

Abstract

Contact with outgroup members can serve as a powerful demonstration of the quality of intergroup norms on other ingroup members. This extended contact of fellow ingroup members with outgroup members is known to positively affect intergroup attitudes. Research has demonstrated a positive relationship between positive extended contact and positive intergroup attitudes – even for those most prone to prejudice, e.g., those high in authoritarianism. However, little is known about the relationship between negative extended contact and intergroup attitudes, nor about its interaction with authoritarianism. With correlational data from 7 samples (totaling 2760 respondents across four countries), we ran an internal meta-analysis examining the relationships of positive and negative extended contact with attitudes towards immigrants for group members of advantaged ethnic-cultural groups. The analysis controlled for direct contact and relevant demographic variables to ensure robustness. We considered right-wing authoritarianism (RWA) and its subdimensions as a moderator of these relationships. As expected, positive extended contact showed a stronger relationship with attitudes towards immigrants for high authoritarians. Unexpectedly, negative extended contact showed no interaction with authoritarianism. Put differently; negative extended contact showed a similarly large relationship with intergroup attitudes among high and low authoritarians. These results reveal an extended contact asymmetry: positive intergroup norms created by positive extended contact promote tolerance among authoritarians, whereas negative extended contact does not particularly harm those individuals more. Contrary to our expectations, the analysis of RWA's subdimensions did not reveal further insights. Theoretical and practical implications are discussed in light of the current debates on norm-setting and intergroup tensions.

Keywords: extended intergroup contact, contact valence, RWA, intergroup attitudes, intergroup norms

**The Extended Contact Asymmetry:
Authoritarians Benefit More From Positive But Do Not Suffer More From Negative
Extended Intergroup Contact**

Societal polarization and heightened intergroup tensions among diverse ethnic-cultural groups have become prominent features of the contemporary world. Recent intergroup conflicts, exemplified by events such as the anti-migration demonstrations across Europe, frequently garner substantial media attention. Sometimes, these conflicts stem from negative intergroup contact experiences or shared experiences in peer groups. Understanding the factors that influence intergroup attitudes and exploring strategies to reduce prejudice and foster tolerance have long been the focus of policymakers and social scientists. In this context, the impact of contact experiences on intergroup attitudes has received considerable scholarly attention (Allport, 1954; Pettigrew, 1998). Empirical evidence consistently supports the notion that positive face-to-face interactions with outgroup members can diminish prejudice (Pettigrew & Tropp, 2006) and promote intergroup harmony (Paluck et al., 2019).

However, a subset of individuals, particularly those high in authoritarianism, who are firmly adhering to social norms and who show a propensity to display hostility towards outsiders (Altemeyer, 1981, 1996), demonstrate a pronounced reluctance to engage in direct intergroup contact and exhibit a heightened susceptibility to negative intergroup attitudes following negative direct contact experiences (Dhont & Van Hiel, 2009; Pettigrew et al., 2007; Pettigrew, 2008). Paradoxically, once intergroup contact is established, authoritarians derive the greatest benefits from positive intergroup contact experiences regarding its harmonizing effect (Dhont & Van Hiel, 2009).

One possible avenue to address the avoidance of direct contact from authoritarians is to shift focus towards the contact experiences of significant others and peers. Positive extended intergroup contact, as documented by Wright et al. (1997) and Zhou et al. (2019), holds promise as an effective alternative for individuals facing difficulties in establishing direct contact or in situations where little intergroup contact is possible. Research indicates that positive extended intergroup contact is associated with prejudice reduction (Zhou et al., 2019), even among individuals high in Right-Wing Authoritarianism (RWA) (Hodson et al., 2009). While the research on the positive side of extended contact holds significant evidence for its effectiveness, the evidence for its effects on authoritarians is sparse (Dhont & Van Hiel, 2011), and the attempts to explain this effect are inconclusive. Additionally, little is known about negative extended contact and its relationship with intergroup attitudes (but see Mazziotta et al., 2015; Wölfer et al., 2017), and its interaction with authoritarianism has not been explored to date.

To address these open questions, this paper investigates the moderating role of authoritarianism in the relationships of positive and negative extended contact with attitudes towards immigrants. Extending present research, we further investigate to what extent the different theoretical subfacets of authoritarianism (e.g., authoritarian aggression, conventionalism, and authoritarian submission; see Altemeyer, 1981) play a role in explaining these relationships.

Direct Intergroup Contact

Since the seminal work of Allport (1954) on the contact hypothesis, the study of intergroup contact has evolved into a comprehensive framework known as the intergroup contact theory (Hewstone & Swart, 2011). Extensive research, including multiple meta-analyses comprising numerous studies, has provided compelling evidence regarding the prejudice-reducing effects of contact across various groups (Pettigrew & Tropp, 2006), across various individuals (Van

Assche et al., 2023), across differences in group status (Tropp & Pettigrew, 2005), across qualitative aspects of contact (Davies et al., 2011), and even regarding the efficacy of contact-based interventions for enhancing intergroup relations (Lemmer & Wagner, 2015; Paluck et al., 2019).

Pettigrew and Tropp (2006) highlighted the prevailing focus on positive contact experiences and their capacity to reduce prejudice in existing research. However, contact in its natural form can encompass both positive and negative experiences for individuals. The notion of contact valence, introduced by Paolini et al. (2010), has since garnered increased attention from scholars (Graf et al., 2014; Paolini & McIntyre, 2019; Schäfer et al., 2021) and prompted a closer examination of the combined effects of negative and positive intergroup contact. The contact valence hypothesis (Paolini et al., 2010) suggests that negative intergroup contact exerts a stronger influence on intergroup attitudes compared to positive contact, a proposition supported by recent meta-analytic findings (Paolini & McIntyre, 2019).

