European Review of Social Psychology

Publication details, including instructions for authors and subscription information:
http://www.tandfonline.com/loi/pers20

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Published online: 28 Jul 2015.

To cite this article: Gordon Hodson & Kristof Dhont (2015): The person-based nature of prejudice: Individual difference predictors of intergroup negativity, European Review of Social Psychology, DOI: 10.1080/10463283.2015.1070018

To link to this article: http://dx.doi.org/10.1080/10463283.2015.1070018

European Review of Social Psychology, 2015
http://dx.doi.org/10.1080/10463283.2015.1070018

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The person-based nature of prejudice: Individual difference predictors of intergroup negativity

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(*Received 23 December 2014; accepted 15 June 2015*)

Person-based factors influence a range of meaningful life outcomes, including intergroup processes, and have long been implicated in explaining prejudice. In addition to demonstrating significant heritability, person-based factors are evident in expressions of *generalised prejudice*, a robust finding that some people (relative to others) consistently score higher in prejudice towards multiple outgroups. Our contemporary review includes personality factors, ideological orientations (e.g., authoritarianism), religiosity, anxiety, threat, disgust sensitivity, and cognitive abilities and styles. Meta-analytic syntheses demonstrate that such constructs consistently predict prejudice, often at the upper bounds of effect sizes observed in psychological research. We conclude that prejudice theories need to better integrate person- and situation-based factors, including their interaction, to capture the complexity of prejudice and inform intervention development.

Keywords: Personality; Individual differences; Prejudice; Intergroup relations; Outgroup attitudes.

> . . . if I take part in a race riot or strenuously and vocally support my local team during a football match, or demonstrate against the oppression of my group by another group, I interact with another group—as Sherif wrote—fully in terms of my group identification. *However, the truism that marked individual differences will persist in these situations is still valid* [emphasis added]. (Tajfel, 1978, p. 402)

In the intergroup and prejudice literatures there exists an ebb and flow between explanations favouring person- vs. situation-based underpinnings of prejudice (Choma & Hodson, 2008). These positions are frequently characterised as being diametrically opposed, creating a deep schism in the field (see Hodson, 2009). The observation by Tajfel (above), one of the founding fathers of Social Identity Theory,

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nicely captures the inherent tension between the situation and the person as explanations. The first portion is central to identity-based approaches and is widely embraced by its advocates. Yet Tajfel's followers pay less heed to his qualification regarding individual differences, despite the words "truism", "persist" and "valid" conveying that Tajfel never intended to negate the role of individual differences. Rather, he sought to introduce a sorely needed social account of prejudice, given that the field at the time stressed personal factors (e.g., Adorno, Frenkel-Brunswik, Levinson, & Sanford, 1950; see also Allport, 1954, especially Chapters 25–27). Although the pendulum then swung too far in the "social" direction (Choma & Hodson, 2008), balance has more recently been restored, with individual differences playing a central role in explaining contemporary prejudice.

In this review we discuss a contemporary understanding of the person-based nature of prejudice, starting with a brief historical review. We then detail some central person-based predictors of prejudice, starting with those most distal (e.g., heritable factors, broad personality, values) to prejudice, followed by individual differences that are ideological (e.g., authoritarianism) or cognitive (e.g., need for closure; cognitive abilities) in nature. Even less distal and more specific to prejudice itself, we next consider emotional predictors (e.g., intergroup disgust sensitivity), and individual differences in factors regulating the suppression or expression of prejudice (e.g., legitimising myth endorsement). We then discuss the implications of recognising person-based factors, both generally and in terms of interventions (e.g., intergroup contact). We conclude by reviewing various conceptual models that incorporate person and/or situation factors, making recommendations for modelling, research design, and statistical analysis, before reviewing some limitations of person-based approaches. In keeping with Allport's (1954) monumental contributions in his seminal book *The Nature of Prejudice*, we focus primarily on prejudice as a relatively negative evaluation of outgroups, but recognise that this discussion at times encompasses other processes such as stereotyping (beliefs about the characteristics of groups), given that these inform an understanding of prejudice more generally.

Historical considerations of individual differences in prejudice research

In *The Authoritarian Personality*, Adorno et al. (1950) provided a comprehensive account of why some people, relative to others, are more bigoted and hostile towards outgroups. This authoritarianism-account considered prejudice as an expression of a basic personality trait that is psychopathological and largely the function of internal, primarily unconscious processes (e.g., projection, displaced aggression, scapegoating) rooted in exploitative, hierarchical parent-child relations early in life. That is, consistent with then-popular Freudian traditions, internal conflict and suppression were posited to cause psychological problems for the individual that were then translated into antipathy and negativity towards convenient and (typically) weaker outgroups. A related but distinct account was

provided by Allport (1954) in *The Nature of Prejudice*, a text that set the path for our contemporary understanding of intergroup relations. He emphasised cognitive rigidity and intolerance of ambiguity, coupled with fearfulness and concerns that people are inherently bad (see Dhont, Roets, & Van Hiel, 2011). Similarly, Rokeach (1960) emphasised dogmatism (a rigid cognitive orientation) as an individual difference variable explaining prejudice. In doing so, Allport and Rokeach were shifting the conceptualisation of prejudice and authoritarianism from the realm of the "abnormal" (or disturbed) and into the domain of the everyday and the "normal" (see Choma & Hodson, 2008, for a review).

From the 1960s to the 1990s, the emphasis on individual differences subsided considerably, replaced by concerns related to social–cultural norms, intergroup relations and structural factors, and relatively universal cognitive processing (see Duckitt, 1992). Many within the social identity tradition deemed that individual differences were relatively irrelevant to the prejudice discussion (see Table 1). Yet the contemporary prejudice literature reveals that individual difference accounts now play a prominent role in our top journals. A PsychInfo search reveals a noticeable publication spike, particularly since 2000 (see Figure 1a). Somewhat dwarfed within the scaling of this overall trend, however, is an interesting pattern in the 1950–1999 "post-war" era (see Figure 1b inset). Bucking a trend of increased interest up to the early 1970s, a noticeable dip in interest followed Mischel's (1968) treatise, which criticised the predictive value of person-based approaches, reflecting downward trends regarding individual differences in psychology more generally (Swann & Seyle, 2005).

We suggest that three key factors underpin the current (post-2000) uptake in interest. First, the effect sizes observed in the overall personality and social psychological literatures are relatively comparable, both averaging around $r = .20$ (Richard, Bond, & Stokes-Zoota, 2003). Therefore, to the extent that social findings are important, so too are person-based understandings. Indeed, many prominent individual difference predictors of prejudice approach the $r = .50$ effect size range (see meta-analysis by Sibley & Duckitt, 2008), earmarking them as some of the largest effect sizes in psychology (Anderson, Lindsay, & Bushman, 1999; Hemphill, 2003). Second, psychologists have a renewed appreciation that individual differences matter to human life and functioning generally (see Choma & Hodson, 2008; Swann & Seyle, 2005). Individual differences such as cognitive ability and basic personality factors predict major life outcomes such as mortality, divorce, and occupational attainment as well as (if not better than) situational factors such as socioeconomic status (Ashton, 2013; Deary, Weiss, & Batty, 2010; Roberts, Kuncel, Shiner, Caspi, & Goldberg, 2007). It makes little sense to recognise that individual differences matter to a wide range of important social outcomes but not to acknowledge that they also impact *intergroup* interactions and perceptions (Hodson, 2009; Hodson, Costello, & MacInnis, 2013). That is, people differ in

TABLE 1
Perspectives questioning the value of person-based accounts from social psychology

Source	*Quotation*
Reynolds, Turner, Haslam, and Ryan (2001)	. . . it may be misleading and inappropriate to locate *explanations* of prejudice at the level of individual personality . . . it is not possible to extrapolate directly from individual processes (i.e., personality) to shared collective intergroup behavior (p. 433)
Reynolds et al. (2007)	The social identity perspective . . . suggests that personality tends to become irrelevant to prejudice where social identity or group membership is salient (p. 519)
Brown (2010)	For the majority [of people], personality may be a much less important determining factor of prejudice than the many and varied *situational* influences on behaviour. (p. 32) Personality accounts of prejudice are limited because of their tendency to down-play situational factors and to neglect the influence of societal or sub-cultural norms. Furthermore, they cannot readily explain the widespread uniformity of prejudice in some societies or groups. Nor can they easily account for historical changes in the expression of prejudice. (p.33)
Rubin and Hewstone (2004)	Personality theories provide relatively inflexible explanations of intergroup discrimination because they explain differences in discrimination in terms of differences in personality that are assumed to be stable across situations. (p. 837)
Hogg and Abrams (1988)	With regard to personality, the point is not that psychological constitution is irrelevant, but that relationships between groups would be fixed and invariant if they were simply products of the stable and unchanging personalities of their constituent members. In reality, intergroup antipathy can arise and dissipate within dramatically short spaces of time (p.35).

their beliefs, anxieties, ideologies, cognitive styles/abilities, and motives, and necessarily bring these differences into intergroup arenas.

A third reason for rebound in interest in person-based predictors presumably pertains to a robust finding within the prejudice field itself. As observed by Allport (1954):

> One of the facts of which we are most certain is that people who reject one out-group will tend to reject other out-groups. If a person is anti-Jewish, he is likely to be anti-Catholic, anti-Negro, anti any out-group. (p. 68)

Such patterns of *generalised prejudice* have been observed in multiple studies, across multiple types of outgroups, in multiple cultures (e.g., Akrami, Ekehammar, & Bergh, 2011; Altemeyer, 1998; Ekehammar, Akrami, Gylje, & Zakrisson, 2004; MacInnis & Hodson, 2012; McFarland, 2010). Thus, those who score higher in prejudice towards Group X typically score higher in prejudice towards Groups Y and Z, a finding also established

