003). Hodson et al. (2009) found that for university students with higher (vs. lower) heterosexual identity, contact and friendship with gay people was associated with less prejudice. Furthermore, studies conducted in Northern Ireland showed that contact between Catholics and Protestants positively predicted intergroup forgiveness but only among those more highly identified with their community (Voci, Hewstone, Swart, & Veneziani, 2015), and also predicted greater receptivity to cross-community relationships and more favorable attitudes toward the other community yet more strongly so among higher identifiers (Paterson, Turner, & Hodson, 2019).

## 1.5 | Agreeableness and extraversion

Theorists have proposed that there are five (Costa Jr. & McCrae, 1992; Goldberg, 1993) or six (Ashton & Lee, 2007) major dimensions of personality. Extraverts tend to be talkative and sociable; agreeable people tend to be warm and cooperative; people higher in openness to experience exhibit imagination and broad interests; conscientious people tend to be organized and dependable; neurotic individuals are anxious and insecure. Of these five personality dimensions, two are negatively correlated with generalized prejudice: Openness to experience and agreeableness (Ekehammar & Akrami, 2003; Sibley & Duckitt, 2008). Indeed, people higher in openness find exposure to different values and norms beneficial (not threatening), whilst agreeable individuals cooperate with others rather than focus on self-interests or competition (Sibley & Duckitt, 2008). Although zero-order correlations between extraversion and prejudice have been found not to be significant (Turner, Dhont, Hewstone, Prestwich, & Vonofakou, 2014), because extraverts desire smooth, successful social interactions and have more friends generally, they may have more cross-group friendships. This, in turn, is associated with lower levels of prejudice. Turner et al. (2014) found that White British students' friendships with South Asians more strongly predicted positive outgroup attitudes among those lower (vs. higher) in agreeableness or extraversion (with no moderation effects by openness).

Most studies reviewed above considered each individual difference variable in isolation. Kteily et al. (2019) simultaneously examined the contact–attitude relationship at varying levels of ideological (SDO, RWA), cognitive style (NFC) and identity-based (group identification) indicators of prejudice proneness, across multiple criteria (e.g., racism; racial profiling). Greater contact quality predicted lower intergroup hostility regardless of whether participants scored lower or higher on each individual difference measure.

## 2 | INDIVIDUAL DIFFERENCES AS PREDICTORS OF INTERGROUP CONTACT

A lack of engagement in contact may be a fundamental reason why intergroup conflict and prejudice seem so commonplace (Paolini et al., 2018). To encourage contact, we need to understand why some people engage in contact, whereas others do not (Hodson, 2011; Pettigrew, 1998). Although it often reduces prejudice among them, HP individuals may be especially likely to *avoid* intergroup contact (Dhont & Van Hiel, 2009; Hodson, 2008; Hodson et al., 2009; Pettigrew, 2008, 2017; Pettigrew & Tropp, 2011). The mere prospect of contact may trigger negative thoughts and emotions among HPs, including expectations of communication uncertainty (Plant & Devine, 2003), and impending threat to cherished values (Stephan & Stephan, 2000). Paolini et al. (2018) argue these reactions might be especially likely among those higher in NFC or RWA.

### 2.1 | The broader personality space

Jackson and Poulsen (2005) proposed that people higher on openness or agreeableness are more likely to seek favorable intergroup contact experiences and behave favorably during those interactions. Partially supporting this, openness predicted more frequent and more positive contact with Black and Asian people; agreeableness predicted contact quality but not frequency. The relationship between personality and outgroup attitude for each group was mediated by intergroup contact. A secondary analysis revealed that both agreeableness and openness predicted prejudice when controlling for one another, through contact quality, but not contact quantity (Hodson et al., 2017). Corroborating this pattern in Italy, Vezzali, Turner, Capozza, and Trifiletti (2018) surveyed Italian and immigrant first year high school students, finding among both groups that agreeableness and openness at the start of the school year longitudinally predicted more positive contact at year end. In addition to agreeableness and openness, Turner et al. (2014) considered extraversion as a contact predictor. Extraverts seek out friendships and tend to have more friends. This may increase the potential for cross-group friendships. Moreover, their affiliation motivations may reduce cross-category boundaries. Across two studies, White British students' extraversion predicted more South Asian friends, which in turn predicted more favorable outgroup attitudes. Openness and agreeableness, however, predicted outgroup attitudes directly rather than friendships.

