INDIVIDUAL DIFFERENCES, REMEMBERED PARENTING STYLES AND PREFERENCE FOR GROUP–BASED HIERARCHY: AN INVESTIGATION INTO PREDICTORS OF SOCIAL DOMINANCE ORIENTATION

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Declaration:

No portion of the work referred to in the dissertation has been submitted in support of an application for another degree or qualification of this or any other university or other institute of learning.

Copyright and ownership of intellectual property rights:

List of abbreviations:

SDO Social Dominance Orientation

RWA Right-Wing Authoritarianism

RPS Remembered Parenting Styles

AR Authoritarian Parenting

PI Permissive-Indulgent Parenting

AV Authoritative Parenting

PN Permissive-Neglectful Parenting

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Abstract

Social Dominance Orientation (SDO), a general preference for group-based dominance, is a robust predictor of various measures of prejudice with an extensive base of supportive literature. However, gaps in understanding exist on the familial, particularly, parental socialization associations to SDO. In keeping with this supposition, it was theorized that the parent-child relationship is related to later SDO levels in young adult children. Accordingly, Remembered Parenting Styles (RPS) was examined in conjunction with selected demographic SDO correlates (age, gender, ethnicity and education level) plus a short-form measure of personality traits (BFI) to investigate the relationship between childhood and adolescent rearing experiences and SDO. Two hundred university-aged students, consisting of 131 females and 69 males with an average age of 22.8 years, completed the anonymous online questionnaire. Results for the most part confirm previous findings for personality, education, gender and age, although ethnicity presented an unexpected relationship to SDO. In addition, results revealed a significant positive relationship between permissive-indulgent parenting styles and SDO, suggesting that the parent-child relationship is related to young adult SDO levels. The implicated confluence of individual, familial and societal factors is discussed through a comparison to previous literature. A brief examination of limitations and further opportunities for research conclude the report.

Individual differences, remembered parenting styles and preference for group-based hierarchy: An investigation into predictors of Social Dominance Orientation

1. Introduction

In exploring the nature of prejudice, current analysis places the locus of origin within either personal dispositions, reflected in social attitudes, or exterior social factors (Katz, 2003). Social Dominance Orientation (SDO) represents one of the key factors in the prediction of prejudice from the former category with a multitude of support (Adelson & McFarland, 1996; Birum, Du Plessis, Duckitt, & Wagner, 2002). Pratto and Sidanius' psychological measure of SDO, formulated from Social Dominance Theory (SDT), is conceptualized as a predilection towards group inequality and social dominance, whereby individuals registering highly on the scale are also observed to hold prejudiced and anti-egalitarian beliefs and values (Pratto & Sidanius, 1994; Chatard & Selimbegovic, 2008). In addition, SDO is a powerful predictor of various forms of prejudice such as sexism, xenophobia and racism as well as discrimination (Akrami & Ekehammar, 2006; Egisdottir & Whitley, 2000; Levin, Pratto & Sidanius, 2006).

The pioneering theorists' most recent expositions on SDO, which present both original and current studies, will be referred to throughout the text of this report and indeed, the majority of background information on SDO can be found within their pages (Pratto & Sidanius, 2001; Levin, Pratto & Sidanius, 2006). The history and theoretical underpinnings of SDO will be addressed briefly as it is this background that informs current research in the area. Relevant studies on demographic, personality as well as familial factors will be put forth in order to glean insight on the most recent areas of empirical research in due course.

1:1 Aims and rationale

The primary purpose of the study was to launch an exploratory investigation of the hypothesized involvement of RPS in the significant predictor of prejudice, SDO, developed by Sidanius, Pratto and colleagues (Bobo, Pratto & Sidanius, 1996; Levin, Pratto & Sidanius, 2006; Mitchell & Pratto, 1994; Pratto & Sidanius, 1994, Pratto, Sidanius & Stallworth, 1994). Specifically, the nature of the relationships between RPS and young adult levels of SDO were examined in combination with age, gender, ethnicity, education level, and personality. The grounds for such exploration centers on the dearth of research into developmental factors associated with SDO, whilst researchers acknowledge that this is a vital area of inquest (Duriez & Soenens, 2006; Pratto & Sidnaius, 2001).

Past inquests into the construct have focused primarily on a few significant areas of SDO, primarily, that of group status in addition to policy preferences (Levin, Pratto & Sidanius, 1996; Levin & Sidanius, 1999; Mitchell & Pratto, 1994; Pratto, 1999; Pratto & Sidanius, 2001). While research along these lines is useful, the hypothesized interaction of socialization and temperament has been relatively neglected (Pratto & Sidanius, 2001). Interestingly, this paucity is in opposition to the substantive amount of literature on the parental influence of a similar instrument for the prediction of prejudice, Altemeyer's Right-Wing Authoritarianism (RWA), with authoritarian parenting styles repeatedly linked to its presentation (Altemeyer, 1996; 1998; 2003; Knafo, 2003). Additionally, value transmission, prosocial or anti-social behaviours and political orientation have been studied more expansively in recent years with regards to parental correlates like parenting styles and practices, though this area is also limited (Assor & Kanat-Mayman, 2010; Chartard & Selimbegovic, 2008; Clark, Jeglic & Schaffer, 2009; Duriez, Goosens, Soenens & Vansteenkiste, 2007; Pena & Sidanius, 2003; Rohan & Zanna, 1996). As Rohan and Zanna

state, examinations into familial influences on socially undesirable behaviours like prejudice are vital for the disruption of the replication process. Likewise, inquest into perceived parenting, that has proved to be highly related to values transmission in children, can shed light on this damaging element of personal disposition (De Vries, Jaspers & Lubbers, 2008).

2. Literature Review

Initially when studying SDO, like other value orientations, it was important to establish both the robustness and uniqueness of the construct, so as to distinguish it from related scales like RWA. SDO has proven itself in this regard over extended research conducted worldwide for the past 15 years (Levin, Pratto & Sidanius, 2006). In reviewing the seminal work by Sidanius and Pratto (1994), one of the areas they highlighted as necessary for furtherance of the understanding of SDO was to identify potential developmental factors associated with support for hierarchical groupings in social structure. Since that preliminary call, very few studies have ventured into this area (Chatard & Selimbegovic, 2008). Duckitt (2001) proposed a model whereby tough-mindedness, ruthlessness and related characteristics exhibited in SDO could develop as a result of unresponsive parenting with initial supportive results. Replication of this finding, however, is limited and often contradictory (Koelva & Rip, 2009). Likewise, Chatard and Selimbegovic looked at the intergenerational transmission of social dominance between grandparents, parents and children (in their early adulthood) and found high intergenerational congruence, although the nature of these interactions was not examined. It is for the aforesaid reasons that the present study examines the parent-child dynamic and its relation to SDO. To begin, current research on SDO in general, and its relations to age, gender, ethnicity, personality, and parenting will be elucidated.