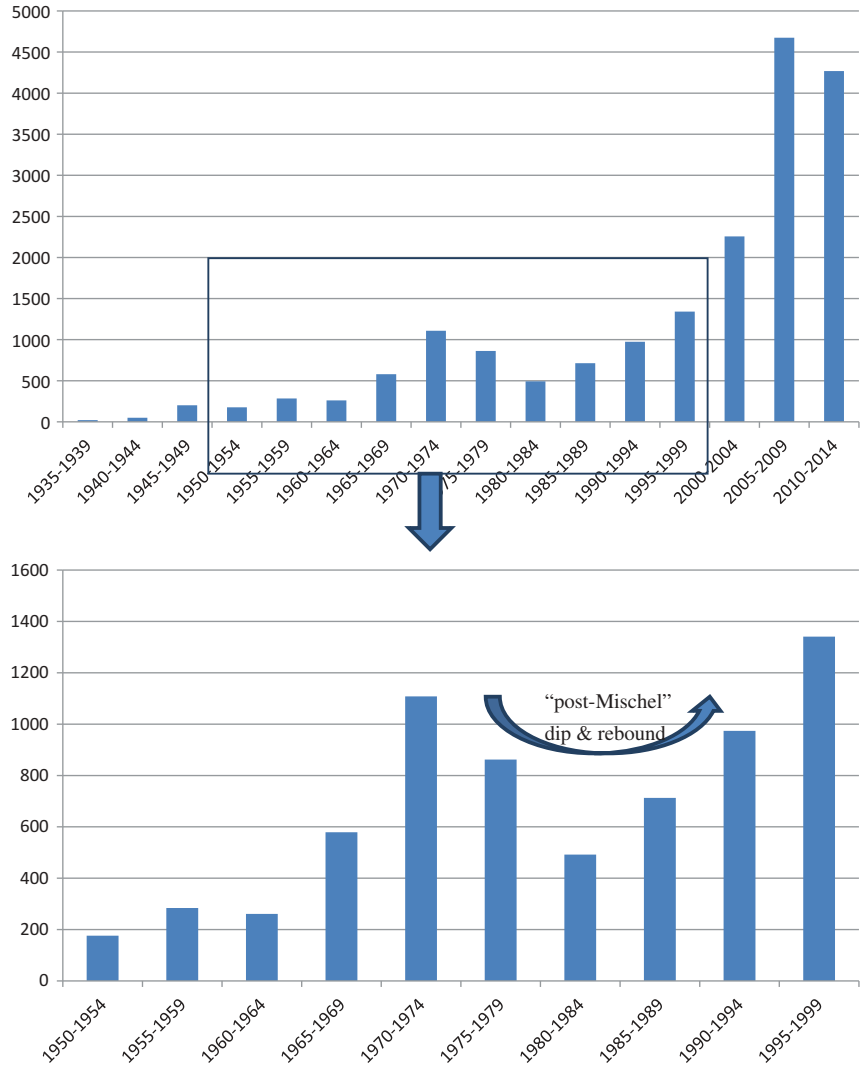

Figure 1. (a) and (b) Number of citations for prejudic*, racism, sexism, or homophob* with individual difference, personality, authoritarian*, or social dominance orientation (PsychInfo).

at the level of implicit biases (Cunningham, Nezlek, & Banaji, 2004). Overall, relative differences between individuals in generalised prejudice (and ingroup favouritism) are remarkably stable over time (Zick et al., 2008) and significantly heritable (Lewis & Bates, 2010; Lewis, Kandler, & Riemann, 2014). Such covariation of specific prejudices suggests that an underlying latent

factor *within the individual* makes him or her more generally prejudiced and intolerant towards outgroups relative to others in the population (in the same manner that covariation between cognitive ability tasks suggests an underlying generalised intelligence responsible for their covariation). Modern takes on this basic idea have subsequently emerged. In a student sample from New Zealand, Duckitt and Sibley (2007) have identified correlated but distinct subdimensions of generalised prejudice: derogated groups (e.g., mentally handicapped, Africans), dangerous groups (e.g., terrorists, drug dealers), and dissident groups (e.g., protesters, feminists). That is, certain types of prejudices are more likely to inter-correlate than others, a nuanced position recognising between-person variability in prejudicial expressions but also sensitivity to group subdimensions.

VARIETIES OF INDIVIDUAL DIFFERENCES RELEVANT TO PREJUDICE

Genetic influences

Historically, theorists (e.g., Allport, 1954; Altemeyer, 1996) have emphasised the contextual aspects of prejudice, emphasising processes such as social learning in the transmission of prejudice and authoritarianism. But recent advances in statistical modelling have also revealed considerable genetic influences. For example, in a large American sample of monozygotic and dizygotic adult twins, Lewis and Bates (2010) examined ingroup favouritism in the domains of religion, ethnicity, and race. They found clear evidence of heritability regarding both generalised and more domain-specific (e.g., involving ancestry and kinship) attitudes, supporting genetic bases of ingroup favouritism. As is often the case with heritability studies using samples of adult twins, very little variance was explained by common/shared environments (such as family cohorts), with the most predictive environmental influences being unique to the individual. In a large German dataset containing both mono- and dizygotic twins, Lewis et al. (2014) also observed heritable influences explaining considerable variance in pro-ingroup biases and separate heritable influences explaining anti-outgroup biases. Again, common (e.g., family-based) environments accounted for little variance. Others have explored the heritability of constructs of prejudice-predictors, including social dominance orientation (Stößel, Kämpfe, & Riemann, 2006), right-wing authoritarianism (Lewis & Bates, 2014; Ludeke, Johnson, & Bouchard, 2013; McCourt, Bouchard, Lykken, Tellegen, & Keyes, 1999), conservatism (Alford, Funk, & Hibbing, 2005; Lewis & Bates, 2014; Ludeke et al., 2013), and religiosity (Ludeke et al., 2013), constructs that we explore in more detail in later sections.

Broad psychological individual differences

Personality factors (Big Five, HEXACO)

Personality theorists use factor-analytic procedures to classify inter-correlated narrow personality traits into a few broad personality factors (Ashton et al., 2004; Costa & McCrae, 1985). The most common approach is the Big Five framework (e.g., Costa & McCrae, 1985), which includes Extraversion (being talkative and outgoing vs. shy and passive), Agreeableness (being kind and gentle vs. rude and harsh), Openness to Experience (being innovative and unconventional vs. shallow and conventional), Neuroticism (being moody and anxious vs. relaxed and calm), and Conscientiousness (being organised and thorough vs. disorganised and unreliable). Of these, Agreeableness and Openness are theoretically the most relevant to predicting prejudice, with those friendlier and more pleasant, or more open to new experiences and feelings and so on, scoring lower in prejudice. For instance, Hodson, Hogg, and MacInnis (2009) administered a battery of personality measures to 197 Canadian undergraduates, in addition to measures tapping perceived immigrant threat and anti-immigrant prejudice. As expected, those lower in Agreeableness felt significantly more threatened by and more prejudiced towards immigrants, and those lower in Openness were more prejudiced. In this study, several "dark" personality constructs (narcissism, Machiavellianism, psychopathy) were even stronger predictors of both threat and prejudice, out-predicting Agreeableness (but not Openness).

In the literature, low Agreeableness and Openness generally predict prejudice, often in the $r = .20$ range (e.g., Akrami et al., 2011; Ekehammar et al., 2004; Graziano, Bruce, Sheese, & Tobin, 2007, Studies 1–3). Relations between the other personality factors and prejudice are much less consistent and lower in magnitude. Or, as Turner, Dhont, Hewstone, Prestwich, and Vonofakou (2014, Study 2) observed in a sample of 147 White British undergraduates, personality factors such as extraversion (i.e., sociability) can *indirectly* predict less prejudicial attitudes through greater cross-group friendships. As illustrated in our Table 2, a meta-analysis by Sibley and Duckitt (2008) confirmed that Openness (mean $r = -.30$) and Agreeableness (mean $r = -.22$) were significantly associated with lower prejudice. Such effect sizes are equivalent to (or exceed) the meta-analytic relation between intergroup contact and prejudice (mean $r = -.21$; Pettigrew & Tropp, 2006).

More recently, the HEXACO model of personality structure (Ashton et al., 2004) has become popular, with advantages over some Big Five approaches, including better ability to capture the full personality space and lower respondent bias such as desirability management (Lee & Ashton, 2013). Here, the Extraversion, Conscientiousness, and Openness factors resemble their five-factor counterparts, but Agreeableness and Emotionality (or Neuroticism) are represented somewhat differently (see Figure 3.1 in Ashton, 2013). Agreeableness

TABLE 2
Meta-analytic associations (mean *r*) between person-based variables and prejudice

Meta-analytic source	*Variable*	*Mean* r *(with prejudice)*
Sibley and Duckitt (2008)	Openness	−.30
	Agreeableness	−.22
	Social dominance orientation	.55
	Right-wing authoritarianism	.49
Whitley and Lee (2000) (anti-gay prejudice)	Conservatism	.42
Hall et al. (2010) (racism)	Religious identification	.10
	Extrinsic religiosity	.17
	Religious fundamentalism	.13
	Intrinsic religiosity	−.05
	Quest	−.07
Whitley (2009) (anti-gay prejudice)	Fundamentalism	.45
	Church attendance	.32
	Christian orthodoxy	.29
	Religiosity	.24
	Quest	−.24
	Intrinsic religiosity	.23
	Extrinsic religiosity	.04
McCleary et al. (2011)	Religious truth	.45
Riek et al. (2006)	Realistic threat	.42
	Symbolic threat	.45
	Intergroup anxiety	.46
	Negative stereotypes	.44
	Group esteem	.21
Dovidio, Brigham, Johnson, and Gaertner (1996)	Negative stereotypes	.25
Rosenthal, Levy, and Moyer (2011)	Protestant work ethic	.19
Onraet et al. (2015)	Cognitive ability (predicting general ethnocentrism)	−.28
	Cognitive ability (predicting specific prejudices)	−.16
Costello and Hodson (2014b)	Human–animal divide	.34

All reported mean *r* values significant, $p < .05$. Prejudice collapses across outgroups except where noted. Readers are referred to target articles to learn of analysis properties, moderators, etc. Note that Openness and Agreeableness refer to Big Five or Five-Factor Models, not the rotated variants from the HEXACO.

primarily reflects forgiveness, gentleness, flexibility, and patience, and Emotionality concerns fearfulness, anxiety, dependence, and sentimentality.[1] Critically, this model introduces a sixth factor, *Honesty–Humility*, which taps sincerity, fairness, and modesty (vs. slyness, greed, deception, pretentiousness),

[1] To highlight one difference, sentimentality [vs. toughness] is part of Big Five Agreeableness but HEXACO Emotionality.

which is theoretically very relevant to prejudice (given that those higher in Machiavellianism, narcissism, and psychopathy score higher in prejudice; see Hodson, Hogg, et al., 2009).

Recently, Sibley, Harding, Perry, Asbrock, and Duckitt (2010) documented subdimensions of generalised prejudices towards: (a) derogated, low-status groups (e.g., unemployed, obese) associated with low Honesty–Humility, low Agreeableness, and low Openness; (b) dangerous groups (e.g., drug dealers, immoral people) associated with high Honesty–Humility, Emotionality, and Conscientiousness; and (c) dissident groups (e.g., protesters, feminists) associated especially with low Openness. This study highlights that higher scores on a personality factor are not uniformly predictive of outgroup attitudes; rather, the nature of the target group (and/or its generalised subdimensions) is important. Interestingly, this study found a rather noticeably reduced role for (low) Agreeableness relative to studies using five-factor personality measures (e.g., Sibley & Duckitt, 2008). Within the HEXACO personality space, Honesty–Humility is conceptually more relevant to prejudice. This finding was corroborated in a HEXACO-based study utilising a Canadian undergraduate sample (n = 136), where anti-immigrant prejudice was predicted by lower Honesty–Humility ($r = -.19$, $p < .05$) and lower Openness ($r = -.29$, $p < .001$), but not Agreeableness ($r = .03$) (Hodson & Ashton, 2009). Within the HEXACO framework, therefore, the "darker" aspects of personality are best captured by (lower) Honesty–Humility, along with Openness, and less by Agreeableness.

Values

Individual differences in values (i.e., broad guiding principles regarding how to live) have been associated with prejudice and its correlates. For instance, Feather and McKee (2008) examined anti-Aboriginal prejudice among Australians, finding that value dimensions such as self-enhancement and conservation (e.g., valuing power, security) are positively associated with prejudice, whereas dimensions such as self-transcendence (e.g., valuing universalism and benevolence) are negatively associated with prejudice. In a community sample of Australians, Heaven, Organ, Supavadeeprasit, and Leeson (2006) found that attitudes toward Middle-Easterners were more negative among those valuing national strength and order but more positive among those valuing harmony and equality. Each study observed values predicting prejudice through more proximal variables (authoritarianism).

