Exploring The Role of Emotional Intelligence in Prejudice and Intergroup Relations.

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Declaration

I declare that this thesis is my own work carried out under the normal terms of supervision.

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Publications

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This one goes out to my closest friends,

The ones who make me feel less alien,

I do not think I would be here if not for them.

- The Maine, *Another Night on Mars*

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This thesis is dedicated to my late parents, Sarojini and Purshottam Makwana. I hope I have and will continue to make you proud.

Abstract

People vary in their ability to understand, process, and manage information about one's own and others' emotions, a construct known as Emotional Intelligence (EI). Previous research indicates that EI is an important factor in interpersonal relations, but hardly any research has investigated the associations between EI and intergroup relations. This thesis aims to explore the role of EI (and specifically emotion management) in prejudice across different contexts and different target outgroups. The first empirical chapter (Chapter 3) investigated the associations between EI and prejudice in two different counties (Spain and the UK) using both student and community samples. Results showed that those with higher emotion management skills expressed lower levels of prejudice (Study 1 and 2), and more positive attitudes towards immigrants (Study 2a) and refugees (Study 2b). Chapter 4 (Study 3) investigated the role of empathy in explaining (i.e., mediating) the association between emotion management and prejudice. The results demonstrated that higher empathy partly accounted for the association between emotion management and different forms of prejudice. The next set of studies described in Chapter 5 aimed to test whether those with higher emotion management scores are less likely to endorse right-wing and prejudicial attitudes. We tested these associations in both student (Study 4) and adult (Study 5) samples from the UK, and results showed that those who are better at managing their emotions are less likely to endorse attitudes which support social hierarchies and inequalities (i.e., SDO) and traditional, conservative views (i.e., RWA, Study 5 only), which in turn related to more positive attitudes towards outgroups. Finally, Chapter 6 examined if one's ability to manage emotions can facilitate (i.e., moderate) the relationship between positive and negative contact experiences and prejudice, using an app-based experience sampling method (Study 6). The results from the moderation analysis showed that the main effect between positive contact and prejudice was negative and significant, however the main effect of negative contact and prejudice was non-significant. Furthermore, we also found a significant interaction between positive contact and emotion management on prejudice, indicating that the effect of everyday positive contact was significant for those with greater emotion management abilities, but not for those with lower levels of emotion management. Taken together, the findings highlight that emotion management abilities play an important, but so far largely neglected role in generalised prejudice and outgroup attitudes.

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Chapter 1: Emotional Intelligence: History, Measurement, and Applications

In Western discourse, we often hear that we should "trust our gut feelings" or "follow our hearts" which suggests that emotions are intuitive, and decisions guided by emotions are more closely aligned to a person's desires. On the other hand, emotions are also portrayed as irrational and disruptive; we should not let them "get in the way" when making important decisions as they may compromise our ability to think systematically. We might believe emotions provide valuable insight about our inner state, but that they should be overcome, or disregarded, in exchange for logic. However, there is scientific consensus that the dichotomous approach of emotions *versus* cognition does not accurately reflect our experiences of thinking and feeling (Matthews et al., 2002; Matthews et al., 2006). Emotions and cognition are dynamically intertwined, such that emotions can shape our thinking and our thinking can affect our emotions (Mayer, Roberts et al, 2008). In other words, people do not rely on *either* their emotional experiences or logical thinking. Instead, we use cognitive skills to understand and manage our emotions and use our emotions to facilitate reasoning and decision making.

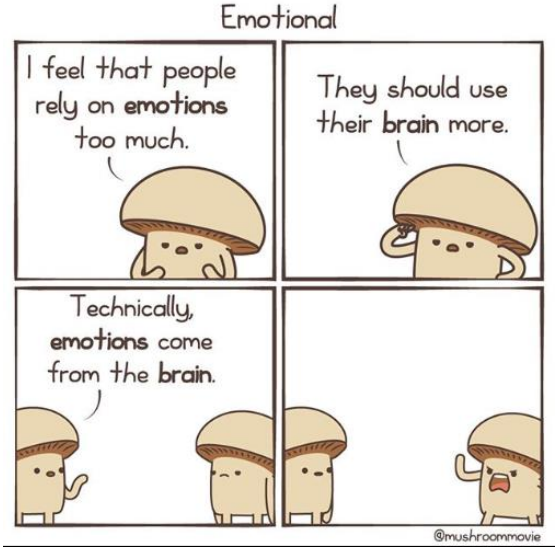

Figure 1. Comic illustrating the conflict between emotions and logic (MushroomMovie, 2020)

People vary in their "ability to monitor one's own and others' feelings and emotions, to discriminate among them and to use this information to guide one's thinking and actions" (Salovey & Mayer, 1990, p. 189), a construct known as Emotional Intelligence (EI). People high in EI can use their cognitive skills to accurately recognise, understand, and regulate emotions in themselves and

others. They can express their emotions to others appropriately and can also harness their emotions to achieve a variety of adaptive behaviours and outcomes such as redirecting/prioritising attention, increasing motivation and eliciting emotions in others (Mayer et al, 1999; Mayer & Salovey, 1993; Salovey & Mayer 1990). In contrast, people who are low in EI are not as cognitively well equipped to deal with their emotions and therefore are less able to identify, interpret, monitor, and regulate their emotions. Lower levels of EI are generally associated with negative outcomes such as tumultuous social relationships, greater levels of interpersonal aggression and poorer mental health (Brackett et al., 2011; Goleman 1995; Zeidner et al, 2012), whereas higher EI is related to positive outcomes such as academic achievement, mental wellbeing, and job performance (Brackett et al, 2011; Matthews et al, 2002).

Emotional information processing skills are likely to be important for social adaptation and relationships. For example, in seven studies, Schutte and colleagues (1998) demonstrated that EI was related to a range of indicators associated with better interpersonal relations, including social skills, cooperation, and affectionate and satisfying relationships. Furthermore, the ability to manage and regulate emotions seems specifically important for social functioning and maintaining high-quality social relationships (Brackett et al, 2006; Lopes et al, 2005). However, despite a substantial body of research demonstrating the importance of EI in interpersonal, intimate, and organisational relationships (e.g., Brackett et al, 2011; Matthews et al, 2002; Mayer, Roberts et al, 2008; Schlaerth et al, 2013), hardly any research has investigated the role of EI in intergroup relations and prejudice towards others. Exploring the associations between EI and outgroup attitudes could improve our understanding of the antecedents of prejudice and lead to more targeted prejudice-reduction interventions. Therefore, the focus of this thesis is to examine the connection between EI and prejudice. More specifically, a series of studies will explore the relationship between the different facets of EI and prejudice, whether there is a robust association between EI and prejudice that can be observed across different contexts and different target outgroups, if key intergroup factors can further explain the relationship between EI and prejudice, and if EI can facilitate better day-to-day intergroup contact experiences.

The Development of the Emotional Intelligence Construct

Early empirical work on EI emphasised the importance of both cognitive and emotional processes (Mayer & Salovey, 1993; Salovey & Mayer 1990). Cognitive ability, usually referred to as intelligence, involves skills such as reasoning, problem-solving, and abstract thought (Carroll, 1993). Evidence suggests that intelligence can be separated into multiple factors (such as verbal and spatial intelligence; Carrol, 1993; Thurstone, 1938), with each factor associated with a specific set of abilities that are essential to perform well in these areas (Carroll, 1993). Accordingly, in the same way verbal intelligence requires the ability to process spoken language and recognise words, people might also require specific cognitive abilities to process emotion-related information effectively (Mayer & Salovey, 1993; Mayer, Salovey et al, 2008; Salovey & Mayer, 1990).

Emotions are best described as episodic experiences which occur after an appraisal of a stimulus (e.g., an object, situation, or condition), are usually directed towards that stimulus, and are related to physiological responses, such as a change in facial expression, posture, or arousal (Gross, 2015; Keltner & Gross, 1999; Mayer, Roberts et al, 2008; Mulligan & Scherer, 2012; Oatley & Jenkins, 1992). Importantly, emotions are not simply a by-product of one's appraisal of their environment. They can influence our memory, problem solving abilities, and capacity to meet our interpersonal and social needs (Lazarus, 1991; Oatley & Jenkins, 1992; Tibbett & Lench, 2015). Harnessing our emotions effectively might enhance our thinking and allow us to be more successful in meeting our needs (Salovey & Mayer, 1990). Indeed, meta-analytic reviews have reported that EI is positively related to a range of real-life outcomes including academic achievement, job performance, organisational leadership, emotional wellbeing, and physical health (Keefer et al, 2009; MacCann et al, 2020; Miao et al, 2017a; 2017b; Sánchez-Álvarez et al, 2016).

The notion that we can use emotions to our advantage became increasingly popularised and as a result, EI research grew exponentially (Matthews et al, 2002). The field was dominated by work aiming to establish the specific skills necessary for EI and how best to measure this and consequently, many alternative conceptualisations of EI were proposed (e.g., Bar-On, 1997a; 1997b; Goleman, 1995; 1998; Mayer et al, 2002a; 2002b; Petrides & Furnham, 2001; Salovey et al, 1995; Schutte et al.,

1998). However, it became evident that these approaches varied widely (Cherniss, 2010). Different theoretical models and measurement tests of EI captured a diverse range of cognitive and non-cognitive factors making the EI construct increasingly broad, overinclusive and confusing (Cherniss, 2010; Landy, 2005; Locke, 2005; Mayer, Salovey et al., 2008).

Many researchers raised concerns around the wide range of definitions, tests and models that were being proposed. Locke (2005) for instance, noted that "the concept of EI has now become so broad and the components so variegated that no one concept could possible encompass or integrate all of them" (p. 426), and Matthews and colleagues (2006) argued that "the label 'emotional intelligence' has been rather haphazardly used to refer to a multitude of distinct constructs that may or may not be interrelated" (p. 8). EI grew to be all-encompassing to the point that it became difficult to isolate which skills were truly related to the cognitive ability to process emotional information.

Models and Measures of EI

To delineate between the different ideas and methods in the EI literature, three main approaches can be distinguished based on different conceptualizations of the EI construct. *Ability models* maintain the view that EI is a cognitive ability (Mayer et al, 2001; Mayer, Salovey et al., 2008), *mixed models* frame EI as a collection of cognitive and non-cognitive skills and competencies relating to emotions (e.g., Bar-On, 2006; Goleman; 1996) and *trait models* describe emotion-related self-perceptions and disposition (Petrides & Furham, 2000).

Another way to classify different approaches in EI research is based on the type of measurement method used to assess EI. Generally, ability models use performance-based tests which aim to measure one's level of ability to solve problems related to emotions, whereas mixed and trait models use self-reported tests which measure the perceptions of traits or characteristics associated with emotionally intelligent behaviour (Petrides, 2011; Petrides & Furham, 2000). Although both methods of classification have been used extensively in the literature, the performance-based vs self-reported EI distinction has become the most widely accepted classification to distinguish between different EI theories and methods (O'Connor et al., 2019; Pérez et al., 2005).

Performance-Based EI

According to the well-established Mayer and Salovey model (1997), EI is best conceptualised as a set of interrelated cognitive abilities relating to emotion (Mayer et al, 1999; 2001; Rivers et al, 2007). This model proposes that EI is composed of four hierarchical branches of distinct emotional abilities (Mayer & Salovey, 1997; Mayer, Salovey et al, 2000). These branches consist of:

a) Perception of Emotions. This refers to the ability to identify emotions in oneself and others accurately. For example, those who are more skilled in this domain can correctly identify emotional expressions in people's faces and voices, and in more abstract expressions such as in art and media.

b) Using Emotions to Facilitate Thought. This branch refers to the ability to use emotions for problem solving, decision making, and interpersonal communication. Those who are more adept at this skill would be able to use their emotional experiences to inform other mental processes, they would be better at tasks like generating emotions to facilitate perspective taking or using emotions to motivate themselves.

c) Understanding Emotions. This skill relates to the capacity to recognise, reflect upon and analyse the experience of emotions. Being skilled in this area means being able to discriminate between similar emotions, label emotions with accurate language, and understand relationships between emotions (e.g., how anger and disgust can combine to create contempt, or how anger and frustration can lead to resentment).

d) **Emotion Management.** This branch consists of the ability to lessen, enhance, or adjust an emotional response in oneself or others. People who are proficient at emotion management are better able to regulate their emotions (and the emotions of others) to achieve a desired goal. For example, down-regulating anxiety before public speaking, or controlling anger during a heated discussion. (Mayer et al., 2001, 2003; 2016; Mayer & Salovey, 1997; Mayer, Salovey et al, 2008; Rivers et al., 2007; Salovey & Grewal, 2005).

To measure EI, Mayer and colleagues initially developed the Multi-factor Emotional Intelligence Scale (MEIS; Mayer et al, 1999) which was later revised to the Mayer-Salovey-Caruso Emotional Intelligence Test Version 2.0 (MSCEIT; Mayer et al., 2002a; 2002b). The MSCEIT is a widely used test which measures the capacity to solve emotion-related problems in each of the four branches of the Mayer and Salovey model of EI (1997). Each branch is measured using two subtests. Perceiving emotions is measured by the *faces* task in which participants view a series of photographs of faces and indicate the emotion that is represented and the *pictures* task which is like the faces task but uses pictures of landscapes and abstract imagery. Using emotions is measured by the *sensation* task where participants attribute, taste, colour, and physical sensations to specific emotions they have generated and the *facilitation* task in which participants judge the usefulness of different moods to cognitive tasks and daily activities. Understanding emotions is measured using the *blends* task where participants identify emotions that combine to form more complex emotions and the *changes* task in which participants identify emotions that occur as a result of changing or intensifying emotions. Finally, managing emotions is measured using the *emotion management* task where participants are asked to rate the effectiveness of different actions to regulate emotions to achieve the specified goal and the *emotional relations* task which is like the emotion management tasks but in relation to managing other people's emotions. Branch scores can also be combined to give scores for two separable factors (experiential and strategic EI) and a total score of EI (as demonstrated in Figure 2; Mayer et al, 2002a; 2002b; 2003). Other scholars have also developed scales to measure specific branches such as the Situational Tests of Emotional Management and Understanding (STEM and STEU, MacCann & Roberts, 2008), and Emotion Management Abilities scale (EMA, Freudenthaler, & Neubauer, 2005).

However, there have been mixed findings regarding the factor structure of the model. Some have reported evidence to support the four-factor model (e.g., Mayer et al., 2003; Sanchez-Garcia et al., 2016), whereas others have questioned whether the "using emotions" branch is truly separable from the "perceiving emotions" and "managing emotions" branches (Evans et al., 2020; Hughes & Evans, 2018). More specifically, items assessing the use of emotions have been found to load onto the

perception and/or management factors (Fan et al., 2010; Gardner, & Qualter, 2011; Gignac, 2005; Palmer et al., 2005; Rossen et al., 2008) thus demonstrating that a three-factor model consisting of perception (or experience), management and understanding of emotion might be more accurate (Fan et al., 2010; Gardner, & Qualter, 2011; MacCann et al., 2014; Rode et al, 2008). Furthermore, the Mayer and Salovey model (1997) does not include other abilities that are theoretically relevant to the EI construct (such as emotional expressiveness and perspective taking), thus the criteria for deciding what is or is not relevant to EI is not clear either (Matthews et al, 2006).

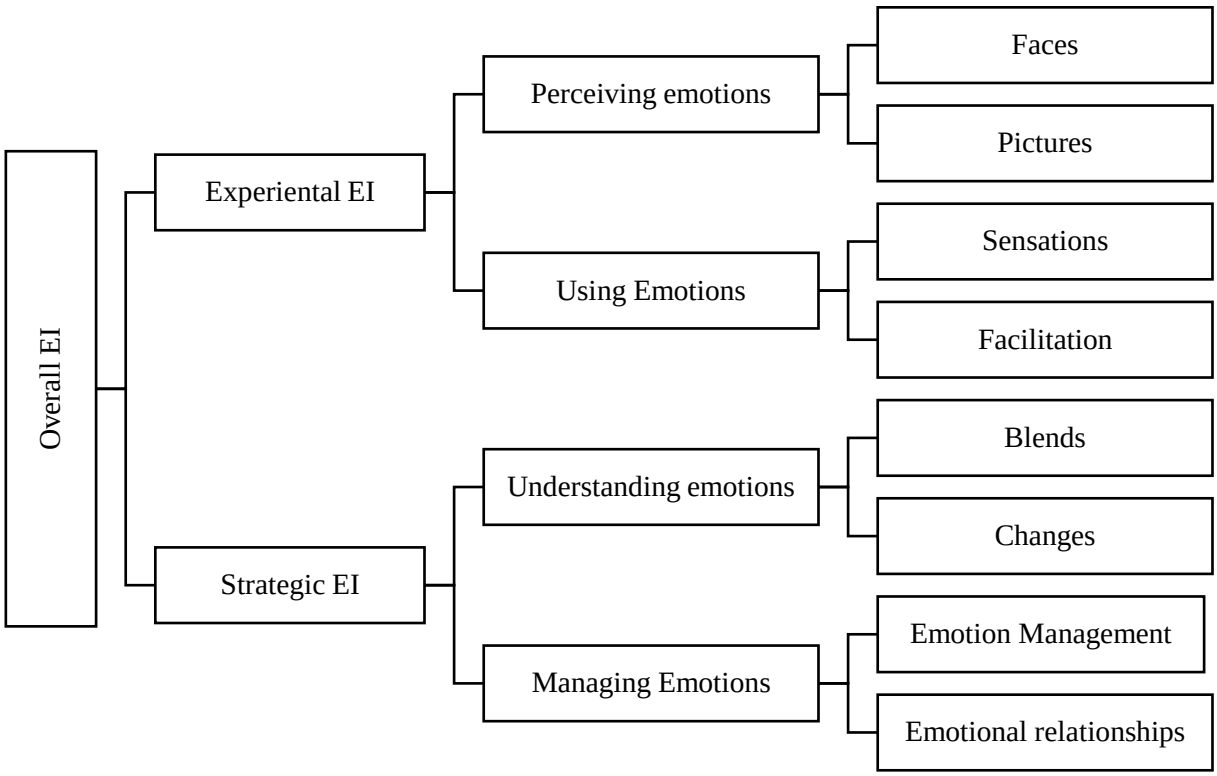

Figure 2. Diagram of the Mayer-Salovey-Caruso four-branch model of Emotional Intelligence (based on Mayer et al., 2003, see also Rossen et al., 2008)

It can also be difficult to develop items that can effectively measure emotional problem-solving skills. Due to the subjective nature of emotions, there could be many different, but still relatively adaptive, ways a person could express and manage their emotions in any given situation. This makes it difficult to evaluate definitive right or wrong responses unlike other tests of cognitive abilities (Izard, 2001; Matthews et al, 2007; Roberts et al, 2001). Given that some of the test items do not have clear right or wrong answers, they are usually scored with a degree of correctness. Better or worse answers are determined by how closely they match either the consensus of a panel of experts or

the consensus of a normative sample of the general population. The scores are weighted based on the proportion of the sample that gave the same response (Mayer et al., 2003; MacCann & Roberts, 2008). Both expert and consensus scoring are highly correlated suggesting that correctness is largely agreed upon in both normative and expert opinions (Mayer et al., 2003).

Self-Reported EI

Self-reported tests of EI measure individuals' subjective beliefs about their own emotional states, skills, and competencies (Petrides & Furnham, 2001; Petrides et al, 2016). They typically cover the *perceived* capacity to attend to one's own emotions, understand different emotional states and regulate feelings. Three theoretical models are particularly well known in this area, the first is Daniel Goleman's model of Emotional Competencies which was first established in 1995 and later revised in 1998 to be solely applicable to organisational settings. This model suggests that EI is composed of several wide-ranging characteristics (including trustworthiness, adaptability, a positive outlook, and communication skills) which are proposed to fall under four dimensions: self-awareness, social awareness, self-management, and relationship management (Boyatzis et al, 2000; Goleman, 1998). To measure this construct in a workplace environment, Boyatzis and colleagues developed the Emotional Competencies Inventory (ECI; Boyatzis et al, 2000) which measures perceived levels of emotional and social competencies and can be completed by oneself or by one's peers or supervisors. Critically, this model assumes that a wide array of independent characterises can cluster together cohesively to form the EI construct, an assumption that lacks strong empirical evidence (Matthews et al., 2004, Locke, 2005).

Another well-known model of EI is Reuven Bar-On's model of Emotional-Social Intelligence (ESI, 1997a; 1997b; 2006) which described EI as "interrelated emotional and social competencies, skills and facilitators that determine how effectively we understand and express ourselves, understand others and relate with them, and cope with daily demands" (Bar-On, 2006; p 14). This model proposed that relevant emotional and social skills can be grouped into five components: intrapersonal awareness, interpersonal awareness, stress management, adaptability, and mood. These components can be measured using the self-reported Emotional Quotient Inventory (EQ-i; Barr On, 1997a, 1997b,

2006). Unlike Goleman's theory of Emotional Competencies, the proposed factor structure and validity of the EQ-i has been supported by various empirical studies (described in Bar-On, 2006) suggesting that it is a more cohesive model. However other researchers have noted that the theoretical basis of the model remains unclear as it has not yet been established how the components measured by the EQ-i are conceptually related to the EI construct (Conte, 2005; Matthews et al, 2002).

Goleman's and Bar-On's accounts are examples of mixed models of EI as they capture of a range of both cognitive and non-cognitive factors (Mayer, Salovey et al., 2000). Both tests capture elements of problem solving and incorporate aspects such as self-confidence and conscientiousness (Goleman, 1998), and stress management and adaptability (Bar-On, 2006). This approach is source of controversy for many, as the models have been criticised for being broad, sweeping and overinclusive (Matthews et al, 2002; Mayer, Salovey et al, 2000; Daus & Ashkanasy, 2003). Furthermore, it seems imprecise to integrate items measuring a range of ability and personality-related characteristics into a single test, as blurring the lines between distinct psychological variables raises concerns for validity testing (MacCann et al, 2003). Finally, the value of measuring abilities using self-report tests is limited. This measurement method can only tap into one's perceptions of their abilities and therefore cannot accurately assess an intelligence (Petrides & Furnham, 2001; Roberts et al, 2008). Indeed, some scholars have highlighted that it seems inaccurate to refer to these constructs as 'emotional intelligence' as they do not measure intelligence of any type (Cherniss, 2010; Daus & Ashkanasy, 2003; MacCann et al, 2003; Matthews et al., 2002; Mayer et al, 2000; Neubauer & Freudenthaler, 2005).

Aside from the methodological concerns, Hughes and Evans (2018) noted that mixed models of emotional competencies share a significant overlap with previous theories on emotion regulation, which is the process that allows people to control or modify their emotions by influencing the type and intensity of emotion they experience, when they experience it, and how they express it (Gross, 1998; 2014; 2015; Peña-Sarrionandia et al., 2015). Both theories attempt to explain how a person might be able to use their emotions to meet goals and both give examples of similar strategies to do this (see Hughes and Evans 2018 for detailed comparison). Due to this conceptual overlap, it was

suggested that instead of pursuing broad competencies related to emotional intelligence, work should be refocused on examining the role of emotion regulation alongside emotion-related abilities and personality traits.

In contrast to the mixed models of EI, Petrides and Furham (2000) proposed a different model termed trait EI (also referred to as trait emotional self-efficacy). In their work, EI is defined as a constellation of emotion-related self-perceptions. One way of measuring trait EI is by using the Trait Emotional Intelligence Questionnaire (TEI-Que) which aims to capture a comprehensive range of personality traits related to emotions and consists of four factors which cover wellbeing, sociability, self-control, and emotionality (Petrides & Furnham 2001; 2003; Petrides, 2009). Other researchers have devised tests that measure traits which are specifically related to the Mayer and Salovey's conceptualisation of EI (1990; 1997). Examples of these include the Self-Report Emotional Intelligence Scale (SREIS, also known as the Emotional Intelligence Scale, Schutte et al., 1998) which measures perceived skills in appraisal, regulation and use of emotions, and the Trait Meta-Mood Scale (TMMS, Salovey et al, 1995) which captures the perceived capacity to attend to one's emotions, to discriminate between different emotional experiences, and to regulate negative emotions.