2:1 Overview of SDO

Previously, SDO was defined as an individual's preference for group-based social hierarchical structures (1994). SDO is now viewed as the extent to which one is supportive of hierarchical group relations in general (Pratto & Sidanius, 1999). This personality variable is embedded within the greater social psychological theory, SDT, which describes why human society maintains and perpetuates oppressive group-based hierarchical structures (Haley & Sidanius, 2005). SDO, a controversial proposition 15 years ago, has since gained an abundance of empirical support and been reproduced across multiple cultures (Levin, Pratto & Sidanius, 2006). This instrument captures broad social attitudes and beliefs and reflects an individual's tendency to support disparity between social groups. It reliably predicts various forms of prejudice (Altemeyer, 1998; Arad & Lippa, 1999; Duckitt, 2001).

Past inquests into prejudice have focused on the search for personality constructs related to holding prejudicial attitudes or engaging in discrimination like those of Adorno's *F-Scale* (Adorno, Frenkel-Brunswick, Levinson & Sanford, 1950) or Altemeyer's RWA (1981; 1988; 1996; 2003). Here, prejudice can be defined as the holding of negative inter-group beliefs such as nationalism, ethnocentrism, "cultural elitism", racism, sexism and heterosexism (Pratto & Sidanius, 1994; Pratto, Sidanius & Stallworth, 1994). Of the many individual difference measures used to predict prejudice, SDO, along with RWA, is recognized as the most critical by contemporary researchers (Duckitt, 2001; Fishbein, O'Bryan & Ritchey, 2004; Heaven & Quintin, 2003; Levin & Sidanius, 1999). Moreover, SDO has proven to be the strongest correlate in most forms of prejudice or the rejection of out-groups (Heaven & Quintin, 2003).

Duckitt and Sibley (2008) have suggested SDO is an indicator of the extent to which one views the world as a competitive environment where it is necessary to compete for resources; hence, those who score high on SDO value dominance, power and superiority over others. This is contrasted to RWA that serves as an indicator of the extent to which a person values order and the world is viewed as a fearful place, thereby perceiving different groups as threatening. It is critical to highlight the differences here, as RWA and SDO together predict the vast majority of variance in prejudice, yet each is an independent robust construct in its own right (Altemeyer, 1998). RWA and SDO have variable relations with most samples indicating either a weak positive or negligible correlation (Duckitt & Sibley, 2008).

Contemporary research and theory view RWA and SDO as the two components of authoritarianism (Duckitt & Sibley, 2007). In this regard, RWA is the authoritarian submissive aspect while SDO is the dominance complement (Chatard & Selimbegovic, 2008). Scholars suggest that the two constructs are rooted in different motivational processes and socialization histories (Birum, du Plessis, Duckitt & Wagner, 2002; Duckitt, 2001; Duckitt & Fisher, 2003). Individuals high in RWA require order and structure, and seek out strong leaders to whose authority, seen as rightful, they willingly obey. Conversely, SDO refers to an attitudinal orientation approving of social hierarchies and anti-egalitarianism (Chatard & Selimbegovic, 2008). High SDO individuals are "dominant, aggressive, exploitative and prejudiced; they have little sense of morality, cooperation, and sympathy" (Chatard & Selimbegovic, 2008).

Individual people possess varying levels of desire and support for group-based hierarchy and dominance of 'inferior' groups by 'superior' groups (SDO) (Pratto, 1999). Broadly stated, the factors that contribute to this need for hierarchy are group status,

socialization and temperament (Bobo, Pratto & Sidanius, 1996). For instance, group status was positively related to SDO whether it was operationalized as gender, ethnicity or sexual orientation (Pratto & Sidanius, 2001). SDO has been linked to intolerance towards a variety of low-status groups, including women, people of low socio-economic status, Blacks, Hispanics, Asians, Hispanic and Black civil rights groups and homosexuals (Mitchell & Pratto, 1994). It has been found to correlate with a number of group stratification *legitimating ideologies* or beliefs such as: racism/ethnic prejudice, sexism, nationalism, cultural elitism, patriotism, Protestant work ethic, and the rejection of the noblesse oblige (Levin, Pratto & Sidanius, 1996). More so, it has been linked with attributing poverty to the internal failings of poor people, rejecting the role of external factors (Levin, Pratto & Sidanius, 2000) and of holding capitalistic values (Rohan & Zanna, 1996). High scoring SDO individuals have been characterized as endorsing social competition with emphasis placed on winning at any cost, are more likely to pursue hedonistic goals and show minimal concern when such goals conflict with the interests or desires of others (Duckitt & Sibley, 2008).

Interestingly, SDO has not been linked to cognitive complexity, traditionalism, spirituality, conformity, education level, and intelligence, which reflects the complex multidimensional nature of the construct (Duriez, & Soenens, 2006; Duriez & Van Hiel, 2002). A recent meta-analysis established that SDO is systematically linked to differences in certain personality characteristics as captured by factor analysis of various Big Five inventories (Duckitt & Sibley, 2008). These and other individual differences will be referred to in relation to SDO.

2:2 SDO and age, gender, ethnicity, personality and parent-child relationship factors

Age. With respect to age differences in SDO, a fraction of the results suggest that young adults show higher levels versus their seniors although this is often not the case; SDO is primarily unrelated to age (Adelson & McFarland, 1996; Kupper & Zick, 2010; Pratto & Sidanius, 2001). This study has chosen to include university-aged students (18-35 years), as this is the age range that the majority of research has been conducted upon and that aligns with the other age-ranges for validated measures of personality and remembered parenting styles. Additionally, as ideological beliefs are still in formation in adolescence and young adulthood (De Vries, Jaspers & Lubbers, 2008), there are no reliable scales to measure SDO in childhood and early adolescence although this is a worthy area of exploration.

Gender and ethnicity. Differential responding to SDO items due to group membership has been widely reported (Heaven & Quintin 2003; Levin, Pratto & Sidanius, 2000; Pratto & Sidanius, 2001). Essentially, those who occupy positions in higher-status groups display higher SDO scores regardless of how group status is operationalized (e.g., gender, ethnicity). Heaven and Quintin (2003) found that certain individual features had a differential effect for diverse "out-groups" under distinct conditions. For instance, men displayed more negative attitudes to Asians than females, SDO scores increased when national identity was salient and scores had a unique impact on attitudes towards Aborigines. Members of ethnic minority groups report lower SDO scores than dominant group members (Pratto & Sidanius, 2001). Researchers have consistently established that a gender effect is found in responding with males outscoring females (Egisdóttir & Whitley, 2000; Levin, Pratto & Sidanius, 2006; Whitley, 1999).