Ideological/intergroup constructs

Other individual differences lie theoretically between broad personality factors and prejudicial attitudes (Duckitt, Wagner, Du Plessis, & Birum, 2002; Hodson, 2009).

Right-wing authoritarianism (RWA) and social dominance orientation (SDO)

Due to conceptual and methodological problems with Adorno et al. (1950) theory, the authoritarian personality perspective diminished in prominence during the 1960s and 1970s. However, this idea made a comeback in the 1980s with Altemeyer's (1996, 1998) reconceptualisation of right-wing authoritarianism (RWA), which taps the covariation of (1) uncritical submission to and acceptance of established ingroup authorities (authoritarian submission); (2) general aggressiveness directed towards deviants, norm violators, and outgroups (authoritarian aggression); and (3) strict adherence to conventional, middle-class values and norms (conventionalism). Contrary to psycho-dynamic explanations (cf. Adorno et al., 1950), Altemeyer proposed that RWA is developed through social learning processes, such as teaching and modelling, particularly during adolescence. RWA is a powerful predictor of a range of important social and political phenomena, including more support for right-wing political parties and candidates, capital punishment, military-based aggression, and harsh sentences for lawbreakers, and less support for environmentalism and international human rights (see McFarland, in press). Yet the most widely studied correlate of authoritarianism is outgroup prejudice, both in its generalised form towards multiple social groups and towards specific outgroups (e.g., anti-gay bias). The correlation between RWA and prejudice is often around .50 (see Table 2).

Despite its high predictive validity, RWA mainly focuses on the submissive aspects of authoritarianism, whereas group dominance preferences are not very well captured by RWA (Altemeyer, 1998). The introduction of social dominance orientation (SDO) by Pratto, Sidanius, Stallworth, and Malle (1994) addressed this shortcoming. The SDO-scale assesses preference for hierarchy and inequality among social groups (Sidanius & Pratto, 1999). Many of the social and political phenomena predicted by RWA are also predicted by SDO, with relations of comparable magnitude (Hodson, Hogg, et al., 2009; Sibley & Duckitt, 2008). For example, Hodson and Costello (2007) administered individual difference measures to 103 Canadian undergraduates to model the indirect effect of interpersonal disgust sensitivity, a "general and distal avoidance orientation not linked to groups or intergroup relations" (Hodson & Costello, 2007, p. 693), on prejudice towards immigrants. Interpersonal disgust predicted both SDO ($\beta = .36$) and RWA ($\beta = .54$), with each of these in turn simultaneously predicting anti-immigrant prejudice (βs = .44 and .30, respectively). Importantly, RWA and SDO are complementary, unique predictors of prejudice, both accounting for different aspects, such as prejudice towards different types of outgroups, and together explaining 50% of variance in prejudice (Altemeyer, 1998; Son Hing & Zanna, 2010; Van Hiel & Mervielde, 2005).

This observation has led researchers to consider RWA and SDO as two relatively independent core dimensions of ideological attitudes predicting

prejudice. The dual-process motivational model (DPM; Duckitt & Sibley, 2010; Duckitt et al., 2002) of ideology and prejudice proposes that different social environments and different personality traits drive RWA and SDO, which in turn lead to different types of prejudice: (a) Threatening contexts and socially conforming personalities (a combination of low Openness and high Conscientiousness) promote danger-focused worldviews that feed into RWA, which itself predicts prejudice towards "threatening" groups; (b) competitive contexts and tough-minded personalities (low Agreeableness) contribute to competitive-jungle-themed worldviews that feed into SDO, itself a predictor of prejudice towards competitors and/or low-status groups. Meta-analytic evidence (Sibley & Duckitt, 2008) confirms the associations between low Openness and, to a lesser extent, high Consciousness with RWA (mean *r*s = −.36 and .15, respectively), and of low Agreeableness with SDO (mean $r = -.29$). Also the relations between dangerous worldviews and RWA (mean $r = .37$) and between competitive worldviews and SDO (mean $r = -.53$) have received meta-analytic support (Perry, Sibley, & Duckitt, 2013). Experimental evidence demonstrates that inducing social threat increases RWA through increased dangerous worldview, but exerts less influence on SDO (e.g., Duckitt & Fisher, 2003). Longitudinal panel studies testing the different parts of the models are still relatively scarce, yet published longitudinal studies confirm effects of the hypothesised personality factors (Perry & Sibley, 2012), worldview beliefs (Sibley, Wilson, & Duckitt, 2007), and perceived threat in society (Onraet, Dhont, & Van Hiel, 2014; see Onraet, Van Hiel, Dhont, & Pattyn, 2013; for a meta-analysis) on socio-ideological attitudes.

Conservatism

There has long been interest in conservatism (vs. liberalism) in the intergroup literature because conservatism affords priority to the status quo and tradition in ways that have negative implications for less powerful and disadvantaged social groups (e.g., gays, immigrants). Allport (1954, p. 431) concluded that "Prejudiced individuals are more often conservatives", with liberals "critical of the status quo" and desiring "progressive social change" in ways that take power from institutions to avoid entrenching biases structurally. Relatedly, Wilson (1973) operationalised conservatism as "a generalized susceptibility to experiencing threat or anxiety in the face of uncertainty" (p. 259). As such, those higher in conservatism, particularly social or cultural (vs. economic) conservatism,[2] are predisposed towards prejudicial orientations regarding lower status outgroups (see Cornelis & Van Hiel, 2006; Dhont & Hodson, 2014a; Hodson, 2014). Cast in contemporary terms, the "core ideology of conservatism stresses resistance to

[2] For instance, Cornelis and Van Hiel (2006) found prejudice more strongly associated with social–cultural ($r = .51$) than economic ($r = .12$) conservatism (*p*s < .05).

change and justification [or acceptance] of inequality" (Jost, Glaser, Kruglanski, & Sulloway, 2003, p. 339). From this perspective, RWA maps onto resisting change, and SDO maps onto accepting inequality, and these dimensions can be examined independently (see Dhont & Hodson, 2014b). But most researchers and pollsters, when referencing conservatism, rely on self-placement ratings of liberalism vs. conservatism (see our Table 2) or party identification (Democrat vs. Republican), of the sort we focus on below.

In general, those relatively higher in conservatism score more highly on prejudice towards various racial outgroups (e.g., Cornelis & Van Hiel, 2006; Franssen, Dhont, & Van Hiel, 2013; Hodson & Busseri, 2012; Sidanius, Pratto, & Bobo, 1996), immigrants (Hodson, Choma, et al., 2013), and the homeless (Hodson et al., 2013). Conservatism, particularly social–cultural conservatism, proves an especially strong predictor of anti-gay attitudes (Hodson, Costello, et al., 2013), with a meta-analytic $r = .42$ (Whitley & Lee, 2000; see our Table 2). To conservatives, gays threaten a traditional way of life, including marriage and raising children, making them targets of dislike and scorn.

There are several explanations for why those higher in conservatism (vs. liberalism) tend towards more prejudicial attitudes.[3] A number of these explanations involve the employment of conservative legitimising myths and beliefs (Jost et al., 2003; Sidanius & Pratto, 1999) to justify the status quo that generally favours Whites and elites. For instance, in the United States, conservatism and racism are related almost completely through their joint association with SDO (Sidanius et al., 1996). That is, dominance concerns underpin the reasons why (non-Black) conservatives (vs. liberals) dislike Blacks. But conservatism is also related to other constructs reviewed in this paper. For instance, conservatism is positively associated with heightened threat perceptions (Jost et al., 2003; Onraet et al., 2013), lower Openness (Carney, Jost, Gosling, & Potter, 2008; Roets, Cornelis, & Van Hiel, 2014), and greater activation of the anterior cingulate cortex, responsible for threat attention and action (Amodio, Jost, Master, & Yee,

[3] Some argue that liberals and conservatives are equivalently biased against groups they consider threatening (see Brandt, Reyna, Chambers, Crawford, & Wetherell, 2014). In Chambers, Schlenker, and Collisson (2013; Study 1), liberals (vs. conservatives) show less favourable attitudes towards Christian fundamentalists, anti-abortionists, wealthy people, the military, and so on; conservatives (vs. liberals) demonstrate less favourable attitudes towards gays, civil-rights leaders, feminists, environmentalists, and so on. Here, liberals dislike the powerful elites who impose positions or religious values. Contemporary prejudice operationalisations, however, emphasise group position and privilege (not only dislike). Liberals dislike groups holding and using power over others, and, therefore, their attitudes function to dissolve (not entrench) hierarchies, unlike prejudices of central interest to social psychologists as social problems. Examination of individual differences can provide valuable insights into certain prejudices. For instance, whereas liberals tend to respond favourably towards Blacks and the elderly, conservatives are more negative towards Blacks ("unconventional", disadvantaged) but positive towards the elderly (disadvantaged but "conventional"; Lambert & Chasteen, 1997). Such nuanced interpretations are important in exploring "prejudice" from an individual difference perspective.

2007). Those higher in conservatism are higher in disgust sensitivity (Terrizzi, Shook, & McDaniel, 2013) and intergroup disgust sensitivity (Hodson, Choma, et al., 2013). Overall, conservatives are prone to negativity bias (Hibbing, Smith, & Alford, 2014), presenting stronger physiological stress reactions to novel and threatening stimuli relevant to intergroup relations. In terms of cognitive biases, conservatives form more negative impressions of fictitious groups (e.g., A and B), overassociating the "rare" (i.e., minority) group with negativity (Castelli & Carraro, 2011).

Religiosity and religious fundamentalism

Allport (1954) opined that "The role of religion is paradoxical. It makes prejudice and it unmakes prejudice" (p. 444). That is, most major world religions preach peace, love, and tolerance, yet they also target specific groups (e.g., gays) for exclusion. Not only do religions differ from one another in practice, but people differ in *why* they are religious (Altemeyer, 1996; Batson & Stocks, 2005; Hunsberger & Jackson, 2005). People can be religious for *intrinsic* reasons, the sincere commitment to the religion for its own sake, or for *extrinsic* reasons, as a means to an end (e.g., gaining social status and influence). Intrinsic religiosity generally predicts lower prejudice, and extrinsic religiosity predicts greater prejudice (see Batson & Stocks, 2005; Hunsberger & Jackson, 2005). Researchers then became interested in *quest* orientations. Those scoring relatively higher (vs. lower) in quest orientation seek religious meaning by asking questions and are comfortable with complex or absent answers (Batson, 1976). A sample Religion as Quest scale item reads: "Questions are far more central to my religious experience than are answers." Such individuals theoretically express less (not more) prejudice.

Another individual difference distinction involves *religious fundamentalism*, the literal and dogmatic interpretation of religious texts that deeply entrenches categorical, us-vs.-them thinking (Altemeyer & Hunsberger, 1992). Key to fundamentalism is the belief in the absolute truth and infallibility of one's religion (McCleary, Quillivan, Foster, & Williams, 2011). Unlike orthodoxy beliefs referencing religious content (e.g., Jesus as son of God), fundamentalism is a more general attitude that one's religion has particular access to truth plus a unique relationship with God; these can promote feelings of superiority and ethnocentrism (Altemeyer, 1996).