Extended Intergroup Contact

In addition to direct forms of contact, scholars have devoted attention to exploring various forms of indirect contact (Crisp & Turner, 2009; Gómez & Huici, 2008; Schiappa et al., 2005; Wright et al., 1997). It has been argued that indirect contact could help to foster harmonious intergroup relations in settings where direct contact is not possible or for those individuals, who tend to avoid direct contact experiences (Allport 1954).

One prominent example of indirect contact is extended contact, defined as the “knowledge, that an ingroup member has close relationships with an outgroup member” (Wright et al. 1997, p.74). The original operationalization of extended contact involved assessing the number of in-group friends who have outgroup friends, thus emphasizing the existence of close relationships between ingroup and outgroup members. Wright et al. (1997) suggested that knowing about ingroup members having close relations with outgroup

members provides the individual with sources of referent informational influence, demonstrating positive intergroup attitudes and intergroup norms that allow and even promote intergroup contact. A recent meta-analysis, synthesizing two decades of research, revealed small to medium effects of extended contact (Zhou et al., 2019). Despite its relatively smaller effect size compared to direct contact, scholars have emphasized the significance of extended contact, particularly in contexts where direct contact may not be feasible or appropriate, such as hostile or segregated environments (Brown & Paterson, 2016). Additionally, extended contact can serve as an initial step for individuals who may feel threatened or apprehensive about engaging in direct contact with members of an outgroup (Kauff et al., 2021; Wölfer et al., 2019). As such, people high in authoritarianism might be particularly prone to be guided or influenced by extended contact, in the sense that a) they usually tend to avoid direct contact, b) extended contact in that case serves as an excellent source of information about ingroup norms surrounding contact, and c) they have a tendency to follow ingroup norms (in the direction of intergroup harmony as well as hostility).

In their initial research, Wright et al. (1997) proposed four possible mediators through which extended contact should improve intergroup attitudes for those uninvolved in the intergroup contact: First, extended contact should reduce intergroup anxiety and, in turn, should be associated with more favorable intergroup attitudes (Turner et al., 2008; Vezzali et al., 2017). Second, extended contact is expected to foster a sense of closeness between the uninvolved third and the outgroup member, subsequently leading to more positive attitudes towards the outgroup. The third proposed mediator is ingroup norms. When an uninvolved group member witnesses an ingroup member engaging in friendly behavior with an outgroup member, it signals that the ingroup holds positive norms regarding intergroup contact. Consequently, the presence of positive ingroup norms is expected to be linked to more favorable attitudes towards the outgroup. Fourth and last, Wright et al. (1997) mention outgroup norms as a possible mediator. Similar to ingroup norms, observing a cross-group

interaction can indicate that the outgroup holds positive attitudes towards intergroup contact. This, in turn, promotes the development of more positive attitudes towards the outgroup and its members. These mediators have been successfully tested in empirical studies (e.g. Turner et al., 2008).

For this present study, the influence of extended contact through normative processes is most important. The social norms explanation for extended contact effects has been examined in various correlational studies (Tezanos-Pinto et al., 2010; Turner et al., 2008) and, most importantly, in an experimental intervention study (Vezzali et al., 2015) that confirmed the causal relationship between extended contact, perceptions of positive ingroup norms towards intergroup contact, and improved intergroup relations. As the authors argue, cross-group friendships are associated with increased intergroup empathy, reduced intergroup anxiety, and more positive outgroup attitudes. Based on these findings, we argue that extended contact as an observable or reported behavior of peers, might best understood as a *descriptive norm* of what most people do (Cialdini et al., 1991a, p. 203).

While the initial investigations into extended contact focused on close relationships with outgroup members, research by Tausch et al. (2011) tested the effect of extended contact over several sources of extended contact (e.g. neighbors, work colleagues, friends, and family members), demonstrating that the closeness of these relationships is important to achieve the positive outcomes of extended contact. In other words, even extended contact through typically more distant relationships, such as neighbors or work colleagues, can be effective if these relations are sufficiently close. Thus, more recent studies have examined the influence of extended contact by considering not only outgroup friendships from peers but also the experiences of other ingroup members with outgroup members (Árnadóttir et al., 2018; Rupar & Graf, 2019). Although these less intimate forms of extended contact may not be as potent in their effects as close indirect relationships, they still offer valuable referent information regarding intergroup relations and the intergroup norms upheld by the group.

Adopting this stance, our study focuses on extended contact of ingroup members. More precisely, we focus on ingroup members in the majority group of the given national context of the sample.

Extended Contact Valence

Given the recent advancements in intergroup contact research with its specific focus on contact valence (Graf et al., 2014), it is pertinent to examine the valence of extended contact in greater detail. While the initial concept of extended contact (Wright et al., 1997) only focused on positive aspects of extended contact, more recent studies have also included negative extended contact experiences in their studies (Árnadóttir et al., 2018; Mazziotta et al., 2015; Wang et al., 2019, 2022; Wölfer et al., 2017). While for direct contact, a recent meta-analysis from Paolini & McIntyre (2019) has confirmed the stronger effects of negative direct contact compared to positive contact on intergroup attitudes, the results for extended contact are less clear: Mazziotta et al. (2015) reported equally large correlations for both forms of extended contact with intergroup attitudes, Árnadóttir et al. (2018) found in two studies an equally large correlation of both extended contact forms with intergroup trust in a first and a larger correlation of negative extended contact with trust in a second study. Finally, recent studies by Wang et al. (2019, 2022) found that positive extended contact exerted larger effects than negative extended contact on intergroup attitudes and contact intentions.