The higher scores exhibited amongst males has been one of the most reproduced findings in the literature on SDO; a discrepancy that Pratto and Sidanius argue exists both across culture and time (2001). However, recent controversy over the proposed explanation of this differential between the genders calls the original sociobiological stance into question. The original authors believe that the evidence of the gender incongruence across time and cultures is best explained by conferred advantages in reproductive strategy and child care (Sidanius & Pratto). Rather, literature in the past half decade has shown that these gender differences in SDO may be attributable to social factors such as gender roles, gender identity, and group-interested responses to patriarchy (Foels & Reid, 2010; Schmidtt, 2009; Snellman, 2009).

Gender is further confounded with social status (Bourg & Ridgeway, 2004) plus values and characteristics associated with masculinity and femininity (e.g., power and benevolence). The aforementioned variables and others including cognitive complexity, which is typically higher in those of lower social standing, mediate the link between gender and SDO (Caricati, 2007; Foels & Pappas, 2010). Once these variables are controlled for, gender differences are no longer evident. That being the case, a newer framework for the study of SDO treats gender as reflecting effects of different social structural relations, and sees both genders as capable of displaying varied and overlapping responses (Rashotte & Webster, 2009). One such example is found in the compelling findings of the reverse gender gap in a German study (Kupper & Zick, 2010). Unexpectedly, analyses revealed that women displayed higher SDO levels than men. The authors interpreted results on the basis of biocultural interaction, which integrates the sociobiological, social role, and self-construal perspectives. It was hypothesized that older women were exposed to certain cultural features within Germany such as the "agentic female social role in the post-war era necessitated by

the absence of men" (Kupper & Zick, 2010). It is imperative to state at he outset that the scope of the present study cannot account for cultural differences in gender roles that include child-rearing practices and gendered self-stereotyping, thus, interpretation of results is limited in this regard. That notwithstanding, for the above mentioned reasons, gender and ethnicity are pertinent variables that should be included.

Personality. Predominantly, research in prejudice and personality has been rather fragmented with personality and prejudice measures not incorporated within the same framework (Akrami, Ekehammar, Gylje & Zakrisson, 2004). However, an integrated approach that places all the factors within the same model shows that the Big Five personality traits have no direct effect on generalized prejudice when conceptualized as the tendency to respond with prejudice toward any outgroup (Duckitt, 1992). Akrami, Ekehammar, Gylje and Zakrisson (2004) observed an indirect effect transmitted through RWA and SDO, where RWA seemed to capture certain personality aspects to a greater extent in a Swedish sample of university students. The measures for prejudice included *The Modern Racism Scale* and *The Modern Prejudice toward Mentally Disabled Persons Scale* and the personality was assessed using the *Big Five Inventory (BFI).* Specifically, generalized prejudice was affected indirectly by Extraversion, Openness to Experience, and Conscientiousness through RWA, and by Agreeableness through SDO, whereas Neuroticism had no effect (Akrami, Ekehammar, Gylie & Zakrisson, 2004).

In their recent meta-analysis of 71 studies on prejudice and personality traits, Duckitt and Sibley found that SDO was negatively related to Openness to Experience and Agreeableness with the latter having a moderate effect size and the former having a small effect size (2008). This is in support of the preceding study by Akrami and colleagues,

echoing a general trend that the genesis through which Openness to Experience is primarily related to SDO operates via RWA. Furthermore, the meta-analysis also concluded that the other three factors' relationships were negligible to SDO (2008). This finding was further replicated in a study on the subclinical grouping of 'darker personalities' comprised of narcissism, Machiavellianism and psychopathy, as it related to prejudice and SDO (Hodson, Hogg & MacInnis, 2009). A two-stage structural equation model assuming indirect personality effects on prejudice found a latent Dark Personality factor predicted SDO, whereas low Openness to Experience predicted RWA (Hodson, Hogg & MacInnis, 2009). The Big Five model indicates that Openness to Experience and Agreeableness are both negatively related to SDO but with alternate pathways. The above-mentioned outcomes provide evidence for the importance of including Big Five personality factors in a study of SDO.

Parental factors. Diverse parental features like attitudes and value orientations are passed down to children in widespread ways, thus it is argued that global parenting style should impact future attitudinal orientations towards how the world operates (Duriez, Goossens, Soenens & Vansteenkiste, 2007; Hart, Newell & Olsen, 2003; Serbin & Stack, 1998). The family socialization perspective views parenting behaviour as multidimensional, consisting primarily of the areas of parental control and support that are critical to a child's development (Baumrind, 1967; 1989; Maccoby & Martin, 1983). Socialization theories give importance to the transmission of values, beliefs, traditions and attitudes from parents to their children, both through deliberate actions and reactions, and through non-verbal communication and examples (De Vries, Jaspers & Lubbers, 2008). The heart of socialization takes place during the 'formative years', which occur during adolescence by most accounts (Alwin & Krosnick, 1991; Jennings & Niemi, 1978). The attitudes that teenagers are

socialized with then remain constant over their lifespan due in part to environmental continuity (Miller & Sears, 1986). Much attention has been placed on socialization as it represents the source of continuity between generations and can therefore act as a buffer for social change (De Vries, Jaspers & Lubbers, 2008).

Recent research has shown that part of the parent-child concordance in social attitudes can be attributed to genetic factors (De Vries, Jaspers & Lubbers, 2008). This second perspective on intergenerational similarities in attitudes puts forth the proposal that children inherit their parents' structural positions (Hello, 2003). These inherited positions include educational attainment; proven to be an important predictor of many attitudes (Altemeyer, 2003; Jelen & Wilcox, 2003). To unpick the complex interaction between inherited and socialized parental factors is a challenge; nevertheless, research suggests a significant portion of the variance in socio-political attitudes is accounted for by environmental factors (Duriez & Soenens & Vansteenkiste, 2007). It is thus assumed that "social developmental processes, and parenting in particular, represent an important course of influence" for the development of SDO (Duriez, Soenens & Vansteenkiste, 2007).

Primary caregivers are key social influences who contribute to children's representations of how the world works and later adoption of values and behaviours through identification, imitation and internalization (Aronson, 2008)**.** In terms of the conceptualization of parenting behaviour, Baumrind's view of three parenting styles consisting of authoritarian (AR), authoritative (AV) and permissive were revised by Maccoby and Martin (1983) who found that permissive-indulgent (PI) and permissive-neglectful (PN) (also known as permissive-indifferent or uninvolved) typologies better represent the permissive dimension. Recent inquests have linked these parenting styles to an array of adult

behaviours, personality dimensions and attitudes (Cooney, Shin An & Rothrauff, 2009). Parents play a key role in the prediction of various behavioural outcomes and orientations (Barber & Oslen, 1997) with primary bonds impacting relational conceptualizations, values and worldviews amongst other characteristics exemplified by sense of self-worth, security, and greater psychological well-being (Cooney, Shin An & Rothrauff, 2009; Hazan & Shaver, 1987).