Several recent meta-analyses inform our understanding of person-based religiosity and prejudice. Hall, Matz, and Wood (2010) examined religiosity and racial prejudice in the US over a 50-year period. As summarised in our Table 2, significantly greater racism was observed among those higher in religious identification, extrinsic religiosity, or religious fundamentalism. In contrast, those higher in intrinsic religiosity or quest orientation reported significantly less racist attitudes. In a meta-analysis of anti-gay prejudice, Whitley (2009) found that

homophobia was significantly predicted by greater fundamentalism, church attendance, orthodoxy beliefs, religiosity (self-reported religious conviction), and intrinsic religiosity; in contrast, those higher in quest orientation were significantly lower in anti-gay prejudice (see our Table 2). In an extensive meta-analysis examining multiple prejudices across multiple countries, McCleary et al. (2011) observed fundamentalism (or "religious truth") correlating significantly with prejudices generally, especially homophobia (see our Table 2).

Cognitive constructs

Need for closure (NFC)

In the course of several chapters Allport (1954) focused on the cognitive underpinnings of prejudice. As he observed, "A person's prejudice is unlikely to be merely a specific attitude towards a specific group; it is more likely to be a reflection of his whole habit of thinking about the world" (p. 175). Thus expressions of prejudice are characteristic of how people think generally and can be understood in terms of general motivated cognition (Dhont et al., 2011; Roets & Van Hiel, 2011). More specifically, Allport proposed that prejudice-prone people prefer order and structure, liking familiar and predictable ideas and situations and disliking ambiguity, resulting in narrow-mindedness. Recently, Dhont et al. (2011) and Roets and Van Hiel (2011) have illustrated the conceptual fit between Allport's ideas of the prejudiced-prone cognitive style and the concept of Need for Closure (NFC). Decades after Allport's formulation, Kruglanski and colleagues developed the NFC theory outside the field of intergroup relations to explain human knowledge construction and decision making more generally. Dispositional NFC is central to this theory, the desire for a definite answer to a question as opposed to ambiguity and uncertainty (Webster & Kruglanski, 1994). Desires for order, predictability, and quick and definite answers, plus discomfort with ambiguity and closed-mindedness, constitute the NFC facets (Roets & Van Hiel, 2007; Webster & Kruglanski, 1994). Critically, those higher in NFC demonstrate higher levels of ethnic and racial prejudice (e.g., Dhont, Roets, & Van Hiel, 2013; Roets & Van Hiel, 2011; Van Hiel, Pandelaere, & Duriez, 2004), plus greater generalised explicit and implicit prejudice (Cunningham et al., 2004).

For instance, in a series of studies conducted in Belgium, Dhont et al. (2011) found positive associations between NFC and (a) modern prejudice towards immigrants in two student samples (Study 1, $n = 138$, $r = .21$, $p < .05$; Study 4, $n = 125$, $r = .16$, $p < .08$) and (b) blatant anti-immigrant prejudice in samples of adults (Study 2, $n = 294$; $r = .42$, $p < .001$; Study 5, $n = 135$, $r = .46$, $p < .001$). Correlations in the $r = .45$ range between NFC and anti-immigrant prejudice were also found in a sample of 169 Belgian students and one of their

parents (Dhont et al., 2013). Interestingly, this latter study also showed that greater parental NFC was related to greater offspring prejudice through parental and offspring authoritarianism as mediators. Furthermore, two studies using adult samples conducted by Roets, Van Hiel, and Dhont (2012; *n*s = 179 and 222) demonstrated that NFC is also meaningfully related to sexism towards, and by, both men and women, showing even greater predictive power than respondents' gender (for both prejudice targets). Furthermore, NFC is negatively correlated with the desire to engage in thinking activities, as tapped by the need for cognition (Webster & Kruglanski, 1994). Cornelis and Van Hiel (2006) tested the predictive value of several cognitive style measures, finding that NFC, and particularly the need for order and predictability facet, was the best predictor of racism. In sum, a general motivated cognitive style (NFC) represents an important cognitive factor underlying prejudice across targets (Roets & Van Hiel, 2011), supporting Allport's (1954) seminal ideas.

Cognitive abilities

In addition to cognitive styles (i.e., preferences for processing information), theorists (e.g., Adorno et al., 1950) also proposed that prejudice and ethnocentrism may originate in lower cognitive abilities—that is, *capacity* for logical reasoning, understanding, problem solving, and acquiring knowledge. However, contemporary theoretical frameworks explaining prejudice pay little or no attention to cognitive ability (Dhont & Hodson, 2014a; Hodson, 2014; Hodson & Busseri, 2012). Yet cross-sectional studies with various intelligence measures across different age groups reveal differences in cognitive abilities between those lower vs. higher in prejudice (see Dhont & Hodson, 2014a). For example, Costello and Hodson (2014a) asked 6–10-year-old White children (Study 1, $n = 20$; Study 2, $n = 53$) to complete measures of cognitive ability and child-suitable measures of anti-Black racism. In both studies, a water conservation task was administered, assessing whether children comprehended that a short stocky glass can hold equivalent water to a tall slender glass. In Study 2 an inclusive categorisation task additionally assessed ability to sort objects (e.g., cars, trucks) into appropriate superordinate categories (e.g., vehicle). In the smaller sample there was a marginally significant negative association between cognitive ability and racism ($r = -.39$, $p < .07$), and this same effect was reliable in the larger sample ($r = -.45$, $p < .05$, Study 2).

Even more compellingly, longitudinal studies using representative samples (Deary, Batty, & Gale, 2008; Schoon, Cheng, Gale, Batty, & Deary, 2010) have demonstrated that lower mental ability in childhood (i.e., ages 10 and 11, respectively) predicts higher scores on an index of racism, social conservatism, and gender inequality, in adulthood (i.e., ages 30 and 33, respectively). A reanalysis by Hodson and Busseri (2012) specifically focusing on racial prejudice confirmed that, in two large-scale datasets (*N*s > 7000), lower generalised

intelligence in childhood predicts increased adult racism in both men and women, even after statistically controlling for educational level and socioeconomic status (SES). Given that the prejudice measures in such studies are explicit, and that social norms regarding prejudice are also explicit and do not require sophistication for people to follow them, it is unlikely that such findings are due to differences in social desirability concerns between those lower vs. higher in cognitive abilities (see Dhont & Hodson, 2014a; Hodson & Busseri, 2012). These relations are also robust: A recent meta-analysis investigating the association of cognitive ability with right-wing ideological attitudes and prejudice (Onraet et al., 2015) revealed an average effect size of −.28 for studies on generalised prejudice (see our Table 2).

To our knowledge, no single study has simultaneously investigated cognitive ability and style, even though stronger endorsement of right-wing social–cultural attitudes (e.g., RWA) has been suggested to explain why those higher in NFC (e.g., Cunningham et al., 2004; Dhont et al., 2013; Van Hiel et al., 2004), as well as those lower in cognitive abilities (Hodson & Busseri, 2012), show greater prejudice. Scholars have argued that right-wing social–cultural ideologies are particularly attractive among those with stronger desires for order, simplicity, and stable knowledge because such ideologies offer well-structured and ordered views about society that preserve traditional societal conventions and norms (e.g., Jost et al., 2003; Roets & Van Hiel, 2011). By envisioning a strictly structured and ordered society and emphasising the preservation of the status quo, right-wing social–cultural ideologies psychologically minimise the complexity of the social world and increase perceived control over one's context (Heaven, Ciarrochi, & Leeson, 2011; Stankov, 2009). As such, right-wing social–cultural ideologies make societal complexity more palatable for those less able to process and understand new social information and ever-evolving contexts (Deary et al., 2008; Heaven et al., 2011). Taken together, individuals with lower cognitive abilities and higher NFC are more likely to embrace right-wing social–cultural ideologies such as authoritarianism, social–cultural conservatism, and religiosity. Meta-analytic studies have confirmed positive associations (r) ranging between .20 and .40 for NFC with right-wing attitudes (Jost et al., 2003; Van Hiel & Crowson, in press), a negative association of −.30 for cognitive ability (IQ) with authoritarianism (Onraet et al., 2015), and a negative association of −.24 between IQ and religiosity (Zuckerman, Silberman, & Hall, 2013).

Recently, research on the relations between cognitive style or ability and prejudice has been integrated into the Cognitive Ability and Style to Evaluation (CASE) model (Dhont & Hodson, 2014a). This model (see Figure 2) proposes that lower cognitive abilities and stronger preferences for simple structure, order, and predictability increase perceptions of changing social contexts as threatening. Threat perceptions trigger immediate prevention (vs. promotion) reactions emphasising the status quo to reduce uncertainty and anxiety. Threat perceptions and prevention focus can further develop into right-wing social–cultural ideologies,

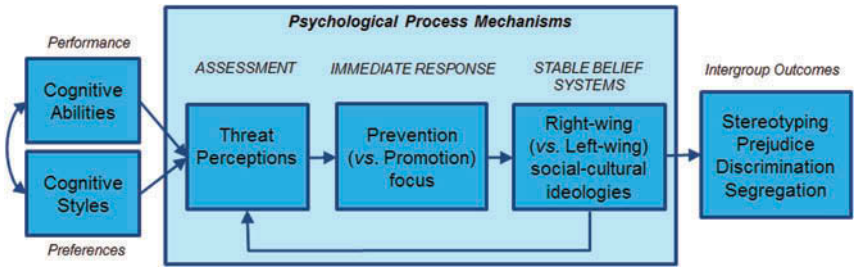

Figure 2. The cognitive ability and style to evaluate (CASE) model of the effects of cognitive ability and style on intergroup outcomes, via psychological processes (controlling for factors such as education and socioeconomic status, SES). © 2014 By <<SAGE Publications Ltd.>>/<<SAGE Publications, Inc.>>. All rights reserved. Reproduced from Dhont and Hodson (2014a) with permission of <<SAGE Publications Ltd.>>/<<SAGE Publications, Inc.>>. Permission to reuse must be obtained from the rightsholder.

emphasising resistance to change, protection of the status quo, and existing group boundaries (Jost et al., 2003; Onraet et al., 2013), which in turn predict a variety of intergroup variables, including prejudice and outgroup avoidance (Dhont & Hodson, 2014a; Hodson, 2014). Endorsing socially conservative ideologies then motivates interpretations of the social world as threatening, further reinforcing threat perceptions, and entrenches existing beliefs (e.g., Onraet et al., 2014). In sum, the CASE model outlines the psychological mechanisms through which individual differences in cognitive style and ability mutually influence attitudes and behaviour towards outgroups through threat perceptions, prevention-oriented responses, and right-wing social–cultural ideologies. Future studies are required to test the implications of this full model.