The trait EI model focuses solely on emotion-related self-perceptions and dispositions, not cognitive abilities, or perceived levels of competence, and therefore is theoretically and psychometrically distinct from both ability and mixed models (Petrides, 2009; 2010). In fact, compared to ability EI, evidence suggests that trait EI is more closely connected to personality dimensions (e.g., Big Five personality factors), yet is still conceptually distinct from these, as research has demonstrated the predictive validity of trait EI over and above existing personality models in a range of everyday outcomes, as discussed later in this chapter (Andrei et al, 2016; Gardner, & Qualter, 2010; Petrides et al, 2007).

Unlike the ability EI approach which can simplify and reduce complex experiences to better or worse responses, the trait EI approach recognises that the appropriateness of the emotional experience might differ based on the person and context, and as such can better account for the subjective nature of emotions (Petrides, 2010). In other words, by placing EI within the domain of

personality rather than intelligence, the trait EI approach emphasises that there are many different, yet adaptive, ways a person can emotionally respond to a situation and some emotional 'profiles' might be more useful in some circumstances but not others (Petrides, 2010, 2011).

Beyond the Ability vs Personality Debate.

A wealth of data demonstrates that scores on performance-based and self-reported EI measures tend to be weakly correlated (Brackett & Mayer, 2003; Brannick et al, 2009; Mayer, Caruso et al, 2000; O'Connor & Little, 2003; Van Rooy et al., 2005). Measures of self-reported EI are more strongly correlated with personality than with cognitive ability, whereas ability-based measures are more strongly correlated with cognitive ability than with measures of personality demonstrating that they are likely to be distinct approaches that tap into different underlying mechanisms, rather than competing models of the same construct (Van Rooy et al., 2005). Indeed, it might be more appropriate to think of the two approaches as complimentary, in that a person's capacity to process emotion-related information could be affected by a range of factors associated with not only performance-based EI and self-reported EI, but also the ability to regulate emotions (Peña-Sarrionandia et al., 2015) Emotion regulation is the *process* to influence and modify one's emotions in order to achieve a goal, using strategies such as situational selection (e.g. avoiding or seeking out certain situations), cognitive change (e.g. reinterpreting the situation), and response modulation (e.g. suppressing emotional responses; McRae & Gross, 2020). Emotion regulation is distinct from performance-based EI, which refers to individual differences in the ability to perceive, use, understand and manage emotions in oneself and others, and self-reported EI which refers to individual differences in emotion-related self-perceptions and dispositions.

Mikolajczak (2009) proposed that the different approaches should be unified into a single, cohesive model which distinguishes between knowledge, ability, and dispositions. More specifically, Mikolajczak (2009) acknowledged that people can differ on the breadth of emotion-related knowledge they may have (i.e., ability EI), their actual ability to implement this knowledge (i.e., the process/action of implementing EI), and their propensity to behave or react in different ways (i.e., trait EI). She also proposed that these different levels are hierarchically linked such that "the propensity to

remain calm in emotional situations implies the ability to implement functional emotion regulation strategies, which in turn implies the knowledge that some strategies are more functional than others in a given situation" (Mikolajczak, 2009 p. 27).

Hughes and Evans (2018) put forward a similar model termed the Integrated Model of Affect-Related Individual Differences (or IMAID) which also linked the different approaches. The authors highlighted the distinction between cognitive ability (ability EI), personality dispositions (trait EI) and emotion regulation (the process/action). However, they suggest that rather than being hierarchical, the impact of ability and trait EI on an outcome is mediated by emotion regulation. In other words, both the ability to process emotional information and the propensity to act in a specific way can affect the strategies used to regulate emotions and thus affect our capacity to meet goals (for supporting meta-analysis, see Peña-Sarrionandia et al, 2015). If nothing else, these models emphasise the need to measure both ability and trait EI to provide a more complete picture of a person's emotional processing skills and dispositions to assess the impact they might have on day-to-day functioning.

The Role of EI in Everyday Life

To establish the validity of the EI construct, it is necessary to determine whether EI has a meaningful impact on important domains within everyday life. By exploring the impact of EI on real-life outcomes, we can a) understand the utility of the construct, b) determine if the different models of EI have similar impacts on daily life outcomes and c) establish the importance of EI compared to other well-established factors such as cognitive ability and personality (Matthews et al., 2002).

Health and Wellbeing

Being more skilled in dealing with one's emotions might have a range of benefits for health and wellbeing. Multiple meta-analyses have reported positive associations between EI and various health and wellbeing indicators including mental, physical, and psychosomatic health and subjective wellbeing (Martins et al, 2010; Sánchez-Álvarez et al, 2016; Schutte et al, 2007). Theoretically, people with higher EI should be better able to regulate negative emotions, appraise stressful events more constructively and use coping strategies effectively (see Matthews et al, 2002). They may be

more attuned to and better able to meet their emotional needs and might be more likely to engage in stress-reducing health behaviours (Matthews et al, 2017). Indeed, those with higher EI demonstrate better psychological and biological reactivity to stress (Mikolajczak et al, 2007; 2009; Salovey et al, 2002) and are more likely to engage in positive health practices like exercise, self-care, and help-seeking, and are less likely to adopt problematic habits such as excessive drinking, drug use, and other risky behaviours (Brackett et al, 2004; Keefer et al, 2009; Kun, & Demetrovics, 2010; Zeidner et al, 2012). Additionally, people with higher EI might also benefit from better social support thus positively impacting their health and wellbeing. EI has been consistently associated with various measures of social competence and social functioning (Brackett et al, 2011; Zeidner et al, 2009) which might result in healthier social relationships and better networks of social support that can be drawn upon in times of need (Matthews et al, 2017; Zeidner et al, 2012).

Academic Achievement

Numerous interventions have been developed to integrate social and emotional learning (SEL) in schools, many of which are based on models of EI. For example, the leading SEL framework emphasises the importance of five key competencies: self-awareness, self-management, social awareness, relationship skills, and responsible decision making (CASEL, 2005), which are very closely related to Goleman's theory of emotional competencies (Goleman 1995; 1998). Another approach to SEL focuses on five different emotion-specific competencies: recognizing emotion, understanding emotions, labelling emotions accurately, expressing emotions, and regulating emotions effectively (RULER; Nathanson et al, 2016; Rivers & Brackett, 2010). This approach is more closely aligned with the principles of the Mayer and Salovey model of EI (1997). The benefit of SEL interventions in schools is well-established, with meta-analytical data demonstrating that students who participated in SEL programmes not only showed improvements in social and emotional skills, but also showed increased positive social behaviours and a reduction in problematic behaviours (Durlak et al, 2011).

Additionally, multiple meta-analytic reviews have further demonstrated that there is a direct link between EI and academic achievement (MacCann et al, 2020; Perera, & DiGiacomo, 2013;

Richardson et al, 2012; Van Rooy, & Viswesvaran, 2004). The most recent and most comprehensive meta-analysis of 158 studies (N = 42,529) reported a significant positive correlation between EI and academic achievement (ρ = .20). Performance-based EI was found to be a significantly stronger predictor of academic achievement compared to self-reported EI, and furthermore the understanding and management branches of performance-based EI were found to be stronger predictors than the perception or facilitation branches. Finally, although cognitive ability was found to be the strongest predictor of academic achievement, the understanding and management branches of EI predicted academic achievement beyond cognitive ability and personality, demonstrating the incremental validity of EI (MacCann et al, 2020). In other words, students who are better at accurately identifying how they are feeling and regulating their emotions effectively are more likely to perform well academically (Goetz & Bieg, 2016; Hoffmann et al, 2020; MacCann et al, 2020).

Occupational Success

Emotional skills can also impact a range of behaviours and outcomes in organisational settings (Cherniss 2003; Caruso et al, 2002). When looking at performance and attitudes towards work, multiple meta-analytical reviews have reported positive associations between EI and job performance (Joseph & Newman, 2010; O'Boyle et al., 2011; Van Rooy, & Viswesvaran, 2004). Furthermore, performance-based and self-reported EI show differential relations with various organisational outcomes. Both performance-based and self-reported EI are related to job satisfaction, yet only self-reported EI is related to greater organisational commitment and reduced intentions to leave the organisation (Miao et al, 2017a).

Furthermore, EI is valuable to leadership in occupational settings. Strong leaders should be able to understand team members' emotional experiences, use emotions to facilitate organisational decision making and problem solving, and manage one's own and other team members' emotions to inspire confidence and enthusiasm to sustain a productive working environment (George, 2000; Walter et al., 2011). Numerous meta-analytical studies have demonstrated significant associations between both performance-based and self-reported EI and a range of positive leadership behaviours, including effective leadership, transformational leadership, and better organisational conflict

resolution skills (Harms & Credé, 2010; Mills, 2009; Schlaerth et al, 2013). Emotionally intelligent leaders can also have a positive impact on job performance, satisfaction, and organisational citizenship behaviours within their team (Miao et al, 2016; 2018) demonstrating that one's level of EI can also have a wider impact on team cohesion and the working environment.

Social Relationships

The importance of EI in interpersonal relations is also well documented in the literature. High EI individuals are typically more socially competent, experience less conflicts in social relationships, and report greater psychological well-being (Brackett et al, 2011, Schutte et al., 2001), while lower levels of EI correspond to socially problematic behaviours such as bullying behaviour, victimisation, and interpersonal aggression (García-Sancho et al, 2014, García-Sancho, Dhont et al, 2017; García-Sancho, Salguero et al, 2017, Schokman et al., 2014; Vega et al., 2021).

In terms of performance-based and self-reported EI, when examined separately, both are related to greater social competence (e.g., Gil-Olarte Márquez et al, 2006; Mavroveli et al, 2007). Yet, when examined simultaneously, scores on performance-based measures seem to play a more prominent role, particularly for men (Brackett et al, 2006). More specifically, Brackett and colleagues (2006) found that performance-based EI, but not self-reported EI, was associated with greater levels of social competence exhibited in both pre-existing social relationships and in the initiation of new social relations. Such findings indicate that the association between EI and greater social competence is more strongly linked to the mental ability to process and use emotional information (i.e., performance-based EI), rather than emotion-related personality dispositions.

Other research has highlighted that not all the four branches of Mayer and Salovey's model of EI (1997) are equally implicated in social relations. For instance, Lopes and colleagues found that out of the four EI branches, only emotion management was significantly correlated to both self-reported and peer-reported friendship quality (Lopes et al, 2004). Moreover, emotion management abilities predicted friendship quality more strongly than self-reported emotion regulation, highlighting the specific importance of performance-based emotion management in positive social interactions (Lopes et al., 2004). In contrast, when looking at interpersonal aggression and bullying, those with lower

levels of emotion management are more likely to engage in bullying behaviour and victimisation (Baroncelli, & Ciucci, 2014; Cañas et al., 2020: Quintana-Orts et al., 2021). Furthermore, Extremera and Fernández Berrocal (2004) explored the relationships between self-reported EI, performance-based emotion management, and quality of interpersonal relationships. They found that stronger emotion management abilities predicted greater levels of intimacy and affect in their social relations, yet higher self-perceived attention to emotions predicted higher antagonism levels. Not only does this research highlight the role of emotion management in social relations, but it also demonstrates that performance-based emotion management and self-perceived emotional skills can be uniquely related to indicators of social relations.

Emotional Intelligence and Intergroup Relations

Taken together, the vast body of research described above highlights the importance of EI for many everyday outcomes. Higher levels of EI are linked to better physical and mental health outcomes, improved academic achievement, better job performance and leadership skills, and more positive relationships with others. EI appears to be a valuable construct in predicting positive outcomes in daily life, and there is reliable evidence of incremental validity over and above other well-established constructs (i.e., cognitive ability and personality). Furthermore, the evidence indicates that different models and measurement methods of EI can have different relationships with these outcomes, highlighting the necessity to examine both performance-based and self-reported EI concurrently. Performance-based measures of EI measure individual differences in the ability to deal with one's own and other people's emotions (e.g., recognising emotions in others, managing emotions based on the social context, and communicating emotions effectively), whereas self-reported tests measure individual differences in perceptions and dispositions associated with emotionally intelligent behaviour (Petrides & Furham, 2000; Petrides, 2011). Theoretically, it could be argued that ability EI may have a more important role in intergroup relations as previous literature indicates that performance-based EI is related to better social and interpersonal relationships (Gil-Olarte Márquez et al, 2006; Mavroveli et al, 2007), especially when compared to self-reported EI (Brackett et al, 2011). Indeed, those who are more emotionally intelligent tend to be better friends, partners, leaders,

teachers, and healthcare providers compared to those lower in EI (Mayer et al., 2008). However, considering the wealth of findings in these areas, it is surprising that hardly any research has investigated the associations between EI and prejudice or outgroup attitudes.

People can experience a range of emotions during intergroup encounters or simply by thinking of a specific outgroup. Whereas some outgroups elicit feelings of warmth and admiration, others make people feel anxious, angry, or disgusted (Cottrell & Neuberg, 2005; Seger et al, 2017). Processing, expressing, and managing these diverse emotional experiences can be challenging and may have implications for how people react towards outgroups. For example, perceiving outgroup members as threatening is typically associated with increased intolerance and derogation, whereas empathizing with outgroups seems critical in establishing positive and sustainable intergroup relations (Stephan & Finlay, 1999; Stephan & Stephan, 2000; Swart et al, 2011). Given that people´s emotions in intergroup contexts are associated with intergroup attitudes, it is likely that their general ability to manage emotions also plays an important role in shaping intergroup attitudes.

Theoretically, it can be expected that those who have greater emotional skills not only show greater interpersonal sensitivity in the domains of work and interpersonal relations but are also cognitively well equipped to better deal with emotional reactions towards members of other groups, relating to lower prejudice. On the other hand, those with lower levels of EI might find it more difficult to process intergroup emotions, thus relating to higher levels of prejudice towards outgroup members. In line with this rationale, a study by Onraet and colleagues demonstrated that those who perceive themselves as being less emotionally competent show greater racial prejudice (Onraet et al., 2017). However, by focusing on the relations between self-reported EI and racism, it remains unclear if a) similar relations exist for performance-based EI after accounting for self-reported EI, b) whether different emotional abilities are equally predictive of outgroup prejudice, or alternatively, whether emotion management in particular plays a more important role (similar to the findings obtained for interpersonal relations) and c) whether the relations between EI and prejudice generalise to different types of prejudice. Indeed, it is not surprising that trait EI is associated with intergroup attitudes due to the established importance of personality in prejudice (discussed in more detail in the next chapter),

however the theoretical role of ability EI is less clear as this requires cognitive skills to navigate social situations, and the link between cognition and prejudice is less well understood in the literature.

The current research addresses this gap in the literature. More specifically, it is proposed that individual differences in emotion management skills are expected to be meaningfully associated with outgroup attitudes. Indeed, the ability to manage emotions is uniquely related to a range of socially adaptive characteristics such as greater interpersonal sensitivity, higher quality social interactions, and better social and intimate relations (Lopes et al, 2003; 2005, for an overview see Lopes et al., 2011). Therefore, it is likely that emotion management is not only relevant to interpersonal relations but is also important for intergroup relations and prejudice. The following chapter will examine the construct of prejudice in more detail as well as review literature exploring the impact of key individual differences that are relevant to prejudice to further clarify the hypothesised link between EI and outgroup attitudes.

Chapter 2: Individual Differences in Prejudice

"*It may help to understand human affairs to be clear that most of the great triumphs and tragedies of history are caused, not by people being fundamentally good or fundamentally bad, but by people being fundamentally people."*

- Neil Gaiman and Terry Pratchett, *Good Omens*

People from ethnic, religious, and sexual minority groups are often victims of prejudice and discrimination (Rodriguez, et L., 2018; Shavers et al., 2012; Zschirnt, & Ruedin, 2016) and such experiences can have a profound and lasting impact. For instance, those who have been targets of prejudice tend to report poorer mental and physical health outcomes (Burton et al, 2013; Dover et al, 2020; Samari et al, 2018; Williams et al, 2019). Understanding the psychological roots of prejudice is crucial to the development of more effective interventions that aim to reduce prejudice and discrimination.

Prejudice is commonly defined as a negative attitude towards an outgroup or a member of an outgroup (Allport, 1954; Duckitt 1992). However, prejudice can also encapsulate seemingly 'positive' sentiments that nevertheless have negative implications by perpetuating unfairness and inequality (e.g., benevolent sexism; Brown, 2011, Glick et al., 2000). In his seminal work, Allport (1954) described prejudice as "a general trait of personality" (p. 69), and suggested that underlying tendencies, preferences, and patterns of thinking can shape the way people relate to outgroups. As such, prejudice was seen to reflect a deeply-rooted, generalised way of thinking about the social world:

> Prejudice is more than an incident in many lives; it is often lockstitched into the very fabric of personality. In such cases it cannot be extracted by tweezers. To change it, the whole pattern of life would have to be altered. (p. 408).

This framing implies that prejudice is not always a context-dependant reaction to an outgroup, but that underlying person-based factors might make some people more predisposed to prejudice compared to others (Hodson & Dhont, 2015). He also suggested that those who are prejudiced

towards one outgroup are more likely to be prejudiced towards other outgroups (Allport, 1954). This generalised way of thinking about outgroups has been widely supported by empirical research reporting positive correlations between different types of prejudice, including xenophobia, anti-Semitism, homophobia, sexism, and ageism (e.g., Adorno et al, 1950, Bierly, 1985; McFarland, 2010; Zick et al, 2008). Indeed, the typical correlation between different prejudice scales is often around r = .50 (Duckitt, 1992; Ekehammar & Akrami, 2003; Sibley & Duckitt, 2008). Not only does this covariation between different types of prejudice demonstrate the generality of prejudice across a wide range of outgroups, but it also supports the notion that generalised prejudice might be shaped by latent psychological individual differences (Allport, 1954; Duckitt, 1992; Hodson & Dhont, 2015). This is the foundation of the person-based approach to prejudice which proposes that underlying attributes within the individual can form a generalised disposition to adopt prejudiced attitudes towards others (Duckitt 1992; Hodson & Dhont, 2015).

Variations in people's beliefs, values, personalities, and abilities can impact the way people relate to others, and this might explain why some people are more prone to prejudice, or tolerance, compared to others (Hodson & Dhont, 2015). A wealth of data has demonstrated robust and reliable links between various emotion and cognition-related individual differences and different types of prejudice (see Hodson & Dhont, 2015 for a review). However, researchers have only recently begun looking into the role of EI on intergroup relations and prejudice (Dierckx et al., 2021; Onraet et al., 2017; Van Hiel et al., 2019). This thesis will add to this body of literature by investigating the relationship between emotional intelligence and prejudice and exploring the role of important psychological and intergroup factors such as socio-ideological attitudes, dispositional emotions, and intergroup contact in this relationship.

Psychological Characteristics Related to Prejudice

Interest in the role of individual differences in prejudice can be traced back to early accounts of the prejudiced personality (Adorno et al., 1950; Allport, 1954). Adorno and colleagues (1950) initially noted that those who were susceptible to ethnocentrism and fascism tended to share similar personality characteristics, such as a tendency to be deferential and submissive to authority, closed-

minded, intolerant, and hostile towards outgroups. This construct, termed the *authoritarian personality,* was believed to stem from a "hierarchical, authoritarian, exploitative parent-child relationship" (Adorno et al., 1950, p. 971) and implied that prejudice was a sign of psychological maladjustment (Adorno et al., 1950; Jenson, 1957). Several others also emphasised the role of individual differences to account for why some people are more prone to prejudice, highlighting individual differences in ideology, cognitive rigidity, preferences for social order, and fear towards outgroups (Allport, 1954; Rokeach, 1954). However, the latter approaches did not assume that prejudice is a result of a disturbed or abnormal personality, but rather stems from basic psychological factors that vary between individuals, which is more in line with contemporary research (Hodson & Dhont, 2015).

Ideology

Building on the work of Adorno and colleagues (1950), Altemeyer (1981) refined and partly reconceptualised the construct of authoritarianism and referred to it as Right-Wing Authoritarianism (RWA). More specifically, he proposed that those who are high in RWA tend to be more submissive to authority, support punishment for those who transgress against established social norms, and endorse traditional values (Altemeyer, 1996). To measure RWA, Altemeyer constructed the RWA scale which assessed three connected socio-ideological components: a) *authoritarian submission,* referring to obedience to and uncritical support for ingroup authorities, b) *authoritarian aggression,* referring to the support for strict and punitive measures which promote societal control, and c) *conventionalism,* referring to the support for traditional, more religious social norms and values (Altemeyer, 1981, 1988, 1996). A more recent, commonly used measure of RWA used slightly different labels for the subscales and differentiates between the support for a) authoritarianism (strict, punitive social control), b) conservatism (uncritical support for authorities) and c) traditionalism (old-fashioned social norms) yet is still very similar to and partly based on Altemeyer's original scale (Bizumic & Duckitt, 2018; Duckitt et al., 2010; Duckitt, & Bizumic, 2013).

Researchers were also prompted to understand how social hierarchies that contribute to group-based oppression are formed and maintained. To answer this, Sidanius and Pratto, 1999 (see

also Pratto et al, 1994) established the social dominance theory which proposes that both institutional and individual factors contribute to the establishment and maintenance of hierarchical societies which legitimise group-based discrimination (Sidanius et al., 2004; Pratto et al., 2006). For example, social institutions (e.g., schools, governments, and religious bodies) might direct more desirable commodities (such as wealth, power, and access to resources) to higher status groups, while leaving lower status groups with undesirable social burdens (such as underemployment, dangerous work, and disproportionate punishment) and thus enforcing and deepening societies' unequal group-based hierarchies. Individuals can also allocate resources favourably (or unfavourably) based on these established hierarchies which further contribute to the maintenance of unequal social structures and the discrimination of subordinate groups (Sidanius et al., 2004; Pratto et al., 2006).

Social Dominance Theory also suggested that individual differences in the endorsement of group-based hierarchies and social inequality might explain why some people are more inclined than others to oppress and subjugate those who belong to different social groups (Pratto et al., 1994; Sidanius et al., 2004). This preference for social dominance was termed Social Dominance Orientation (SDO). Those who are high in SDO prefer a hierarchical, structured society where those belonging to a higher status social group are perceived to acquire power, prestige and privilege that would not be afforded to lower status groups, thus perpetuating inequality and discrimination (Sidanius et al, 1992; Sidanius & Pratto, 2001). Pratto and colleagues (1994) devised the SDO scale to capture this general desire to perceive one's social group as superior to others. A more recent update to the scale distinguishes between two distinct subdimensions of social dominance. These capture a) the preference for group-based hierarchy, which is characterised by support for the active suppression of subordinate groups by dominant groups (SDO-Dominance; SDO-D) and b) the preference for social inequalities, which is characterised by an opposition to equality and efforts to reduce social mobility (SDO-(Anti) Egalitarianism; SDO-E; Ho et al, 2012, 2015).

Critically, both RWA and SDO have consistently shown strong independent associations with various measures of prejudice (e.g., McFarland, 2010; Van Hiel & Mervielde, 2005). For example, McFarland and Adelson (1996) found that RWA and SDO emerged as the strongest predictors of

generalised prejudice even after controlling for numerous other variables that have been previously implicated in prejudice including self-esteem, aggression, conformity, life satisfaction, income, and education (see McFarland, 2010; Pratto et al, 2006). Furthermore, this association remains relatively stable across time, participant samples and countries (Asbrock et al, 2010; Cichocka et al., 2017; McFarland, 2010; Sibley & Duckitt, 2008). Together, RWA and SDO can account for around 50% of the variance in prejudice (Altemeyer, 1998; Ekehammar et al, 2004; McFarland & Adelson, 1996; Van Hiel & Mervielde, 2005), earning the title of "the lethal union" (Altemeyer, 1998, p. 88).