Literature on socialization holds that parental support is comprised of both the degree to which parents provide a basic need for relatedness in addition to the need for autonomy (Duriez, Goosens, Soenens & Vansteenkiste, 2007). The combined construct formed from these two dimensions is labeled need supportive, parental warmth or *responsiveness* (Bernstein, Deci, Lynch, Niemiec, Ryan & Vansteenkiste, 2006) and is positively associated with various adjustment indicators including self-esteem and social competence (Maccoby & Martin, 1983; Bernstein et al., 2006). Adolescents who experience an affectionate, responsive and personal relation with their parent(s) possess high parental need support, whereas those low in this area experience intrusive and manipulative parenting techniques such as love withdrawal and guilt-induction (Duriez, Soenens & Vansteenkiste, 2007). It is the child's perception of their relationship to their parent(s) that is most important for value transmission (Bao, Conger, Hoyt & Whitbeck, 1999). If the relationship is thought to be negative, the child may react against their parent's values hence the transmission of attitudes will be most probable in these caring circumstances (De Vries, Jaspers & Lubbers, 2008). Accordingly, perceived parental responsiveness is related to parent-child similarity in the beliefs that children later develop (Rohan & Zanna, 1996). Duckitt (2001) states that a lack of parental need support should predict SDO because this parenting style would make

individuals tough, ruthless, unfeeling and cynical, all of which apply to individuals who are social dominators, although this remains unclear (Koleva & Rip, 2009).

Of particular relevance to this study, research has demonstrated significant parent-child concordance in prejudice and transmission of intolerance (Dunn, Lowery & Sinclair, 2005; Fishbein, O'Bryan, & Ritchey, 2004; Serbin & Stack, 1998). One example is the observation that RWA's tend to also be AR parents (Altemeyer, 2003; Rohan & Zanna, 1996). ARs have been characterized as high in the second parental dimension of *demandingness* and low in responsivity to their children (Maccoby & Martin, 1983). Table 1 displays the breakdown of parenting style by these dimensions.

Table 1

Parenting styles categorized by the dimensions of responsivenss and demandingness

Parenting Style Dimensions	**Low Support/ Responsiveness**	**High Support/ Responsiveness**
Low Control/ Demandingness	Permissive-Indifferent/Uninvolved	Permissive-Indulgent
High Control/ Demandingness	Authoritarian	Authoritative

Note. As described by Rohan & Zanna (1996)

Interestingly, physical punishment is shown to be unrelated to RWA but harsh AR child rearing is related to a later ego-defense against inadequacy and vulnerability (Altemeyer, 1998). In a study comparing retrospective perceptions of parenting of male and female inmates and non-inmates, the former reported higher incidences of both AR and permissive parenting and lower incidences of AV parenting (Chipman, Frost Olsen, Hart, Klein & Robinson, 2000). Furthermore, adolescents high in power values with AR fathers were two and a half times more likely to report having engaged frequently in bullying,

compared with their peers (Knafo, 2003). Correspondingly, in his simulation on how adolescents would "run the world" if they had the ability, Altemeyer (2003) found that the individuals who scored highly on SDO were power-hungry dominators who tended to elect themselves as leaders, who would ostensibly make the world more violent. Finally, SDO itself was linked to increased anti-social and dominating behaviours in youth raised by AR fathers (Knafo, 2003).

With respect to parenting and ethnicity, there are examples of dissimilarities in parenting correlates across cultures and subpopulations (Crockett, Driscoll & Russell, 2008). For instance, AV parenting is only associated with improved academic performance only among European Americans (Darling & Fletcher, 1995). Chao (1994) argues that observed ethnic differences in the association of parenting style with child outcomes may be due to differences in social context, parenting practices, or the cultural meaning of the dimensions. Correspondingly, Markus and Kitayama (1997) argue that parenting styles are responsible for the transmission of cultural values and practices. Studies reveal that the different parenting styles of AV, AR, and permissive approaches appear across both individualistic and collective cultures although in disparate proportions (Sorkhabi, 2005). What is more, it is unclear as to whether daughters and sons are socialized in a similar manner with equivocal results for value transmission differences by gender (De Vries, Jaspers & Lubbers, 2008). It is therefore tenable that ethnic and gender dissimilarities in parenting factor into the differences in SDO and should be examined.

2: 3 Assumptions

-Prejudice is a result of stable factors within an individual and those factors linked to the world such as group membership

-SDO is a reliable, robust, unitary construct independent of other measures

-Parenting style can be conceptualized as consisting of four distinct styles

-Remembered parenting styles are related to the transmission of values from parent to child

2:4 Summary

As one can see, a number of discrepancies and inconsistencies exist in the investigation of SDO and the factors implicated in its expression. That SDO is a unique robust construct capable of predicting prejudicial beliefs in individuals is evident. Despite this, the literature regarding the contributory factors towards SDO has been quite the opposite, save for personality and group membership features such as ethnicity and gender. Even scarcer are investigations into the contextual elements like parenting effects and values transmission in relation to SDO. This study, therefore, aimed to contribute data concerning probable predictive factors of SDO through the incorporation of a comprehensive perceived parenting measure, along with personality and demographic features using a diverse sample.

2:5 Research questions

Principally, this study employed forced entry multiple regression analysis in attempt to produce a predictive model for SDO that was assessed for appropriateness of fit. As well, personality as measured by the *Big Five Inventory* (BFI), age, gender, ethnicity, education level, and the four styles of parenting (falling under: Authoritarian (AR), Authoritative (AV), Permissive-Indulgent (PI) and Permissive-Neglectful (PN) as captured by the RPS) were assessed in both their correlation and relative contributions to the prediction of SDO. The purpose of the study was to analyze participants' scores on the various measures in an attempt to develop a regression equation for SDO, and to determine the relative weight of each. Specifically, the research questions addressed were as follows:

RQ1: What are the bivariate correlations between the predictors?

RQ2: Can a predictive model for SDO be made using RPS, BFI and the selected demographic variables of age, ethnicity, gender, and education level?

RQ3: What are the relative contributions of each variable to the prediction of SDO?

In regards to the previous literature, the study aimed to investigate the following associations:

1. Based on extensive studies by Pratto, Sidanius and colleagues, males will have higher SDO scores than females, education and age will be uncorrelated to SDO and ethnic minorities will exhibit lower SDO scores than their Caucasian counterparts (1994; 2000; with Levin, 2006).