While there is ample evidence for a stronger effect of positive direct contact compared to positive extended contact on intergroup attitudes (Zhou et al., 2019), the picture is not as clear for extended negative contact. For example, Wölfer et al. (2017) reported that both negative direct and negative extended contact were equally harmful to intergroup relations over three studies. Wölfer et al. (2017) argued that individuals might evaluate negative extended contact more critically. When people discuss negative intergroup experiences with fellow ingroup members, they may omit crucial details (e.g. their own behavior), which could provide context for the outgroup member's negative actions. This biased information from

negative extended contact may lead to an exaggerated interpretation of indirectly experienced negative contact events, potentially yielding effects similar to those of negative direct contact. Further mixed results are reported in two studies by Árnadóttir et al. (2018) with smaller and non-significant results for negative extended contact compared to the larger and significant effects of direct negative contact on outgroup trust.

Based on these mixed empirical findings and theoretical assumptions outlined above, a comprehensive examination of the relationship between extended contact and intergroup attitudes should encompass both positive and negative forms of extended contact, and should control for direct contact experiences.

Finally, there are several proposed moderators for extended contact effects, including contextual, situational, and personal aspects (for an overview, see Vezzali et al., 2014). One proposed moderator that has received attention is Authoritarianism (Altemeyer, 1981; Duckitt, 2022). However, to the best of our knowledge, this moderator has only been examined by Hodson et al. (2009) and Dhont and Van Hiel (2011). Its moderating role for extended negative contact still needs to be explored.

Right-Wing Authoritarianism as Potential Moderator

With the resurgence of interest in authoritarianism due to Altemeyer's (1981) revival of Adorno's seminal work on "The Authoritarian Personality" (Adorno et al., 1950), the study of authoritarianism gained renewed momentum. RWA has since then been identified as one of the major individual difference predictors of generalized prejudice, with meta-analytic evidence supporting a correlation of $r = .49$ (Sibley & Duckitt, 2008).

In addition to their propensity for prejudice, research has consistently shown that individuals high in RWA display a tendency to actively avoid intergroup contact (Dhont & Van Hiel, 2009; Pettigrew et al., 2007; Pettigrew, 2008). However, when contact becomes inevitable (Brune et al., 2016; Van Assche et al., 2018a), or authoritarians experience positive

intergroup contact first-handed (Dhont et al., 2011; Hodson, 2011; Asbrock et al., 2012), the impact of the positive contact on their intergroup attitudes was particularly pronounced. With regards to the contact-prejudice relation, studies consistently demonstrated lower levels of prejudices for high-RWAs who reported frequent positive direct contact in the past (for a recent review see: Turner et al., 2020). On the contrary, negative direct contact experiences were related with more hostile intergroup attitudes particularly for those high in RWA in correlational studies (Dhont & Van Hiel, 2009; Van Assche et al., 2018b).

Concerning extended contact, there are only two studies that previously investigated RWA as a moderator. Hodson et al. (2009) demonstrated that heterosexual university students showed less prejudice against homosexuals when they reported extended positive contact experiences (e.g., heterosexual friends with homosexual friends). Dhont & Van Hiel (2011) demonstrated that positive extended contact with immigrants resulted in reports of more favorable attitudes towards immigrants for those high in RWA. No study thus far has investigated the interaction between RWA and extended negative contact. These findings are underscored by the conceptualization of extended contact as an ingroup norm concerning intergroup interactions (Tezanos-Pinto et al., 2010; R. Turner et al., 2008; Wang et al., 2022).

The results hold significance, particularly from a theoretical standpoint, given that authoritarians are characterized by a pronounced adherence to societal norms and tendencies toward conformity (Adorno et al., 1950; Duckitt, 1989; Kessler & Cohrs, 2008). There are a few studies that provided initial evidence for this norm orientation. In a correlational study conducted by Roets et al. (2015), it was found that in the pro-diversity climate of Singapore, individuals high in RWA displayed more positive attitudes towards outgroups compared to those low in RWA. The authors argue that these findings reflect a conformity to the pro-diversity perspective explicitly endorsed by the Singaporean authorities. Similarly, Brune et al. (2016) discovered that in ethnically diverse neighborhoods, high RWAs spent more time interacting with members of the outgroup compared to individuals low in authoritarianism.

The authors suggest that when intergroup contact becomes the norm, authoritarians adhere more strictly to this norm than others. Finally, Górska et al. (2022) demonstrated that positive norms weaken the association between RWA and prejudice, whereas negative norms strengthen this relationship. They conclude that authoritarians are particularly sensitive to normative cues within the social context. Rather than exhibiting a rigid opposition towards outgroups in general, authoritarians tend to align themselves with prevailing social norms and reject only those outgroups that are similarly rejected by society.

Based on these findings and theoretical considerations, our main focus in this research is to investigate the interaction between both forms of extended contact and RWA. We hypothesize that both forms of extended contact show a stronger influence for those high in RWA.

Additionally to this main quest, we aim to extend the current research on RWA by investigating the influence of its subdimensions. Altemeyer (1981) (re-)conceptualized authoritarianism as encompassing three distinct subdimensions: authoritarian aggression, authoritarian submission, and conventionalism. While the original Altemeyer scale did not clearly differentiate these subdimensions, more recent scales developed by researchers achieved this separation (Beierlein et al., 2014; Duckitt et al., 2010; Funke, 2005). Subsequent research demonstrated that these subdimensions were correlated with different outcomes (Duncan et al., 1997; Passini, 2017; Reese, 2012) or mediated the relationship between authoritarian dispositions and intergroup attitudes in distinct ways (Asbrock & Kauff, 2015). Passini's (2017) analysis of the subdimensions of authoritarianism revealed noteworthy associations. Specifically, authoritarian aggression demonstrated a robust correlation with various forms of prejudice, whereas authoritarian submission displayed the strongest association with conformity (i.e., norm adherence), and conventionalism exhibited a pronounced link to traditionalism. However, despite the importance of these subdimensions, their relationships remain relatively understudied, with no existing research exploring their

connections to (extended) intergroup contact. Drawing on these theoretical considerations and preliminary empirical investigations, we propose that authoritarian submission plays a crucial role in shaping the normative orientation of authoritarians. Consequently, we anticipate that authoritarian submission would exhibit stronger interactions with extended contact compared to the other subdimensions.