Both RWA and SDO were initially described as personality traits (Adorno, 1950; Altemeyer, 1998, Pratto et al., 1994), however researchers soon began to question whether these constructs accurately reflected dimensions of personality (Duckitt, 1989; 2001). It was noted that the measurement scales used to capture RWA and SDO reflected socio-ideological or ideological attitudes rather than behavioural tendencies (Duckitt, 2001) and that RWA and SDO were more strongly correlated with other measures of social attitudes and weakly correlated with measures of behaviour or personality (Duriez & Van Hiel, 2002; Saucier, 2000). Jost and colleagues (2003) also noted the importance of epistemic motivations (such as need for closure and avoidance of ambiguity) in ideology and have advocated for a clearer distinction between psychological and ideological variables because, despite being closely linked, many individual difference measures of ideology have historically conflated epistemic motivations with conservatism. Consequently, the RWA and SDO constructs are now typically referred to as *socio-ideological attitudes* rather than personality traits (Duckitt et al., 2002, Duckitt & Sibley, 2010). However, if RWA and SDO are not personality constructs, there remains a question around the role of personality in intergroup relations, and whether broad personality factors might underly the endorsement of these socio-ideological attitudes and prejudice towards outgroups.

Personality

Looking at the role of personality in intergroup relations can shed light on whether core personality traits can influence a predisposition to prejudice (or tolerance). One of the most widely used personality frameworks in this line of research is the Big Five model of personality (Costa &

McCrae, 1985; 1992; 1995) which describes five distinct personality domains: Neuroticism (anxious vs. calm), Extraversion (socially enthusiastic vs reserved), Openness to Experience (innovative vs. uncreative), Agreeableness (sympathetic vs. critical), and Conscientiousness (dependable vs. unreliable). Both cross-sectional and meta-analytical evidence suggests that people who are less agreeable and less open tend report higher levels of generalised prejudice towards low status, disadvantaged outgroups (such as ethnic and sexual minority groups, immigrants, and women; Akrami et al., 2011; Bergh et al., 2012; Ekehammar & Akrami, 2003, 2007). Such findings demonstrate that differences in personality can be related to a general tendency towards prejudice.

Additionally, as the Big Five model of personality is hierarchical (i.e., each of the five core personality domains consist of six lower-level facets; Costa & McCrae, 1995), exploring how these individual facets relate to prejudice can give a more nuanced understanding of how the specific elements within each domain that might relate to prejudice. To this end, Ekehammar and Akrami (2007) found that although five out of the six facets for both openness and agreeableness were significantly related to prejudice, the specific facets of *tender-mindedness* (i.e., the tendency to be guided by one's emotions, *openness to feelings* (i.e., receptiveness to one's emotions) and *warmth* (i.e., the capacity for interpersonal affection and intimacy) showed particularly strong negative relationships with prejudice (-.61, -.49 and -.42 respectively; Ekehammar & Akrami, 2007, Study 1). This indicates that personality traits related to the understanding of and receptiveness to emotions are implicated in generalised prejudice, and as such, it is likely that trait EI (i.e., emotion-related personality traits) may also be implicated in prejudice and intergroup relations. Therefore when exploring relations between EI and prejudice, it would be important to examine the unique relationships between emotion-related cognitive abilities *and* personality traits.

Dispositional Emotions

Early prejudice researchers acknowledged that those who are more susceptible to certain emotions, such as frustration, aggression, fear, and anxiety, were more likely to respond to outgroups with prejudice (e.g., Allport, 1954). These emotional dispositions were described as chronic, underlying personality traits that predispose people to react to intergroup situations with negative

emotional responses (Allport, 1954). More contemporary research defines these emotional tendencies as dispositional emotions (also referred to as trait or chronic emotions), which are trait-like emotional temperaments that affect the proneness to experiencing specific emotions and are relatively stable over time. These emotional dispositions are different to context-dependant emotions (also referred to as state or episodic emotions) which are transient, elicited in response to a specific situation, and can vary in intensity (Lerner & Keltner, 2000; Spielberger & Reheiser, 2003; Stephan, 2014). For example, people who have higher levels of *dispositional* anger would be more likely to experience frequent and intense feelings of *state* anger in provocative situations (Spielberger & Reheiser, 2009). Emotional dispositions are also associated with people's preferences (i.e., how they *want* to feel) and goals (i.e., what would be *useful*). For example, one study showed that people's emotional dispositions were related to their desire to feel that emotion, due to the familiarity with that specific emotion, regardless of whether the emotion was positive (i.e., happiness) or negative (i.e., anger and fear; Ford & Tamir, 2011). In other words, a person who tends to feel angry may prefer to feel angry in different situations because they are familiar with feeling angry.

In the context of intergroup relations, it is likely that dispositional emotions can affect a person's judgements about others. Tapias and colleagues (2007, Study 2) found that heterosexual male students who scored higher on dispositional anger were more likely to report higher levels of prejudice towards social groups that were perceived to elicit anger-related emotions (i.e., Black people), whereas those who are more sensitive to disgust were more prejudiced towards groups that were perceived to elicit more sex-related disgust (i.e., gay men). Furthermore, Lopes and Jaspal (2015) demonstrated that non-Muslim students who reported frequent paranoid thoughts (a subfactor of dispositional paranoia) also reported greater Islamophobia and mistrust of Muslims. Finally, Schriber and colleagues demonstrated that people from a range of different ethnic backgrounds (but largely Caucasian) who are generally more contemptuous (i.e., dispositional contempt) or excessively proud (i.e., dispositional hubristic pride) reported greater levels of SDO and prejudice towards black people (Schriber et al., 2017, Study 3). This research indicates that a person's emotional disposition

can affect how they respond to outgroups, and that specific groups are associated with specific emotional reactions (see also Cottrell & Neuberg, 2005).

Positive emotional dispositions can also have an impact on intergroup relations. It has been long acknowledged that those who are more empathetic should have more favourable and tolerant attitudes towards outgroups (Allport, 1954). Dispositional empathy (i.e., the general tendency to experience compassion towards others) consists of multiple dimensions, but two key components have been specifically researched within domain of prejudice: empathetic concern, referring to compassion and sympathy towards others, and perspective taking, referring to the capacity to understand the thoughts and feelings of others (Davis, 1983, Levin et al., 2016, McFarland, 2010; Miklikowska, 2018). Many studies have demonstrated a robust and stable negative association between empathy and prejudice, indicating that those with higher levels of dispositional empathy tend to report more positive attitudes towards outgroups (Alvarez-Castillo et al., 2018; Bäckström, & Björklund, 2007; Boag and Carnelly, 2016; Foster et al, 2018; Önal et al., 2021; Onraet et al., 2017; Pedersen et al., 2004). For example, using six different samples of students and adults across five studies, McFarland (2010) demonstrated that along with RWA and SDO, dispositional empathy had a consistent significantly negative relationship with generalised prejudice (with correlation coefficients ranging from between -.23 to -.42). Furthermore, longitudinal evidence suggests that dispositional empathy can predict changes in the development of anti-immigrant attitudes in adolescents, suggesting that a person's propensity to empathise with others can protect against the development of prejudice (Miklikowska, 2018).

Not only are general emotional dispositions relevant to prejudice, but some intergroup emotions can also be dispositional and have a similar impact on intergroup attitudes. Intergroup emotions are emotions that are specifically elicited when thinking about or interacting with different outgroups. For example, intergroup anxiety is distinct from general and social anxiety and is characterised by anxious feelings towards outgroups. This can present as state intergroup anxiety which is triggered by participating in or thinking about intergroup contact, or trait intergroup anxiety characterised by an enduring, chronic anxiety that can occur across different intergroup contexts

(Stephan, 2014). Similarly, intergroup disgust sensitivity, which reflects a revulsion towards outgroups, can also occur as a state emotion and dispositional emotion (Hodson et al., 2013). Individual differences in both dispositional intergroup anxiety and dispositional intergroup disgust sensitivity are related to greater prejudice towards a wide range of social groups including gay people, ethnic minorities, Black people, Muslims, and AIDS patients (Britt et al, 1996; Choma et al., 2012; Hodson et al, 2013; Stephan, 2014), further demonstrating that relatively stable emotional dispositions can underpin people's attitudes towards outgroups.

Emotional experiences can also be impacted by group membership. Group-based emotions, defined as emotions that arise as a function of being a member of a social group, are elicited when a particular in-group identity becomes salient for an individual and are distinct from the emotions one might feel on an individual level (Mackie & Smith, 2015). In this way, a person's group-based emotional reactions might differ based on the social group they identify with in any given situation. For example, a person might feel a certain emotion/pattern of emotions when they identify strongly as a fan of their sports team but experience a different pattern of emotions when their membership to their ethnic group, or political party is made salient (Seger et al, 2009; Smith et al, 2007). Group-based emotions can impact people's attitudes and behaviours towards outgroups, with evidence suggesting that people's reactions towards outgroups can change depending on the group membership that is made salient (e.g., Ray et al., 2008). Goldenberg and colleagues (2016) proposed that group-based emotions can be regulated just like individual experiences of emotions, such that when a person strongly identifies with an in-group, they may generate and regulate their emotions to achieve group-based goals. As such, it could be argued that those who are higher in EI might be better at generating relevant emotions and choosing appropriate regulation strategies to meet the in-group's goals.

Taken together, these findings demonstrate that people who are more prone to particular emotional dispositions (either in general, or in intergroup situations) will typically respond in this way in an intergroup context (e.g., Britt et al., 1996), especially if they *want* to feel this way, are *familiar* with that particular emotion and believe the emotion will *help* them achieve their goal (Tamir et al., 2009). Furthermore, one's level of EI might be able to further explain this relationship. On the one

hand, trait EI can affect dispositional emotions (e.g., Chamorro-Premuzic et al., 2007; Mikolajczak et al, 2008) which might then have an impact outgroup attitudes. Whereas on the other hand, ability EI could have an impact on the way a person understands and regulates dispositional emotions (Mayer at al., 1999) which might also affect responses to outgroups. So far, only one study has examined the relationship between EI, dispositional emotions, and prejudice. Onraet and colleagues (2017) found that trait EI was negatively associated with RWA, SDO and subtle racial prejudice, and furthermore, these relationships were all significantly mediated by dispositional empathy (specifically the perspective-taking subfactor). This research demonstrated that those with low levels of trait EI are less able to understand the perspectives of others and as such are more likely to report higher levels of right wing and prejudiced attitudes. However, by focusing solely on self-reported EI it remains unclear if similar relations exist for performance-based (ability) EI and whether the different abilities to perceive, understand, reason about, and manage emotions have unique relationships with prejudice, socio-ideological attitudes, and empathy.

Cognition

Besides emotional experiences, scholars have also suggested an association between cognitive factors and prejudice. For example, early work on prejudice identified that lower cognitive ability was related to negative attitudes towards outgroups (e.g., Adorno et al., 1950; Kutner & Gordon, 1964; Dhont & Hodson, 2014) and various cognitive styles (including cognitive rigidity, intolerance of ambiguity and dichotomous thinking) were related to a greater endorsement of authoritarian values, fascism, and ethnocentrism (Adorno et al., 1950; Allport 1954; Rokeach, 1954; Roets & Van Hiel, 2011). Contemporary research has sought to refine the measurement of these constructs and further explore the relationship with socio-ideological attitudes and prejudice however, most of the attention has been focused on the role of cognitive styles in prejudice whereas literature on the role of cognitive ability is still relatively limited (Dhont & Hodson, 2014; Hodson & Busseri, 2012; Onreat et al., 2015).

One cognitive construct that has received a lot of interest in this area is Need for Closure (NFC), which is a motivated cognitive style that describes a preference for quick and definitive

judgements which are relatively impervious to change in the face of contradictory evidence (Webster & Kruglanski, 1994; Kruglanski & Webster, 1996). It is characterised by a preference for order and predictability, a need for decisiveness, discomfort with ambiguity and closed-mindedness (Webster & Kruglanski, 1994), all of which can be theoretically mapped onto the prejudice-related cognitive styles described by Allport (1954; see Roets, & Van Hiel, 2011 for review). Research has demonstrated that those who report higher levels of NFC are more likely to endorse right-wing socio-political ideologies (Cornelis & Van Hiel, 2006; De keersmaecker et al., 2017; Jost et al., 2017; Onraet, et al., 2011) because right-wing ideologies are considered to meet the psychological needs of those high in NFC (Jost et al., 2003; Jost et al., 2009). More specifically, according to the motivated social cognition framework (Jost et al., 2003), ideology satisfies people's need to understand their social world and to make predictions about the future (i.e., epistemic needs). Right-wing conservative ideologies meet these needs by offering certainty, familiarity, and predictability by preserving traditions and societal conventions, and by presenting simple solutions to societal problems. In other words, people who are motivated to process information in ways that satisfy their need for simple, predictable, and stable explanations are more likely to endorse authoritarian values (Roets, & Van Hiel, 2011). This propensity towards categorical thinking is also associated with prejudice, as those higher in NFC tend to express greater levels of racism, sexism, and transphobia (e.g., Makwana et al, 2018; Roets & Van Hiel, 2006; Roets et al, 2012), showing that one's cognitive thinking patterns are associated with socio-ideological attitudes and intergroup relations.

Unlike NFC which reflects a tendency or preference for simplistic information processing, cognitive ability (i.e., intelligence) reflects an ability to perform cognitive tasks such as reasoning, problem solving and knowledge acquisition. Previous research shows that differences in intelligence can impact a range of social outcomes, for example higher levels of intelligence is related to interpersonal sensitivity, and a general tendency to trust others (Murphy & Hall, 2011; Sturgis et al., 2010). Theoretically, mental abilities could also be relevant to ideological attitudes and prejudice. Those with lower cognitive resources may be more inclined to endorse ideologies that reduce social complexities by enforcing clear societal norms and structure (i.e., right wing ideologies) and

encourage the denigration of outgroups (Hodson & Dhont, 2014). In support of this, several cross-sectional studies that employed a range of intelligence tests and measures of prejudice have reported that those who have higher levels of intelligence report less negative attitudes towards outgroup members (Keiller, 2010, Costello & Hodson, 2014; Meeusen et al, 2013). Furthermore, a meta-analysis of twenty-three studies found a significant negative correlation between cognitive ability and right-wing ideologies (r = -.20) and between cognitive ability and prejudice (r = -.19; Onraet et al, 2015, see also Van Hiel et al., 2010), and large scale, longitudinal datasets have also shown that lower cognitive ability in childhood is related to greater levels of racism in adulthood, via stronger endorsement of right-wing ideologies (Hodson and Busseri, 2012). This evidence demonstrates a robust relationship between cognitive ability, socio-ideological attitudes, and prejudice.

This body of literature shows that individual differences in cognition (i.e., cognitive styles and abilities) also play an important role in prejudice and intergroup relations. More specifically, a person's cognitive preferences, patterns of thinking and ability to reason and problem solve is likely to impact their processing of social information and this can affect their endorsement of right-wing values and prejudice towards outgroup members. As such, it is likely that other forms of intelligence (i.e., performance-based emotional intelligence) could also impact ideological and intergroup factors. Only one study has examined the relationships between ability EI, ideology, and prejudice. Van Hiel and colleagues (2019) investigated the associations between the ability to recognise, manage, and understand emotions and right-wing and prejudiced attitudes. They found that aggregated scores of these three branches of EI significantly predicted RWA, SDO, and blatant prejudice, even after controlling for cognitive abilities. Their results demonstrated the importance of performance-based EI when investigating the links between ideology and prejudice (Van Hiel et al, 2019).

However, the use of aggregate scores cannot clarify whether these distinct emotional abilities have unique effects on the relations between RWA, SDO, and prejudice. This is important to investigate as some emotional skills (i.e., emotion management) might be specifically relevant to intergroup relations and understanding the nuances of these associations could lead to the development of more effective prejudice-reduction interventions. For example, previous research

investigated how emotion regulation can affect political attitudes during the Israeli-Palestinian conflict. The findings indicated that Israeli people who are more competent at cognitive reappraisal (i.e., a cognitive process used to change an emotional response) experienced less negative emotions towards Palestinian citizens of Israel, reported more tolerant attitudes towards Palestinians, and were more inclined to support conciliatory policies that would de-escalate Israeli-Palestinian conflict (rather than aggressive policies which would escalate conflict; Halperin et al., 2012; 2013; see also Halperin et al., 2014). Another study showed that regulating negative emotional responses after a terrorist event (2013 Boston Marathon bombings) reduced bias and anger towards Muslims (Steele et al., 2019). Hence, these studies demonstrate that regulating emotions can impact political and outgroup attitudes in times of conflict and threat. However, research has yet to examine whether individual differences in the *ability* to manage emotions can play a role in intergroup relations. Theoretically, those who have higher emotion management abilities might be able to regulate their emotions more efficiently and appropriately (Hughes and Evans, 2018; Mikolajczak, 2009; Peña-Sarrionandia et al, 2015), and this could impact socio-ideological and outgroup attitudes in intergroup contexts.

Distal vs Proximal Predictors of Prejudice

So far, the research highlighted here demonstrates that core individual differences (such as personality, emotional dispositions, and cognition) are related to a generalised disposition toward prejudice (Hodson & Dhont, 2015). These associations can be further explained (i.e., mediated) by a greater endorsement of right-wing socio-ideological attitudes (Hodson & Busseri, 2012; Cichocka et al, 2017; Sibley & Duckitt, 2008; Van Hiel et al, 2004). This pattern of relationships indicates that deep-rooted individual differences are indirect, relatively distal predictors of prejudice as they underly the endorsement of social and political attitudes, which are more proximal predictors of prejudice. Two key theoretical models support this assertion, one related to personality and prejudice, the other focusing on cognition and prejudice.

The Dual Process Model of ideology and prejudice explains how personality traits can influence ideological attitudes and prejudice (Duckitt, 2001; Duckitt et al., 2002). This model

proposes that personality traits can predispose individuals to interpret their social world in different ways which can affect their endorsement of socio-ideological attitudes and their attitudes towards outgroups. More specifically, those who are less open and more compliant tend to perceive the world as a dangerous place which motivates a desire for control and stability (i.e., RWA). In contrast, those who are disagreeable and tough-minded tend to perceive the world as a competitive environment that rewards those who are ruthless, and this motivates a desire for dominance and superiority (i.e., SDO; Duckitt & Sibley, 2017; Sibley & Duckitt, 2008; 2013; Van Hiel, Cornelis, & Roets, 2007), with both pathways resulting in greater prejudiced towards others (Sibley & Duckett, 2008). This indicates that a) individual differences in personality can shape a person's endorsement of socio-ideological attitudes and prejudice, and b) provides further evidence that RWA and SDO are distinct constructs that are motivated by different underlying processes.

Dhont & Hodson (2014) have put forward another theoretical model which demonstrates how cognition relates to socio-ideological attitudes and prejudice. The integrative model of Cognitive Ability and Style to Evaluation (CASE) proposes that both cognitive abilities and motivated cognitive styles (i.e., NFC) can influence the endorsement of socio-ideological attitudes (i.e., RWA and SDO) and other intergroup factors, which in turn relates to negative attitudes towards outgroups. Not only does this model call for the consideration of both core individual differences and socio-ideological attitudes, but it also highlights that both abilities and tendencies can play a role in prejudice. Along similar lines, the current research tests whether emotion-related mental abilities and traits play a similar role in outgroup prejudice, and whether this relationship can be explained by socio-ideological attitudes. The next chapter outlines the key research aims and studies of the thesis.

Current research

In Chapter 1, I reviewed literature on emotional intelligence and social relations, concluding that due to the key role of emotions in intergroup relations, it is likely that those with greater emotional skills are cognitively well equipped to deal with emotional reactions towards members of other groups, relating to lower prejudice. The research reviewed in Chapter 2 further demonstrates that core individual differences relating to personality and cognition can impact the endorsement of

right-wing attitudes and shape a general tendency towards prejudice, thus strengthening the assertion that individual differences in EI may impact levels of prejudice, and that this relationship is likely to be mediated by RWA and SDO.

The studies by Onraet and colleagues (2017) and Van Hiel and colleagues (2019) are the first to demonstrate links between EI and prejudice, showing that when assessed separately, lower levels of both ability and trait EI are associated with greater endorsement of right-wing socio-ideological attitudes and ethnic prejudice. However, as can be seen from previous research on EI in social relations, when examined together, ability EI is more strongly related to social outcomes compared to trait EI (Brackett et al, 2006). Furthermore, it is well documented that not all branches of ability EI are equally associated to social relations. Evidence has consistently shown that emotion management has specific implications for interpersonal relationships with friends, family, and peers (Brackett et al, 2005; Lopes et al, 2003; 2004; 2005; Mayer et al, 2008). Therefore, just as the ability to manage emotions is critical in positive social relations, it is likely that it will also be uniquely related to ideology and prejudice.

The general aim of the thesis is to examine if those with higher EI scores (with special attention to performance-based emotion management scores) are less likely to report generalised prejudice. More specifically, in this thesis I will investigate the link between EI and prejudice by examining:

a) The relationship between the different factors of performance-based and self-reported EI and prejudice,
b) The generalisation of this relationship (i.e., if this relationship can be observed across different samples and can extend to a range of different types of prejudice),
c) The role of other key intergroup factors such as empathy and socio-ideological attitudes in this relationship,
d) The role of EI in daily intergroup contact situations to understand how individual differences in EI can affect naturalistic intergroup experiences.

Firstly, in **Chapter 3**, we explore the relations between performance-based and self-reported EI and generalised ethnic prejudice to understand the relative impact of the different facets of trait and ability EI, using a Spanish sample of undergraduate psychology students (Study 1). Next, we aim to replicate our findings using a student sample (Study 2a) and an adult sample (Study 2b) recruited from a different cultural context (i.e., the UK), and using a different validated performance-based measure of emotion management. We also include a measure of negative attitudes towards immigrants (Study 2a) and a measure of negative attitudes towards refugees (Study 2b) to assess if the relationship could extend to specific outgroups.

Previous research has indicated that empathy is implicated in the relationship between trait EI and racism (Onraet et al., 2017), therefore we explore whether similar relations exist for emotion management and prejudice in our next study reported in **Chapter 4**. More specifically, Study 3 explores the associations between performance-based and self-reported emotion management, empathy, homophobia, and generalised ethnic prejudice.

Socio-ideological attitudes are also crucial to intergroup relations (Sibley & Duckett, 2007) and therefore, the studies reported in **Chapter 5** aim to explore the role of right-wing socio-ideological attitudes (i.e., RWA and SDO) in the relationship between emotion management and generalised ethnic prejudice using both student (Study 4) and adult (Study 5) samples from the UK. We also measure attitudes towards immigrants in Study 5.

The final study (Study 6) is reported in **Chapter 6**. Here, we use an app-based experience sampling survey to capture data on intergroup contact experiences over a 3-week period to examine if one's ability to manage emotions can facilitate (i.e., moderate) the relationship between everyday positive and negative contact experiences and prejudice.

Chapter 3: Exploring Associations Between Emotional Intelligence and Prejudice

The review of literature in Chapters 1 and 2 has demonstrated that individual differences in personality and cognition can affect a person's tendency towards generalised prejudice, and that EI might be an important, but largely overlooked, variable in this relationship. Previous research indicated that EI is related to a range of important interpersonal and social outcomes. Those with greater levels of EI tend to have better relationships with friends, peers, colleagues, and romantic partners, are more prosocial at school, and more supportive in the workplace (Brackett et al, 2005; 2006; Caruso & Salovey, 2004; Durlak et al, 2011; Lopes et al., 2004; Schlaerth et al, 2013). It seems likely that EI could also have an impact on intergroup relations, especially due to the importance of emotions in intergroup situations (Cottrell & Neuberg, 2005; Hodson et al., 2013; McFarland, 2010; Seger et al, 2017; Stephan, 2014), however research investigating this relationship is limited (Onraet et al., 2017; Van Hiel et al., 2019).