Emotion constructs

Intergroup threat

Intergroup threat refers to the notion that an outgroup can negatively impact the fate or outcomes of one's ingroup. Broadly speaking, people differ from each other conceiving outgroups as realistic threats (i.e., to property, person, or finances) or symbolic threats (i.e., to culture, values, beliefs; Riek, Mania, & Gaertner, 2006; Stephan, 2014). As with intergroup anxiety, threats can be operationalised as individual differences to the extent that people report their general reactions to outgroups. Indeed, perceptions of outgroup threat can mediate (or explain) why person-based factors [e.g., RWA, SDO, Dark Triad (narcissism, Machiavellianism, psychopathy)] predict greater prejudice (e.g., Dhont & Van Hiel, 2011; Hodson, Hogg, et al., 2009). Manipulations of intergroup threat can also strengthen the relation between SDO and prejudice or (decreased) intergroup help (see Costello

& Hodson, 2011, discussed in the next section). Meta-analytically, both realistic (mean r = .42) and symbolic (mean r = .45) threats predict greater prejudice, uniquely from each other and from intergroup anxiety (Riek et al., 2006; see our Table 2). Overall, those considering outgroups as relatively more threatening are consistently more likely to dislike and disparage outgroups.

Intergroup anxiety

Related to the notion of threat, resistance to intergroup interactions and prejudice often stem from intergroup anxiety, the worries and concerns about the "other", and the negative expectations that are associated with contact (Stephan, 2014). Measures of intergroup anxiety typically ask the extent to which one would feel emotions (e.g., awkwardness, worry, apprehension) in contact settings. As an example of the use of such measures, among White British prison inmates Hodson (2008) found that greater intergroup anxiety towards Black inmates was associated with both greater SDO (rs = .50, ps < .01; Study 1, n = 35, Study 2, n = 50) and ingroup bias (rs = .44, .41, Studies 1–2 respectively, ps < .01).

Although earlier work presented intergroup anxiety as largely social in nature, recent conceptualisations recognise both a stable trait and flexible social component (Stephan, 2014). Typical studies asking about anxieties during intergroup interactions refer to the trait-like dimension (Stephan, 2014), with some people relatively higher than others in awkwardness around outgroups. Theoretically, factors such as individual differences (e.g., authoritarianism) and situations (e.g., resource competition) elevate intergroup anxiety, which in turn predicts prejudice and avoidance. There is some suggestion that relations between individual differences (e.g., SDO) and intergroup anxiety can be relatively strong and impervious to experimental manipulations of threat. For example, Costello and Hodson (2011, Study 2) exposed predominately White undergraduates (n = 162) to information that incoming Somali immigrants posed realistic threats (e.g., economic costs), symbolic threats (e.g., to host culture), combined realistic and symbolic threats, or control information. Relative to control, threat manipulations increased or decreased the relation between SDO and prejudice or intergroup helping, respectively, but SDO was associated with greater intergroup anxiety equally across control and experimental conditions. Of particular relevance to our discussion, meta-analytic evidence (Riek et al., 2006) supports the notion that intergroup anxiety predicts greater prejudice (mean r = .46, see our Table 2), even independently of other types of threat (e.g., realistic, symbolic, see below).

Disgust sensitivity

Disgust has long been recognised as a basic human emotion (Rozin, Haidt, & McCauley, 2000) yet is seriously understudied, relative to emotions such as anxiety, with regard to prejudice. This is surprising given that disgust concerns

aversion to having contact with unsavoury or "contaminating" others (Hodson, Choma, et al., 2013) and thus is theoretically relevant to prejudice. This proposition has been confirmed by recent theorising and research into disgust. In discussing different types of groups as relevant to distinct threats (accompanied by distinct emotional reactions), the socio-functional approach to prejudice (Cottrell & Neuberg, 2005) earmarks disgust as a relevant emotion to prejudices, in terms of protecting the ingroup both from outgroup diseases and from outgroup values and beliefs. This line of thinking is consistent with a "behavioural immune system", whereby costly physiological responses to immune threats are bolstered by overly sensitive social defences that promote avoidance of "others" and outgroups in particular (Schaller & Park, 2011).

The properties of disgust make it very relevant to prejudicial attitudes, varying through both contextual factors (e.g., disease prevalence) and individual differences (e.g., perceived vulnerability to disease). As noted by Rozin et al. (2000), disgust signals danger and the need to withdraw from noxious or offensive stimuli. Building on this position, Hodson and Costello (2007) argued that disgust has properties relevant not only to danger and avoidance (and hence associated with RWA), but also to purity, superiority, and hierarchy (and hence associated with SDO). As such, disgust sensitivity is theoretically relevant to understanding prejudicial attitudes, with several recent studies supporting this contention. Homophobia, for instance, is predicted by both general disgust sensitivity (Terrizzi, Shook, & Ventis, 2010, Study 1) and by core disgust, a subcomponent relevant to protection from offensive objects (Olatunji, 2008). Hodson and Costello (2007) found that although general disgust sensitivity predicted attitudes towards immigrants and foreigners, the interpersonal disgust sensitivity subscale was an especially strong predictor, exerting influence on attitudes through RWA, SDO, and outgroup dehumanisation. Interestingly, disgust sensitivity was *positively* related to ingroup attitudes (see also Hodson, Choma, et al., 2013), suggesting that this sensitivity is not a simple aversion to others, but rather aversion towards outgroup others coupled with a draw towards ingroup members. Disgust sensitivity is thus theoretically relevant given that intergroup biases are characterised not only by outgroup dislike but particularly by pro-ingroup biases (Greenwald & Pettigrew, 2014). Future research, particularly longitudinal and experimental in nature, can further explore the theoretically claimed causal direction of disgust as an exogenous variable.

More recently researchers have isolated individual differences in *intergroup disgust sensitivity* (ITG-DS), an "affect-laden revulsion towards social outgroups, incorporating beliefs in stigma transfer and social superiority" (Hodson, Choma, et al., 2013, p. 195) that is theoretically more proximal to prejudice than is general disgust sensitivity. Those scoring higher in ITG-DS express negative affect (particularly disgust, revulsion) towards outgroups, contamination beliefs (dangerous outgroups can pollute/alter us), and superiority (we are better in nature than them). Among White Americans, ITG-DS has demonstrated strong test–retest reliability

over four months (r = .74) and 12 months (r = .68; see Hodson, Kteily, & Hoffarth, 2014). Of relevance to our discussion, across five datasets (N = 708), Hodson, Choma, et al. (2013, Study 1) examined whether ITG-DS predicted prejudice towards several outgroups. ITG-DS repeatedly predicted prejudice towards Muslims, foreigners, and ethnic minorities in the r = .40 range and remained significant after controlling for well-established individual difference predictors such as RWA, SDO, and intergroup anxiety (Hodson, Choma, et al., 2013, Table 5).[4]

Moreover, individual differences in ITG-DS moderate reactions to experimentally induced group disgust. Hodson, Choma, et al. (2013, Study 2) randomly assigned predominantly White Canadian undergraduates to read a fictitious travel blog about an adventurer experiencing contact with isolated villagers. In the control condition the villagers engaged in ordinary activities, such as preparing food, or tribal traditions that were painful but not disgusting (e.g., manhood rituals involving suspension by ropes). In the disgust condition the group prepared disgust-inducing foods, engaged in taboo sexual practices, and took part in rituals involving body skewering and kissing corpses on the lips. Across conditions, the manipulation successfully induced disgust towards the disgust-eliciting targets and heightened both perceptions of threat and intergroup anxiety. However, only those higher in ITG-DS translated those emotional reactions into prejudice towards the disgust-eliciting target. Overall, (intergroup) disgust sensitivity appears to be a very relevant factor not only in predicting prejudice towards outgroups, but also in moderating and shaping whether negative emotions induced *by* an outgroup are translated into negativity *towards* that outgroup.

Rationalisation constructs

Prejudices often require "support" or "justification" for their expression, given that norms (certainly in the West) have shifted away from open expressions of bias (Crandall & Eshleman, 2003). People differ systematically, therefore, not only in the expression of prejudice, but in the accompanying justifications that legitimise and maintain prejudices. Some of these can take the form of ideological attitudes, as discussed above, but some can be more specific to the groups in question or the expression of bias itself. We now explore some of these and their implications.

Legitimising myths and system justification

According to Social Dominance Theory (SDT; Sidanius & Pratto, 1999), a variety of structural but also personal factors contribute to intergroup equalities and prejudices. A key aspect of this approach is that "group-based hierarchy is

[4] Recent studies find no associations between general disgust sensitivity and prejudice (Choma et al., 2012; Hodson, Choma et al., 2013; Hodson, Dube, & Choma, 2015). Rather, individual differences in ITG-DS particularly predict prejudice.

also affected by . . . legitimising myths . . . [the] attitudes, values, beliefs, stereotypes, and ideologies that provide moral and intellectual justification for the social practices that distribute social value within the social system" (Sidanius & Pratto, 1999, p. 45). From this perspective, factors such as sex, group status, and SDO impact discrimination and hierarchy-enhancing social policies through myths (or ideologies) such as the Protestant work ethic, negative outgroup stereotypes, nationalism, and so on. Stronger legitimising myths, it is argued, more readily facilitate expressions of bias. Legitimising myths are routinely measured and interpreted as individual differences, such that people differ in support for the rationalisations and justifications underpinning intergroup inequality. System justification theory (Jost & Banaji, 1994) similarly proposes that people can differ systematically in their endorsement of the status quo, including beliefs justifying the existing economy, political system, and so on, in ways that promote intergroup biases. In support, Esses and Hodson (2006) administered measures to 101 Canadian undergraduates, finding that those higher in SDO or RWA expressed greater prejudice, in part, through beliefs that prejudice is justified, normative, and "understandable" (i.e., acceptable).

There also exist individual differences in beliefs related to the harmlessness of intergroup expressions. For example, Hodson, Rush, and MacInnis (2010) developed a measure of cavalier humour beliefs (CHB)—that is, the extent to which jokes are considered simply jokes, and thus fun not harmful. In Study 1, 135 predominantly White Canadian undergraduates completed items tapping cavalier orientations towards humour (e.g., "Sometimes people need to relax and realise a joke is just a joke"), along with several prejudice-relevant constructs and ratings towards jokes disparaging Mexicans (vs. neutral). Those higher in CHB scored higher in SDO (but not RWA) and prejudice towards Blacks, and also rated Mexican-disparaging jokes more amusing and less harmful. Thus, simply being casual about humour is actually associated with intergroup negativity. Study 2 addressed this question systematically, having 177 predominantly White Canadians rate jokes disparaging Mexicans (lower status), Americans (higher status), or Canadians (high status ingroup). Critically, the jokes were experimentally sorted so that joke targets were rotated across participants. For instance, for some participants a particular joke targeted Mexicans, but for other participants that same joke targeted Americans (or Canadians). As such, if those higher in SDO considered anti-Mexican jokes particularly amusing it would not be because the jokes were objectively more amusing; rather, such associations would be directly attributable to the specific *target* associated with the joke. Those higher in SDO found anti-Mexican jokes particularly amusing and inoffensive, an effect entirely explained by greater CHB. In Study 3 ($n = 164$), this basic pattern was replicated and extended, demonstrating that exposure to disparaging humour also increased prejudice against Mexicans, as facilitated by individual differences in CHB. Thus cavalier humour beliefs serve as legitimising myths, fully explaining why those higher in SDO find jokes disparaging low-status groups harmless and inoffensive, in ways that in turn contribute to greater prejudice.