2. Based on their meta-analysis of 71 studies (Duckitt & Sibley, 2008), we can expect the following Big Five factor personality relationships to SDO: a significant negative correlation will exist between Agreeableness and SDO with a medium effect size, Openness will also be negatively related to SDO with a smaller effect size, and Neuroticism, Conscientiousness and Extraversion will have negligible associations with SDO.

3. Based on parenting style and prejudice studies (Altemeyer, 1998; 2003, Knafo, 2003; Rohan & Zanna, 1996), there will be a positive correlation between SDO and AR mothers and fathers. Due to the lack of research in the other three parenting styles with respect to prejudice and SDO specifically, no predicted relationship can be stated. From reviewing the literature, it is unclear as to what relationships will be observed between the other three measured parenting styles and SDO explicitly, such that a conclusive directional hypothesis cannot be made.

3. Methodology

3:1 Design

The study conducted was correlational in nature. The predictor variables were age, gender, ethnicity, education level, Big Five factor personality traits (Openness to Experience, Conscientiousness, Extraversion, Agreeableness, Conscientiousness) as measured by the BFI, and RPS for mother and father. The outcome variable of interest was SDO.

Previous studies in this area has required participants to fill-out anonymous short-form questionnaires deemed to be the most reliable method for investigation of personality and prejudice (Altemeyer, 1996, 1998, 2003; Duriez & Van Hiel, 2002). As Bonilla-Silva documents, in qualitative studies college participants displayed incoherence in communicating values or discussing inequality or other issues of a socially-culturally sensitive nature, rendering information exceedingly difficult to interpret (2002). Furthermore, he states that qualitative in-person interviews are not valid and often unreliable for measuring prejudice for a number of reasons, not the least of which includes social desirability effects and researcher biases. It is for this reason that anonymous measures of fixed answer format are most often employed in studies of this type (Altemeyer, 1996). An anonymous online survey with fixed answers in short-format decreases researcher effects of in-person tasks, lowers demand effects in regards to socially desirable responding, provides a large sample size necessary for subsequent quantitative analysis and protects against participant attrition. In addition, Internet delivery enables a relatively diverse large sample to be recruited with minimal requirements, risks or commitments from participants.

3:2 Participants

Participants were recruited in convenience sampling via an online advertisement for research volunteers through the University of Manchester as well as the Online Psychology Research UK website (Gardner, 2010)[1]. Once the requirement for speaking English for at least ten years was set as a filter (nine respondents' questionnaires were removed), there were 200 participants comprised of 131 females (65%) and 69 males (35%) with an average age of 22.8 years with a range of 18-35 years. The means and standard deviations of participants' scores are indicated in the Appendix. This number of participants was seen as sufficient by taking into account the necessary number to yield appropriately powerful results from a regression analysis utilizing eleven variables (minimum of 138)(Green, 1991).

3:3 Measures (Copies included in Appendix)

Demographic Questions:

1. Have you spoken English for at least ten years? Yes/No.

2. What is your age: ____.

3. What is your gender: ____.

4. Please indicate your ethnicity: _____.

5. Please indicate your highest level of education: Secondary School, Technical/Apprenticeship, Undergraduate Degree, Postgraduate Degree.

Education level was broken into additional components beyond university degree versus high school diploma as Haaramo, Jasinskaja-Lahti and Liebkind (2000) point out that in the search for possible effects, multiple levels are necessary.

[1] Copy of participant information in Appendix

Big Five Inventory (BFI) **(Donahue, John & Kentle, 1991)**

Although there are many ways to measure personality (e.g., IPIP (Goldberg, 1999; NEO-PI-R, Costa & McCrae, 1992), due to the study being entirely voluntary and restricted in length only one instrument was included in this study. The BFI was chosen because it identifies a broad set of personality facets that capture a variety of traits in a short fixed-format, which is straightforward to complete and administer and has been consistently used in the measure of prejudice (Duckitt & Sibely, 2008). The BFI has been found to be reliable and valid across ethnic groups and cultures and includes age-specific norms (Cross & Worrel, 2004). A common measure of personality traits, the inventory captures the five broad dimensions of personality traits, which are: Extraversion (includes specific traits like talkative, energetic and assertive), Agreeableness (includes sympathetic, kind and affectionate), Conscientiousness (includes organized, thorough and planful), Neuroticism (encompasses traits like tense, moody and anxious), and Openness to Experience (includes traits like insightful, being imaginative and having wide interests) (Gosling, 2010). The Big Five factors were derived from statistical analyses of which traits tend to co-occur in self-descriptions or ratings of others. It should be noted that even a very comprehensive profile of an individual's personality traits represents only a partial account of their personality. Other units that are included within the broader term of personality include emotions, attitudes, abilities, self-concepts, social roles, autobiographical memories and life stories (Gosling, 2010).

This multidimensional measure was rated by participants in a Likert scale response (*strongly disagree* to *strongly agree*) to the prompt: 'I see myself as someone who ____', for 44-items total (e.g. 'Is full of energy', 'Is inventive'). Scoring instructions include the break

down for reverse-coded items. Cronbach's alphas for the BFI were .83 for Openness, .81 for Conscientiousness, .78 for Extraversion, .81 for Agreeableness, and .79 for Neuroticism.

Remembered Parenting Style (RPS) **(Rohan & Zanna, 1996)**

This is a retrospective perception of parenting scale constructed by Rohan and Zanna in their study of the transmission of values between parents to their young adult children (1996). Two common dimensions of parenting style include responsiveness (warmth) and demandingness (control). On this particular scale, a parent can be rated as high or low on each axis, thus producing four parenting styles. It is important to note that the scale represents not the actual parenting style but rather how young adult and adult children perceived their parents. A perceived parenting measure for completion by (young) adults was chosen (rather than directly measuring parenting style) as previous studies have shown these to be a more reliable and valid measure (Bao et al., 1999; Duriez, Soenens & Vansteenkiste, 2007). An additional strength lies in the use of the empirically supported four parenting style model of Maccoby and Martin (1983). This scale was validated on a similar demographic sample to the present study and was additionally utilized by Knafo (2003) in a study requiring the four parenting style model.

Participants rated four parenting style prototypes, indicating which best described their mother and father separately via one option format (*'Please indicate which description most accurately describes your mother/father'*). The four prototypes consisted of a paragraph-length description of AR, AV, PI and PN, were counterbalanced and labeled as Parent Type A,B,C,D. Below is an example of the *Authoritative Parent Prototype.* Please refer to Appendix for remaining vignettes.