Evidence further suggests performance-based and self-reported EI are differentially related to social outcomes, with some studies suggesting that performance-based EI might play a more prominent role (Brackett et al., 2006; Brackett & Mayer, 2003; Lopes et al., 2004). Furthermore, it seems that some components of EI (i.e., emotion management) are more relevant to social relations compared to others (Lopes et al, 2004). Research has yet to simultaneously explore the unique relationships between performance-based and self-reported EI, and generalised prejudice therefore the purpose of this chapter is to examine the relationship between EI and prejudice by testing if a) self-reported and performance based EI are differentially related to prejudice, b) whether different components of EI are equally predictive of outgroup prejudice, and c) whether the relations between EI and prejudice generalise to different types of prejudice.

The studies presented in this chapter investigated the associations between EI and prejudice in two different countries (Spain and the UK) using both student and community adult samples. It is hypothesised that people with a greater ability to process and manage their emotions (i.e., better emotion management skills) will hold less prejudiced attitudes towards outgroups. In Study 1, EI was measured using both performance-based and self-reported tests to investigate their independent

associations with generalised ethnic prejudice and to determine the relative importance of each EI component for prejudice. Studies 2a and 2b aim to replicate the findings using different performance-based measures of emotion management and emotional understanding and to examine if the relationship could also extend to attitudes towards specific outgroups (i.e., immigrants and refugees).

Study 1

The aim of Study 1 was to examine performance-based and self-reported EI simultaneously to explore the independent associations of both constructs with prejudice. More specifically, a widely used performance-based test (i.e., the Mayer-Salovey-Caruso Emotional Intelligence Test; MSCEIT v2.0) was used to assess the four branches of ability EI, and a self-reported measure (i.e., the Trait Meta-Mood Scale**;** TMMS) was used to measure the different facets of trait EI. Furthermore, this study also examined the relationships between the specific factors in both models to determine the relative importance of each EI component for prejudice.

Participants and procedure

This study was conducted at a Spanish university[1]. 233 Spanish undergraduate psychology students (70% females) aged between 19 and 48 (M = 22.01, SD = 3.61) took part. Participants were informed that the study aimed to investigate how people feel towards groups and received course credits for participating. Participants first completed the MSCEIT v2.0 in group sessions in a classroom. The TMMS and the prejudice measure were completed individually as part of an online survey.

Measures

Performance-based emotional intelligence. The validated, Spanish version of the MSCEIT v2.0 (Extremera, Fernández-Berrocal, & Salovey, 2006; based on Mayer et al, 2002) was used to measure the four branches of ability EI. The MSCEIT v2.0 is a performance-based scale that asks participants to solve several emotion-related problems related to each of the four branches (i.e.,

[1] We collaborated with Dr. Esperanza García-Sancho (Department of Psychology, University of Cordoba, Spain) and Prof. Pablo Fernández-Berrocal (Department of Basic Psychology, University of Malaga, Spain) on this study.

perception, use, understanding and management of emotion). Each branch is measured using two subtests. Perception of emotion is assessed using the faces and pictures subtests which measure the ability to identify emotions in facial and abstract images. Using emotions is assessed by the facilitation and sensations subtests that measure the ability to generate and use emotions to facilitate thought. Understanding emotions is assessed using the changes and blends subtests which measure the ability to identify how emotions can intensify and combine. Finally, managing emotions is assessed by the emotional management and relations subtests which measures the understanding of effective actions to manage one's own and other's emotions in different situations (Mayer et al., 2002a; 2002b).

For each branch, a mean score is calculated based on the degree of correctness of the responses as determined by a normative sample (i.e., consensus-scoring, Sánchez-Garcia et al, 2016). In other words, better or worse answers are determined by how closely they match the consensus of a normative sample of the general population (Mayer, Roberts et al., 2008). Higher scores for each branch indicate higher levels of the respective ability. Calculating split-half reliability coefficients showed that the scales for all four branches had an acceptable internal consistency with values of .91 for perception of emotion, .50 for using emotions to facilitate thought, .67 for understanding emotion, and .68 for managing emotions. The combined scores for total EI showed high internal consistency, $\alpha = .86$. This is comparable to previous research which reported split-half reliabilities of around .79 to .91 for the four branches, and .91 for total EI (Mayer et al., 2002b)

Self-reported emotional intelligence. Self-reported EI was measured using the validated, Spanish version of the TMMS-24 (Fernández-Berrocal et al, 2004; based on Salovey et al, 1995). The TMMS-24 is a 24-item scale that measures individual's perceptions about their own emotional competence using three subscales: attention, clarity, and repair of emotions. The attention subscale measures the level of attention paid to one's emotional state (sample items include: "I often think about my feelings" and "It is usually a waste of time to think about your emotions"). The clarity subscale measures how well a person understands their emotional state (e.g., "I am usually very clear about my feelings" and "I almost always know exactly how I am feeling"). Finally, the repair subscale

measures one's tendency to regulate negative emotions (e.g., "If I find myself getting mad, I try to calm myself down" or "When I am upset, I think of all the pleasure of life").

Respondents were asked to indicate the extent to which they agree or disagree with each of the statements on a 5-point scale (*1, strongly disagree*; 5, *strongly agree*). Responses for each subscale were averaged and coded such that higher scores indicate higher levels of the trait EI component. For the Spanish version of this scale, Extremera and Fernández-Berrocal (2005) obtained high internal consistency coefficients for all subscales (all αs > .85), which is comparable to the present study (attention to emotion, α = .90; clarity of emotion, α = .90; and repair of emotion, α = .84).

Generalised ethnic prejudice. A five-item scale measured attitudes towards different ethnic outgroups using affective thermometers ranging from 0-10° (*extremely unfavourable*) and 91-100° (*extremely favourable*). Specifically, participants were asked to indicate how they generally feel towards immigrants, ethnic minorities, Arab people, Black people, and Asian people (see also Dhont et al, 2016; Duckitt and Sibley, 2007; Sears, 1988). The scores were reversed such that high scores indicated greater levels of prejudice towards the outgroup and were then averaged in a single score of generalised ethnic prejudice. This scale demonstrated high internal consistency (α = .90) which is comparable to previous research (α = .93, Dhont et al., 2014)

Results and discussion

Means, standard deviations, and zero order correlations are presented in Table 1. Some missing data was evident in the sample. All analyses were conducted in MPlus (version 8, Muthén and Muthén 1998–2017), using the full information maximum likelihood estimator to deal with missingness. Although most of the EI components were negatively related to prejudice, emotion management was the only performance-based EI branch that showed a significant negative correlation with prejudice (r = -.17, p = .019), corroborating the importance of emotion management for intergroup attitudes. Furthermore, for the self-report EI scores measured with the TMMS, both the attention and repair of emotions subscales were also significantly negatively correlated with prejudice (r = -.18, p = .010; r = -.14, p = .040, respectively).

Table 1. Zero-order correlations, means, and standard deviations for variables in Study 1.

Measure	*M*	*SD*	2.	3.	4.	5.	6.	7.	8.	9.
1. MSCEIT Total	107.92	9.49	.73***	.76***	.65***	.55***	-.05	-.03	.04	-.09
2. MSCEIT - Perception	107.60	12.04	-	.46***	.19**	.07	-.12	-.10	-.04	.03
3. MSCEIT - Facilitation	100.71	10.64		-	.33***	.29***	-.01	-.04	.06	-.09
4. MSCEIT - Understanding	107.79	10.45			-	.33***	-.01	.01	.01	-.08
5. MSCEIT - Management	108.94	11.51				-	.08	.08	.13	-.17**
6. TMMS - Attention	3.52	0.73					-	.25***	.03	-.18**
7. TMMS - Clarity	3.46	0.73						-	.41***	-.07
8. TMMS - Repair	3.45	0.69							-	-.14*
9. Generalised Prejudice	3.73	1.57								-

Note. MSCEIT = Mayer-Salovey-Caruso Emotional Intelligence Test, TMMS = Trait Meta Mood Scale. * $p < .05$, ** $p < .01$, *** $p < .001$

Having established the associations between emotion management, attention to emotion, and repair of emotion with prejudice, analysis then focused on simultaneously testing these associations while controlling for gender and age. Path analysis with the robust maximum likelihood estimator in Mplus (version 8, Muthén and Muthén 1998–2017) was used. The results confirmed that emotion management was still significantly negatively related to prejudice (β = -.134, p = .041). Attention to emotion was also still significantly associated with generalised prejudice (β = -.163, p = .037), but repair of emotions was not (β = -.126, p = .126).

The findings of Study 1 demonstrated that stronger emotion management skills, but not the other ability EI branches, were related to lower generalised ethnic prejudice. In other words, those who are more capable of managing their emotions showed lower levels of ethnic prejudice. This

relationship was observed even after accounting for other components of EI that were significantly correlated with generalised prejudice, demonstrating the unique role of emotion management abilities in the prediction of ethnic prejudice. Furthermore, self-reported attention to emotion was also significantly related to prejudice, suggesting that the tendency to attend to one's own emotional state is also relevant to intergroup attitudes.

Study 2

Study 1 provided support for the hypothesised relationship between emotion management and generalised prejudice in a student sample in Spain. The aim of Study 2 was to replicate this association using a student sample (Study 2a) and an adult sample (Study 2b) recruited from a different cultural context (i.e., the UK). Furthermore, this study also aimed to establish this relation using a different validated performance-based measure of emotion management, the Situational Test of Emotion Management (STEM, MacCann & Roberts, 2008). Demonstrating the relation between emotion management and prejudice with a different measure of emotion management would provide convergent evidence for the hypothesised association, increasing confidence in the robustness of the findings.

In testing the association between emotion management and prejudice, the analysis controlled for emotional understanding as measured with the Situational Test of Emotional Understanding (STEU; MacCann & Roberts, 2008). Previous research has demonstrated positive correlations between emotion management and understanding which could indicate the existence of a higher order factor, termed Experiential EI (Mayer et al., 2003; Palmer et al., 2005), and as such, controlling for the ability to understand emotion will further clarify the unique association between emotion management and prejudice. The associations with different outgroup attitude measures were also tested. Specifically, in addition to generalised ethnic prejudice, the study also included a measure of negative attitudes towards immigrants in the student sample (Study 2a) and a measure of negative attitudes towards refugees in the adult sample (Study 2b) to assess if the relationship could extend to specific outgroups.

Study 2a: Participants and Procedure

The sample for Study 2a consisted of 246 psychology undergraduate students recruited from a university in England (85% female participants). Participants were aged between 18 and 47 (M = 19.33, SD = 3.80). Most of the participants self-identified as White (173 participants, 70%). The remaining sample identified as Asian (n = 29), Black/African American (n = 20), Middle Eastern (n = 3), or 'other' (n = 21). Participants were informed that the study focused on the associations between personality, personal experiences, and attitudes towards several social groups and issues. The measures were completed in a computer-based classroom in supervised group sessions as part of a demonstration on psychological measurement.

Measures

Performance-based emotion management. The short 18-item Situational Test of Emotional Management (STEM) was used to measure the ability to manage emotions (Allen et al, 2015). For each item, participants are asked to choose the most effective response to manage an emotional situation. An example statement reads "A demanding client takes up a lot of Jill's time and then asks to speak to Jill's boss about her performance. Although Jill's boss assures her that her performance is fine, Jill feels upset. *What action would be the most effective for Jill*?". Each statement is accompanied with four different ways that a person could respond to the situation, some of which are more appropriate than others. To calculate the participants' scores, a partial scoring procedure is used in which participants are given scores depending on the appropriateness of the answer, with higher scores for better answers as determined by expert ratings. These are summed to give a total score (M = 10.88, SD = 2.26). Allen and colleagues (2015) reported high internal consistency (α = .84), the Cronbach's alpha for the current study was .67.

Performance-based emotional understanding. The brief 19-item version of the Situational Test of Emotional Understanding (STEU, Allen et al, 2014) was used to measure participants' ability to understand emotions. Each item of the STEU is brief description of a situation that elicits an emotion. An example statement reads: "Charles is meeting a friend to see a movie. The friend is very late and they are not in time to make it to the movie. *Charles is most likely to feel?*". Each statement is

accompanied with five different responses, and only one of these is correct. The total number of correct answers are summed to give a score of emotional understanding (M = 11.83, SD = 2.22). Previous research reported moderate internal reliability (α = .63; Allen et al., 2014), however the Cronbach's alpha in our sample was low (α = .38).

Generalised ethnic prejudice. Similar attitude thermometers used in Study 1 were used here to measure generalised ethnic prejudice but were adapted to suit the UK context. Specifically, participants were asked to indicate their general feelings towards ethnic minorities, Muslims, Hispanic people, Black people, South Asian people, immigrants, and refugees. Scores were recoded so that higher scores indicated higher levels of prejudice and were averaged into a single score of generalised ethnic prejudice (M = 2.90, SD = 1.65, α = .94).

Attitudes towards immigrants. In addition to the attitude thermometers, the study also included four items asking respondents to indicate how they generally feel towards immigrants 7-point scales anchored by bipolar adjective (cold vs. warm, negative vs. positive, hostile vs. friendly, and contempt vs. respect, adapted from Wright et al, 1997; see also Dhont et al, 2011). The items were averaged to create a score of attitudes towards immigrants and were coded such that higher scores indicate more negative attitudes (M = 2.50, SD = 1.16, α = .94).

Results

The zero-order correlations showed that, as expected, emotion management was negatively and significantly correlated with generalised ethnic prejudice (r = -.26, p < .001) and negative attitudes towards immigrants (r = -.20, p = .002). Emotional understanding was not significantly correlated with either of the prejudice measures (r = -.12, p = .07; r = -.02, p = .72, respectively).

Furthermore, using path analysis in Mplus, we simultaneously tested the associations of the STEM scores (i.e., emotion management) and the STEU scores (i.e., emotional understanding) with generalized prejudice and attitudes towards immigrants, while controlling for age and gender. The results confirmed that emotion management was significantly negatively related to both generalised prejudice and attitudes towards immigrants, β = -.26, p < .001 (R^2 = .076) and β = -.23, p = .004 (R^2 =

.066), respectively. Emotional understanding was not significantly related to either of the prejudice measures (β = -.02, p = .75 and β = .05, p = .46, respectively). Consistent with the findings of Study 1, these results provide further evidence for the association between emotion management and prejudice. Study 2b aimed to replicate this association in a heterogeneous community sample of adults from the UK.

Study 2b: Participants and Procedure

The sample for Study 2b consisted of 219 White British adults (56% females, 43% males, and 1% who identified as 'other') aged between 18 and 72 years (M = 38.71, SD = 13.09). With respect to participants' highest level of education, 34 participants were educated to the GCSE level, 52 completed their A levels, 96 had a bachelor's degree, 25 had a master's degree and 6 completed a PhD. Five disclosed they had 'other' education and 1 person preferred not to disclose their level of education. Participants were recruited via Prolific Academic (an online crowdsourcing website for research) and were paid £1.25 for their time. Pre-screening filters were applied to the online survey ensuring that only White UK nationals could take part.

Measures

Performance-based emotion management. Emotion management was measured using the same STEM scale as in Study 2a (M = 10.34, SD = 2.43). Internal consistency of the scale was comparable to the previous study (α = .67).

Generalised ethnic prejudice. The generalised prejudice measure was also like the one used in Study 2a. Affective thermometers were used to measure attitudes towards ethnic minorities, Muslim people, Black people, South Asian people, and refugees, and scores were averaged to give a score of generalised ethnic prejudice (M = 4.08, SD = 2.00, α = 94).

Attitudes towards refugees. A similar measure of attitudes with bipolar adjective scales was also included to measure attitudes towards refugees (M = 3.13, SD = 1.42, α = 93).

Results

The results of a correlation analysis replicated the findings of Study 1 and Study 2a. Emotion management was negatively correlated with both generalised ethnic prejudice and attitudes towards refugees (r = -.23, p < .001, and r = -.17, p = .011, respectively). Next, these relations were tested using path analysis while controlling for age, gender, and education level, revealing that STEM remained significantly related to both prejudice measures, β = -.24, p = .001 (R^2 = .060) and β = .18, p = .01 (R^2 = .043), respectively.

Discussion

The results of Studies 2a and 2b further showed that emotion management is not only associated with generalised prejudice but can also impact attitudes towards specific outgroups, validating the idea that emotion management underpins attitudes towards a range of different outgroups. Furthermore, this finding was obtained using a different measure to capture individual differences in the ability to manage emotions, in a different cultural context, and using both student and adult samples. This demonstrates that the relationship observed in Study 1 is not limited by the specific characteristics of the measure or sample and thus attests to the generalisability and robustness of the relationship.

Chapter Summary

The findings reported in this chapter consistently demonstrate that those with better abilities to manage emotions reported less prejudiced attitudes towards outgroups. More specifically, Study 1 demonstrated that emotion management skills, but not the other ability EI branches, were related to lower generalised ethnic prejudice, while Studies 2a and 2b showed that emotion management was also related to less negative attitudes towards immigrants and refugees. Additionally, when simultaneously testing both performance-based and self-reported measures of emotion management, it was found that the repair facet of the TMMS (Study 1) which captures the tendency to regulate emotions, was not significantly related to prejudice. In other words, our findings demonstrated that the performance-based measure of emotion management, rather than self-reported tendency to manage emotions, appeared to be more relevant to outgroup attitudes.

Critically, the negative association between emotion management and prejudice was found using different performance-based measures of emotion management, in two different countries, and in both student and heterogeneous adult samples. This demonstrates the generalizability and thus the robustness of the results across different measures of the same construct and across different samples. The association held after accounting for self-reported emotional intelligence, performance-based emotional understanding, and demographic variables. These results extend previous research indicating that performance-based EI, and specifically the ability to manage emotions, is related to better social and personal relationships (Brackett et al., 2006; Extremera & Ferández-Berrocal, 2004; Lopes et al., 2004). Taken together, the ability to regulate and manage emotions is not only critical for people's social competence and interactions on an interpersonal level but also relevant when considering intergroup dynamics and outgroup attitudes.

Moreover, the present findings move beyond the recent work on the associations between EI and prejudice (Onraet et al., 2017; Van Hiel et al., 2019) by revealing that performance-based EI is significantly related to prejudice towards a variety of outgroups, even after controlling for self-reported EI scores. This way, our findings add to the wider debate regarding the differentiation between performance-based and self-report EI measures (Petrides & Furnham, 2001; Petrides et al., 2016) and show that components of both types of measures are likely uniquely related to outgroup attitudes (e.g., Study 1).

The next chapter aims to shine further light onto the relationship between the ability to manage emotions and outgroup attitudes. More specifically, Study 4 will examine whether dispositional empathy can account for (i.e., mediate) the association between emotion management and prejudice. Additionally, the following study will also examine whether this relation can extend to negative attitudes towards a completely different outgroup (i.e., sexual minority groups), which will add to the evidence of generalisability by demonstrating that performance-based emotion management is not only linked to xenophobia but also to homophobia.

Chapter 4: Emotion Management and Prejudice: The Role of Empathy

The findings reported in the previous chapter demonstrate the unique relationship between performance-based emotion management and both generalised ethnic prejudice and prejudice towards specific outgroups (i.e., immigrants and refugees). The purpose of this chapter is to explore *how* emotion management is related to outgroup prejudice and it is expected that dispositional empathy will be an important factor in this relationship.

Previous research has demonstrated that dispositional empathy is robustly linked to various forms of prejudice including generalized prejudice, and homophobia (Johnson et al., 1997; McFarland, 2010) and is also associated with both performance-based and self-reported EI (Brackett et al., 2006; Ciarrochi et al., 2000; Mayer et al., 1999; Schutte et al., 2001). When considering the associations between specific ability EI branches and empathy, management of emotions tends to be the most closely related to empathy (Mayer et al., 1999; Iliescu et al., 2013). Additionally, other research has shown that empathy mediates the relationship between emotion management (using both performance-based and self-reported tests) and a range of interpersonal outcomes including effective conflict management, forgiveness of others, and higher quality of person-centred care in nursing (Hodgson & Wertheim, 2007; Pérez-Fuentes et al., 2020; Rizkalla et al., 2008). As such, it is expected that those who are better able to manage emotions are likely to be more empathetic, which in turn would relate to lower prejudice.

Onraet and colleagues provided initial support for this rationale, as they have demonstrated that those who perceive themselves as being less emotionally competent (i.e., lower scores of self-reported EI and Alexithymia) show greater levels of subtle racial prejudice, and a significant part of the negative association was explained by greater levels of empathy and perspective taking (Onraet et al., 2017). However, by focusing on the relations between self-reported EI and racism, it remains unclear if similar relations exist for performance-based EI (and specifically emotion management) and whether the relations between EI and prejudice generalise to other types of prejudice. Therefore, the aim of Study 3 is to investigate the role of empathy in explaining (i.e., mediating) the association

between emotion management and different types of prejudice including attitudes towards ethnic and sexual minority groups.

Study 3

Study 3 included scales measuring emotion management, prejudice, and dispositional empathy to assess whether emotion management would be indirectly related to lower prejudice through dispositional empathy. Secondly, a measure of homophobia was also included to provide a more comprehensive test of the relations between emotion management and different types of prejudice. Finally, the findings from the previous chapter suggest that performance-based emotion management was related to outgroup prejudice even after accounting for self-reported abilities to regulate negative emotions (i.e., the repair facet of TMMS). To provide further support for this, a different measure of self-reported emotion regulation was included in this study, namely the Difficulties in Emotion Regulation Scale (DERS).

Participants and procedure

A total of 224 undergraduate students from a university in England took part in this study, with 16% male and 84% female participants (M = 19.29, SD = 2.54). Regarding ethnicity, 144 participants self-identified as white, 27 as Black, 22 as Asian, 3 as Arabic, 1 as Latin/South American, and 26 as 'other'. One person did not disclose their ethnicity. Participants were also asked to disclose their sexual orientation; 92.4% (207 participants) self-identified as heterosexual, 11 as bisexual, two as homosexual, one as queer, and three as 'other'. Participants were provided with an anonymous link to a larger survey which included the measures used in the current study. They were informed that the study aimed to collect people's opinions about several social topics. Scales measuring emotion management and emotion regulation were presented first, followed by empathy and the prejudice measures (i.e., attitudes towards lesbians and gay men and generalised ethnic prejudice).

Measures

Performance-based emotion management. As in Study 2, the Situational Test of Emotional Management (STEM) was used to measure emotion management abilities. For this measure,

participants are asked to read 18 statements describing various emotional situations and choose the most effective response out of four choices, some of which are more appropriate than others (Allen et al, 2015). The internal consistency was α = .62, which is comparable to the previous study.

Self-reported emotion management. The shortened 18-item self-report scale measuring difficulties in emotion regulation was used in this study (DERS; Kaufman et al, 2016; derived from the full version developed by Gratz & Roemer, 2004). The DERS is a validated measure used to assess emotion dysregulation and taps into people's non-acceptance of negative emotions, difficulties engaging in goal directed behaviour, difficulties with impulse control, lack of emotional awareness, inability to use emotion regulation strategies, and lack of emotional clarity (Gratz, & Roemer, 2004; Kaufman et al., 2016). The scale is typically used in clinical settings and has previously been associated with the self-reported tendency to avoid negative experiences, self-harm, anxiety, depression, and behavioural problems (Gratz, & Roemer, 2004; Kaufman et al, 2016). Sample statements include: "When I'm upset, I acknowledge my emotions" and "When I'm upset, I believe there is nothing I can do to make myself feel better". These were rated on a 5-point scale from 1 (*almost never*) to 5 (*almost always*). Reverse scored items were recoded, and responses were averaged such that higher scores indicated poorer perceived ability to regulate emotion. Kaufman and colleagues (2016) reported high internal consistency in both adolescent and adult samples (α = .91 and α = .89, respectively) which is comparable to the present study (α = .89).