### 2.2 | Self-expansion motivation

People vary in their motivations to acquire resources, perspectives, and identities that facilitate the achievement of desired goals (Aron, Aron, & Norman, 2001). Self-expansion can be achieved through meaningful relationships with outgroup members because they offer resources, perspectives, and identities that we do not possess (Aron, Steele, Kashdan, & Perez, 2006; Wright, Aron, & Tropp, 2002). In Australia and Thailand, those who expected to experience self-expansion through relationships with others reported higher quality contact experiences, a relationship mediated by an increased interest in intergroup contact (Paolini, Wright, Dys-Steenbergen, & Favara, 2016). Similarly, Migacheva and Tropp (2012) found that having a learning orientation (seeking to obtain knowledge) rather than a performance orientation (seeking to certify one's abilities) predicted greater comfort and interest in contact, even controlling for past cross-group friendship experience.

Stürmer et al. (2013) examined the role of HEXACO's six-factor structure of personality (Ashton & Lee, 2007) in predicting xenophilia, "a favorable attitude toward exploratory contact with individuals from other groups that are perceived as culturally different and unfamiliar on the basis of their language, ethnicity, habits, or customs" (p. 833). Three of the HEXACO traits–Extraversion, Openness to Experience, and Conscientiousness—relate closely to self-expansion because they reflect investment in *endeavors* that bring benefits for the self, such as socializing and

gaining new friends (for extraverts), learning and thinking (for open individuals), and generating material and economic gain (for conscientious people). The other three—Honesty-Humility (e.g., fairness, avoidance, modesty), Emotionality (anxiety, fearfulness, emotional dependence), and Agreeableness–reflect a tendency toward *altruism and cooperation*.

Across three studies, Stürmer et al. (2013) found that endeavor traits were stronger predictors of xenophilia than were altruism and cooperation traits (controlling for individual differences in SDO, national identification, and motivation to control prejudice). Importantly, although intergroup contact can bring benefits in terms of genetic variability and exposure to new people, knowledge, and resources, there are inherent risks given our lack of familiarity with outgroups. People higher in endeavor-related traits are willing to prioritize potential personal gains over risks, and are therefore keener to engage in intergroup contact, whereas those higher in altruism and cooperation may be less willing to potentially harm or impose costs on others. It is important to note, however, that Stürmer et al. examined the unique predictive power of each endeavor-related trait rather than their concurrent predictive power, so the findings only provide indirect support for our argument that self-expansion predicts engagement in contact.

## 2.3 | Cognitive abilities

Because intergroup interactions can be cognitively draining, they are theoretically more likely to be avoided by those with fewer mental resources at hand (Hodson & Busseri, 2012). Cognitive abilities (e.g., abstract reasoning skills and verbal, non-verbal, and general intelligence) are also critical in forming individuated impressions of others and being open-minded and trusting (Scarr & Weinberg, 1981; Sturgis, Read, & Allum, 2010). Those with lower cognitive abilities may therefore gravitate toward more socially conservative right-wing ideologies that provide psychological stability and order (Jost et al., 2003; Onraet et al., 2015), which are in turn associated with prejudice. Indeed, Hodson and Busseri (2012) found that individuals lower in abstract reasoning abilities were more prejudiced toward gay people, in part through lower levels of contact with gay people, even when controlling for authoritarianism.

## 3 | CONTACT EFFECTS ON INDIVIDUAL DIFFERENCES

One of the most recent, and perhaps most debated, developments concerns the examination of individual differences as *outcomes* of intergroup contact. Recently there has been recognition that contact can shape cognition, ideologies and personality traits. For instance, Hodson, Meleady, Crisp, and Earle (2018) argue that contact serves as an agent of *cognitive liberalization*, improving not only intergroup relations, but also the way people think about the world more broadly. Synthesizing evidence that diversity experiences prompt individuals to inhibit existing, rigid thought patterns in favor of more flexible, open-minded ways of thinking (Crisp & Meleady, 2012; Crisp & Turner, 2011), they argue that, over time, intergroup contact can promote a disposition toward less structured and dogmatic thinking.