My mother sets clear standards for me. She expects me to do what she says, and she explains the reasoning behind her requests and decisions. She listens to my opinions, and she will give me what I ask for or want if she thinks it is reasonable. She believes in having firm control, but she does not overload me with rules and restrictions. She will admit to her mistakes and she is loving and supportive. She thinks it is important for me to be both happy and productive. She wants me to be independent and assertive as well as respectful, and be able to fit in with others.

***Social Dominance Orientation (SDO[6])*(Pratto & Sidanius, 1994)**

Participants rated a 16-item SDO; (e.g. 'It's sometimes necessary to step on others to get ahead in life', 'Group equality should be our ideal') on a five-point Likert scale anchored by *Very Negative* to *Very Positive*. Accordingly, scores were converted to values (1-7) for scoring. The measured Cronbach's alpha was 0.86. The SDO scale has been found to have high degrees of reliability and construct validity across cultures and diverse sample groups beyond adolescence (Pratto et al., 1994; Pratto, 1999).

3:4 Procedure

Participants were recruited via online advertisement referred to above. The data were collected over a two-month period from April 2010-June 2010. Informed consent was provided in the first page of the six page online questionnaire[1]. Voluntary participation was outlined and consent was inferred if participants completed the study. The right to withdraw via: 1) incompletion of the study or 2) upon completion of the study by notification was stated within the participant information page. Participants were then guided throughout the questionnaire (e.g. Please indicate your ethnicity below…') with separate pages for

[1] Copy of participant information in Appendix

demographics and each scale, plus pages for information. Appropriate debriefing components were included within the online format. The online questionnaire in its entirety took approximately ten minutes to complete and was filled out by participants in the environment of their choice. Participants were offered the option of being contacted for results from the study[2].

3:5 Ethical Considerations

The study was carried out in line with ethical guidelines as set out by the University of Manchester's ethical principles for conducting research with human participants. The study was granted ethical approval by the Ethics Committee of the University of Manchester. Participants were assured of the full anonymity and confidentiality in participation that would be maintained throughout the research process. Information on informed consent including the ability to withdraw at anytime, the nature of the study, avenues for further inquiry into the research and its conduct, in addition to further resources for participants was provided. Data was kept under password-protected files and destroyed after completion of the study. A follow-up email with results from the study was offered to participants who elected to reveal their email contacts for this purpose.

[2] Copy of participant debrief in Appendix

4. Results

The intention of this study was to investigate the relationship of the predictor variables to SDO. The research questions addressed: 1) the bivariate correlations between the predictors and SDO, 2) whether a predictive model could be constructed from multiple regression analysis using RPS, BFI, ethnicity, gender, educational level, and if so, 3) what were the relative contributions of each predictor to SDO. Firstly, the descriptives will be presented followed by the inferential statistics addressing the research questions.

Scores on the original eleven predictor variables (age, gender, ethnicity, education level, BFI factors of Openness to Experience, Conscientiousness, Extraversion, Agreeableness, and Neuroticism), RPS Mother, RPS Father) and the dependent variable, SDO, were calculated for each participant (N= 200). Missing scores were excluded by casewise pairings. Prior to testing, the statistical significance was set at the conventional value of p= .05. This study enlists the widely used effect-size conventions for r proposed by Cohen (1988), where values of less than .10 represent weak effects, r values of approximately .25 represent moderate effects, and those approximating .40 or higher represent strong effects.

Initial screening of data involved assessment for suitability in parametric analyses (e.g., homogeneity of variance, normality) to determine if predictor and outcome variables fulfilled the four parametric requirements. Nominal variables (e.g., ethnicity, education, RPS) were converted via dummy coding to binary format to produce scale level data, thus allowing for inclusion in parametric testing and regression analyses. Additionally, data screening revealed a small number of outliers, which were included in the analysis, as none were outside two and a half standard deviations (Appendix G). Additionally, normality and

variance statistics are presented in Table 2. This initial treatment of the data revealed that all variables fulfilled the requirements of parametric testing.

RPS scores were reformulated to create a new variable of *Absolute RPS*, signifying at least one parent displayed the parenting style in question. In line with Rohan and Zanna (1996), this variable allowed for the additional comparisons of the impact between parenting styles on SDO.

4:1 Descriptive statistics

Measures of central tendency in terms of the mean and standard deviation, variance and normality for the variables are presented in Table 2. Females comprised 65% of the sample. Of the 200 participants, 65% indicated Caucasian ethnicity, 8% East Asian ethnicity, 4% *mixed ethnicity* (indicated more than one ethnic background), 9% *other ethnicity* (not falling into the other three categories), and 14% chose not to indicate their ethnicity. For the highest level of education, 49% of respondents selected secondary school, 35% undergraduate, 14% postgraduate, and 4% technical or apprenticeship training. In order of descending means of BFI factors, the sample scored highest in Openness, then Agreeableness, Conscientiousness, Neuroticism and lowest in Extraversion.

The most common RPS for mothers was AV (females 54%, males 47%), and then PI (25%, 25%), AR (14%, 24%), with PN being the least reported (7%, 2%). For fathers the most common RPS was AV (45% females, 38% males), AR (21%, 26%), PI (21%, 23%), and finally PN (14%, 13%). Additionally, there were three single mothers and no single fathers.

In order of increasing SDO scores, those participants with PN mothers scored the lowest, followed by AR mothers, AV mothers, and finally respondents with PI Mothers (Table 2). Similarly, those with PI fathers had the highest levels of SDO, and then AV, but with AR and PN exchanging places. For Absolute RPS (at least one parent displaying a particular RPS), a similar pattern emerged whereby those with one or more PI parents scored the highest on SDO, followed by AV, and then AR with participants with PN parent(s) possessing the lowest SDO level. Consistently then, PI parenting was associated with the highest SDO values.

4:2 Inferential statistics

RQ 1: What are the relationships amongst 1) the predictors and 2) SDO?

(Correlation matrix in Appendix H)

Age. The differences by age were as to be expected for education level, with a positive relationship to higher levels of education (undergraduate degree $r = .27$, $p < .001$; postgraduate degree $r = .32$, $p < .001$) and a negative relationship to secondary degree ($r = -.49$, $p < .001$). In addition, being older was related to being more open to experience ($r = .163$, $p < .05$). Age was not related to SDO ($r = .13$, $p = ns$) (refer to correlation matrix for full report).

Gender. Neuroticism was significantly negatively related to being female ($r = .23$, $p < .05$). A significant relationship between gender and SDO was observed ($r = .20$, $p < .01$). Correspondingly, a significant difference between the genders was observed with females ($M = 2.33$, $SD = .40$) reporting significantly lower SDO scores than men ($M = 2.68$, $SD = .85$), $t(150) = -2.21$, $p < .05$).