Empathy. Dispositional empathy was measured using 14 items of the Interpersonal Reactivity Index (Davis, 1980; 1983) to assess the tendency for concern for others and to take on another's point of view. Sample items read: "I often have tender, concerned feelings for people less fortunate than me" and "Before criticizing somebody, I try to imagine how I would feel if I were in their place". Participants responded to each item using a 7-point scale from 1 (*strongly disagree*) to 7 (*strongly agree*). Reverse scored items were recoded, and mean scores were calculated such that high scores indicated higher levels of empathy (α = .86).

Homophobia. This construct was measured using the Attitudes towards Lesbians and Gays scale (ATLG-Short Form; Herek, 1988). The short 10-item version of this scale was derived from the

full 20-item scale devised by Herek (1984) and aims to measure negative attitudes towards lesbian women and gay men (i.e., "Lesbians just can't fit into our society" and "I think male homosexuals are disgusting"). Statements were scored on a 7-point scale anchored by 1 (*strongly disagree*) and 7 (*strongly agree*), reverse scored items were recoded and averages were calculated such that high scores indicate more negative attitudes. More recently, Vincent and colleagues (2011) reported a Cronbach's alpha of .93 which is comparable to the current study ($\alpha = .85$).

Generalised ethnic prejudice. The same measure of generalised prejudice used in Study 2a was also used in this study. More specifically, participants indicated their general feelings towards ethnic minorities, Muslims, Hispanic people, Black people, South Asian people, immigrants, and refugees using a feelings thermometer. The internal consistency of this scale was comparable to the previous studies ($\alpha = .92$).

Results

Table 2 shows the zero-order correlations, means and standard deviations for measures used in Study 3. As expected, performance-based emotion management (i.e., STEM) was negatively related to both types of prejudice (i.e., homophobia, $r = -.32$, $p < .001$, and generalised ethnic prejudice, $r = -.21$, $p = .002$) whereas self-reported difficulties in emotion management (i.e., DERS) was not significantly related to any of these measures. As expected, performance-based emotion management scores were also significantly positively related to empathy, and empathy was negatively related to both prejudice measures.

Next, we simultaneously tested the direct associations between STEM, DERS, homophobia, and generalised ethnic prejudice, as well as the hypothesised indirect associations between these variables via empathy using Mplus (version 8, Muthén and Muthén, 1998–2017). The results of this model, presented in Figure 3, showed that the direct path between STEM and homophobia was significant, whereas the direct path between STEM and generalised prejudice was not. Furthermore, corroborating our hypotheses, the indirect associations from STEM, via empathy, to both homophobia and generalised prejudice were significant, $\beta = -.05$ [-.114, -.010], $p = .047$, and $\beta = -.10$ [-.173, -.045], $p = .002$, respectively (based on 10,000 bootstrap samples). Self-reported emotion management

(i.e., DERS) was not significantly related to any of the variables in the model. The model explained 12% of the variance in homophobia and 13% of the variance in generalised prejudice.

Table 2. Zero-order correlations, means, and standard deviations for variables in Study 3.

Measure	*M*	*SD*	2.	3.	4.	5.
1. STEM	10.59	2.18	-.04	.33***	-.32***	-.21**
2. DERS	2.34	.64	-	-.10	-.00	-.11
3. Empathy	5.29	.74		-	-.24***	-.34***
4. Homophobia	2.05	.95			-	.18**
5. Generalised Prejudice	3.30	1.09				-

Note. STEM = Situational Test of Emotion Management, DERS = Difficulties in Emotion Regulation. * $p < .05$, ** $p < .01$, *** $p < .001$

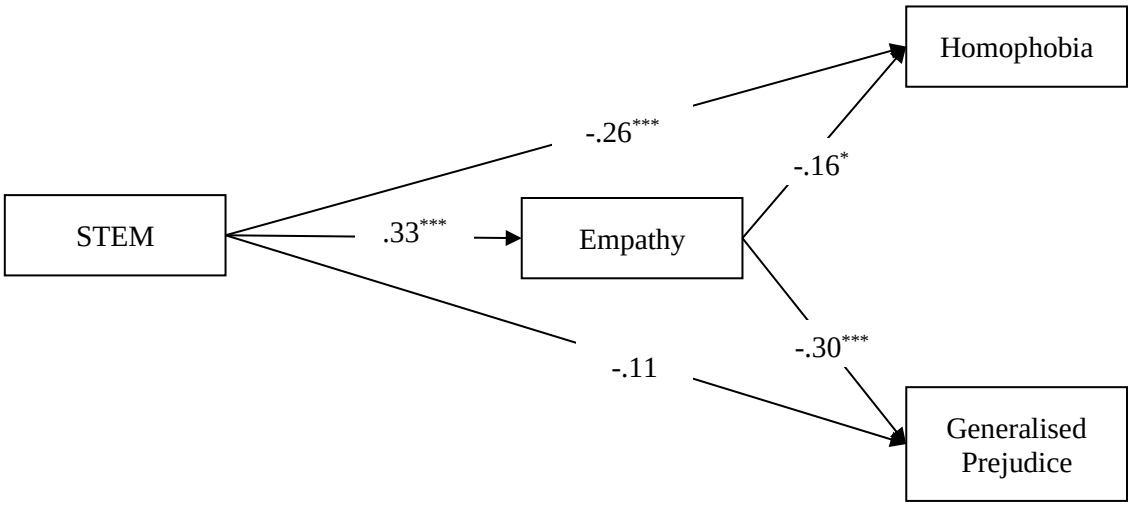

Figure 3. Standardised model results for Study 3 showing associations between performance-based emotion management (STEM), homophobia, and generalised ethnic prejudice through empathy, controlling for self-reported emotion management (DERS). Note. * $p < .05$, ** $p < .01$, *** $p < .001$

Chapter Summary

Study 3 showed that stronger emotion management skills was related to higher dispositional empathy, which in turn was related to lower prejudice levels. In other words, being better at managing emotions makes it easier for people to sympathise with and understand others, which is critical to develop positive outgroup attitudes and harmonious intergroup relations (e.g., Batson et al., 1997;

McFarland, 2010). This finding is in line with previous research that has demonstrated the association between emotion management and empathy (Mayer et al, 1999; Iliescu et al., 2013), as well as with recent work of Onraet et al. (2017) who demonstrated that dispositional empathy is key in understanding why those who score higher on self-report measures of EI tend to report lower levels of racism. Moreover, the present findings move beyond the work of Onraet and colleagues (2017) by revealing that a) performance-based EI is also significantly related to empathy and prejudice and b) this relationship can extend towards a variety of outgroups.

So far, Studies 1, 2 and 3 have demonstrated that performance-based emotion management is consistently negatively related to a range of different prejudices, including generalised ethnic prejudice, negative attitudes towards immigrants and refugees, and homophobia. This relationship remained significant even after accounting for demographic variables and self-reported tendencies to regulate negative emotions (as measured with the repair facet of the TMMS and the DERS). The studies reported in the next chapter will extend these findings further and explore the impact of socio-ideological attitudes on the relationship between emotion management and prejudice.

Chapter 5: The Impact of Right-Wing Socio-ideological Attitudes

In Chapter 2, I reviewed the literature on two ideological constructs that have received a great deal of attention in the field of prejudice and intergroup relations: Right-Wing Authoritarianism (RWA) and Social Dominance Orientation (SDO). RWA describes a set of social attitudes and values related to three connected components: authoritarianism, (i.e., obedience to and uncritical support for ingroup authorities), conservatism (i.e., support for strict and punitive measures which promote societal control) and traditionalism (i.e., support for traditional, more religious social norms and values; Altemeyer, 1981; Duckitt et al, 2010). On the other hand, SDO refers to attitudes about inequality among social groups and is measured by assessing a person's preference for group-based hierarchy (supporting the active suppression of subordinate groups by dominant groups) and social inequalities (opposing equality and efforts to reduce social mobility; Pratto et al, 1994; Ho et al, 2015).

Research has demonstrated that RWA and SDO are complementary, but distinct, relatively independent socio-ideological attitudes (Pratto et al., 1994; Sibley & Duckitt, 2008) that are uniquely, and robustly related to a range of negative intergroup attitudes including generalised prejudice, racism, sexism, and homophobia (Austin & Jackson, 2019; Hodson et al, 2017; McFarland, 2010; Van Hiel & Mervielde, 2005). Furthermore, evidence indicates that a number of psychological individual differences are associated with stronger endorsement of right-wing attitudes and the general tendency towards prejudice (e.g., Hodson & Busseri, 2012; Hodson & Costello, 2007; Makwana et al., 2017; Roets & Van Hiel 2006; Sibley & Duckitt, 2008). One individual difference variable that is specifically relevant to this thesis is cognitive ability. Several cross-sectional, longitudinal, and meta-analytical studies have demonstrated that lower intelligence is related to negative attitudes towards outgroup members, via stronger endorsement of RWA and SDO (e.g., Hodson & Busseri, 2012; Onreat et al., 2015), indicating that those with lower cognitive resources are more likely to endorse right-wing socio-ideological attitudes and show greater prejudice towards outgroups.

Just as general intelligence can underpin right-wing and outgroup attitudes, it is likely that other forms of intelligence (i.e., performance-based emotional intelligence) could also play a similar

role. Theoretically, those who have lower levels of emotional intelligence might be more inclined to endorse ideologies which provide clear, rigid rules for social norms and hierarchies (i.e., RWA and SDO), and reduce the need to process complex emotions surrounding outgroups who deviate against or challenge these rules. In line with this rationale, Van Hiel and colleagues (2019) tested the association between performance-based EI, ideology and prejudice. They analysed this association by using an EI score that combined three performance-based measures of EI (i.e., emotional understanding, management, and recognition) and found that the aggregate scores of the three branches were significantly related to RWA, SDO and blatant prejudice. Although this study is the first to demonstrate significant relationships between EI, ideology, and prejudice, it is not possible to draw conclusions about the unique impact of emotion management, which has been previously identified as a key variable that impacts relationships with others (Lopes et al, 2003; 2005; 2011).

Indeed, previous research has demonstrated that ideological differences are associated with the type, intensity, expression and regulation of emotions (see Pliskin et al., 2020 for review) and that regulating emotions can impact political and outgroup attitudes in times of conflict and threat (Halperin et al., 2012; 2013, Steele et al., 2019). Furthermore, the previous studies reported in this thesis have demonstrated that performance-based emotion management is consistently negatively related to a range of different prejudices, including generalised ethnic prejudice. Therefore, the purpose of this chapter is to explore the specific relationship between emotion management, ideology, and generalised prejudice. More specifically, the studies reported in this chapter aim to test whether those with higher performance-based emotion management scores are less likely to endorse right-wing socio-ideological attitudes (i.e., RWA and SDO), which in turn, are expected to be related to generalised prejudice. We test these associations in both student (Study 4) and adult (Study 5) samples from the UK.

Study 4

This study included scales measuring performance-based emotion management, socio-ideological ideology (i.e., RWA and SDO) and generalised prejudice, to assess whether emotion management would be related to lower RWA, SDO, and prejudice.

Participants and procedure

Participants were asked to complete an online survey which included the measures used in the current study. Respondents were 441 undergraduate students from a UK university (379 women), with most of the sample (> 99%) aged between 18 and 24 years old. 280 participants described themselves as White, 41 as Asian, 61 as Black/African, 26 as Chinese and 31 as Mixed Race. Two individuals did not report their ethnicity and gender.

Measures

Performance-based emotion management. As in the previous studies, the Situational Test of Emotional Management (STEM) was used to measure emotion management abilities. The internal consistency was $\alpha = .71$, which is comparable to the previous studies.

Right Wing Authoritarianism. RWA was measured using 12 items of the RWA scale (Duckitt et al, 2010, based on Altemeyer, 1981). This scale assesses three facets of RWA: *authoritarianism* (sample item reads: "The facts on crime and the recent public disorders show we have to crack down harder on troublemakers, if we are going preserve law and order"); *conservatism* (sample item reads: "Obedience and respect for authority are the most important virtues children should learn"); and *traditionalism* (sample items reads: "The "old-fashioned ways" and "old-fashioned values" still show the best way to live"). Reverse coded items were recoded, and mean scores were calculated such that higher scores indicated higher levels of RWA. Previous research reported Cronbach's alphas ranging between .83 and .94 (Duckitt et al., 2010) which is comparable to the current study ($\alpha = .73$)

Social Dominance Orientation. The study used the short eight-item SDO scale by Ho et al. (2015). The scale assesses support for intergroup dominance (sample item reads: "Some groups of people are simply inferior to other groups") and intergroup anti-egalitarianism (sample item reads: "It is unjust to try to make groups equal"). Reverse coded items were recoded, and mean scores were calculated such that higher scores indicated higher levels of SDO. The internal consistency of the SDO scale in this study was $\alpha = .78$ which is comparable to previous research which ranged between $\alpha = .78$ and $\alpha = .90$ (Ho et al., 2015).

Generalised ethnic prejudice. Like the previous studies, participants were asked to rate how they felt towards immigrants, ethnic minorities, Muslims, and Black and South-Asian people using affective thermometers. Scores were reversed such that high scores indicated greater levels of prejudice and averaged to give a single score of generalised ethnic prejudice. This scale demonstrated high internal consistency ($\alpha = .92$) which is comparable to previous studies.

Results and discussion

Descriptive statistics, and correlations are reported in Table 3. As expected, STEM scores were significantly negatively related to all measures. To further investigate the associations between these variables, we tested (using 10,000 bootstrapped samples) whether performance-based emotion management was related to RWA and SDO, and in turn to generalised prejudice. The results of this analysis showed that all direct paths in the model were significant, except for the relation between emotion management and generalised prejudice (see Figure 4). The indirect associations from emotion management to generalised prejudice via SDO was significant (β = -.06 [0.039, 0.101], p < .001). whereas the association via RWA was not (β = -.015 [0.004, 0.039], p = .089). Gender did not have any meaningful effects on the model.

The findings supported the previous studies by demonstrating the general association (i.e., significant zero-order correlation) between emotion management and generalised ethnic prejudice. Furthermore, the model analyses showed that the ability to manage emotions is negatively related to lower endorsement of right-wing political ideology (specifically SDO), which in turn was related to generalised ethnic prejudice. In other words, those with better emotion management skills are less likely to support social hierarchies and inequalities (i.e., SDO), which in turn is related to lower levels of prejudice towards members from different ethnic outgroups. The indirect effect via RWA was not found in this sample as the relationship between RWA and STEM was weaker than expected. However, it is likely that the relation may still be observed in a bigger sample (Fritz & MacKinnon, 2007).

Table 3. Zero-order correlations, means, and standard deviations for variables in Study 4 and 5.

Study	Variables	M	SD	2	3	4	5	6
4	1. STEM	10.30	2.52	-.12*	-.26***	-.15**	-	-
	2. RWA	3.45	.74	-	.33***	.21***	-	-
	3. SDO	2.67	.95		-	.33***	-	-
	4. Generalised Prejudice	2.82	1.64			-	-	-
5	1. STEM	10.82	2.22	-.15***	-.20***	-.20***	-.15***	-.10*
	2. RWA	3.56	1.09	-	.45***	.30***	.43***	-.08
	3. SDO	2.83	1.10		-	.38***	41***	.01
	4. Generalised Prejudice	4.08	1.91			-	.68***	.01
	5. Attitudes towards immigrants	3.09	1.34				-	-.02
	6. DERS	2.29	.64					-

Note. STEM = Situational Test of Emotion Management; RWA = Right-Wing Authoritarianism; SDO = Social Dominance Orientation; DERS = Difficulties in Emotion Regulation.
* $p < .05$, ** $p < .01$, *** $p < .001$

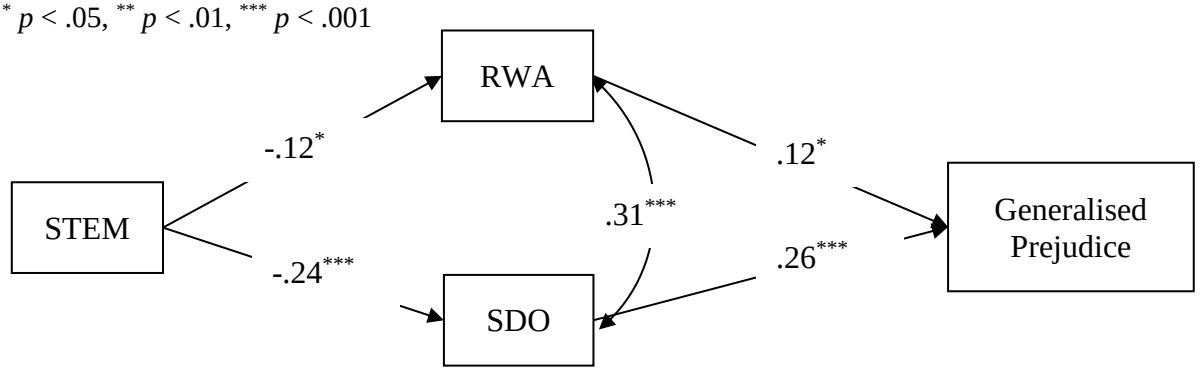

Figure 4. Standardised model results for Study 1 showing significant associations between STEM (Situational Test of Emotion Management) and generalised ethnic prejudice through RWA (Right Wing Authoritarianism) and SDO (Social Dominance Orientation) after controlling for gender. * $p < .05$, ** $p < .01$, *** $p < .001$

Study 5

Study 4 provided support for the hypothesised associations between emotion management, ideology and prejudice using a sample of undergraduate students. The aim of Study 5 was to replicate these findings in an adult community sample. A measure of attitudes towards immigrants was also included in this study to examine if the link between emotion management, ideology and prejudice can extend to different types of prejudice. Furthermore, a measure of self-reported difficulties in emotion regulation (i.e., the DERS) was included to separate any potential shared variance between performance-based and self-reported skills in emotion management and further clarify the relationship between emotion management, socio-ideological ideology, and prejudice.

Participants and procedure

Participants were recruited via Prolific Academic (an online crowdsourcing website) and were paid at an hourly rate of £5.81 for their time. Pre-screening filters were applied so that only White UK nationals could take part. The sample consisted of 611 White British adults (370 women) and was aged between 16 and 71 years (M = 34.10, SD = 11.43). Thirteen people did not disclose their gender, age, or ethnicity.

Measures

Performance-based emotion management. As in the previous studies, the Situational Test of Emotional Management (STEM) was used to measure emotion management abilities. The internal consistency was $\alpha = .63$.

Self-reported difficulties in emotion management. As in Study 3, the shortened 18-item self-report scale measuring difficulties in emotion regulation was used in this study. The internal consistency was $\alpha = .89$, which is comparable to Study 3.

Right Wing Authoritarianism. RWA was measured using a shortened, nine-item version of the RWA scale (Duckitt et al, 2010, based on Altemeyer, 1981). The internal consistency was $\alpha = .85$ which is slightly higher than the previous study.

Social Dominance Orientation. The same eight-item scale used to measure SDO in the previous study was also used here (Ho et al., 2015). scores were calculated such that higher scores indicated higher levels of SDO. The internal consistency was α =.86 which is slightly higher than the previous study.

Generalised ethnic prejudice. The same affective thermometer scale used in the previous study was used here. This scale demonstrated high internal consistency (α = .91) which is comparable to previous studies.

Attitudes towards immigrants. The study also included four items asking respondents to indicate how they generally feel towards immigrants 7-point scales anchored by bipolar adjective (same as Study 2a). This scale demonstrated high internal consistency α = .93 which is comparable to the earlier study.

Results and discussion

Table 3 shows descriptive statistics, and correlations. Supporting Study 4, STEM was negatively related to all measures, however, the DERS was not significantly related to any of the dependent variables.

As in Study 4, we used MPlus to test the hypothesised associations (using 10,000 bootstrapped samples). Specifically, we tested a model that included all paths from performance-based and self-reported emotion management (i.e., STEM and DERS) to RWA, SDO, generalised prejudice, and attitudes towards outgroups, as well as the paths from RWA and SDO to generalised prejudice and attitudes towards outgroups. As in Study 1, the results showed that the direct paths between emotion management and RWA and SDO were significant (Figure 5). Furthermore, RWA and SDO were also related to both generalised prejudice and attitudes towards outgroups. This analysis also showed a significant direct path between STEM and generalised prejudice. Significant indirect associations were found between STEM and generalised prejudice through RWA and SDO (β = -.04 [0.014, 0.055], p = .003 and β = -.05 [0.025, 0.076], p < .001, respectively) and between STEM and attitudes towards immigrants through RWA and SDO (β = -.07 [0.023, 0.064], p < .001 and β = -

.05 [0.015, 0.051], $p < .001$, respectively). There were no significant direct or indirect paths between DERS and any of the variables, and age and gender did not have any meaningful effects on the model.

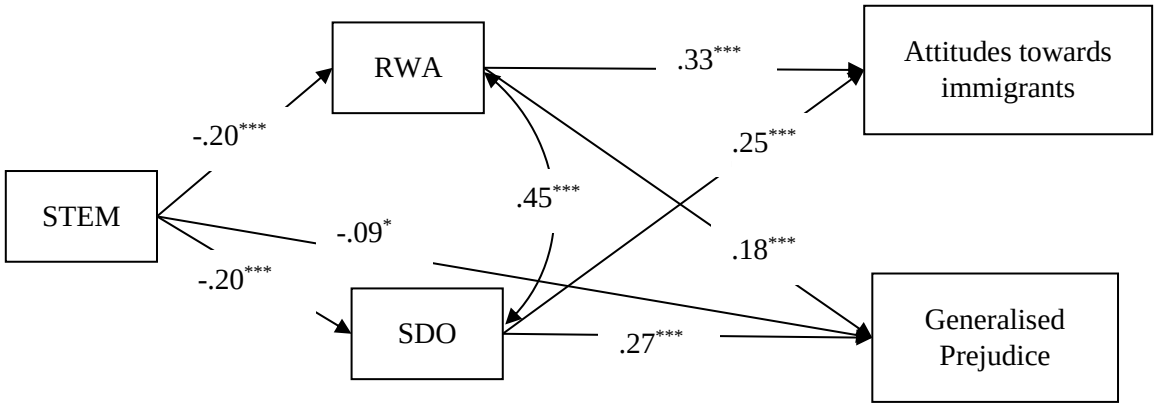

Figure 5. Standardised model results for Study 2 showing significant associations between STEM (Situational Test of Emotion Management) and prejudice through RWA (Right Wing Authoritarianism) and SDO (Social Dominance Orientation) after controlling for age and gender. * $p < .05$, ** $p < .01$, *** $p < .001$

Chapter summary

The two studies reported in this chapter showed that those who have higher scores in emotion management are less likely to hold prejudiced attitudes, whether this is targeted towards outgroups in general (i.e., generalised prejudice, Studies 4 and 5), or towards a specific outgroup (i.e., immigrants, Study 5). This core finding mirrors the previous studies reported in this thesis and confirms the robustness of the relationship.

More importantly for the purpose of this chapter, the results also showed significant associations between emotion management socio-ideological attitudes. That is, those who are better at managing their emotions are less likely to endorse attitudes which support social hierarchies and inequalities (i.e., SDO) and traditional, conservative views (i.e., RWA, Study 5 only), which in turn, are related to more positive attitudes towards members from different outgroups. This adds to previous work by Van Hiel and colleagues (2019), who reported similar relationships between emotional abilities, ideology, and prejudice. Our results show the specific impact of the emotion management branch of EI and thus highlights the importance of assessing the impact of emotional abilities separately to identify the variance explained by each specific branch.

These studies are also the first to show that performance-based emotion management skills are negatively related to RWA and SDO which adds to the previous literature exploring the role of cognitive abilities in the endorsement of right-wing political ideology (Hodson and Busseri, 2012; Onraet et al., 2015). Furthermore, in Study 5, we found that self-reported skills in emotion regulation (i.e., DERS) were not significantly related to any of the variables measuring ideology or prejudice and did not account for any additional variance in the mediation model. This replicates the findings from Studies 1 and 3 and confirms the importance of performance-based emotion management skills, rather than self-reported difficulties in emotion regulation.