## 3.1 | Social dominance orientation

Dhont, Van Hiel, and Hewstone (2014) found that Belgian high school students who interacted with Moroccan students on a school trip subsequently reported lower levels of SDO and prejudice. In a longitudinal study of Belgian adults over 3 months they further found that contact at Time 1 predicted lower SDO at Time 2 (see also Trifiletti et al., 2019; Van Laar, Levin, Sinclair, & Sidanius, 2005). These findings leave us optimistic about the potential for contact to change people's attitudes toward group dominance and inequality. The effect of contact on SDO has parallels with the secondary transfer effect (Pettigrew, 1997; Tausch et al., 2010); that is, contact results in a generalized

orientation that represents an important social attitudinal basis of attitudes toward a range of outgroups not directly involved in the contact (Dhont et al., 2014). Indeed, White American students randomly assigned a roommate of a different race showed a significant decrease in SDO after the first term, which in turn promoted more positive attitudes toward several different outgroups (Shook, Hopkins, & Koech, 2016; see also Vezzali et al., 2018).

Contact also impacts outcomes via lowered SDO. Meleady and Vermue (2019) found that White participants' positive contact with Blacks, and British participants' positive contact with immigrants, predicted increased support for the Black Lives Matters movements and EU rights via lower SDO. Moreover, Meleady, Crisp, Dhont, Hopthrow, and Turner (2019) found, across several studies (one longitudinal), that positive contact predicted greater environmental concern and pro-environmental behaviors via lower SDO. Individuals higher in SDO may be more willing to exploit the environment to maintain hierarchical social structures (Stanley, Wilson, Sibley, & Milfont, 2017), but by reducing SDO, positive contact attenuates these tendencies.

## 3.2 | Additional individual differences

Sparkman and Eidelman (2018) examined intercultural contact as a predictor of identification with humanity (McFarland, Brown, & Webb, 2013). In two of three studies, Americans' contact with members of other cultures (e.g., foreign travel, keeping in contact with people from other countries) predicted higher identification with humanity, which in turn predicted lower prejudice toward five ethnic outgroups (Africans, Slavs, Asians, Arabs, and Latin Americans; measured as one combined scale) and greater concern for human rights.

Contact has also been examined as a predictor of Big Five personality traits. Sparkman, Eidelman, and Blanchar (2017); Study 1) found that frequency of self-reported contact with people from other countries predicted lower prejudice via openness to experience (see also Vezzali, Turner, et al., 2018). In Study 2, participants were exposed to images of culturally diverse regions. Compared with control participants exposed to images of familiar regions, multicultural exposure caused more openness and less prejudice toward several foreign cultures, including those outside of the contact manipulation. It is important to acknowledge that brief exposure to images of cultural diversity, as in Study 2, are unlikely to have a lasting change on personality. It is, however, plausible that people may perceive themselves as more open to experience after exposure to these materials. Moreover, repeated exposure to outgroup members may lead to lasting changes in open-mindedness.

Finally, there is evidence that multicultural experiences reduce stereotype endorsement, symbolic racism, and discrimination via reduced NFC (Tadmor, Hong, Chao, Wiruchnipawan, & Wang, 2012). Individuals who experience contact may subsequently self-identify as being more open to ambiguity and divergent perspectives, which contradicts characteristics associated with NFC (i.e., discomfort with ambiguity; unwillingness to seek out divergent perspectives).

## 4 | FUTURE DIRECTIONS

There remain a number of potential avenues that have not yet been fully pursued.

## 4.1 | Underlying mechanisms

It is important to identify mechanisms underlying the relationship between contact and prejudice among HPs because different mechanisms may be in operation for each trait (Dhont & Van Hiel, 2009; Hodson et al., 2017; Kteily et al., 2019). For those higher in RWA and SDO we know much about how contact works. Among higher RWAs who feel threatened by outgroup values (Duckitt, 2006; Van Hiel, Cornelis, & Roets, 2007), for example,

contact works by reducing symbolic threat and promoting self-outgroup overlap and trust (Dhont & Van Hiel, 2011; Hodson et al., 2009). Among higher SDOs, who may have less positive outgroup feelings (Duckitt, 2006), contact works by promoting empathy (Hodson, 2008). An important next step is to develop and evaluate interventions targeting prejudice among those higher in certain traits. For example, threat-reduction interventions may be valuable among higher RWAs, whereas empathy-based interventions may be effective among higher SDOs.