Summary

As with most life domains (e.g., Deary et al., 2010; Roberts et al., 2007), individual differences matter in predicting and explaining intergroup prejudices. Be they relevant to basic personality, ideology, cognition, emotion, or rationalisation, the individual differences we have identified correlate as much (if not more) with prejudice as do traditional "situational" variables (e.g., contact). The meta-analytic effect sizes listed in Table 2 are not insignificant by any standard, with many reaching the upper bounds of associations observed in psychology (see Hemphill, 2003). Individual differences matter, particularly (but not exclusively) for predicting *generalised* prejudices (see Akrami et al., 2011; Onraet et al., 2015; Sibley & Duckitt, 2008)—that is, understanding why some people (relative to others) systematically dislike a host of outgroups. Moreover, generalised implicit and generalised explicit prejudices can themselves be correlated, as represented in Figure 3. That is, implicit biases towards different groups can covary (suggesting an implicit generalised prejudice factor causing their covariation), just as explicit prejudices typically covary, with the explicit and implicit latent generalised prejudices then being inter-related. In such a test, Cunningham et al. (2004) observed a correlation of .47 between implicit and explicit generalised prejudice. Such findings demonstrate that people meaningfully and systematically differ from each other in both their self-reported and more indirect, automatic biases, and in their underlying common cause (i.e., individual differences in generalised intolerance). In the same way that "personality theories have difficulty explaining how the same person can show markedly different degrees of discrimination in different situations" (Rubin & Hewstone, 2004, p. 837), theories emphasising contextual factors to the neglect of person-based factors similarly have difficulty explaining how people can differ from each other in

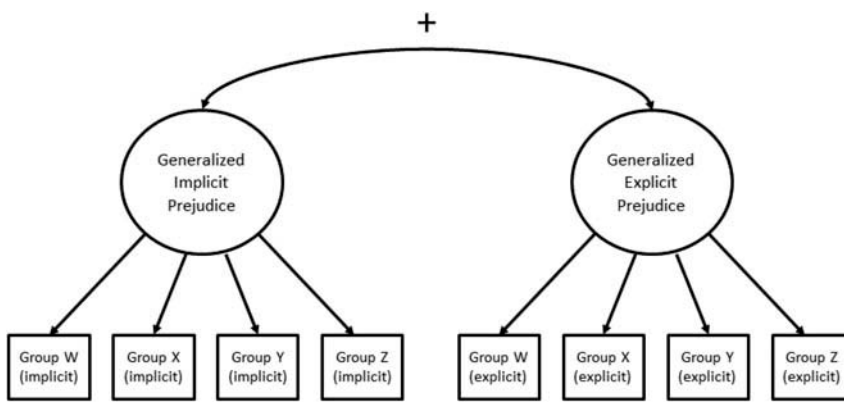

Figure 3. Conceptual representation of relations between individual differences in implicit and explicit generalised prejudice.

their dislike towards different and diverse outgroups, even over time (see Zick et al., 2008). Each approach, we argue, is well suited for a particular goal: individual differences for explaining why some people are more prejudiced (across targets) than others, and social factors for explaining why some contexts elicit mass and relatively uniform changes (across people) that seemingly counter personal attributes. These foci are equally interesting and valid enterprises, but speak to distinct (but related) phenomena.

Broader implications of the person-based nature of prejudice

Recognising that people differ systematically in individual difference factors predicting prejudices towards human outgroups opens up new avenues for research, including biases in other domains, such as human–animal relations (e.g., Dhont & Hodson, 2014b; Hodson & Costello, 2012; Plous, 2003) and orientations towards the natural world (e.g., Milfont, Richter, Sibley, Wilson, & Fischer, 2013). Recently, theoretical frameworks designed to explain prejudice towards human outgroups have been applied successfully to the psychological study of speciesism—that is, attitudinal orientations favouring one's own species to the detriment of other species. The interspecies model of prejudice (Costello & Hodson, 2010, 2014) proposes that animalistic dehumanisation of outgroup members is rooted in the belief that humans are inherently different from and superior to non-human animals. Thinking of animals as inferior sets the stage for the use of animalising metaphors with regard to outgroups we seek to dominate. If we did not systematically undervalue animals, there would be no social value in seeing human outgroups as animalistic. A series of studies (Costello & Hodson, 2010, 2014; see Hodson, MacInnis, & Costello, 2014) demonstrates that individual differences in perceiving a greater hierarchical divide between humans and non-human animals is associated with anti-immigrant prejudice (see our Table 2), through the facilitation of animalistic outgroup (i.e., human) dehumanisation. Critically, experimentally accentuating animals' similarities to humans, for instance via exposure to editorials (Costello & Hodson, 2010) or personally writing essays (Bastian, Costello, Loughnan, & Hodson, 2012), significantly reduces dehumanisation and outgroup prejudice (Costello & Hodson, 2010), decreases speciesism, and increases moral inclusiveness towards human outgroups (Bastian et al., 2012). Thus, prejudicial attitudes towards human outgroups are systematically connected to prejudicial attitudes towards non-human outgroups, influenced by both individual differences and contextual manipulations of the human–animal divide. Moreover, in a Canadian sample of university students (n = 191), those endorsing more speciesist attitudes (e.g., "The production of inexpensive meat, eggs, and dairy products justifies maintaining animals under crowded conditions") also reported more negative ethnic outgroup attitudes (Dhont, Hodson, Costello, & MacInnis, 2014), with ideological individual differences in desire for dominance and inequality (SDO) accounting for (i.e.,

explaining) the association between speciesism and negative ethnic outgroup attitudes. That is, individual differences in SDO, a key factor in understanding human–human relations, also underpin human–animal relations.

Furthermore, several other studies have reported positive associations between right-wing ideological attitudes (SDO, RWA) and attitudes and exploitative behaviours towards animals. Specifically, Dhont and Hodson (2014b) focused on the psychological mechanisms explaining why right-wing ideological attitudes positively predict speciesist attitudes and meat consumption in two Belgian community samples (Study 1, $n = 260$; Study 2, $n = 489$). In line with previous research (e.g., Costello & Hodson, 2010), those higher in SDO were expected to hold greater human supremacy beliefs, which would in turn predict more speciesist attitudes and meat consumption. Theoretically, those higher in RWA or SDO are more likely to regard vegetarian ideologies as threats to the dominant status and traditional norms of a "carnist" ideology, which in turn foster speciesism and meat consumption. We found supporting evidence for the mediating role of human supremacy beliefs (for SDO effects), and perceived threat from vegetarianism (for SDO and RWA effects), in explaining the relations between right-wing ideologies and greater acceptance of animal exploitation and meat consumption. Even after statistically controlling for hedonistic liking of meat (Study 2), the hypothesised associations remained significant (see our Figure 4), highlighting the role of person-based, *intergroup* ideologies. These results are

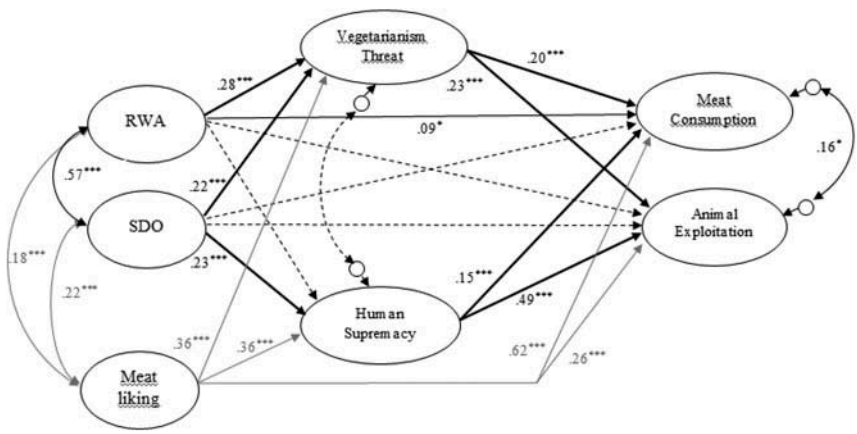

Figure 4. Mediation model (showing standardised estimates) of relationships between right-wing attitudes and attitudes towards animal exploitation and meat consumption through vegetarianism threat and human supremacy, controlling and meat-linking. RWA = right-wing authoritarianism; SDO = social dominance orientation. Dashed paths represent non-significant relationships. Model fit: $\chi^2(149) = 307.24$, $p < .001$; comparative fit index = .97; root-mean-square error of approximation = .047; standardised root-mean-square residual = .039.*$p < .05$.**$p < .01$.***$p < .001$.

critical to our present discussion for several reasons. We again demonstrate links between human–animal relations and constructs commonly associated with human–human intergroup relations (e.g., SDO, RWA). But we also show that some of the reasons why right-leaning individuals more readily exploit animals actually involves a "pushback" against left-leaning vegan culture. Animals, it seems, pay a price for human–human intergroup relations.

This nascent but rapidly growing body of evidence indicates that individual differences relevant to understanding prejudice towards human outgroups are also valuable for our understanding of how humans perceive and treat non-human animals and the biosphere more generally. Biases towards human and non-human outgroups have common roots in ideological beliefs centred on dominance and status quo maintenance, providing new insights into biases.

Prejudice interventions (relevant to individual differences)

Prejudice researchers are interested not simply in explaining or predicting prejudices but also in preventing and reducing bias. This is by no means an easy task. For instance, multiculturalism training can actually *increase* intergroup categorisation (i.e., us-vs.-them representations) and stereotyping (Wolsko, Park, Judd, & Wittenbrink, 2000). Moreover, prejudice interventions can particularly backfire among prejudice-prone persons, such as when confronting their values (Altemeyer, 1996), teaching or priming multiculturalism (Avery, Bird, Johnstone, Sullivan, & Thalhammer, 1992; Vorauer & Sasaki, 2010), or pairing outgroups with positive stimuli (Sappington, 1976). For instance, Hodson and Dovidio (2001) exposed White American university students (n = 84) to a videotaped speech by a Black speaker. Participants were randomly assigned to a control condition or a stereotype suppression instruction condition. Among those scoring higher in anti-Black racism, instructions to suppress stereotypes actually resulted in greater recall of Black (but not White) stereotype-relevant words on a subsequent task, evidence of a "stereotype rebound" among prejudicial persons. Relatedly, in a Canadian sample (n = 104), undergraduates higher (vs. lower) in SDO acknowledged difficulty suppressing their negative outgroup thoughts (r = −.32) or actions (r = −.20; ps < .05, Hodson & Esses, 2005), highlighting obstacles to planning prejudice interventions.

For such reasons, researchers are often satisfied when interventions work *despite* the influence of individual differences that promote prejudice. For instance, Hodson, Choma, and Costello (2009) had heterosexuals engage in an intergroup perspective-taking exercise simulating stigmatised outgroup membership. Specifically, participants imagined and discussed their reactions to being mistreated by aliens on another planet, with subtle parallels to how gay people are treated in reality. Compared to a control condition, this intervention boosted intergroup perspective-taking and empathy in ways that reduced anti-gay prejudice. These results held after covarying out individual differences (SDO, RWA,

religious fundamentalism, conservatism), meaning that prejudice-relevant individual differences did not detract from the intervention.