So far, the results obtained from Studies 1-5 indicate that emotion management is significantly associated with prejudice, and socio-ideological ideology. However, these studies do not give an indication of how emotion management affects prejudice during everyday contact situations. The following chapter aims to explore this further by testing how contact experiences can affect prejudice, and whether this relation is different for people who have higher (vs lower) levels of emotion management.

Chapter 6: Intergroup Contact and Prejudice: The Moderating Role of Emotion Management

Intergroup contact is defined as an interaction between members from different social groups (Pettigrew & Tropp, 2011), and can occur in many forms, either directly via cross-group friendships, face-to-face, and even virtual interactions, or indirectly through vicarious, or imagined interactions (Dovido et al, 2017). A vast body of evidence has demonstrated that positive contact with outgroup members can reduce prejudice and improve intergroup attitudes (Paolini et al., 2021; Pettigrew & Tropp, 2006), however, the mere act of interacting with an outgroup member is not always enough to lower prejudice. As stated by Allport, "the effect of contact will depend on the kind of association that occurs, and upon the kinds of persons who are involved" (p. 262). In other words, the type of contact experienced (i.e., positive, or negative), as well as the specific characteristics of the person engaging in intergroup contact (i.e., individual differences) can impact how successful contact will be in improving intergroup relations. Understanding how these different factors could facilitate or inhibit the impact of contact on prejudice could lead to the development of more targeted interventions and a more effective reduction in prejudice.

The previous studies reported in this thesis have demonstrated that emotion management is negatively related to prejudice, but emotion management could also play a role in the extent to which positive and negative contact experiences have an impact on prejudice. Those who are better able to manage emotions can regulate (i.e., lessen, enhance, or adjust) their emotional responses in a way that is appropriate for the social context (Mayer & Salovey, 1997). This is likely to be an important skill for everyday intergroup contact situations, as those higher in emotion management might respond differently to positive and negative contact compared to those who are lower in emotion management, which could impact levels of prejudice. As such, individual differences in emotion management are expected to be meaningfully associated with intergroup contact and outgroup attitudes. Therefore, in this chapter, I will test whether emotion management can boost or inhibit the relationship between daily experiences of positive and negative intergroup contact and prejudice.

Intergroup contact and prejudice

Early research examining race relations noted that those who interacted with people from minority ethnic backgrounds often held more positive attitudes and beliefs about them (Allport & Kramer, 1946; Lee & Humphrey, 1943; Williams, 1947). For example, white people who had pre-existing relationships with black people were more likely to provide support to black individuals during race riots (Lee & Humphrey, 1943) and held more positive attitudes towards integration of black people in the workforce and in their neighbourhood (Deutsch & Collins, 1951; Kephart, 1957). Observations such as these were the basis of Allport's (1954) intergroup contact hypothesis which suggested that optimal and meaningful intergroup contact could reduce prejudice if four prerequisites are met: a) the groups have equal status within the interaction, b) intergroup cooperation, c) working towards common goals, and d) institutional support for the interaction.

Since then, decades of research using cross-sectional, longitudinal, experimental, and meta-analytic methodologies have demonstrated that positive intergroup contact is robustly related to lower levels of prejudice (e.g., Dhont et al, 2012; Levin, van Laar, & Sidanius, 2003; Wright et al., 2004; Pettigrew et al, 2011). For instance, a meta-analysis by Pettigrew and Tropp (2006) demonstrated that not only can positive contact improve attitudes towards the individual involved in the interaction, but the effect can also be generalised to improve attitudes towards the wider social group. They also showed that although Allport's suggested conditions of optimal contact can enhance the effect of positive contact on prejudice, they are not essential, as positive contact can still reduce prejudice in the absence of these conditions (Pettigrew & Tropp, 2006). Furthermore, the relationship between positive contact and prejudice has been observed across many different target groups including ethnic minority groups, gay people, transgender people, and those who suffer from mental ill health (Herek & Capitanio, 1996; Kteily et al., 2019; Maunder & White, 2019; Walch et al., 2012). As such, intergroup contact is often facilitated during interventions which aim to reduce prejudice (e.g., Al Ramjah & Hewstone, 2013; Maunder & White, 2019; Rani & Samuel, 2019).

However, real life intergroup contact can be complex and unpredictable. People can experience positive *or* negative contact when interacting with outgroup members, and it stands to

reason that just as positive contact can decrease prejudice, negative contact could lead to an increase in prejudice.

Positive and negative intergroup contact

Although historically, scholars have recognised that the effect of contact on prejudice can vary based on the quality and nature of the contact experience, research has largely focused on understanding the positive role of contact, whereas the potentially damaging consequences of negative contact has only recently gained empirical interest (Barlow et al., 2012; Dhont et al, 2010; Dhont & Van Hiel, 2009; Pettigrew, 2008; Pettigrew & Tropp, 2006; Schäfer et al., 2021). Even though positive contact is likely to occur more often than negative contact (Barlow et al., 2012; Graf et al., 2014; Hayward et al., 2017; Kauff et al., 2017; Pettigrew, 2008), negative contact can still have a detrimental effect on intergroup attitudes and prejudice (Barlow et al., 2012; Paolini & McIntyre, 2018).

To demonstrate the importance of negative contact in intergroup relations, Barlow, and colleagues (2012, Study 1) simultaneously compared the effects of positive and negative contact on various forms of prejudice using data collected over eight years, across seven different samples. They found that compared to positive contact, negative contact was a stronger predictor of prejudice towards a range of outgroups (including Muslim people and asylum seekers). They also revealed a significant interaction between contact frequency and valence, such that those who experienced more negative contact reported greater level of prejudice compared to those who experienced less negative contact. However, this was not the case with positive contact, as those who experienced frequent positive contact did not express lower prejudice than those who experienced infrequent positive contact. This positive–negative contact asymmetry suggests that negative contact might have a more damaging effect on intergroup relations compared to the beneficial impact of positive contact. This finding has been supported by several studies (e.g., Graf et al., 2014; Paolini & McIntyre, 2019), however others have found no differences in the size of the effects (e.g., Árnadóttir et al., 2018).

Despite the mixed results, this body of research has demonstrated that positive and negative contact can affect intergroup emotions and relations in different ways. Indeed, Barlow and colleagues (2019) later showed that positive contact was a stronger predictor of warmth (compared to negative contact), whereas negative contact was a stronger predictor of anger (compared to positive contact), highlighting that the emotions experienced during intergroup contact correspond to the type of contact experienced (i.e., affect matching). This emphasises the need to examine both positive and negative contact experiences simultaneously to understand how and under what circumstances contact is beneficial or detrimental to intergroup relations (Schäfer et al., 2021).

Intergroup contact and emotion management

It has been well established that positive contact reduces prejudice via an increase in positive emotions (e.g., empathy, admiration), and a decrease in negative emotions (e.g., anxiety, anger, disgust; Serger et al., 2017; Pettigrew & Tropp, 2008), however the mechanisms by which negative contact affects prejudice are less clear. One study examining the relationships between positive and negative contact, intergroup emotions and attitudes found that negative contact was related to greater levels of anxiety and anger, which in turn was related to the avoidance of outgroups. In contrast, positive contact was related to greater levels of empathy, and more positive attitudes towards outgroups (Hayward et al., 2017, Study 1). Another study examined different forms of positive and negative contact and found that both direct and extended positive contact was related to lower prejudice via greater levels of empathy and trust, and lower levels of anxiety. In contrast, negative contact through mass media (i.e., TV news and newspapers) was related to greater levels of prejudice via lower empathy and trust, and higher anxiety (Visintin et al., 2017, Study 2).

Evidently, experiences of both positive and negative emotions during contact situations can affect how people feel towards outgroup members, yet the extent to which people are capable of effectively managing emotions might be a critical factor in this process. It has been theorised that those with better emotion management abilities are better able to regulate emotions during social interactions and use strategies to communicate effectively which would facilitate smoother interactions (Lopes et al., 2004). Additionally, effective emotion regulation can also allow individuals

to manage their negative emotions appropriately and control their harmful responses during conflict situations (Halperin, 2014 Halperin et al., 2014; Mischel et al, 2014). For example, one study showed that Israeli participants who were better able to regulate their emotions reported more positive attitudes towards Palestinians and showed more support for political policies relating to Israeli – Palestinian conflict resolution (Halperin et al., 2013). Such evidence suggests that the management of emotions is likely to be important in dealing with positive and negative contact situations. However, the role of one's emotional abilities has not been explored in this domain, even though several studies have shown that personal characteristics can impact the effectiveness of intergroup contact in reducing prejudice (e.g., Dhont & Van Heil 2009; Dhont et al., 2011; Kteily et al., 2019; see Turner et al., 2020 for review). As such, using a "person x situation" approach when investigating intergroup contact is useful in understanding how different people respond to positive and negative contact, and for whom contact is most effective (Hodson et al., 2017; Turner et al., 2020).

Those with higher levels of emotion management tend to be more proficient at regulating their emotions to suit the social context (Mayer & Salovey, 1997). Therefore, it can be expected that those higher on emotion management would be better at regulating their emotions during everyday intergroup contact situations in a way that would facilitate more harmonious intergroup relations (i.e., enhance the beneficial impact of positive contact, or protect against the detrimental impact of negative contact, on levels of prejudice). In contrast, those lower on emotion management might be less well equipped to deal with their emotions during social interactions and therefore, may be less receptive to the effects of intergroup contact. As such, the effect of daily positive and negative contact experiences on intergroup attitudes may differ between those who are higher versus lower on emotion management.

Only one study has previously explored how people might use their emotional abilities during daily interactions. Lopes and colleagues (2004, Study 2) asked participants to keep a social interaction diary for two weeks to monitor how they felt about each interaction, and they found that the ability to manage emotions was positively related to better quality interactions, specifically with people of the opposite sex. Although this study gives a good indication of the role of emotion management in daily

social interactions, it does not consider the valence of each interaction (i.e., whether it was positive or negative). Therefore, the aim of this study was to explore how the ability to manage emotions can help in naturalistic intergroup situations that differ in valence. More specifically, it is expected that people's ability to manage emotions would be important in both positive and negative contact situations, such that higher emotion management would a) boost the beneficial effect of positive contact or b) buffer against the detrimental effects of negative contact.

Study 6

The current study aims to examine if one's ability to manage emotions can facilitate (i.e., moderate) the relationship between positive and negative contact experiences and prejudice. To capture every day, naturalistic intergroup interactions, this study used experience sampling methodology in a novel app-based format. Experience sampling (also known as ecological momentary assessments, or EMA) is a research method by which participants are asked about their daily life experiences on multiple occasions over a set amount of time (Larson & Csikszentmihalyi, 1983). This method of data collection allows researchers to observe psychological processes in natural environments as they happen which increases the validity and generalisability of the data (Thai & Page-Gould, 2018). In the past, researchers would instruct participants to complete the experience sampling surveys using pen and paper, and this moved to more modern methods which used SMS (text messaging) to signal participants to complete their data entry via a link to an online survey. Now with the advent of smartphones, researchers can use mobile applications (apps) which are downloaded directly onto participant's phones (Keil et al., 2020; Prati et al., 2022).

Much of the previous research assessing intergroup contact has used self-reported measures to capture experiences of contact. For example, when looking at the studies analysed in Pettigrew and Tropp's (2006) influential meta-analysis, 81% of these used retrospective, self-report measures of contact (Dhont et al., 2012; Hewstone et al., 2011). Although this method of data collection is useful as it is relatively cheap and easy to administer, it is limited by the potential for socially desirable responding and recall bias (Hewstone et al., 2011; Keil et al., 2020). This is a particular concern when measuring contact valence as researchers tend to ask participants to retrospectively rate whether their

contact experience was positive or negative in nature, sometimes using single item questions (Barlow et al., 2012; Hayward et al., 2017) which might not accurately reflect the complexity of daily contact experiences. Other studies have examined intergroup interactions in lab-based experiments (see Paolini et al., 2018 for review). However due to the artificial settings of these studies, they may not truly reflect naturalistic, daily contact experiences. With experience sampling methodology, it is possible to collect near-time data on intergroup interactions in real-life settings, maximizing the ecological validity of the data (Keil et al., 2020), yet researchers have only recently begun using experience sampling mobile apps in intergroup contact research (e.g., Keil et al, 2020; Prati et al, 2022).

This study used *ExperienceSampler* which is an "open-source scaffold for creating smart-phone apps" (Thai & Page-Gould, 2018, p. 731). This allowed for the creation of a bespoke experience sampling smartphone app that is entirely customisable by the researchers and can be programmed to notify participants to take part in the experience sampling survey using a predefined schedule. Once created, the app is downloaded onto participant's smartphones, they are regularly notified to complete the survey on the app itself (as opposed to proving a link to an online survey). Once the survey is completed, the data is sent to the researcher's server when the smartphone is connected to the internet. This type of technology can reduce participant's costs which might be incurred when receiving SMS and completing surveys online and can be integrated into the participant's routine with minimal disruption (Thai & Page-Gould, 2018). We used this app to capture data on the valence of everyday intergroup interactions by measuring emotional experiences during contact (for example: "did you feel angry/happy/irritated" etc), which would give a clearer indication of whether the interaction elicited positive or negative emotions.

Furthermore, previous research has indicated that cognitive abilities are meaningfully associated with socio-ideological attitudes and prejudice towards outgroups (Dhont & Hodson, 2014). For example, several studies have revealed that those with weaker cognitive abilities report more negative attitudes towards outgroup members (Costello & Hodson, 2014; Keiller, 2010, Meeusen et al, 2013) and tend show greater endorsement of right-wing ideologies (Hodson and Busseri, 2012;

Onraet et al, 2015). Hence, when testing the associations between emotional abilities and socio-ideological and intergroup attitudes, it seems important to control for the effect of cognitive abilities, and thus to disentangle the unique impact of emotional abilities on socio-ideological and outgroup attitudes. To date, only one study has simultaneously tested the associations of cognitive and emotional abilities with socio-ideological attitudes and prejudice and confirmed that both types of abilities had unique predictive validity (Van Hiel et al., 2019). Therefore, in our study, we included a measure of verbal IQ (VIQ) to control for cognitive ability. Finally, the studies reported in the previous chapter (Studies 4 and 5) demonstrated that the link between emotion management and prejudice can be partly explained by the mediating role of socio-ideological attitudes. In order to replicate these findings in a different sample, scales measuring Right-Wing Authoritarianism (RWA) and Social Dominance Orientation (SDO) were also included in this study.

Participants

Students from four universities across England[2] were invited to take part in this study. The study was separated into three successive data collection points: an initial survey, the app-based experience sampling surveys, and a follow up survey. As the mobile app was developed for android phones, only those who had an android phone were able to take part (N = 219). Participants were informed that the study aimed to examine possible associations between personality, personal experiences, and attitudes towards social groups and that they were required to complete all three parts of the study for full participation. Participants were either awarded course credits or received monetary compensation at the UK national living wage[3] (approximately £11) once all parts of the study were completed.

Participants who provided inconsistent ID codes and/or pseudonyms that could not be matched across the three data collection points, and those who did not complete the app-based diary study, were excluded from the analysis. Furthermore, the focus of this study was to investigate

[2] We collaborated with Dr Julie Van de Vyver (Durham University), Prof. Rhiannon Turner (Queen's University Belfast), and Dr. Rose Meleady (University of East Anglia) on this study.
[3] The rate for the UK national living wage depends on the age of the individual being paid and the year of payment (April 2019; https://www.gov.uk/national-minimum-wage-rates). Participants were paid for the full amount of time spent completing the three parts of the study, which was calculated to be 1.5 hours in total.

attitudes of the ethnic majority group (i.e., white UK/Irish people) towards ethnic minority group members, and thus we excluded those who self-reported belonging to an ethnic minority group. The remaining participant sample consisted of 103 participants, (19 males, 84 females) aged between 18-52 years (M = 21.10, SD = 5.69).

Procedure

Participants were first asked to complete a brief initial survey online, in which they created an anonymous ID code and pseudonym which would be used to match their responses across the three data collection points. The survey also included demographic questions and measures which captured emotion management ability, socio-ideological attitudes, and cognitive ability. Once participants completed the initial survey, they were asked to download the free ExperienceSampler smartphone app (Thai & Page-Gould, 2017) which was created for the purpose of this study (see appendix X). The app would notify participants to complete a brief survey which asked about their intergroup contact experiences. These notifications were scheduled to occur once every few days, so data was collected at random intervals approximately three or four times a week, for three weeks. Furthermore, the notification schedule was customised to each participants' routine which meant that participants received their notifications at a random but convenient time in the day, between the time they woke up and the time they ate their evening meal. This time window was selected to allow for data to be collected outside normal office hours but ensured that the study would not be intrusive to the participants' daily routine thus minimising the burden.

After three weeks, when the experience sampling section was completed, participants were asked to complete a follow-up survey which included the same measures of socio-ideological attitudes as the initial survey as well as scales measuring generalised prejudice and attitudes towards outgroups. Once participants completed this final survey, they were directed to a more detailed summary of the study and contact details of the researchers. There were also reimbursed for their time via course credits or a monetary payment.

Measures

Emotion management. Emotion management was measured using the Situational Test of Emotion Management (STEM; Allen et al., 2015) which is an 18-item performance-based scale used to measure individual differences in the ability to manage one's own and other's emotions (α = 52). The reliability of this scale was lower compared to previous studies reported in this thesis, and to other research reporting alphas as low as .65 and .66 (Bucich & MacCann, 2019; Double et al, 2022).

Cognitive ability. To measure cognitive ability, we included a 10-item performance-based test which measures vocabulary knowledge (i.e., wordsum; adapted from Thorndike, 1942). Participants are presented with target words and are asked to choose a word from five different response options that matches the meaning of the target word most closely. For example, the target word '*BEAST'* would be accompanied with the response options: *afraid, words, large, animal, separate,* and *don't know*. In this example, '*animal'* would be the correct response as this word comes closest to the meaning of '*BEAST'* than any of the other words (Malhotra et al, 2007). Although the use of a vocabulary test to measure cognitive ability might not be as informative as a full IQ test, evidence suggests that verbal IQ (VIQ) is highly related to general intelligence (Alwin, 2010; Miner, 1957; Zhu and Weiss, 2005) and furthermore, this specific vocabulary test is often used as a proxy measure for cognitive ability when administration of lengthier IQ tests is not feasible (e.g., Caplan & Miller, 2010, Brandt & Crawford, 2016). The Cronbach's alpha for this scale was (α = 61) which is comparable to previous research (α = .62 and .72; De Keersmaecker et al., 2021).

Right Wing Authoritarianism. This study measured RWA using the same 12 item scale from Study 4. This measure captures the endorsement of right-wing ideology using three connected facets: authoritarianism, conservatism, and traditionalism (Duckitt et al, 2010, based on Altemeyer, 1981). Previous research reported Cronbach's alphas ranging between .83 and .94 (Duckitt et al., 2010) which is comparable to the current study (α = .80 for the initial survey, and α = .80 at follow up).

Social Dominance Orientation. SDO was measured using the same eight item scale used in Study 4 and 5. This measure assesses support for intergroup dominance and intergroup anti-

egalitarianism. Reverse coded items were recoded, and mean scores were calculated such that higher scores indicated higher levels of SDO. The internal consistency of the SDO scale in this study was α = .87 for the initial survey, and α = .82 at follow up, which is comparable to previous research (Ho et al., 2015).

Contact valence. Each experience sampling survey asked if the participant experienced any interactions with people from a different ethnic and/or national background to themselves in the past two days. If they did, they were then asked to rate how they felt during these interactions which indicated whether the contact experience was positive or negative.[4] If they did not have any contact experiences, the survey ended. Positive and negative contact were operationalized with items that captured positive and negative emotional contact experiences. More specifically, during the experience sampling section of the study, participants were asked to rate the degree to which they felt both positive and negative emotions during their intergroup interactions using a five-point scale (1 = not at all, 5 = totally). Scores for positive emotions (i.e., happy, comfortable, and satisfied) and negative emotions (i.e., anxious, irritated, angry, frightened) were averaged across time to give a mean score of positive or negative contact experiences (α = 89, and α = 73, respectively).

Generalised prejudice. Just as previous studies, participants rated how they felt towards immigrants, ethnic minorities, Muslims, and Black and South-Asian people using affective thermometers. The internal consistency was α = .93, which is comparable to the previous studies.

Negative outgroup attitudes. The study also included four items tapping into how respondents felt towards members of a different ethnic group to themselves, using 7-point scales anchored by bipolar adjectives (cold/warm, negative/positive, hostile/friendly and contempt/respect). The Cronbach's alpha for this scale was α = 91, which is comparable to previous studies.

[4] We also included questions on the specific outgroups they had contact with, the frequency of these contact experiences, and how meaningful the interactions were.

Results and discussion

Correlation analysis. Means, standard deviations and zero order correlations are presented in Table 4. The findings show that STEM was significantly positively correlated with experiences of positive contact, and significantly negatively correlated with negative contact, suggesting that those with higher emotion management abilities were more likely to rate intergroup interactions as positive, and less likely to rate them as negative. The results also demonstrated that positive contact was negatively related to prejudice, and negative attitudes towards outgroups, whereas negative contact was positively related to these variables, supporting the notion that positive contact is associated to more positive attitudes, whereas negative contact is associated to greater prejudice (Schäfer et al., 2021).

In contrast to the previous studies reported in this thesis, STEM was not significantly related to generalised ethnic prejudice, or negative outgroup attitudes (r = -.12, p = .231, and r = -.14, p = .161, respectively), however the correlation coefficient is of similar effect size as previous studies. This may be in part due to the smaller sample size compared to the previous studies but nonetheless means that we could not assess whether emotion management would be indirectly related to lower prejudice through socio-ideological attitudes (i.e., replicate the mediation analysis from Study 4 and 5).

In this sample, the relationship between socio-ideological attitudes was clearer with generalised ethnic prejudice, however the relationship with attitudes towards outgroups was mixed. More specifically, RWA (measured during the initial and follow up survey) was positively and significantly related to prejudice (r = .35, p < .001, and r = .42, p < .001, respectively), but negative attitudes towards outgroups was only significantly related to RWA at follow-up (r = .23, p = .025). Similarly, SDO (measured during the initial and follow up survey) was significantly positively related to prejudice (r = .28, p = .005, and r = .30, p = .003, respectively), but attitudes towards outgroups was not significantly related to SDO, either at the initial survey or follow up (r = .15, p =.127, and r = .18, p =.064, respectively).

Additionally, it was found that VIQ was not significantly related to any of the variables except RWA (r = -.20, p = .045 at the initial survey, and r = -.27, p = .008 at follow up), supporting previous studies that suggest that cognitive ability is negatively related to right-wing ideologies, and particularly with RWA (Heaven et al., 2011; Choma et al., 2014). It is also worth noting that the scores for socio-ideological attitudes at the initial survey were highly correlated with the scores of these measures at follow up (RWA: r = .80, p < .001, and SDO: r = .82, p < .001), supporting previous research demonstrating that these constructs are relatively stable over time (Asbrock et al., 2010).

Moderation analysis. Next, we tested the two new hypotheses, using regression analyses. First, we tested whether the impact of positive contact on generalised prejudice is different for those who are higher (vs lower) on emotion management. Hence, we entered the centred scores of emotion management and positive contact as well as their interaction term as predictors of generalised ethic prejudice, while also controlling for VIQ and negative contact. The results showed that the main effect between positive contact and generalised prejudice was negative and significant (b = -.52, se = .248, p = .039). The main effect between emotion management and generalised prejudice was also negative but non-significant (b = -.09, se = .095, p = .330). More importantly, the interaction effect was significant (b = -.35, se = .110, p = .002).

Furthermore, deconstructing the interaction effect revealed that those who have higher scores of emotion management showed a significant negative relationship between positive contact and prejudice (b = -1.17, se = .330, p < .001, see figure 6), whereas the relationship between positive contact and prejudice was non-significant for those with lower scores of emotion management (b = .13, se = .310, p = .670). This finding confirms that those who are more adept at managing emotions experienced a decreased in generalised ethnic prejudice after experiencing positive contact with outgroup members, even after controlling for experiences of negative contact and cognitive abilities.