To date, there has been little systematic investigation of the full range of mechanisms underlying contact-based prejudice reduction for various individual difference measures. Theorists have, for example, argued that contact might work for those higher in SDO because it promotes cooperation, reduces perceived outgroup competition, or increases the perception that contact might be personally beneficial (Kteily et al., 2019; Visintin et al., 2019), whereas for higher ingroup identifiers contact might work by promoting a common or dual identity (Gaertner & Dovidio, 2000; Kteily et al., 2019). But these possibilities have not been tested. We also know relatively little about the mechanisms underlying the impact of broad personality factors (e.g., extraversion) or NFC, gaps that can be filled by future research.

## 4.2 | Intergroup and societal contexts

There has been no comprehensive investigation of whether the interaction between contact and individual differences varies depending on the target outgroup, but initial evidence suggests its likelihood. Maunder, Day, and White (2019) looked at the contact–prejudice association in Australia toward lesbians and gay men, indigenous Australians, and people with schizophrenia. Contact with lesbians and gay men was most effective among those higher in SDO or RWA, as this group may be threatening in terms of competition for status (for those higher in SDO) *and* traditional norms and values (for those higher in RWA), and contact works by reducing both types of threat. Contact with indigenous Australians was more effective among those higher in SDO only, perhaps because this group is perceived as getting privileges from its minority status (i.e., competition threat). By contrast, contact with people with schizophrenia was more effective among those *lower* in SDO or RWA. These findings highlight the importance of identifying and explaining outcomes in target groups that vary in group status, ease of establishing contact, and degree of marginalization.

Kteily et al. (2019) noted that the target and national context may help to explain why contact is stronger for those higher in SDO in some studies but not others. They point out, for example, that in Asbrock et al.'s (2012) German study concerning immigrants, contact worked for high RWAs but not higher SDOs perhaps because immigrants are perceived as culturally threatening in this context. By contrast, American studies examining Whites and Blacks, where the conflict is more about resource competition than cultural threat, contact is more effective for those higher in SDO than RWA.

The interaction between individual differences and diversity at a neighborhood level is also relevant (Van Assche, Roets, Van Hiel, & Dhont, 2019). Van Assche, Roets, Dhont, and Van Hiel (2014) found that higher neighborhood diversity predicted less positive attitudes toward immigrants among those higher in authoritarianism, whereas it predicted more positive attitudes among those lower in authoritarianism. But there are mixed findings regarding contact seeking in diverse areas. Brune, Asbrock, and Sibley (2016) found when living in areas with high proportions of Asian immigrants, higher RWAs spent more time with minority friends, but Pettigrew (2008) found that higher RWA people avoided contact in multi-ethnic areas. Future research might consider how neighborhood diversity and contact experiences influence when and why HP individuals avoid versus engage with contact (see Van Assche, Asbrock, Dhont, & Roets, 2018).

Adding a dimension of complexity, recent research has considered intergroup context as an *indicator* of ideology. Noting that some cultures are generally more egalitarian (e.g., the Netherlands), whereas others are more hierarchical (e.g., India), Kende, Phalet, Vanden Noortgate, Kara, and Fischer (2018) reanalyzed Pettigrew and Tropp's (2006) contact meta-analysis after coding for country-level egalitarianism. In contrast to what is commonly found at the

*individual* level, at a *societal* level Kende et al. found that contact reduces prejudice more in egalitarian than in hierarchical societies. These findings are an important reminder that structural inequalities may limit the success of intergroup contact (Dixon, Durrheim, & Tredoux, 2005), and highlight the importance of examining the interplay between individual, intergroup, and societal factors.

## 4.3 | Contact valence

Although positive contact is more prevalent than negative contact in both peaceful and post-conflict societies (Barlow et al., 2012; Dhont & Van Hiel, 2009; Graf, Paolini, & Rubin, 2014; Hayward, Tropp, Hornsey, & Barlow, 2017; Pettigrew, 2008), negative contact is sometimes a stronger predictor of higher prejudice than positive contact is a predictor of lower prejudice (Barlow et al., 2012; Graf & Paolini, 2017; Paolini & McIntyre, 2019). This may reflect its stronger associations with higher levels of category salience, giving it a generalization advantage over positive contact (Paolini, Harwood, & Rubin, 2010).