The Present Study

The objective of the current study is to enhance our understanding of how individual intergroup attitudes are influenced by the extended contact experiences of other members within one's peer group. Although extensive evidence exists regarding the impact of direct contact (Paolini & McIntyre, 2019; Pettigrew & Tropp, 2006) and positive extended intergroup contact (Zhou et al., 2019) on intergroup attitudes, conclusive evidence for extended negative contact is missing. Our first research question (1) thus revolves around the varying effects of negative extended contact on intergroup attitudes, which have yielded mixed results in previous studies. We aim to clarify and compare the strength of its link in relation to extended positive contact and direct negative contact on intergroup attitudes. Since contact effects have been shown to differ across positively and negatively valenced outcomes (namely outgroup anger and outgroup warmth in Barlow et al. (2019)) we further aim to explore this outcome valence for extended contact.

Our second, and main research question (2) is to investigate one sparsely tested moderator of extended contact more closely: authoritarianism. High authoritarians are characterized by a certain proneness to prejudice (McFarland, 2010) but also a show particular sensitivity to social norms (Duckitt, 1989; Kessler & Cohrs, 2008), which makes their reaction towards a descriptive norm such as extended contact most interesting. Building upon the aforementioned findings and theoretical considerations, we propose the hypothesis that the association between extended positive contact and intergroup attitudes will be

positively influenced (i.e., strengthened) by RWA. Conversely, we anticipate that RWA will exert a negative influence on (i.e., aggravate) the relationship between extended negative contact and intergroup attitudes.

The inclusion of a third research question (3) in our study aims to explore the impact of the subdimensions of RWA in the context of positive and negative extended contact. Previous research (Asbrock & Kauff, 2015; Duncan et al., 1997), has demonstrated that these subdimensions exert differential influences on intergroup attitudes. Although no prior research has specifically investigated similar interactions between (extended) contact and RWA's subdimensions, we propose that the distinctive effects of extended contact may be most pronounced within one of the subdimensions. Adopting a normative perspective, we posit that authoritarian submission, which reflects conformity to norms within RWA, will exhibit a more pronounced influence than the other two subdimensions in the interaction with extended contact. Furthermore, we expect that individuals high in authoritarian submission will demonstrate stronger effects of extended contact compared to those low in authoritarian submission. Conversely, for the remaining subdimensions, namely aggression and conventionalism, we do not anticipate similar effects based on previous theoretical considerations. In other words, the hypothesized interaction effects between extended contact and RWA would be primarily (if not exclusively) driven by the submission dimension.

Method

Detailed information regarding the samples, assessed scales, item wordings, descriptive analyses, correlations, and analyses for each sample can be found in the supplemental materials. The supplemental materials, which further include all data and scripts, are organized by sample number and are stored in the OSF repository:

https://osf.io/mfwh6/?view_only=1682f93d99434c639289e82f67412914

Samples and Participants: We conducted our investigation by analyzing data of seven samples originating from four different countries: the Netherlands, Belgium, United States, United Kingdom. These samples were available to us from our own sampling efforts and previously published research that met the requirements for our analysis. Detailed information regarding the specific characteristics, origins, and demographics and assessed dependent variables for each sample can be found in Table 1. ***Note to the editor/reviewer: We blinded the last line in Table 1 containing related publications.*** It is important to note that previous publications for which the data was used and collected did not include measures of extended contact, and the research questions addressed in those studies were unrelated to the current research presented here. From the available samples, we exclusively included individuals belonging to the majority group within each respective country for our subsequent analysis and internal meta-analysis. For student samples, we opted to exclude a small number (<5) of outliers based on age if their age values deviated more than 3 standard deviations (*SD*) from the mean age, thereby enhancing the overall data quality. The internal meta-analysis was conducted using data from a total of 2,760 individuals.

Measurements: To ensure comparability of the results, we specifically identified samples in which the variables that measured the intergroup relations (all measurements of forms of contact and dependent variables) referred to the target group as "immigrants" or used related terms such as "foreigners" in the language of the original survey. Within three samples where questions were directed at multiple ethnic outgroups, we combined and condensed those items into highly reliable scales, all of which exhibited Cronbach's alphas ranging from .74 to .92.

Extended positive and negative contact with immigrants were assessed as predictors. Measurement scales in the samples contained items that were primarily adapted from, or aligned with Maziotta et al. (2015), focusing on positive and negative experiences by (national) ingroup members or acquaintances with immigrants. Example items read: "I know

many [(national) ingroup] people within my broad circle of acquaintances who already had [positive/negative or pleasant/unpleasant, e.g.] contact with immigrants.” Other, comparable items read: “How many [ingroup] people (friends, family members, colleagues,...) you know have had [negative/positive, hostile/pleasant] experiences with immigrants?”.

Right-Wing Authoritarianism (RWA) was included in all samples as the moderator variable. RWA scales were based on Altemeyer (1981) and used abridged versions with 11 or 6 items in the native language of the sample. In two samples, the RWA scale from Duckitt et al. (2010) was assessed. The RWA subdimensions were calculated following scale instructions (Duckitt et al., 2010), theoretical assumptions (Altemeyer, 1996; Funke, 2005), and practical examples (Mavor et al., 2010).