A similar moderation analysis was carried out to test the impact of positive contact on negative outgroup attitudes for those higher (vs lower) on emotion management. The results showed that the main effect between positive contact and negative outgroup attitudes was negative and

significant (*b* = -.40, *se* = .157, *p* = .013). The main effect between emotion management and negative outgroup attitudes again negative but non-significant (*b* = -.07, *se* = .060, *p* = .269). The interaction effect was also significant (*b* = -.18, *se* = .282, *p* = .011).

Deconstructing this interaction effect revealed that those with higher scores of emotion management showed a significant negative relationship between positive contact and outgroup attitudes (*b* = -.73, *se* = .209, *p* < .001, see figure 7), whereas the relationship between positive contact and outgroup attitudes was non-significant for those with lower scores of emotion management (*b* = .06, *se* = .196, *p* = .745). This finding confirms that those who are better able to manage emotions experienced a decreased in negative outgroup attitudes after experiencing positive outgroup contact, even after controlling for experiences of negative contact and cognitive abilities.

Another moderation analysis was carried out to test the interaction effect between emotion management and negative contact in the prediction of prejudice, while controlling for positive contact and VIQ. The results showed that the main effects of negative contact and emotion management were positive but non-significant (*b* = .85, *se* = .917, *p* = .362, and *b* = .01, *se* = .095, *p* = .941, respectively). When testing the interaction between emotion management and negative contact in the prediction of negative attitudes towards outgroups (while controlling for positive contact and VIQ), the results again revealed no significant effect of negative contact (*b* = .444, *se* = .527, *p* = .402).

We also tested the role of VIQ a moderator to explore if the results could be explained by cognitive ability. More specifically, a moderation analysis was conducted in which centred scores of VIQ and positive contact predicted generalised ethic prejudice, while also controlling for negative contact and STEM. It was found that the main effects between generalised prejudice and both positive contact and VIQ were non-significant (*b* = -.480, *se* = .262, *p* = .071, and *b* = -.044, *se* = .103, *p* = .674, respectively). The interaction effect was also non-significant (*b* = -.078, *se* = .157, *p* = .622).

Table 4. Means, standard deviations, and zero-order correlations for variables in Study 6.

Survey	Measure	*M*	*SD*	2.	3.	4.	5.	6.	7.	8.	9.	10.
Initial survey	1. STEM	11.21	1.91	.04	-.11	-.24*	.28**	-.27**	-.04	-.10	-.12	-.14
	2. VIQ	6.27	1.64	-	-.20*	-.16	.14	-.17	-.27**	-.13	-.13	-.04
	3. RWA	3.22	.78		-	.52***	-.25*	.16	.80***	.38***	.35***	.17
	4. SDO	2.42	1.08			-	-.37***	.18	.56***	.82***	.28**	.16
Diary Study	5. Positive contact	3.56	.65				-	-.23*	-.26*	-.39***	-.25*	-.27**
	6. Negative contact	1.18	.36					-	.25*	.29**	.29**	.23*
Follow-up survey	7. RWA	3.14	.84						-	.43***	.42***	.23*
	8. SDO	2.32	.98							-	.30**	.19
	9. Generalized prejudice	3.34	1.65								-	.69***
	10. Negative outgroup attitudes	2.09	1.02									-

Note. STEM = Situational Test of Emotion Management, VIQ = Verbal Intelligence, RWA = Right-Wing Authoritarianism, SDO = Social Dominance Orientation * $p < .05$, ** $p < .01$, *** $p < .001$

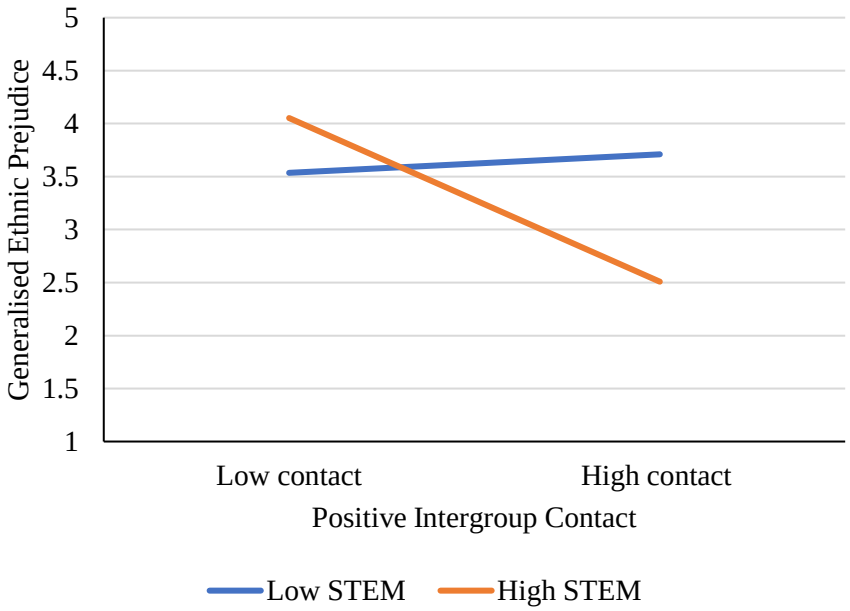

Figure 6. Line graph demonstrating the interaction between emotion management, positive contact, and generalised ethnic prejudice. Note. STEM = Situational Test of Emotion Management

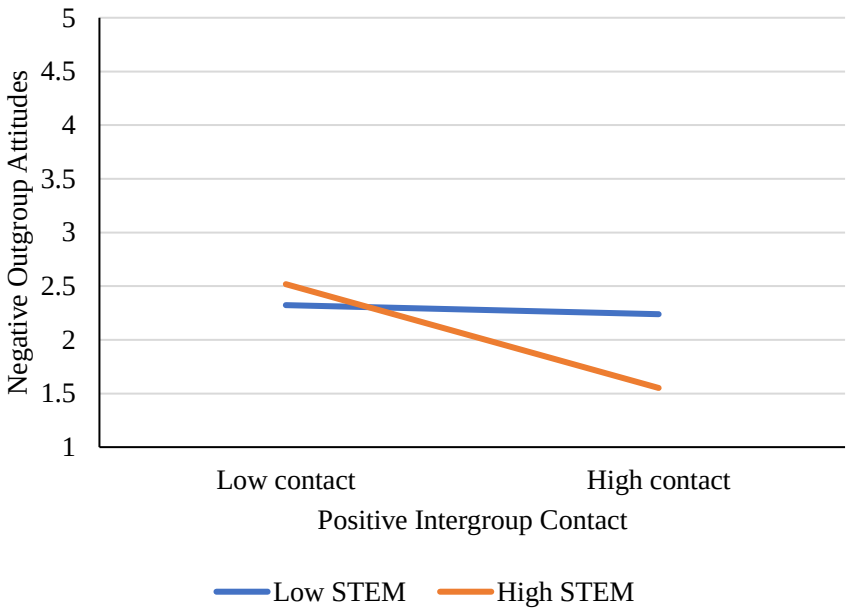

Figure 7. Line graph demonstrating the interaction between emotion management, positive contact, and negative outgroup attitudes. Note. STEM = Situational Test of Emotion Management

We also analysed if VIQ and positive contact predicted negative outgroup attitudes (while controlling for negative contact and STEM) and found that the main effect between positive contact predicting negative outgroup attitudes was negative and significant (b = -.361, se = .163, p = .029) but the main effects of VIQ on negative outgroup attitudes was non-significant (b = .013, se = .064, p = .835). The interaction effect was also non-significant (b = .059, se = .098, p = .546).

When analysing negative contact (while controlling for positive contact and STEM), it was found that the main effect of negative contact on generalised prejudice as well as the effect of VIQ on generalised prejudice were non-significant (b = 1.406, se = .821, p = .090, and b = -.049, se = .102, p = .635, respectively). The interaction effect was also non-significant (b = .192, se = .389, p = .624). When looking at whether VIQ and negative contact predicted negative outgroup attitudes (while controlling for positive contact and STEM), it was found that the main effect of negative contact and VIQ on negative outgroup attitudes were positive, but non-significant (b = .778, se = .510, p = .130, and b = -.027, se = .063, p = .675, respectively). The interaction effect was also non-significant (b = .182, se = .243, p = .453).

Chapter Summary

It has been noted that people may respond differently to positive and negative contact depending on personal characteristics that make them more (or less) prone to prejudice (Hodson & Dhont, 2015). Examining how individual differences in emotion management abilities might facilitate (or inhibit) the relationship between positive and negative contact and prejudice could shed light on which characteristics make people more (or less) receptive to the effects of intergroup contact.

This study expanded on the previous studies by demonstrating the importance of the ability to manage emotions in everyday intergroup contact situations. More specifically, we examined the relationship between positive and negative contact experiences and prejudice at difference levels of emotion management. In line with our expectations, the findings showed a significant interaction between positive contact and emotion management on prejudice, indicating that the effect of everyday positive contact on prejudice was significant for those with greater emotion management abilities, but

not for those with lower levels of emotion management. This finding suggests that emotion management boosted the effect of positive contact on prejudice, in line with previous research which demonstrated that the ability to manage emotions is beneficial to daily social interactions with members of the opposite sex (Lopes et al., 2004). Furthermore, this association was found even after controlling for VIQ, which is in line with previous research that has demonstrated that links between EI and social relations exist even after controlling for cognitive ability (Brackett et al, 2006; Ciarrochi et al., 2000, Lopes et al., 2005).

Furthermore, we expected that levels of prejudice would not be as affected by negative contact for those who are high in emotion management, compared to those lower in emotion management (i.e., high emotion management would buffer against the detrimental impact of negative contact). However, this hypothesis could not be confirmed given that the interaction between negative contact and emotion management on prejudice was not significant. In fact, we found that the relationships between negative contact and prejudice was not significant at both low and high levels of emotion management. In the absence of significant effect of negative contact on prejudice, the idea of whether the effect of negative contact is buffered by emotion management becomes irrelevant.

Not only do these findings emphasise the importance of examining positive and negative contact simultaneously (Barlow et al., 2012), they also contribute to the debate regarding the positive-negative contact asymmetry. More specifically, previous research indicates that negative contact tends to increase levels of prejudice, more than positive contact can reduce it (Barlow et al., 2021; Graf et al., 2014; Paolini & McIntyre, 2018), however the results of this study show that positive contact plays a more important role on levels of prejudice than negative contact, especially for those who have a better ability to manage emotions. Individual differences are likely to play a role in the asymmetrical effect of contact valence on attitudes towards outgroups, such that those who are more prone to prejudice might respond to contact differently than those who are less prone to prejudice (Hodson et al., 2017; Turner et al., 2020). In line with this, our results showed that the impact of daily contact experiences on prejudice differ for those who are higher (vs lower) on emotion management,

emphasising the importance of considering both the person and the situation when examining the impact of contact on prejudice.

Chapter 7: General Discussion

Although emotions are personal experiences, they are also crucial in informing our social interactions. Emotions can affect how we think about and behave towards people from different social groups. Research on the affective factors related to prejudice has typically focused on various emotions that are elicited in intergroup contexts as well as on the social nature of these emotions (Cottrell, & Neuberg, 2005; Mackie et al, 2008; Tapias et al, 2007). However, this research line has largely overlooked the possible role of EI, which underpins people's understanding, perception, use, and management of emotions. This thesis addressed this gap and revealed several important findings regarding the associations between emotional intelligence and prejudice.

Summary of findings

Previous research has shown that EI is related to a range of important interpersonal and social outcomes (Brackett et al, 2005; 2006; Caruso & Salovey, 2004; Durlak et al, 2011; Lopes et al., 2004; Schlaerth et al, 2013), and as such, we reasoned that EI could also have an impact on intergroup relations, especially due to the importance of emotions in intergroup contexts (Cottrell and Neuberg, 2005; Hodson et al., 2013; McFarland, 2010; Seger et al, 2017; Stephan, 2014). Therefore, Chapter 3 tested the association between EI and outgroup prejudice in both adult and community samples from different countries.

Firstly, in Study 1, we examined the relations between performance-based and self-reported EI and generalised ethnic prejudice to understand the relative impact of the different facets of trait and ability EI, using a Spanish sample of undergraduate psychology students. The results demonstrated that stronger emotion management skills, but not the other ability EI branches, were related to lower generalised ethnic prejudice. In other words, those who are more capable of managing their emotions showed lower levels of generalised ethnic prejudice. This relationship was observed even after accounting for other facets of EI that were significantly correlated with generalised prejudice, demonstrating the unique role of emotion management abilities in the prediction of ethnic prejudice.

Furthermore, self-reported attention to emotion was significantly related to prejudice, suggesting that attending to one's own emotional state is relevant to intergroup attitudes.

Next, we aimed to replicate our findings in a student sample (Study 2a) and an adult sample (Study 2b) recruited from the UK, using a different performance-based measure of emotion management. We also included a measure of negative attitudes towards immigrants (Study 2a) and refugees (Study 2b) to test whether the relationship could extend to specific outgroups. The results of Studies 2a and 2b showed that those with better emotion management abilities reported lower levels of generalised ethnic prejudice and less negative attitudes towards immigrants and refugees.

The next chapter focused on the role of empathy. Recent evidence has indicated that dispositional empathy is an important variable to consider in the relationship between self-reported EI and racism (Onraet et al., 2017). Therefore, in Chapter 4, we tested whether similar relations exist for performance-based emotion management and prejudice. More specifically, Study 3 investigated the associations between performance-based and self-reported emotion management, empathy, homophobia, and generalised ethnic prejudice. Consistent with the previous studies, the results indicated that performance-based emotion management was negatively related to both types of prejudice. Furthermore, these associations were mediated by empathy, showing that stronger emotion management skills were related to higher dispositional empathy, which in turn was related to lower prejudice levels. Self-reported emotion management was not related to any of the variables, suggesting that the performance-based ability to manage emotions, rather than the perceived ability to manage emotions, appeared to be more relevant to outgroup attitudes.

In Chapter 5, we turned attention to socio-ideological attitudes as these are also crucial to intergroup relations (Hodson & Dhont, 2015; Sibley & Duckitt, 2007). Specifically, the studies reported in Chapter 5 tested the associations between emotion management and right-wing socio-ideological attitudes (i.e., RWA and SDO) using both student (Study 4) and adult (Study 5) samples from the UK. Both studies replicated findings from the previous chapters by showing that those who have higher scores in emotion management are less likely to express generalised ethic prejudice (Studies 4 and 5) and prejudice towards a specific outgroup (i.e., immigrants, Study 5). Furthermore,

mediation analyses showed that higher emotion management scores were associated with lower endorsement of right-wing socio-ideological attitudes, which in turn was related to lower prejudice thus demonstrating the role of emotion-related mental abilities in the endorsement of right-wing and outgroup attitudes.

Studies 1-5 showed that individual differences in emotion management are related to levels of prejudice, however for a more comprehensive picture, we wanted to explore the role of emotion management in everyday experiences of intergroup contact and how that might affect levels of prejudice. The final empirical chapter (Chapter 6) aimed to examine the role of emotion management in real-life naturalistic intergroup contact situations. In Study 6, we used an app-based experience sampling survey to capture data on intergroup contact experiences over a 3-week period to examine the role of emotion management in daily intergroup interactions. Firstly, we found that emotion management was significantly correlated with both positive and negative contact, such that those with higher scores of emotion management tended to have more positive intergroup interactions and less negative interactions. The results also showed that positive contact was related to lower levels of prejudice, whereas negative contact was related to higher levels of prejudice. Next, we tested if one's ability to manage emotions can facilitate (i.e., moderate) the relationship between everyday positive and negative contact experiences and prejudice. It was found the effect of positive contact on outgroup prejudice was significant for those with greater emotion management abilities, but not for those with lower levels of emotion management. This finding suggests that emotion management boosted the effect of positive contact on prejudice, as those with better emotional management abilities are more likely to benefit from positive contact with outgroup members, compared to those with lower emotion management skills. As such, our results show that high emotional management skills facilitate positive contact effects, indicating that a certain level of emotion management skill is required for positive contact effects to occur.

Taken together, the findings from this thesis showed that a greater ability to manage emotions is negatively related to generalised ethnic prejudice and prejudice towards a range of different outgroups (i.e., immigrants, refugees, and gay people), corroborating the idea that people who are

better equipped to manage emotions are less likely to hold negative attitudes towards outgroup members. The association between emotion management and prejudice was found using different performance-based measures of emotion management (i.e., the Mayer-Salovey-Caruso Emotional Intelligence Test and the Situational Test of Emotional Management), in two different countries (i.e., Spain and the UK), and in both student and heterogeneous adult samples. This demonstrates the generalizability and thus the robustness of the results across different measures of the same construct and different samples. Furthermore, the association held after controlling for age, gender, and education level, indicating that the ability to manage emotions is meaningfully associated to intergroup attitudes beyond the influence of these variables.

Theoretical implications

Associations Between Emotional Intelligence and Prejudice

These results extend previous research indicating that performance-based EI is related to better social and interpersonal relationships (Brackett et al, 2011; Gil-Olarte Márquez et al, 2006; Mavroveli et al, 2007). Those who are more emotionally intelligent are more adept at recognising emotions in others, regulating emotions based on the social context, and expressing emotions appropriately, and as such tend to be better friends, leaders, and healthcare providers compared to those with lower levels of EI (Lopes et al, 2004; Miao et al, 2016; 2018; Jiménez-Picón et al., 2021). Our results show that EI is not only critical for people's social competence and interactions on an interpersonal level but also relevant when considering intergroup dynamics and outgroup attitudes.

When looking at the unique associations between the different branches of performance-based EI and prejudice, we found that emotion management is uniquely relevant to positive intergroup relations (Study 1). This finding is in line with previous research demonstrating that the specific ability to regulate and manage emotions is important for social relations (Brackett et al., 2006; Extremera & Fernández-Berrocal, 2004; Lopes et al., 2004; 2011), and adds to the research on affective factors related to prejudice. More specifically, it is well established that a range of different emotions can be elicited through intergroup interactions. Some might feel threatened or disgusted which is typically associated with more negative attitudes, whereas others might feel empathetic,

relating to more positive intergroup relations (Cottrell & Neuberg, 2005, Seger et al, 2017; Stephan & Finlay, 1999; Stephan & Stephan, 2000). By showing that individual differences in emotion management are meaningfully related to levels of prejudice, we can see that not only are situational emotions vital in influencing our attitudes towards others, but a person's ability to manage emotions also plays an important role in shaping intergroup attitudes.

Moreover, the present findings move beyond recent work investigating associations between EI and prejudice (Dierckx et al., 2021; Onraet et al., 2017; Van Hiel et al, 2019). When examined separately, both performance-based and self-reported EI show negative associations with prejudice. However, in this thesis we simultaneously assessed the relations between prejudice, and performance-based and self-reported measures of emotion management. It was found that the repair facet of the TMMS (Study 1) and the DERS (Study 3 and 5), both of which capture the perceived ability to manage and regulate negative emotions, were not significantly related to prejudice. This indicates that the *ability* to manage emotions, rather than *perceived* skills in emotion management, appeared to be more relevant to outgroup attitudes. This finding also adds to the wider debate regarding the differentiation between performance-based and self-report EI measures and highlights the importance of distinguishing between one's mental ability, and one's perception about their ability to manage emotions (Freudenthaler, & Neubauer, 2007; Petrides, 2011). Indeed, performance-based, and self-reported measures of EI tap into conceptually distinct constructs (Petrides & Furnham, 2001; Petrides et al., 2016) and facets of both types of measures are likely to be uniquely related to outgroup attitudes (e.g., Study 1).

The unique association between performance-based emotion management and intergroup attitudes is also in line with previous research highlighting the role of cognitive abilities in intergroup attitudes. Specifically, higher levels of cognitive ability tend to be related to lower levels of prejudice (Dhont & Hodson, 2014; Onraet et al., 2015). Our results further support the link between mental abilities and prejudice, as we have found that those who are cognitively well equipped to manage emotions are more likely to report positive attitudes towards outgroups, thus demonstrating that other mental abilities are also relevant to intergroup attitudes. That said, we should be clear on what these

tests of emotion management truly measure. Researchers have distinguished between tests of conceptual (or declarative) knowledge (referring to knowledge about facts, principles and concepts that can be explicitly articulated) and procedural knowledge (referring to knowledge about processes and actions which is sometimes more difficult to articulate). It is likely that both conceptual *and* procedural knowledge is important to emotion management, for instance "one might understand that smiling at someone can be an effective means of producing a positive emotional reaction but recognizing in a live encounter the moment to smile and doing so in a way that does not seem false or insincere may well be a different ability" (Spector & Johnson, 2006, p. 335). However, both the MSCEIT and STEM measure conceptual knowledge only (MacCann & Roberts, 2008; Matthews et al., 2007a), and as such could be considered an incomplete test of emotion management ability (Matthews 2012).

Relatedly, performance-based tests of EI assess maximum performance in the level of knowledge. However, this might not be a good predictor of a person's behavioural tendencies (i.e., how a person might typically respond in everyday situations). For example, Freudenthaler and Neubauer (2007) asked participants to respond to scenarios that require emotion management skills using either maximum performance questioning (e.g., what is the *right* way to respond to this situation?) or typical performance questioning (e.g., how would *you* respond in this situation?). They found that participants who completed the typical performance test achieved lower scores than those who completed the maximum performance test suggesting that people are likely to understand the objectively best way to respond in a situation, but they might not necessarily choose to behave in that way (Freudenthaler & Neubauer, 2005; 2007; Freudenthaler et al, 2008). In other words, although a person's score on performance-based measures of emotion management might be a good indicator of the level of conceptual knowledge they have on the most appropriate way deal with an emotion, the test cannot tell us whether that person knows *how* to manage their emotions in this way, or whether they will generally *choose* to manage their emotions in this way (Matthews et al., 2006). Therefore, to ascertain if people can and will regulate emotions effectively in intergroup situations, we need look to the literature on emotion regulation.

Emotion regulation is defined as the process which allows people to control or modify their emotions by influencing the type and intensity of emotion they experience, when they experience it, and how they express it (Gross, 1998; 2014; 2015; Peña-Sarrionandia et al., 2015). This is distinct from emotion management abilities which refer to individual differences in emotion regulation, such that those scoring high on emotion management are seen as better able to regulate their emotions than those with lower scores. There are a range of different strategies that can be employed at different stages to regulate emotions. For example, if individuals are faced with an anxiety-inducing situation, they may choose to avoid the situation entirely (*situation selection*), seek social support to change the experience of the situation (*situation modification*), distract themselves from the emotion or situation (*attention deployment*), reappraise the context to make it less anxiety provoking (*cognitive change*) or supress any feelings of anxiety (*response modulation*; for full process model of emotion regulation, see Peña-Sarrionandia et al., 2015).

Understanding how emotionally intelligent individuals employ different strategies of emotion regulation to meet their social/motivational goals could give us a clearer insight into how these factors interplay in the intergroup arena. For example, previous research exploring the role of emotion regulation in the context of intractable conflict and has shown that those who reappraise conflict events reported less anger and hatred, and more tolerant attitudes towards members of the opposing side (Halperin & Gross, 2011; Halperin et al., 2012; 2013; 2014). Although this shows that the process of emotion regulation can affect intergroup attitudes, it is likely that those who are more adept at emotion management are better at selecting and employing appropriate regulation strategies (e.g., Megías-Robles et al., 2019) which may result in more harmonious intergroup interactions. Thus, we propose next steps in this research line should combine the emotion regulation and emotional intelligence approaches to test the mechanism that underlies the link between emotion management and prejudice.