Theorists predict that this positive–negative contact asymmetry will be accentuated for HPs, such that positive contact will have a more positive effect, but negative contact will exert a more negative effect. For example, Hodson et al. (2017, pp. 24–25) point out that "future research would benefit from better understanding how contact valence matters as a function of various individual differences. It is possible (if not probable) that HPs might benefit from more frequent and more positive contact...but be particularly susceptible to the negative impact of negative or inflamed contact." (see also Paolini et al., 2014). Indeed, Dhont and Van Hiel (2009) found that higher RWA and SDO's prejudice levels are lowered by positive contact experience but exacerbated by negative contact, with larger effects observed for negative contact, while Graf and Sczesny (2019) found that both positive and negative contact effects on outgroup attitudes (but not behaviors) were exacerbated for those right-wing in political orientation. Further research in this area will assist the development of interventions to reduce the impact of negative contact. Positive contact can, for example, buffer people from negative cross-group experiences such as discrimination (Bagci, Kumashiro, Smith, & Rutland, 2014), and negative outgroup encounters (Paolini et al., 2014). This buffering might be especially pronounced for HPs.

## 4.4 | Direct and indirect forms of contact

Indirect contact refers to approaches based on contact theory that do not involve face-to-face encounters, for example, extended contact (knowing ingroup members with outgroup friends; Wright et al., 1997), imagined contact (Crisp & Turner, 2009, 2012), simulated contact through video games (Adachi, Hodson, & Hoffarth, 2015; Adachi, Hodson, Willoughby, & Zanette, 2015) and online contact (MacInnis & Hodson, 2015; White & Abu-Rayya, 2012). Helping people prepare people for face-to-face contact (Turner & Cameron, 2016), such interventions may be especially useful among HPs.

Preliminary evidence offers promise. Dhont and Van Hiel (2011) found that Dutch adults' extended contact with immigrants predicted less anti-immigrant prejudice, an effect stronger among those higher in RWA. As extended contact changes perceptions of ingroup norms about contact (Turner, Hewstone, Voci, & Vonofakou, 2008), it may be especially effective among RWAs (who are motivated to conform to such norms). Considering imagined contact, it promotes more positive intergroup outcomes (e.g., less intergroup bias, greater contact intentions) among those higher (vs. lower) in RWA (Asbrock et al., 2012). However, findings regarding SDO are mixed: Asbrock et al. found that imagined contact did not promote positive intergroup outcomes for those higher (vs. lower) in SDO, whereas Visintin et al. (2019) found that imagined contact was more effective among those higher in SDO at promoting multiculturalism support. One fruitful line of work involves identifying when and how different types of contact are

influenced by, or influence, individual differences, and how indirect contact can be utilized to increase uptake of contact among prejudice-prone individuals.

## 4.5 | Developmental perspectives

Vezzali, Di Bernardo, et al. (2018) found that contact effects were mediated by lower SDO among Italian primary school children, whilst Vezzali, Turner, et al. (2018) observed bidirectional longitudinal relationships between contact and agreeableness, and a longitudinal relationship between more contact and greater openness to experience among adolescents. However, many individual difference measures have not yet been considered among children, with little known about how traits develop and interact with contact in younger populations. This represents an interesting area of development given that during early to mid-adolescence children are particularly influenced by peers (Brechwald & Prinstein, 2011; Van Zalk, Kerr, Van Zalk, & Stattin, 2013). As RWA and NFC are often associated with adherence to societal norms, one might expect contact to be especially influential with those higher in these traits during adolescence.

Another line of research deserving further attention concerns parent-to-child transmission of prejudice. Dhont and Van Hiel (2012) found that parental authoritarianism predicted adolescent's prejudice, but these relationships were weaker among adolescents with higher intergroup contact, suggesting that contact buffers adolescents from the potential impact of parental authoritarianism.

## 4.6 | Expanding individual differences

A number of variables, despite links to intergroup relations, have not yet been fully explored in relation to contact.

### 4.6.1 | Intergroup disgust sensitivity

Disgust aversion refers to a sensitivity to having contact with unsavory or contaminating others (Hodson, Choma, et al., 2013), reflecting desire to protect the ingroup from outgroup value systems and behaviors (Cottrell & Neuberg, 2005). Disgust also has properties associated with danger and avoidance, like RWA, and superiority and hierarchy, like SDO (Hodson & Costello, 2007). Hodson et al. found that *intergroup* disgust sensitivity (ITG-DS) predicts prejudice toward Muslims, foreigners, and ethnic minorities even after controlling for SDO, RWA, and intergroup anxiety. Whereas experimentally induced intergroup disgust increases anxiety over intergroup contact (Hodson, Choma, et al., 2013), elaborated imagined contact involving relaxation and guided imagery weakens the link between ITG-DS and prejudice (Hodson, Dube, & Choma, 2015). Future research might investigate how we can encourage contact among these individuals, and the effectiveness of contact among those higher in ITG-DS.