Ethnicity. A one-way ANOVA revealed one main effect for ethnicity whereby East Asian participants (M = 3.04, SD = .60) scored significantly higher than Caucasians (M = 2.31, SD = (.85), $F(4,143) = 3.93$, $p < .005$. This difference represented a large effect size (Cohen's d= 1.02, effect size = .45). Caucasian ethnicity was significantly related to lower AR parenting in general (AR absolute) (r= -.18, $p < .05$), lower reports of AR mothers (r= -.18, $p < .05$) and lower SDO scores (r= -.25, $p < .01$). East Asian ethnicity was significantly positively correlated to SDO (r= .24, $p < .01$). Mixed ethnicity was positively related to having an AR Mother (r= .19, $p < .05$).

Education. Certain educational levels were correlated to indicating certain parenting styles although not strongly. Secondary education was significantly positively related to indicating AV parent(s) (r= .19, $p < .05$) and negatively related to AR mother (r= .17, $p < .05$), and to Openness to Experience (r= -.19, $p < .05$). Undergraduate education displayed a significant positive relationship to PI parent(s) (r= .16, $p < .05$) and a negative relationship to AV parent(s) (r= -.16, $p < .05$).

BFI Factors. Openness to Experience was significantly negatively associated with SDO (r = -.20, $p < .05$). Conscientiousness was positively related to being extraverted (r = .22, $p < .01$) and agreeable (r = .19, $p < .05$). Being extraverted was positively related to being agreeable (r = -.27, $p < .001$), having an AV mother (r = .17, $p < .05$), AV parents (r = .17, $p < .05$) and negatively related to Neuroticism (r = -.42, $p < .01$). Agreeableness was negatively related to Neuroticism (r = -.39, $p < .01$), AR parenting (r = -.19, $p < .05$), PN parenting (r = -.22, $p < .01$), having a PN father (r = -.19, $p < .05$), while positively related to having an AV father (r = .16, $p < .05$). Finally, Neuroticism was negatively related to SDO (r = -.25, $p <$

.01), and having an AV father (r = -.19, p< .05), but was positively related to having at least one AR parent (r = .19, p< .05).

RPS. Rating at least one parent as AR was negatively correlated to indicating a PI parent (r= -.20, p< .05), AV parent (r= -.30, p< .001), PI mother, PI father and AV father. Indicating one or more PI parents was negatively associated with AV parent(s) (r= -.39, p< .01) and PN parent(s) (r= -.31, p< .01). SDO was strongly positively related to indicating a PI parent (r= .32, p< .001), and positively associated with PI mother (r= *.23*, p< *.01)* and PI father (r= .18, p< .05). Evidently, the presence of one PI parent versus all other types led to a significant increase in SDO.

Mother and father pairs were investigated in accordance with their connection to SDO levels reported by participants. Controlling for the remaining predictor variables, AR-AR pairings were associated with the lowest SDO scores (M= 1.52, SD = .77), whilst PI-AV pairs had the highest SDO scores (3.03, M= 3.03, SD = .13). Moreover, PI mothers with any father pairing were related to the highest SDO scorers apart from AV-PI father pairings (M= 2.88, SD= .20).

Bivariate and partial relationships amongst variables. A summary of the bivariate and partial correlations between the predictor variables and SDO are presented in Table 3. Coefficients represent the bivariate or partial association between each variable and SDO with partial correlations controlling for age, gender, ethnicity, education and the BFI factors.

To summarize, only the significant partial associations to SDO scores will be elucidated. After controlling for the remaining variables (ethnicity, education, BFI and RPS) a partial correlation of moderate effect size (r= .196, p< .05) for gender was observed.

Caucasian ethnicity was significantly negatively related to SDO with a moderate effect size (r= -.34, p< .001). Conversely, East Asian ethnicity's relationship to SDO increased after controlling for the other variables, producing a moderate effect size (r= .27, p< .01). Additionally, Neuroticism was moderately negatively correlated to SDO (r= -.33, p< .001), as was Agreeableness after the other predictors were controlled for (partial r= -.25, p< .01).

Rating one's mother as AR was significantly negatively related to SDO after controlling for the other predictors (r= -.202, p< .05). Having a PI mother was significantly positively related to SDO (r= .233, p< .01) with an increased partial correlation of moderate effect size (r= .251, p< .01). PI fathers were significantly positively related to SDO, although not as strongly as in the mother relationship (r= .178, p< .05). This relationship was no longer significant in partial correlation. The Absolute RPS variable had a significant positive association for PI parent(s) and SDO (r= .315, p< .001). Likewise, the partial correlation only slightly reduced the initial observation (partial r= .309, p< .001). No other significant relationships were found with the remaining parenting styles.

Key relationships produced involved the significant independent positive correlations between SDO and being male, indicating East Asian ethnicity or indicating PI parenting style. Multiple regression was used to investigate these relationships further.

RQ 2 & 3: Can a predictive model for SDO be produced with the predictor variables, and if so, what are their relative contributions?

Multiple regression forced entry analysis for SDO. As this exploratory study sought to determine the relative effects of a number of variables, forced entry regression (all predictors entered simultaneously) was utilized. This method is appropriate for theory testing

without making assumptions about the order in which to enter predictors (Fields, 2009). The data was analysed by multiple regression, using age, gender, ethnicity (East Asian, mixed, and other), education level (secondary, technical/apprenticeship, and postgraduate), BFI factors (Openness to Experience, Agreeableness, Conscientiousness, Extraversion, Neuroticism), and RPS asbolute (AR, PI, AV, PN) as regressors. Absolute RPS yielded the most predictive power in contrast to individual parent ratings as expected (Rohan & Zanna, 1996); these results are presented below.

In screening the data, all assumptions for multiple regression were met regarding multicollinearity (see Appendix). The variables used as constants for dummy coding (Caucasian ethnicity and undergraduate education) were not included, as they would breach multicollinearity assumptions. The variance inflation factor (VIF) values were all below ten, the average was not substantially greater than one and the tolerance statistics were well above 0.2, indicating no collinearity within the data (Fields, 2009).

Casewise diagnostics indicated there was one data point (62) that had a standardized residual greater than two (2.13), but as this was not greatly outside of the expected range and the only outsider in a sample of 200, the case was included. Moreover, no cases had Cook's distances greater than one value, implying no one case overly influenced the model. The Mahalanobis distances, average leverages and covariance ratios further confirmed that the model was reliable and not overly influenced by any particular case.

In testing the linear regression, the Durbin-Watson test produced a value of 1.70, indicating that the residuals were independent. A regression plot of the standardized residuals against the standardized predicted values (*X*-axis) displayed no significant curve, indicating

that assumptions of linearity and homoscedasticity were met (see Appendix for these related plots). Finally, histograms and normal probability plots of the data revealed normally distributed residuals.