The role of empathy and ideology

Another important finding from this thesis is that we have established that key intergroup factors can further explain the relationship between emotion management and prejudice. People's

emotional dispositions (i.e., trait-like emotional temperaments that affect susceptibility to experiencing specific emotions) can impact how they respond to intergroup situations. For example, those who are generally more prone to anxiety, threat, or disgust report higher levels of prejudice, whereas those who tend to be empathetic report lower levels of prejudiced (Hodson et al, 2013; McFarland 2010; Stephan, 2014). Furthermore, previous research has reported positive correlations between emotion management abilities and dispositional empathy (Iliescu et al., 2013; Mayer et al., 1999), which might explain why those with higher emotion management skills are less prejudiced. In line with this theorising, Study 3 showed that emotion management skills were related to higher levels of dispositional empathy, which in turn was associated with lower levels of both generalised ethnic prejudice and homophobia. In other words, those who are better at managing their emotions are less prejudiced partly because they are generally more empathetic.

This finding contributes to research which aims to clarify the relationship between emotional abilities and dispositions. Researchers suggest that a person's capacity to process emotion-related information could be affected by a range of factors associated with both ability and personality (McCrae, 2000), and that emotion-related cognitive abilities and personality dispositions are likely to be linked (Hughes & Evans, 2018; Mikolajczak, 2009). By demonstrating that greater emotion management skills (i.e., factor of ability EI) are related to greater dispositional empathy (i.e., facet of trait EI), and lower levels of prejudice, we show that emotional abilities intersect with emotion-related traits to predict outcomes, supporting the theoretical models proposed by Hughes and Evans (2018) and Mikolajczak (2009). However, to fully understand this process, future research should explore how ability EI, trait EI and emotion regulation interact to predict prejudice. This would further clarify the how these different constructs are linked (e.g., Hughes & Evans, 2018; Mikolajczak, 2009).

Additionally, we are the first to show that emotion management abilities are negatively related to right-wing attitudes. Studies 4 and 5 showed that higher levels of emotion management are negatively related to the endorsement of social hierarchies and inequalities (i.e., SDO) and traditional, conservative views (i.e., RWA, Study 5 only), which in turn, is related to more positive attitudes towards ethnic outgroups and immigrants. In other words, those who are better at managing emotions

are likely to be less prejudiced partly due to a lower endorsement of right-wing socio-ideological attitudes. To further clarify the relation between RWA and STEM, an internal meta-analysis was carried out using the data from Studies 4, 5 and 6 (pre-survey only). An internal meta-analysis can allow researchers to accumulate data from multiple studies to explore effects that are difficult to detect (Goh et al, 2016). It was found that the meta-analytic association between RWA and STEM was significant (M_{ean} r = -.13, $p < 0.001$), confirming the significant, albeit weak, association between right-wing authoritarianism and emotion management, despite the mixed results obtained across the different samples. This is in line with previous research showing that lower cognitive ability relates to a greater endorsement of right-wing socio-ideological attitudes (Hodson & Busseri, 2012; Ornreat et al., 2015; Van Hiel et al., 2010). Our findings also add to research demonstrating similar relationships between emotional abilities, ideology, and prejudice (Van Heil et al., 2019) by showing that the ability to manage emotions is uniquely important in this relation.

Taken together, the results of Studies 3, 4 and 5 show that the ability to manage emotions is a relatively distal predictor of prejudice that has an impact on more proximal predictors, which in turn affect levels of generalised and specific prejudices. This fits previous theorising which suggests that although distal predictors (such as broad personality traits and cognitive ability) might not be obviously related to intergroup attitudes, they can impact factors that are more closely related to prejudice (Duckitt & Sibley, 2017; Grigoryev et al., 2020; Hodson & Dhont, 2015). For example, the integrative model of Cognitive Ability and Style to Evaluation (CASE; Hodson & Dhont, 2014) proposes that cognitive factors can influence socio-ideological attitudes and other intergroup factors, which in turn relates to negative intergroup attitudes. Similarly, we have shown that individual differences in emotion-related cognitive abilities (specifically emotion management) are linked to empathy and lower endorsement of right-wing attitudes, which corresponds to lower prejudice.

Practical implications

Historically, there has been a divide in the literature between person-based and situation-based explanations of prejudice, however, factors associated with both the individual and the context are likely to be important in the formation and maintenance of outgroup attitudes (Dhont & Hodson,

2015; Hodson, 2009). One way to improve intergroup relations is via positive intergroup contact. Intergroup contact interventions are grounded in Allport's (1954) intergroup contact hypothesis, which posits that optimal positive contact between members of different social groups can results in a reduction of prejudice. Meta-analytical evidence indicates that positive contact is a robust way to reduce prejudice by decreasing levels of anxiety and fostering greater empathy (Pettigrew & Tropp, 2006, 2008), and so intergroup contact is often facilitated during prejudice-reduction interventions (e.g., Al Ramjah & Hewstone, 2013; Maunder & White, 2019; Rani & Samuel, 2019). However, as Allport highlighted "contact, as a situational variable, cannot always overcome the personal variable in prejudice" (1954; p. 280) meaning that people's unique attributes and predispositions are likely to influence how successful contact is in reducing prejudice. Indeed, several studies have shown that individual differences play a pivotal role in the effectiveness of intergroup contact (e.g., Dhont & Van Heil 2009; 2011; Dhont et al., 2011; Kteily et al., 2019; see Turner et al., 2020 for review), and as such, it is important to consider individual differences when designing contact-based interventions that aim to improve intergroup relations.

Processing, conveying, and managing emotions towards outgroups can be challenging and as such, interventions which aim to improve intergroup relations must address the affective dimensions of prejudice to be effective. In Study 6, we theorised that the management of emotions is likely to be important in dealing with positive and negative contact situations, so we explored how individual differences in emotion management abilities might facilitate (or inhibit) the relationship between positive and negative contact and prejudice. We found that the relationship between positive contact and prejudice was significant for those who are better able to manage emotions, but not for those with lower emotion management skills, indicating that positive contact is more beneficial for those who are more adept at managing emotions (compared to those who are less able to manage emotions).

Our results indicate that having better emotion management skills enable people to be more receptive to the effects of intergroup contact. Not only is this in line with other research demonstrating that the ability to manage emotions is positively related to better quality naturalistic interactions (Lopes et al., 2004, Study 2), but also highlights that both personal factors (i.e., emotion management

ability) and situational factors (i.e., contact valence) are likely to be important when dealing with emotion-laden intergroup situations. In this way, our results strengthen the case for adopting a "person x situation" approach to explain prejudice formation and inform prejudice reduction interventions (Hodson et al., 2017; Turner et al, 2020). More specifically, improving our understanding of the role of individual differences in the relationship between intergroup contact and prejudice can help us identify who benefits from intergroup contact which can lead to the development of more targeted interventions that take person-based factors into account (Hodson & Dhont, 2015).

The current findings also provide new avenues for the development of prejudice-reduction interventions that aim to improve emotion management skills and provide support to apply these skills in contact situations. Skill-based interventions work by training individuals to improve their social and emotional skills. For example, some interventions have been developed to help children improve their emotional skills to reduce prejudice and foster better intergroup relations (e.g., Berger et al, 2016; 2018; Bigler & Liben, 2007; Brenick et al, 2019;). These interventions target areas such as resilience to stress, perspective-taking, empathy, and compassion. Children who participated in this type of intervention reported less negative attitudes towards the outgroup, and the effect is typically maintained for months after the intervention has ended (Berger et al., 2016; 2018). Other skill-based interventions focus on improving emotion regulation skills by training individuals in cognitive reappraisal (i.e., reinterpreting situations to up-regulate positive emotions, and down-regulate negative emotions). Individuals who are trained in reappraisal report higher levels of tolerance and support, and more positive emotions towards the outgroup, and these effects lasted up to 5 months after the training (Halperin et al, 2013).

This evidence suggests that skill-based interventions that aim to improve emotional skills can be effective in reducing prejudice and improving intergroup relations. Indeed, one study compared the effectiveness of skill-based interventions and contact-based interventions and found that skill-based interventions are as effective as contact interventions (Berger et al, 2018). Therefore, it may be useful to combine both skill-based and contact-based interventions into a single, comprehensive intervention that aims to improve emotional skills and take part in intergroup contact interactions. For example,

Brenick and colleagues (2019) compared the effectiveness of a skills-only intervention, and a skills+contact intervention in children. Individuals in the skills-only intervention practiced specific skills related to improving empathy, compassion, and non-judgemental attitudes, whereas those in the skills+contact intervention practiced the same skills but also engaged in contact with children from ethnically diverse backgrounds. It was found that although both interventions yielded positive results compared to the control group, participants in the skills+contact group took longer to exhibit positive intergroup attitudes, likely to be due to the simultaneous nature of the skills+contact training. With this in mind, it may be beneficial to examine if staggering the training is useful, such that individuals are trained to develop their emotional skills in the first instance, and then are given the opportunity to employ them in intergroup contact situations. Furthermore, although many of these interventions are developed for children, it would be important to explore if similar results can be obtained in adult samples too.

Limitations and future research

There are a few limitations in the current thesis which may be beneficial to address in future research.

Correlational study design

All studies presented in this thesis were cross-sectional in design and thus we cannot make inferences regarding the causal directions of the observed relationships between variables. More specifically, the current research assumed that enhanced emotion management skills relate to lower levels of prejudice, and although the direction of this relationship was based on established models (i.e., The Dual Process Model; Duckitt, 2001, and the Cognitive Ability and Style to Evaluation; Dhont & Hodson, 2014), the opposing direction may also be plausible. Indeed, research has shown that emotional abilities can develop through training and experience (Lopes et al., 2006; Mattingly & Kraiger 2019), and so it could be argued that prejudice-prone individuals who tend to avoid intergroup interactions and have less cross-group friendships experience fewer opportunities to practice their emotion management skills in diverse contexts, thus resulting in lower emotion management abilities. To address this limitation, future research could experimentally test whether

emotion management training can improve levels of prejudice, or alternatively if increased exposure to intergroup interactions can improve emotion management abilities. Furthermore, longitudinal studies examining the relationship between emotion management and prejudice could shed further light on the direction of the relationship and, long-term changes and effects of emotion management on outgroup attitudes.

Sample size

The majority of samples in the current thesis were collected through opportunity sampling in student populations (Studies 1, 2a, 3, 4, and 6). This meant that sample sizes of these studies were restricted by the number of students being present in the class sessions, their willingness to sign up for the studies, or, in the case of Study 6, their willingness to participate in all parts of the study. For other studies (Studies 2b and 5), we collected participants using Prolific Academic (an online crowdsourcing website for research) and for these studies, sample sizes were restricted by the limited research funding that was available. Consequently, several studies were underpowered for some of the analyses that we conducted. Specifically, with the exception of Study 6, sample sizes were large enough to detect a correlation of |.21| (with a power of $1-\beta = .80$ and $\alpha = .05$), which is considered a medium effect size in psychological research (Funder & Ozer, 2019) and corresponds to the typical or average effect in social psychology (Richard, Bond, & Stokes-Zoota, 2003; Lovakov & Agadullina, 2021). However, some of the associations were only in the range of rs = |.10| to |.15|, and particularly for the estimates of the indirect associations, the samples were underpowered, rendering them less capable of detecting true associations (Fraley & Vazire, 2014; Fritz & MacKinnon, 2007). The consistent observation of the negative association between emotion management and prejudice across all studies increases confidence in the robustness of this finding, yet highly powered studies are needed to provide further tests of the mediation and moderation effects and the associations with socio-ideological attitudes and empathy.

Measurement methods

The primary measurement scale used to measure emotion management in this thesis was the Situational Test of Emotional Management (STEM), and we observed that the internal consistency of

this measure varied across samples (ranging between .52 to .71). This raises questions regarding the reliability of the STEM, especially since other studies have also reported low to acceptable reliability (e.g., Austin, 2010; Bucich & MacCann, 2019; Côté et al., 2011; Double et al, 2022). Indeed, researchers have highlighted that some of the branch-level measures of performance-based EI have marginally acceptable scores of internal consistency, with some facet scores showing even lower scores (Brannick et al., 2011; Conte, 2005; Matthews et al., 2007; Mayer at al., 2003) to the point that it has even been recommended to avoid using facet-level scores in analyses (Mayer at al., 2003). This has implications for the current research as inconsistent, and sometimes low, internal consistencies might indicate that the items within the STEM do not measure the same construct, and so our findings should be interpreted cautiously. However, the effect size of the correlation between emotion management and prejudice was relatively consistent across studies (correlation coefficients were between r = -.15 to r = -.26), even when using different measures (i.e., the MSCEIT and STEM), indicating the robustness of the results, despite the issues with scale reliability.

We also relied on self-reported measures of prejudice which might be susceptible to social desirability bias. It could be argued that those with higher EI may be more prone to respond to attitudinal measures in a socially desirable manner due to an enhanced understanding and appreciation of socially appropriate responses. However, previous studies have reported nonsignificant associations between social desirability and ability EI, using the MSCEIT (Lopes et al, 2003; 2004; but see also Rode et al., 2008). Furthermore, in the present studies, participants completed the measures anonymously and independently, which should reduce any inclinations to complete the measures in a socially desirable way. That said, we cannot completely rule out this alternative interpretation and future studies should replicate our findings while controlling social desirability.

Underlying mechanisms in emotion management

Additionally, researchers have noted that one of the underlying assumptions of EI is that emotional abilities can generalises across the different emotions (i.e., someone who is skilled at managing anger should also be skilled at managing happiness, or fear). However, the Differential Emotions Theory suggests that emotions are discrete, such that specific emotions are supported by

separate neuropsychological systems and are associated with different motivational and cognitive processes (Izard, 2007; 2009). Therefore, it may be that effective emotion management require the ability to differentially regulate specific emotions (Izard et al., 2011) and as such, the generality of EI across different emotions may need to be tested (e.g., Mikolajczak et al., 2011).

This may have implications for our findings as it could be that people differ in the ability to manage distinct emotional experiences, and this might have an impact on intergroup attitudes. For instance, in one study, Cottrell and Neuberg (2005) asked American students to rate their emotional reactions and perceptions of threat towards a range of different outgroups. Results showed that although all groups received relatively similar ratings of prejudice, different outgroups elicit different emotional reactions and were also perceived to pose different types of threat. This demonstrates that there may be unique patterns of emotions that underly prejudiced attitudes towards different outgroups, and as such, further research would benefit from examining if one's ability to manage these discrete emotions might play a role in how they think and behave towards different outgroups. One way to do this is by exploring if different emotions are regulated in different ways during intergroup interactions. For example, those who are more skilled at emotion management might employ different emotion regulation strategies for different emotions, like up-regulating positive emotions or down-regulating negative ones (e.g., Bodrogi et al, 2020; Grecucci et al., 2013; Megías-Robles et al., 2019). More research is therefore needed to reveal when and how people manage emotions during intergroup interactions.

Finally, although our results show that higher levels of emotion management relate to lower levels of prejudice, it could be argued that differences in people's personality traits and motivations could affect their propensity to manage emotions in a prosocial or antisocial manner. For example, Côté and colleagues (2011) showed that those who reported a strong moral identity were more likely to engage in prosocial behaviour if they had higher (vs lower) levels of emotion management, whereas those who rated themselves as more Machiavellian were more likely to engage in interpersonally deviant behaviour if they were higher (vs lower) in emotion management. These findings demonstrate that individuals high in emotion management are proficient in using their

emotion management skills to meet their goals, regardless of whether the goals are socially beneficial, or socially disruptive (see also Nagler et al., 2014). This suggests that those who are better able to manage their emotions might not always choose to manage them in a prosocial manner, and that emotionally intelligent individuals who are motivated to derogate others could use their enhanced emotion management abilities to amplify their prejudices. This could have devastating consequences for intergroup relations and as such, future research should investigate factors that can affect how emotion management is used in intergroup relations.

Conclusion

Latent psychological individual differences can impact how people think and feel about outgroups and as such, taking a person-centred approach is important when investigating prejudice and intergroup relations (Hodson & Dhont, 2015). While there is a substantial literature examining to what extent differences in beliefs, personality and cognitive factors are implicated in prejudice (see Hodson & Dhont, 2015, for a review), the possible impact of EI on outgroup attitudes has been largely ignored. The current research demonstrated that an individual's capacity to manage emotions are negatively related to prejudice and this relationship is underpinned by higher empathy levels, and lower endorsement of right-wing socio-ideological attitudes. Furthermore, we established that emotion management skills can boost the effect of positive contact on prejudice. These findings have implications for research lines on the roles of emotions and cognitions in prejudice and offers promising directions for prejudice reduction interventions based on EI training.

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Appendices

Appendix A (Chapter 6)

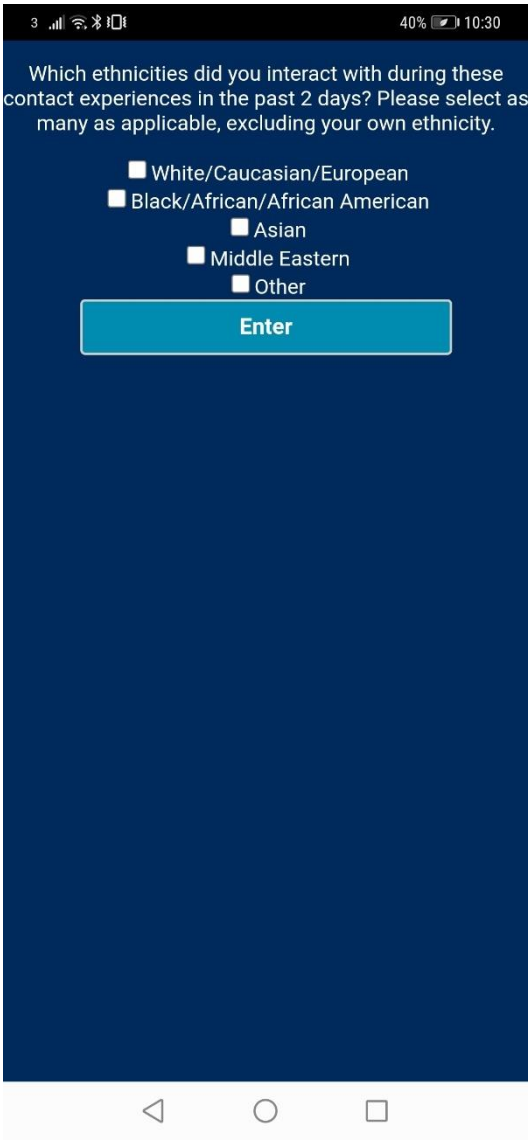
List of questions asked using the ExperienceSampler app.

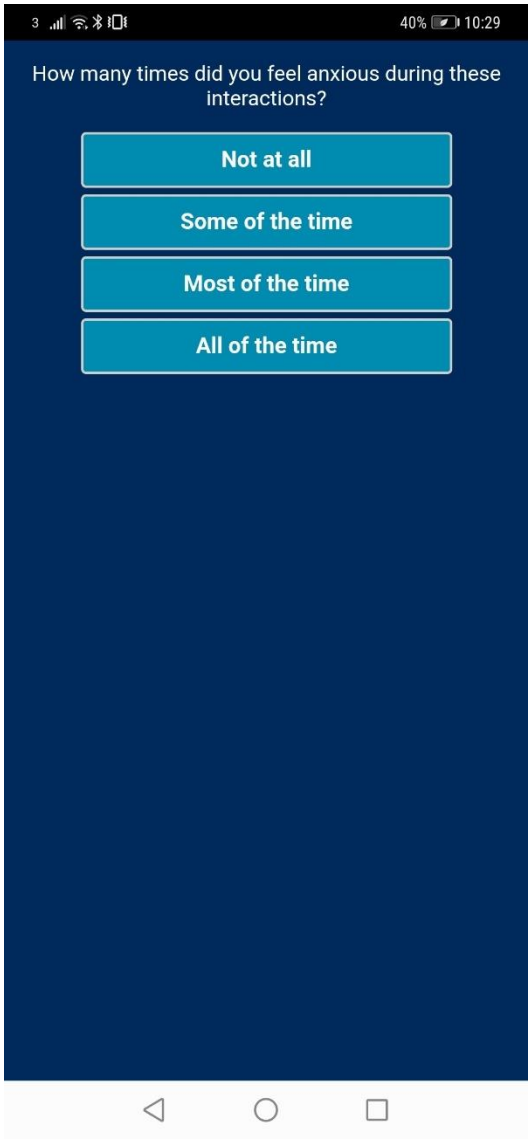
1. Have you experienced any interactions with people from a different ethnic background (ethnic outgroup) to yourself in the past 2 days? (Yes/No; if No survey ends)
2. Which ethnicities did you interact with in the past 2 days? Please select as many as applicable, excluding your own ethnicity.
    a. Eastern European
    b. Western European
    c. Northern European
    d. Southern European
    e. White/Caucasian
    f. Black/African/African American
    g. Asian
    h. Middle Eastern
    i. Chinese
    j. Other
3. If other, please specify (Free Text Space)
4. Think back to the last ethnic and/or national outgroup interaction you had. Was this interaction superficial or meaningful to you? (1 = very superficial; 5 = very meaningful)
5. During the last interaction, did you feel irritated? (1 = not at all; 5 = totally)
6. Did you feel satisfied? (1 = not at all; 5 = totally)

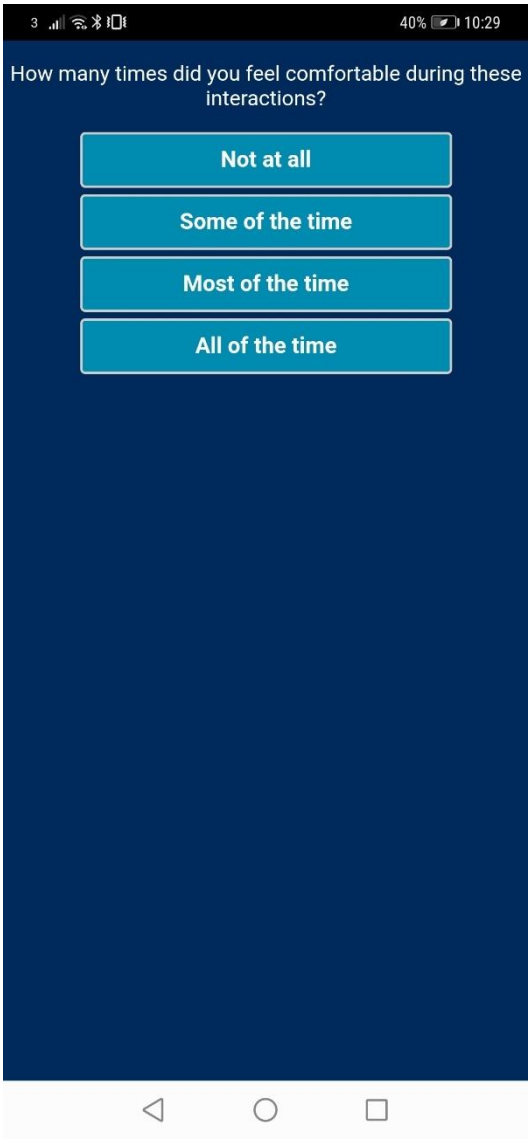
7. Did you feel happy? (1 = not at all; 5 = totally)
8. Did you feel anxious? (1 = not at all; 5 = totally)
9. Did you feel angry? (1 = not at all; 5 = totally)
10. Did you feel comfortable? (1 = not at all; 5 = totally)
11. Did you feel frightened? (1 = not at all; 5 = totally)
12. Which ethnic and/or national outgroups were you thinking of when answering the previous questions?
    1. Eastern European
    2. Western European
    3. Northern European
    4. Southern European
    5. White/Caucasian
    6. Black/African/African American
    7. Asian
    8. Middle Eastern
    9. Chinese
    10. Other
13. If other, please specify (Free Text Space)

Appendix B (Chapter 6)

Example screenshots of experience sampling app.




3
40% 10:29
How many times did you feel anxious during these interactions?
Not at all
Some of the time
Most of the time
All of the time


3
40% 10:29
How many times did you feel comfortable during these interactions?
Not at all
Some of the time
Most of the time
All of the time