Intergroup attitudes were assessed as outcome variables using various scales to measure prejudice (McConahay, 1986; Pettigrew & Meertens, 1995), positive attitudes (Pittinsky et al., 2011), feelings (mostly based on: Van Assche et al., 2014; Wright et al., 1997) or trust (based on Dhont & Van Hiel, 2011) towards the outgroup.

Positive and Negative Contact, age, and gender were included as control variables in all samples. Contact with immigrants was measured with various forms of valenced contact items, comparable with Pettigrew (2008) or Barlow et al., (2012). Sample items read: “I often have [negative/positive or: pleasant/unpleasant] contact with immigrants.” or “How often have you had [negative/positive] experiences with immigrants?”. All item wordings and used scales are available in the Supplemental Materials.

Primary Analysis: Prior to the analysis, all constructs were standardized so that their mean was zero and their *SD* was 1. Linear regression models for each dependent variable in the samples were conducted using RStudio (R Studio Team, 2019). In each regression model, we examined the impact of extended positive and negative intergroup contact, along with their interaction with RWA, on the specific intergroup attitude. We controlled for positive and negative direct contact, age, and gender as covariates (see also: Dhont & Van Hiel, 2011).

The procedure for each sample was as follows: Firstly, for each dependent variable, we conducted a linear regression model that included demographics, standardized variables for positive and negative direct and extended contact, RWA, and one of the interaction terms (RWA x positive extended contact or RWA x negative extended contact) as predictors. In a second step, we computed simple slopes to examine the influence of extended contact for those low in RWA (1 *SD* below the mean), and those high in RWA (1 *SD* above the mean). In the final step, for the samples that permitted differentiation between subdimensions, we applied a similar procedure, using each subdimension (along with the respective interaction term) as predictors. Comprehensive results of all conducted linear regression analyses are presented in the supplemental materials for each respective sample.

Internal Meta Analysis: We now calculated the overall meta-analytic effect sizes of our predictors and weight them according to their respective sample size. We used the *psychmeta* package (Version 2.4.2) (Dahlke & Wiernik, 2019) to calculate a psychometric meta-analysis (Hunter & Schmidt, 2004) and freely estimated the true residual variance (SD_{res}). In particular, we calculated a random effects model using the standardized estimates from our regression and slope analyses between our predictors and outcomes (Becker & Wu, 2007). This approach allowed to assess the impact of the predictor while simultaneously controlling for the influence of the other predictors (i.e. relying on their partial correlations) (see also: Van Assche et al., 2019, 2023).

Results

Tables 2-5 shows the meta-analytical effect sizes with their observed and true standard deviations, their confidence intervals, and their credibility intervals (which represent a range of values that includes the true effect size with 80% probability). When interpreting effect sizes for individual difference research, we followed the guidelines proposed by Gignac and Szodorai (2016).

Tables 2 and 3 shows the meta-analytical effect sizes for the interaction between positive and negative extended contact and RWA for the full dataset. Our findings indicate that men tend to exhibit higher levels of prejudice compared to women, and RWA is consistently positively associated with negative intergroup attitudes showing a typical effect size. We further found typical effect sizes for both direct forms of contact. Interestingly, positive and negative contact displayed comparably large effect sizes and showed no significant difference ($z = 0.606, p = .272$) when the absolute values of the effects were compared using z-tests following Steiger (1980).

Thus, our results did not support the notion of a stronger influence of negative contact experiences, challenging previous findings suggesting the prominence of negative contact effects (Graf et al., 2014; Paolini et al., 2010). Instead, our findings align with recent research that raised concerns about potential overestimations of negative contact effects (Árnadóttir et al., 2018; Schäfer et al., 2021; Van Assche et al., 2023)

Strength of extended contact on intergroup attitudes

Concerning our first research question, the results indicate that both negative and positive extended contact yielded similarly large effect sizes ($z = 1.143, p = .252$), and their influence can be considered relatively small. Compared to the direct forms of contact, both extended contact forms show significantly smaller meta-analytical effect sizes (for negative contact forms: $z = 8.769, p < .001$ and for positive contact forms: $z = 8.232, p < .001$).

Furthermore, our results regarding positive extended contact align with previous research on outcome valence (Barlow et al., 2019), demonstrating a significant influence on positive outcomes, while having no significant influence on negative outcomes (except for those high in RWA, as discussed below). Interestingly, this pattern does not apply to the results of negative extended contact, which influences both positive and negative attitude measurements.

RWA as a moderator for extended contact

Regarding our second research question, the meta-analytical findings (Table 2) reveal a significant interaction between RWA and positive extended contact. While we identified significant relationships with extended contact for positive outcomes across all levels of RWA and an interaction effect, the interaction of RWA with extended positive contact is particularly pronounced for outcomes measuring negativity. The results demonstrate a significant negative relationship between extended positive contact and outgroup negativity exclusively for individuals high in RWA.

Surprisingly, we did not observe an interaction between RWA and negative extended contact (Table 3). In our attempts to investigate this unpredicted finding further, the differentiation between positively and negatively framed outcomes did not provide any additional insights.

RWA's subdimensions as moderators for extended contact

Addressing our third research question, we examined the interactions of the RWA subscales with extended contact. The meta-analytical effect sizes for extended positive contact at the slope values of +1 SD and -1 SD for each subscale, while controlling for all other predictors, are presented in Table 4. Notably, the smaller number of samples for the Conventionalism subscale arose from variations in the RWA scales used across samples, making the isolation of each of the three subdimensions infeasible in some samples (see supplemental materials). Contrary to our assumption, the meta-analytical results do not provide support for the notion that authoritarian submission plays a more prominent role in explaining the interaction effect. Interestingly, all slope values for individuals rating high on each authoritarianism subscale exhibit equally strong meta-analytical effect sizes that can be considered typical in size.