Fortunately, intergroup contact (Allport, 1954; Hodson & Hewstone, 2013) offers special promise for improving outgroup attitudes among prejudice-prone persons, targeting many of the factors (e.g., threat) that characterise such individuals (Hodson, 2011). Pettigrew and Tropp's (2006) meta-analysis of 515 studies confirmed the negative relationship between intergroup contact and prejudice among people generally (mean $r = -.21$). Initially, Allport (1954) was rather sceptical about contact interventions among prejudice-prone persons, stating that "contact, as a situational variable, cannot always overcome the personal variable in prejudice" (p. 280). Only recently have researchers directly examined whether the negative association between intergroup contact and prejudice depends on people's levels of "prejudice-proneness" as indicated by constructs such as SDO, RWA, and NFC (Hodson, 2011). Following Allport's concerns, weaker contact–prejudice relations might be expected among those scoring higher (vs. lower) on these variables. In contrast to this idea, however, Hodson (2008) found that White inmates scoring higher (vs. lower) in SDO showed stronger positive contact effects on attitudes towards Black inmates in two prisons. Similar interaction effects were observed in Belgian community samples by Dhont and Van Hiel (2009), who investigated whether RWA and SDO moderate the association between contact with immigrants and anti-immigrant prejudice. Study 1 ($n = 215$) revealed that more frequent contact was clearly associated with lower prejudice for those higher in RWA or SDO ($\beta = -.23$ and $\beta = -.28$, $ps < .01$) but not for those lower in RWA or SDO ($\beta = .00$, $p > .99$, and $\beta = -.13$, $p < .08$). Study 2 ($n = 90$) also took the quality of intergroup contact into account, revealing that more positive contact was significantly related to lower prejudice among high RWA and SDO scorers ($\beta = -.35$ and $\beta = -.33$, $ps < .01$), but not among low RWA and SDO scorers ($\beta = -.10$, and $\beta = -.09$, *ns*) (see our Figure 5, Panel A). The moderating role of RWA in the contact–prejudice relation has also been replicated among British students ($n = 115$), for direct contact with homosexuals, and for indirect or extended contact (i.e., having ingroup friends with outgroup friendships; Hodson, Harry, & Mitchell, 2009). This pattern has also been observed with representative survey data ($n = 1238$) for both direct and extended contact with immigrants in the Netherlands (Dhont & Van Hiel, 2011), and longitudinally for contact with immigrants in Germany (Asbrock, Christ, Duckitt, & Sibley, 2012). Additionally, Hodson, Hogg, et al. (2009) found that highly identified heterosexuals particularly benefited more from contact with homosexuals.

Others have addressed whether intergroup contact works similarly well among cognitively rigid and closed-minded individuals (i.e., high NFC scorers). In the four cross-sectional studies discussed earlier, Dhont et al. (2011) consistently found that individuals higher (vs. lower) on NFC showed significantly stronger contact effects in predicting lower ethnic prejudice including modern (Studies 1,

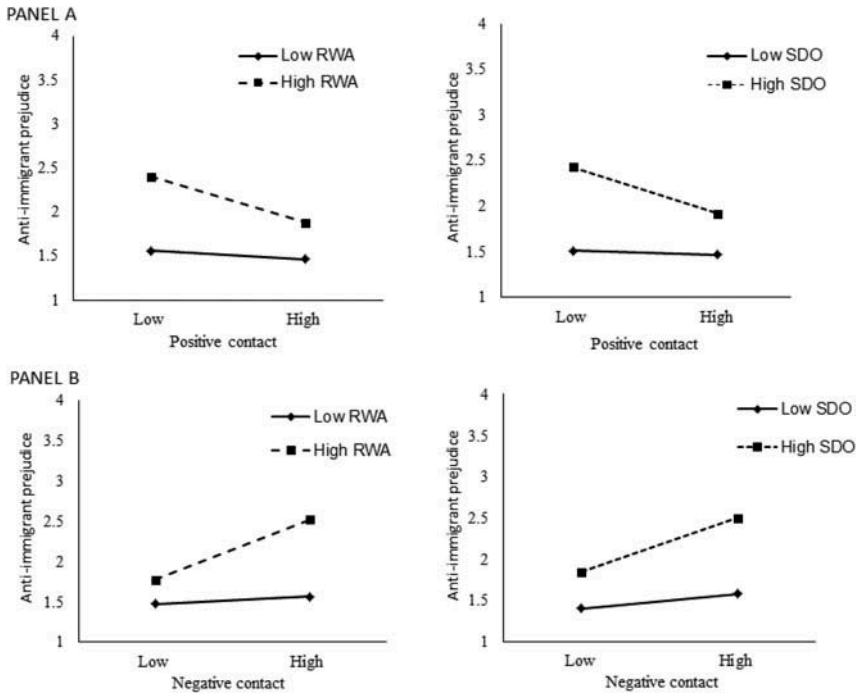

Figure 5. Association of positive contact (Panel A) or negative contact (Panel B) with anti-immigrant prejudice as a function of individual differences in right-wing authoritarianism (RWA) and social dominance orientation (SDO). © 2009 Elsevier. Reproduced from Dhont and Van Hiel (2009) with permission of Elsevier. Permission to reuse must be obtained from the rightsholder.

4, and 5) and blatant (Studies 2 and 5) prejudice, as well as hostile behavioural tendencies (Study 5). A similar interaction also emerged for extended contact (Study 2). Moreover, in a quasi-experimental field study (Study 3, n = 60), Belgian high-school students participating in a contact-intensive school trip to Morocco showed lower prejudice than a control group, with the effect amplified among high NFC scorers. Furthermore, Studies 4 and 5 showed that intergroup anxiety mediated the interaction patterns between NFC and intergroup contact; that is, those who feel most uncertain and fearful of the unfamiliar and ambiguous are the ones who benefit the most from intergroup contact due to the anxiety-reducing effect of intergroup contact.

Overall, these Person × Situation patterns are encouraging, suggesting that contact may effectively reduce prejudice among those most in need of intervention (Dhont et al., 2011; Hodson, 2011; Hodson, Costello, et al., 2013). These patterns also suggest that, by ignoring individual differences, the benefits of contact have been historically underestimated (Hodson, 2011; Hodson, Hogg, et al., 2009), with clear implications for policy implementation and education. To

some extent such findings reflect the fact that those lower in prejudice-prone individual differences have less room to improve their attitudes. But we need to keep in mind the societal relevance of improving attitudes among those relatively *higher* in prejudice, given that such individuals often prove immune to (or reactive against) other types of prejudice intervention. As argued by Hodson (2011), it is important that contact interventions demonstrably alleviate prejudice among those *most* in need of intervention, in the same manner that it is critical to demonstrate that sleep-inducing drugs work among those most (not least) in need of sleep intervention. Drawing attention to how sleep drugs are less effective among those without sleep concerns misses the point that sleep drugs can exert desired sleep-inducement effects among those with sleep problems (i.e., the treatment population). It is important to evaluate whether a treatment (contact, sleep drugs) is effective among the population requiring intervention.

Not all studies converge on the conclusion that contact works, particularly with regard to SDO. Whereas Asbrock et al. (2012) observed stronger effects of contact with immigrants among those relatively higher (vs. lower) in RWA, those higher (vs. lower) in SDO showed weaker or no contact effects. Likewise, in representative samples of eight European countries, Schmid, Hewstone, Küpper, Zick, and Wagner (2012) found weaker contact effects among those higher (vs. lower) in SDO. However, the large-scale nature of these survey projects necessitated a very restricted number of SDO items in the survey, resulting in low reliability that limits firm conclusions. Moreover, intergroup contact can effectively reduce SDO levels (Dhont, Van Hiel, & Hewstone, 2014; Shook, Hopkins, & Koech, in press). In an intergroup contact intervention study among Belgian high-school students (Study 1, $n = 71$), Dhont, Van Hiel, et al. (2014) measured students' levels of SDO before and after a school trip to Morocco involving intergroup contact activities such as hiking and visiting Moroccan families. Lower SDO levels were observed after the intervention, especially among students reporting a higher quality of contact during the trip. A longitudinal survey study among Belgian adults (Study 2, $n = 363$) further demonstrated the attenuating effect of positive intergroup contact on SDO over three-month time interval, whereas the longitudinal path from SDO to intergroup contact was not significant.

Overall, such findings point to the need for additional research on the benefits of contact among those higher in SDO. It remains a challenge, for instance, to bring prejudice-prone people to contact settings. Furthermore, if contact cannot be set up to be positive, there is a serious risk of worsening outgroup attitudes, particularly among prejudice-prone people. Indeed, the effects of negative contact can be more influential in increasing prejudice than are the effects of positive contact in reducing prejudice (e.g., Dhont, Cornelis, & Van Hiel, 2010; Paolini, Harwood, & Rubin, 2010) and also show particularly strong effects among those higher on RWA or SDO (Dhont & Van Hiel, 2009; see our Figure 5 Panel B).

Thinking straight about persons and situations

So where does this leave the discipline of psychology, and social psychology, in particular? We argue for further integration of individual differences into mainstream social psychological theorising (e.g., Dhont & Hodson, 2014a; Hodson, 2014). Fierce battles over person vs. situation have proven unable to capture the complexities of human psychology. Biological science has long since cast aside rigid positions on nature vs. nurture, finding greater explanatory power in their confluence and interaction. Moreover, from a psychological perspective, social phenomena are not purely personal or situational. Instead, social events are internally (i.e., psychologically) construed, and personal factors are derived from and play out through social contexts and interactions. Here again, approaches adopted by the biological sciences are informative. For instance, the expression of genes is determined through contextual factors, such that the heritability of cognitive ability is stronger among those higher (vs. lower) in SES, given their greater ability to "evoke and select positive learning experiences on the basis of their genetic predispositions" (Tucker-Drob, Briley, & Harden, 2013, p. 349). This line of thinking offers meaningful guidance for the future of prejudice research, as we seek to understand the contextual factors that release or inhibit expressions of internal dispositions, and better understand how individuals select themselves into and shape their contexts.

Thinking conceptually (observations)

To assist theorists in thinking clearly about person- and situation-based bases of prejudice, we provide an overview of various frameworks in Figure 6. Panel A presents a relatively straightforward view that person-based factors play a central role in explaining prejudice. Examples of such thinking are found in the work of Adorno et al. (1950), who focused heavily on dysfunctional features of intrapsychic processes, and Rokeach (1960), who emphasised dogmatic thinking styles. Panel B presents an alternative take that stresses social and contextual factors as the causes of prejudice, common in sociological research and social identity and self-categorisation research (as per Table 1). This position largely discounts personality and individual differences as relevant to the discussion. Theoretical frameworks such as the dual-process motivational model (DPM; Duckitt & Sibley, 2010) and social dominance theory (SDT; Sidanius & Pratto, 1999), much of which can be captured by Panel C, have become increasingly popular. Such theories emphasise that person and situation variables are both important in explaining prejudice. As noted above, the DPM stresses person factors (e.g., tough-mindedness) and social factors (threatening or competitive contexts) as predictors of prejudice, operating through SDO and RWA. The first stage of DPM largely treats person and situation effects as additive in their prediction of ideology and prejudice, as per Panel C of Figure 6. For its part,

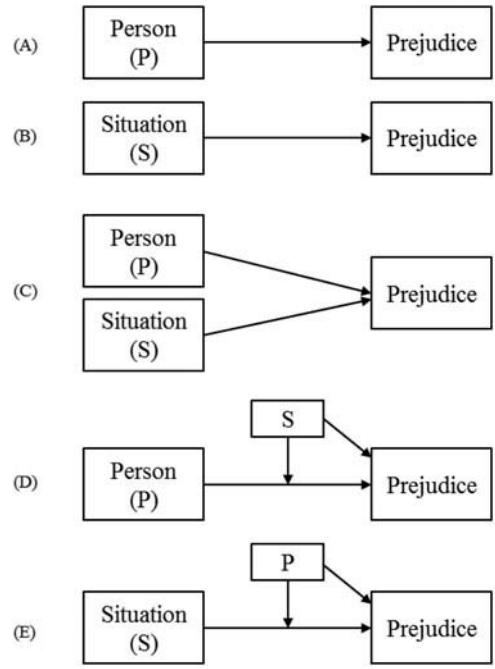

Figure 6. Personal and situational influences on prejudice (conceptual patterns).