### 4.6.2 | Race-based rejection sensitivity

Page-Gould, Mendoza-Denton, and Mendes (2014) found that the tendency to anxiously expect rejection from racial outgroup members was associated with greater stress-symptoms among Black adults who reported fewer cross-group friends but not among those who had more race-based friends. This suggests that intergroup contact buffer the negative effects of being higher in race-based rejection sensitivity. These findings warrant further investigation.

### 4.6.3 | Sensation seeking

People who search for experiences and feelings that are varied, novel, complex and intense, even if risks are involved, can be described as sensation seeking (Zuckerman, 2008). As interacting with outgroup members might be described as varied and novel (see Mendes, Blascovich, Lickel, & Hunter, 2002), sensation seekers may be motivated to engage in contact, and to perceive it as a positive *challenge* rather than a threat.

## 4.7 | Broader range of outcomes

This review illustrates that contact researchers are becoming interested in outcomes beyond traditional self-report measures of attitudes (e.g., multiculturalism, xenophilia, receptivity to intergroup romance, collective action). Outcomes that move beyond intergroup relations are also of increasing interest (Meleady et al., 2019). Hodson et al. (2018) point out how contact can drive cognitive liberalization, with consequences for creativity and problem solving among other outcomes. Examining individual differences either as moderators or mediators of a broad range of outcome measures, both for intergroup relations and cognitive liberalization more broadly, represents an important area of future investigation.

## 4.8 | Methodological considerations

Research in this area would benefit from a greater variety of methods for measuring intergroup contact, for example, diary methods like experience sampling (Page-Gould, 2012), social network analysis (Wölfer et al., 2017), observation of non-verbal behavior and physiological responses (West & Turner, 2014; West, Turner, & Levita, 2015), and GPS Tracking (Dixon et al., 2019). These are more objective than self-reported measures and can enable us to observe how intergroup contact unfolds over time as a function of individual differences.

It is also important to systematically examine the different forms of intergroup contact in relation to personal factors, considering their separate and interactive influence, given their different qualities. For example, cross-group friendship is more intimate, and occurs less frequently than less intimate forms of intergroup contact. Although Hodson et al. (2009) looked at friendship and regular contact separately and found similar patterns of results, future research should continue to explore whether similar patterns of results occur for contact depending on their valence, frequency, and level of intimacy.

The research reported here is largely concerned with the relationships between personal factors and intergroup contact as they naturally occur in the field, hence the use of predominantly cross-sectional designs (see Hodson, 2008). We would, however, encourage researchers to continue to examine contact longitudinally, to assess changes over time (Trifiletti et al., 2019; Vezzali, Turner, et al., 2018), and experimentally, to establish cause and effect (Dhont et al., 2011; Hodson, 2011; Sparkman et al., 2017).

Work in this area relies heavily on convenience samples. However, larger studies with representative samples often use insufficient numbers of items to assess individual difference variables (Asbrock et al., 2012; Thomsen & Rafiqi, 2019). Going forward, it would be valuable to see greater consideration of research using nationally representative samples in both Western and non-Western contexts, provided that full individual difference measures are included in those surveys. Such studies will provide broader evidence that the findings discussed in this article can be generalized.

Finally, we acknowledge that while many of the studies reported compare those higher or lower in these traits within a particular sample, they may not have high or low levels of those traits in absolute terms. Meta-analyses should be employed across multiple samples to explore at what "level" individual difference traits influence the strength of contact–attitude associations.

## 5 | CONCLUSIONS

Early held pessimism about whether contact could be effective at reducing prejudice among HPs coincided with a virtual absence of individual differences in the contact literature (see Hodson, 2011; Hodson, Costello, et al., 2013). Yet recent efforts to explore between-person differences in the propensity for contact, and its outcomes, has proven fruitful for intergroup researchers. What people bring to contact experiences, and how their individual psychologies shape contact and its outcomes, matter a great deal, as does the role of contact in shaping individual differences. Where once there was pessimism the field now recognizes the opportunity and optimism about contact being "effective" among prejudice-prone persons.

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