Table 5 presents the results for the interaction between negative extended contact and the subscales. Similar to the initial analysis, which did not yield a significant interaction

between RWA and extended negative contact, the examination of its subdimensions also failed to provide additional insights into its structure.

Discussion

Scholars in the beginnings of intergroup contact research were skeptical whether there was a way to promote tolerance among those who were most prone to prejudice or with ‘prejudiced predispositions’ such as RWA (Allport, 1954). Over the years, researchers showed that direct and indirect intergroup contact promotes more tolerant intergroup relations, also among those high in RWA. We added to this research by testing the effects of positive *and* negative extended contact for high RWAs on intergroup attitudes in a meta-analysis across seven samples from four different countries and a total N of 2,760.

Testing our first research question, we demonstrated similarly large main effects for both forms of direct contact and both forms of extended contact. Notably, the effect sizes of both extended forms are significantly smaller than their direct contact counterparts. While Paolini & McIntyre (2019) found clear evidence for the contact asymmetry hypothesis from their meta-analysis on direct contact interventions, our results from correlational designs for direct contact point towards mixed results in testing the contact asymmetry hypothesis in intergroup contact research, as we find equally large effects (Hayward et al., 2017; Schäfer et al., 2021). However, as our results depend on cross-sectional data, our results should be considered with caution. Importantly, our findings for extended contact indicate similarly large effect sizes, which, according to the guidelines by Gignac and Szodorai (2016), represent small effects.

It is worth noting that our meta-analytical effect size for extended positive contact ($r = .13$) is smaller compared to the meta-analytical effect sizes reported by Zhou et al. (2018; i.e., $r = .17$) for extended contact. However, this discrepancy can be attributed to methodological differences, as Zhou and colleagues (2018) only controlled for direct friendship contribution,

while our analysis included three strong predictors of intergroup attitudes, namely positive and negative direct contact alongside with RWA. Our results demonstrate the unique influence extended contact has on intergroup attitudes, even above and beyond direct contact experiences.

In addressing the second research question concerning the moderation of extended contact by RWA, our findings align with our hypothesized expectation regarding positive extended contact. The meta-analytical results reveal a significant moderation effect of extended positive contact with RWA. Notably, individuals with higher levels of RWA exhibit amplified effects of positive extended contact on intergroup attitudes, thus reinforcing and corroborating earlier findings within this domain of study.

Remarkably, when investigating the valence of outcomes, our analysis suggests that the impact of positive extended contact extends beyond the domain of positive intergroup attitudes. Specifically, our results unveil that positive extended contact exerts a significant influence on outgroup negativity among high authoritarians, whereas the slope remains non-significant for individuals with low and medium levels of RWA. This outcome offers a first indication of the efficacy of extended contact in fostering more favorable intergroup relations, even among those who may be most predisposed to holding prejudiced attitudes.

In order to classify these results, it is important to note that while Barlow et al. (2019) provide preliminary evidence for affect matching (positive contact disproportionately influencing positive outcomes; negative contact disproportionately influencing negative outcomes), they stress the point of rejecting the idea that positive and negative phenomena compete with each other. Intergroup relations should be understood as ambivalent relations, where positive and negative experiences and attitudes are not, as frequently done in psychology, two ends of a single evaluative dimension (see also: Schäfer et al., 2021). Recognizing these nuances and ambivalences should motivate subsequent research to clarify the underlying mechanisms of positive and negative (extended) contact experiences and their

influence on valenced outcomes more thoroughly, as personal variables might play a crucial role in the processing of contact experiences.

Second and most importantly, the data did not support our interaction hypothesis of negative extended contact with RWA resulting in an *extended contact asymmetry for authoritarians*. The lack of support for an interaction between negative extended contact and RWA was unexpected, given that previous literature has reported such an interaction for negative direct contact (Dhont & Van Hiel, 2009). One potential rationale for this outcome is the ambiguity surrounding the status of extended negative contact as a distinct norm. Unlike positive instances of extended contact, which could be ascribed to the behavior of the ingroup member and subsequently shape a norm, this clarity might not extend to negative extended contact.

Even though negative extended contact narratives convey insights into intergroup interactions among peers, the notably adverse outcomes within these narratives could potentially be attributed to the outgroup. This could lead to a perception that such negative outcomes are disconnected from the behavior of the ingroup member. In simpler terms, whereas positive experiences recounted by peers are likely attributed to the ingroup member's behavior and thus demonstrate an ingroup norm on contact, negative experiences might be more readily attributed to the outgroup and unrelated to the ingroup member's behavior, an idea described by intergroup attribution approaches (Hewstone, 1990; Pettigrew, 2020).

This is supported by the findings of Schäfer et al. (2021), who conducted a diary study revealing that positive contact primarily encompassed instances of casual conversations, brief friendly interactions, and acts of assistance. Conversely, negative contact predominantly entailed experiences such as receiving threats or engaging in conflictual conversations. These results further contextualize the differentiation between positive and negative contact experiences. Thus, it is crucial to recognize that the dynamics of positive and negative contact are not straightforwardly opposing constructs (Árnadóttir et al., 2018). Our findings further

underline the critique articulated by McKeown and Dixon (McKeown & Dixon, 2017), emphasizing that a more comprehensive and qualitative exploration of these contact dimensions is essential for a more nuanced understanding of their implications (Hayward et al. 2017). Maziotta and colleagues (2015) provide additional support for this premise, as they found that negative extended contact was strongly correlated with negative direct contact – but the relationship remained unchanged after introducing several mediators, including *ingroup norms against contact*. This suggests that the influence of ingroup norms did not account for this relationship, in contrast to the indirect effect of ingroup norms observed in the association between positive extended and positive direct contact.