SDT emphasises structural features of human societies (i.e., higher level forces) but also individual differences, especially SDO, which generally serve to entrench and justify inequalities between groups. Without doubt, these two perspectives are among the most dominant and influential contemporary accounts of prejudice by virtue of integrating personal and situational effects.

Panels D and E (Figure 6) include the additive effects of person and situation but also incorporate interactive effects. The theoretical framework in Panel D conceptually emphasises person effects on prejudice, recognising that these effects are qualified by contextual factors. Although Altemeyer's (1996) work on RWA is often considered representative of Panel A, he explicitly stressed contextual moderation, observing that "[RWA] is an individual difference variable . . . developed on the premise that some people would need little situation pressure to (say) submit to authority and attack others, while others require significantly more" (Altemeyer, 1996, p. 8). For instance, participants in Milgram's classic obedience studies varied in the degree to which they needed "prodding" to conduct aggressive acts on others. Here, the social context is like a switch or pedal/brake that determines how much and when personal factors become relevant. Such emphasis has proven useful in discovering that individual

differences in intergroup disgust sensitivity are strong predictors of prejudice under manipulations of fear (Choma, Hodson, & Costello, 2012), but weak predictors under simulated contact conditions that enhance outgroup trust (Hodson, Dube, & Choma, 2015). Likewise, the DPM proposes that the degree to which RWA and SDO predict prejudice depends on the contextual levels of outgroup threat (for RWA effects) or competition (for SDO effects; Duckitt & Sibley, 2010). In Panel E (Figure 6) theorists are largely interested in how effects of the social conditions predict prejudice, as moderated by person-based factors. This line of thinking was emphasised previously in our discussion of contact (e.g., Dhont & Van Hiel, 2009; Hodson, 2008). The differences between Panels D and E are largely conceptual, not statistical, and thus vary in utility depending on the research goals. These approaches share an explicit modelling of person and situation effects plus their interaction.

Recommendations for thinking conceptually

Each of the models in Figure 6 has both strengths and weaknesses. Given space concerns, our review has focused mainly on person-effects (as in Panel A) to push the argument that person-based factors are theoretically and practically relevant, but we consider this a first step in better integrating conceptual approaches that have largely developed in isolation from each other. In fact, few consider person-based factors to be the sole explanations of prejudice. With this in mind, we encourage readers to interpret the person effects in Table 2 as main effects that presumably are expressed through contextual moderators. Panel B only models situational predictors, yet our review suggests that this approach is unlikely to offer a complete account of prejudice, in keeping with Tajfel (1978). Indeed, Panels A and B are equally and unduly narrow in focus. As we have argued, a relatively exclusive person-based account (Panel A) provides a strong account of generalised prejudice, but a weaker account of (sudden) shifts in attitudes among groups or societies. Likewise, a relatively exclusive situation-based account (Panel B) provides a strong account of prejudices towards specific targets in situ (e.g., Muslims after 9/11), but offers little explanation for why some people (relative to others) demonstrate relatively stable dislike towards multiple outgroups. Each approach tends to treat the alternative factor (person or situation) as error variance not theoretically important enough to be modelled, resulting in an incomplete understanding of the nature of prejudice and its dynamics.

We argue that Panels C through E (Figure 6) more fully capture prejudice as a personal and social phenomenon. Model C benefits from simplicity and parsimony, and manages to capture both the person and the situation. However, it considers these factors in isolation, after statistically controlling for the effects of the other (i.e., as main effects). A general limitation with Panels A through E concerns their inadequate modelling of how person and situation effects impact

each other. Future researchers are encouraged to incorporate reciprocal relations where feasible or possible. Overall, we recommend that researchers utilise Models D and E; these models test the main effects from Models A–C, and isolate their unique variance, but also consider the influence of each factor as a function of the other. As with all of the models, we also recommend both measuring and manipulating social factors, and considering manipulations of person-variables (or their underlying construct, for instance "anxiety") where meaningful. Of course, most prejudice-relevant research questions can and should be modelled longitudinally to assess influence over time, a feature applicable to each model in Figure 6. Finally, researchers are encouraged to utilise modern statistical techniques such as multilevel modelling (MLM), whereby effects of the situation (as per Panels B, C, and D) can be tested at an individual but also a contextual level. For instance, contact effects can be tested at the personal level but also at the level of "context" (e.g., neighbourhood or country), considering macro- and micro-level effects (e.g., Christ et al., 2014).

Semantic issues

Conceptually, it is important to recognise that the terms "personal" and "social" are themselves social and scientific constructions that should be handled with care and consideration (for a fuller discussion, see Hodson, Costello, et al., 2013, pp. 64–65). That is, many constructs routinely considered by social psychologists as "social" (e.g., intergroup anxiety, ingroup identification) can be conceptualised as individual or personal factors. In many (if not most) of these studies, people complete measures in the absence of experimental manipulations and, more to the point, systematically differ from each other in these psychological constructs. Similarly, many personal factors (e.g., authoritarianism) are shaped by contextual factors such as peer groups and mass media. Of course, levels of abstraction presumably play a role. At the highest level, generalised prejudice represents an individual-level (i.e., between-person) construct; at the lowest level, specific prejudices (e.g., homophobia) can reflect structural aspects of the context that isolate a particular group (at a time point) as a target of prejudice through personal and situational experiences. By examining subdimensions of generalised prejudices (i.e., derogated, dangerous, and dissident groups), whereby specific types of prejudices are more closely inter-related than others, Duckitt and Sibley (2007) presumably tap the joint influence of personal and contextual factors. That is, although particular subgroupings presumably differ across cultures and/or time points within a culture, individual differences in prejudice towards subgroups within time points or cultures would nonetheless emerge (such that some people are more prejudicial than others towards members of groups within a subgroup). This line of investigation warrants further consideration.

Limitations to person-based approaches

Thinking straight about person-based factors as prejudice predictors also involves a consideration of limitations and issues associated with this approach. For instance, most research involves self-reported individual differences and intergroup attitudes, which can inflate associations due to common method variance (Campbell & Fiske, 1959). This is a valid concern worth recognising. Fortunately, research involving peer or interviewer assessment of the individual difference constructs corroborate those with self-report-only findings (e.g., see Cohrs, Kämpfe-Hargrave, & Riemann, 2012; Lippa & Arad, 1999), suggesting that common method variance alone does not explain observed associations. Moreover, many individual differences are not based solely on self-reflection: Cognitive *abilities* are performance based (e.g., Hodson & Busseri, 2012), heritability analyses are based on genetic similarity to others (e.g., Lewis & Bates, 2010), and implicit measures tap less conscious associations between objects and evaluations (e.g., Cunningham et al., 2004).

Nonetheless, the more conceptually proximal a predictor to prejudice, the more conceptual overlap becomes a consideration. The most distal variables (e.g., broad personality factors; genetic factors) do not directly (or obviously) pertain to prejudice and thus present little concern. The same can be said for variables conceptually downstream but likewise involve little overlap with intergroup attitudes, such as cognitive abilities or NFC (neither of which directly concerns group attitudes per se). Other types of variables, typically considered mediators of distal variables on prejudice (such as RWA, SDO, intergroup anxiety, and intergroup threat) vary in their conceptual relatedness to prejudice. When considering these as prejudice predictors, it becomes important to consider scale items carefully when interpreting findings. For instance, some prejudice measures may themselves tap into anxiety and threat, so relation magnitudes (and their meaning) may warrant reflection at the interpretation stage. Also worth consideration is the level of abstraction of the variables being assessed. For instance, at a high level of abstraction, the *commonality* between RWA and SDO (i.e., generalised authoritarianism) can more strongly predict generalised prejudices than either RWA or SDO on their own (Hodson, MacInnis, & Busseri, 2015). Here, the greater the level of abstraction of either authoritarianism or prejudices, the greater the association between individual differences and prejudice. Thus overlap concerns will vary depending on research question and the level of specificity vs. generality examined. Finally, contextual factors also play a role, as when the association between individual differences (e.g., SDO, or ITG-DS) and prejudice varies as a function of manipulated threat, emotions, or contact (e.g., Choma et al., 2012; Costello & Hodson, 2011; Hodson, Dube et al., 2015). Such research explicitly acknowledges that overlap between constructs is not necessarily static but contextually malleable.

Closing remarks

In discussing the importance of a person-based understanding of prejudice, we have argued that the theoretical impasse between approaches favouring the person or the situation is both sizeable yet unnecessary (Hodson, 2009). Our goal is not to argue that one side is correct and the other incorrect; any such interpretation would be a misreading of our central message. Instead we have presented contemporary evidence that a range of individual differences matter to prejudice, against a backdrop of theorising that has minimised their role and relevance over the past 45 years or so. New tools and statistical methods are uncovering evidence that factors such as genetic influences and unique (not shared) situational experiences are far more important than was previously imagined. The future of prejudice research arguably lies in the joint recognition of both factors, as per our discussion of Person (P) × Situation (S) interactions above (see Figure 6).

As illustrated in our opening quotation, Henri Tajfel, commonly upheld as a pioneer for the "social" side of intergroup research, never intended for the person to be ignored or dismissed, even in salient social contexts. In closing, we draw insights from one of the field's other great conceptual pioneers, Gordon Allport (1954). His seminal book *The Nature of Prejudice* emphasised social factors such as intergroup categorisation, cultural plurality, intergroup contact, and child-rearing practices, but several chapters were devoted to characteristics of the prejudiced person. He concluded a personality chapter with the following observation:

> . . . the basic fact is firmly established—*prejudice is more than an incident in many lives; it is often lockstitched into the very fabric of personality* [italics added]. In such cases it cannot be extracted by tweezers. To change it, the whole pattern of life would have to be altered. (p. 408)

Some of the field's past de-emphasis of person-based factors is presumably rooted in the belief that, if prejudice is deeply located and "inter-stitched" within the person, there is little avenue for recourse. Although people differ systematically from one another in prejudicial expressions (see Table 2), we see promise in prejudice interventions, especially intergroup contact, that target elements (e.g., anxiety, threat, distrust) fuelling these person-based roots of prejudice. A fuller understanding of the nature of prejudice (and efficacious interventions) arguably considers the person, the situation, and their interaction, in shaping intergroup perceptions and reactions.

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