Besides this idea of attributing negative intergroup encounters to the outgroup, it is also possible that extended negative contact experiences work differently for those high and low in authoritarianism. This might explain why we did not observe an interaction effect. For those high in RWA, exposure to negative contact could trigger a normative response, potentially leading to higher reported levels of prejudice. Whereas those low in RWA could feel overwhelmed and shocked by negative extended contact experiences reported by peers (as it is contrary to their expectations) and thus report higher levels of prejudice. For example, research demonstrated that low RWAs react with an increase in negative attitudes after experiencing (societal and symbolic) unanticipated threat (Russo et al., 2014), or show more authoritarian reactions and support more restrictive and aggressive reactions after experiencing threat (from terrorism; (Hetherington & Suhay, 2011)). Further, recent studies demonstrated mixed results for the dynamics between threat, negative contact, and outgroup attitudes for low authoritarians (Van Assche et al., 2018a).

We thus think that investigating the effects underlying the influence of those low in RWA in the future could be worthwhile and offer insights to understand the overall effects of negative intergroup encounters within society. Further studies could test this process of outgroup expectations and the resulting influence of negative (extended) encounters for those

high and low in RWA. This would add well to the growing body of literature investigating the expectations about contact with an outgroup (Schäfer et al., 2021) and further extend recent findings that inconsistent intergroup contact with an outgroup changes attitudes more than stereotype-consistent contact (Turner et al., 2020; Zingora et al., 2020) by an interpersonal difference approach. We see this as a promising emerging field of research.

Testing our third research question, the exploratory analysis on the RWA sub-facets did not yield evidence to support the notion that authoritarian submission, as a reflection of RWA's conformity to norms, exerts a more pronounced influence in these interactions compared to the other subdimensions. However, due to the different scales used to measure RWA and its different approaches to measuring the subdimensions in general and in this study, we remain careful with the interpretation of these results. Most importantly, the primarily used Altemeyer scale (1981) is known for its psychometric problems and the separation of its subdimensions is only a less-than-ideal solution for the here proposed research question. We address this aspect in more detail in the limitations section, as we think that further research on the subdimension could be of high relevance in understanding the normative orientation of authoritarians.

Additionally, the small effect size of the interaction for extended positive contact and the non-significant interaction with extended negative contact already lowered the chances for further insights from the interaction with authoritarian submission.

Limitations and Future Research

The study presented here comes with certain methodological limitations that should be acknowledged in future research. The methodological objective of this internal meta-analysis was to maintain maximal consistency across various aspects to facilitate our

distinctive analytical approach. This pertained primarily to the utilized measures and their evaluation but also conceptual considerations.

First, while the concept of authoritarianism is extensively debated and employed in intergroup research; over time there have been numerous measurements that vary in their applicability and have been used in this meta-analysis. For example, when employing unidimensional scales, the segregation of the subdimensions presents challenges (Mavor et al., 2010), and our approach represents our best effort to address this concern. Yet, despite our considerable confidence in the outcomes of the overarching RWA construct, the findings pertaining to the subdimensions warrant cautious interpretation due to the distinct measurement methodologies employed. It is also apparent that although the discourse on the dimensionality of RWA has been a focal point in the past (Altemeyer, 1996; Duckitt et al., 2010; Funke, 2005), the subdimensions are infrequently scrutinized individually in published studies and continue to lack clear delineation regarding their influence on attitudes (but see: Bilewicz et al., 2023). We believe that this represents a promising avenue for research on RWA as an individual differences variable and encourage researchers to investigate the impact of RWA's subdimensions on attitudes and intergroup relations more closely. Especially, further research could help to address the question of the norm conformity of RWAs and the role of authoritarian submission more clearly, as it is also unclear from which societal institution, entity or (majority)group such norms should stem to be acceptable for those high in RWA.

Secondly, while our research stresses the understanding of extended contact as a social norm, the rationale for this approach is mainly based on theoretical assumptions and previous tests of extended contact effects and their mediators (Tezanos-Pinto et al., 2010; Turner et al., 2008; Wang et al., 2019). Given that we did not explicitly test the perception of extended contact as a social contact norm, further research should investigate this moderated mediation by also assessing norms. Such an approach would help elucidate whether the effect for

individuals high in RWA truly arises from the normative aspect of extended contact, thereby enhancing our understanding of RWA and its sensitivity to norms. Furthermore, a replication study that also examines additional mediators could shed light on whether negative extended contact is perceived as an ingroup or outgroup norm, and which other mediators contribute to a more comprehensive explanation of the effect. To our knowledge, only Wang et al. (2019) have explored how positive and negative extended contact relate to ingroup and outgroup norms in a minority-group student sample (Uyghur). Additionally, Wang et al. (2022) demonstrated that anger towards the outgroup mediated a significant portion of the negative extended contact effects on contact intentions. Therefore, a thorough investigation of all potential mediators for negative extended contact appears to be a promising avenue for future research.

Also, the question of norm formation, its transmission within a group or society (but see: Paluck & Shepherd, 2012), and its influence on individuals (whether high or low in RWA) remains an understudied field in social psychology, despite its prominent role in the history of social psychology (Cialdini et al., 1991b; Sherif, 1936). Answers to these questions could be provided by field experiments with local communities or schools using longitudinal network analyses, a method that has recently gained more attention in the field of intergroup research (Bracegirdle et al., 2022; Kornienko & Rivas-Drake, 2022; Wölfer et al., 2017; Zingora, Stark, et al., 2020). These methods also eliminate the disadvantage of self-reports for social norms and extended contact, which pose a great problem for the validity of research on normative influences. Adding personal differences variables such as RWA to this new methodological approach would be of great benefit to the field's overall understanding of the interplay between situational and personal factors in intergroup research (Hodson, 2009; Pettigrew, 1991; Van Assche, 2019).

Thirdly, a potential limitation stems from our measurement of the dependent variables, which might have introduced certain distortions in the effects observed. Our decision to

utilize a general reference to 'immigrants' without specifying particular outgroups could have led to less consistent effects, given participants' varied inclinations towards different specific outgroups they favor or disfavor. However, extant research indicates that individuals predominantly tend to contemplate the largest minority groups when presented with unspecified references to immigrants (Asbrock et al., 2014; Wallrich et al., 2020). Also, there is extant literature on generalized prejudice, that frequently uses combined measures for different outgroups or unspecific descriptions of outgroups (Osborne et al., 2021). We consider our chosen approach conducive to ensuring result comparability for our internal meta-analysis and upholding the principle of generalizability. Nonetheless, future research could potentially address this concern by, for instance, soliciting responses about specific immigrant groups or focusing on outgroups that are universally available across countries and share common stereotypes, such as sexual minorities (Hodson et al., 2009; Maunder et al., 2020). Such refinements could provide additional insights into the nuanced dynamics of extended contact effects and warrant exploration in subsequent studies.

Fourth, similar to many correlational studies, the present study does not establish causal explanations. While experimental designs exist for examining extended contact effects, their utilization remains scarce (Vezzali et al., 2015). They could, however, be useful to investigate the effects of negative extended contact as well as the interactions with RWA. Additionally, although longitudinal research has demonstrated the effects of direct and extended contact (Christ et al., 2010), as well as contact effects for individuals high in RWA (Asbrock et al., 2012; Van Assche et al., 2018a), the exploration of longitudinal effects pertaining to negative contact experiences is a relatively nascent area within the field (Kotzur & Wagner, 2021). For example, Kotzur and Wagner (2021) have underscored the intricacies in disentangling the association between negative contact and prejudice, which could prove more complex than understanding the link between positive contact and prejudice. This

complexity can also be found for extended negative contact. Hence, a more comprehensive investigation is warranted.

Indeed, negative extended contact so far has not gained much attention. It would, however, add well to a growing body of literature that investigates the preconditions of intergroup contact (Kauff et al., 2021; Schäfer et al., 2021; Wölfer et al., 2019) and could add substantially to the understanding of the attitudes that are formed before contact. Referring to thoughts of Sherif that attitudes towards outgroups are not determined so much by direct contact with the groups but by the attitudes towards these groups prevailing among the other ingroup members, (Sherif & Sherif, 1953, pp. 94–95), negative extended contact could help to paint a more complete picture of intergroup relations.

Implications

Our findings presented herein also hold societal and political significance. Migration and forced migration in the upcoming decades (International Organization for Migration, 2021) and the subsequential increase in diversity will be a (societal) challenge, especially for people who already hold negative attitudes towards diversity in the form of right-wing ideologies. In the pursuit of mitigating intergroup tensions and prejudice within a society, fostering a positive social norm surrounding intergroup contact becomes an indispensable societal tool to advance this objective. Therefore, it is especially important to focus on these individuals not only in future research but also in the communication of societal changes and the support of positive intergroup norms in communities to reduce societal tensions. Guided by this perspective, individual interactions among community members who harbor no inherent avoidance of intergroup contact carry the potential to reach those who may harbor apprehensions or constraints in engaging in direct intergroup interactions.

Further, a society characterized by increased direct intergroup interactions enhances the likelihood that even individuals resistant to such encounters might benefit from the extended

contact experiences of their peers. However, the planned or unprevented segregation of migrant groups or refugees might have proven problematic in the past and could have led to less direct intergroup contact possibilities. Research by Uslander (2011) supports this notion, showing that segregation, rather than diversity, contributes to the deterioration of intergroup relations (see also: Van Assche et al., 2023). City planners and local authorities should therefore be well aware of the consequences of segregated areas. In this respect, diverse neighborhoods with positive intergroup norms could provide a particularly good context for intergroup contact and reduce the possible negative effects of diversity, even for those most prone to prejudice. This was demonstrated in studies by Van Assche and colleagues (Van Assche et al., 2018), where detrimental effects of diversity were reduced through positive social norms.

Thus, the promotion of intergroup contact in various settings, including workplaces, educational institutions, and local communities, exerts favorable effects on the individuals engaged. Importantly, the fact that (positive) extended contact proves advantageous even for those most susceptible to prejudice underscores its potential to cultivate tolerance across a diverse array of contexts.

Conclusion

In an internal meta-analysis of seven samples from four different countries with $N = 2,760$ participants, we showed that more extended positive intergroup contact is correlated with more positive intergroup attitudes, especially for people high in RWA. Negative extended contact, however, did not show stronger effects for high-RWAs, presenting an interesting *extended contact asymmetry*. This adds to the growing body of research on indirect contact (Wölfer et al., 2019), contact valence (Schäfer et al. 2021) as well as individual difference moderators of contact (Turner et al., 2020). To our knowledge, this study provides the first piece of evidence for an extended contact asymmetry for authoritarians. It is possible

that this asymmetry is due to the attribution of the negative intergroup encounter to the outgroup, and not to the intergroup contact norms of the ingroup (Mazziotta et al., 2015). Further, the effects could be due to different mechanisms for those high and low in RWA when hearing about negative intergroup encounters from peers (Russo et al., 2014). Finally, the analysis for the subscales of RWA revealed mixed results, and we encourage further research to answer these questions.

To conclude, the present research adds to the body of intergroup contact research and the question about its efficacy in bringing harmony to intergroup relations. Our research emphasizes the important aspect of the interaction between individual differences and societal norms about contact. The main message of the study is that positive extended contact as a social norm can indeed reduce prejudice. Importantly, it does so for those most prone to prejudice. Moreover, we could demonstrate that even though negative extended contact effects have a detrimental impact on intergroup attitudes, these effects are equally strong for those high and low in RWA.

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