The multiple regression analysis used to test if the predictor variables significantly predicted participants' SDO scores indicated the seventeen included variables explained 67% of the variance in SDO. The regression model was a good fit and was significant $F(17, 117) = 5.55$, $p < .001$. The predictors that contributed the most to the predictive power of the model were, in descending order: PI parenting, East Asian ethnicity, Agreeableness, Neuroticism, Openness to Experience and age (see Table 4 for summary of significant predictors).

Table 4

Forced entry multiple regression analyses of Social Dominance Orientation (SDO) as a function of the predictor variables (significant predictors presented)

Predictor Variable	*b*	*SE b*	β	*t*	*Sig.*
Constant	5.71	.83	-	6.86	.000***
PI Parent(s)	.59	.15	.35	3.80	.000***
East Asian	.88	.21	.31	4.27	.000***
Agreeableness	-.40	.11	-.30	-3.78	.000***
Neuroticism	-.38	.12	-.29	-3.33	.001**
Openness	-.25	.11	-.17	-2.31	.023*
Age	.31	.15	.16	2.07	.041*

Note. $R^2 = .45$ for model. Only the significant predictors are reported. For remaining predictors see Appendix

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

To summarize, correlations and regression analyses of variation in the associations between the predictor variables and SDO emphasized, foremost, the presence of only a few significant yet fairly strong relationships between certain predictor variables and SDO. When considering all factors simultaneously, the association between PI parenting and SDO proved to be one of the most robust relationships before and after accounting for the other variables. A predictive model utilizing age, gender, ethnicity, education, BFI factors and parenting style produced a good fit of the model as it accounted for a significant portion of the variance in SDO scores. Again, the presence of at least one parent who was perceived as being PI in their parenting style contributed the most predictive power out of all the measured factors.

5. Discussion

The purpose of this study was to examine the associations between the group stratification preference measure of SDO and factors selected from extant literature, focusing upon parenting styles and personality. As such, the following factors were assessed: age, gender, ethnicity, education level, Big Five personality factors, and remembered parenting styles. Consequently, the research questions addressed the bivariate correlations between the predictors and SDO; whether a predictive model could be constructed from multiple regression analysis using RPS, BFI, ethnicity, age, gender and educational level, and if so, what were the relative contributions of each predictor to SDO?

It was predicted that a significant negative relationship of medium effect size would be observed between Agreeableness and SDO, Openness would also be negatively related but with a small effect size, and Neuroticism, Conscientiousness and Extraversion would have negligible associations with SDO. Authoritarian parenting on the part of mothers and fathers

was believed to yield a positive relationship to SDO. With regards to the results of the investigation, the relationship between SDO and socio-demographic and BFI factors generally followed previous research with a few notable exceptions: Neuroticism was negatively correlated to SDO, as was being Caucasian. A reversal of the hypothesis on parenting style was observed with parental responsiveness associated with higher levels of SDO and lower levels of demandingness as reflected in the highest scores and lowest scores on the RPS. Moreover, the strongest predictor in the regression model for SDO proved to be indicating the presence of at least one PI parent. The interpretations and implications of these findings will be discussed.

5:1 Age, Education, Gender and Ethnicity

Age. Findings from this research align with previous studies on SDO where age and education level yield no significant associations to SDO scores (Adelson & McFarland, 1996; Duriez & Van Hiel, 2002; Pratto & Sidanius, 2001). It should be noted that age was a significant predictor for the regression of SDO, which is perplexing although this could be indicative of the greater number of younger participants in the designated age range. Additional studies enlisting older participants could elucidate this observation.

Education. The lack of educational effects support Duriez and Van Hiel's thesis that high SDO scorers may exhibit a style of cognition that adopts a form of "modern racism" that is generally expressed when it is socially acceptable, safe and more readily rationalized, irrespective of educational status (2002). It is believed that unlike RWA, which is attenuated with higher levels of education, SDO is apparent and even normative no matter one's educational background (Pratto & Sidanius, 2001). Evidently, the construction and maintenance of social stratification requires at least partial consensus (termed *consensual*

ideology) by members of specific social categories, namely those defined by social class, ethnicity or gender (Levin, Pratto & Sidanius, 2006). It would be most valuable to clarify the links between parents' educational background and associated socio-economic status and their children's educational levels, as the relation between parent social status and their offspring's SDO level remains unclear (Chartard & Selimbegovic, 2008).

Gender. Females were found to have significantly lower levels of SDO than their male counterparts, an apparent confirmation of the invariance hypothesis, which predicts lower levels of SDO for women compared to men even when accounting for other factors (Levin, Pratto, & Sidanius, 2006; Whitley, 1999). Nevertheless, as the literature review outlined, there are still competing theories as to the cause of this differential and as gender identity and a cross-cultural comparison of gender roles were not addressed in the study, conclusive explanations cannot be provided. Results indicated there were no significant differences in parenting style between male and female respondents, appearing to support De Vries, Jaspers and Lubbers recent investigation into value transmission (2008). In this study girls and boys displayed similar socialization from parents on attitudes regarding euthanasia, homosexuality and ethnic minorities. PI mothers had an increased relationship to SDO scores as compared to PI fathers, whose contributions were negligible after controlling for the remaining variables. This relationship and the proposed explanation of dissimilar mother-father socialization effects are discussed further in the later section on parenting. Clearly, this area of contention requires further research to move beyond the speculative stages.

Ethnicity. As with gender, ethnically disparate patterns of responding in SDO are thought by many to be due to social status differences (Heaven & Quintin, 2003; Levin, Pratto & Sidanius, 2000; Pratto & Sidanius, 2001). Accordingly, high status group members

have higher SDO levels than low status group members. For instance, when the social status of an American ethnic group increases, so too do the SDO scores for group members (Levin, Pratto & Sidanius, 2000). This effect has also been shown in diverse populations like Jewish sub-populations within Israel (Levin & Sidanius, 1999). It was therefore surprising to find that, in fact, participants of Caucasian ethnicity were found to register significantly lower scores than East Asian participants. The other groupings of ethnicity (*Mixed* and *Other*) were not found to significantly deviate from Caucasians. Although most studies conducted in Western countries have found Caucasians to possess higher levels of SDO, a number of explanations can account for this effect.

As this was a primarily educated sample as recruited from typically liberal universities, these factors could have posed as third variables; an egalitarian praxis and orientation predominates within the majority of campuses (Kupper & Zick, 2010; Levin, Sears, Sidanius & van Laar, 2008). Nonetheless, results indicated that ethnicity did not co-vary with any of the other independent variables including education level yet was still significantly related to SDO. It is feasible that in groups of lower educational attainment this effect would disappear, yet this is challenging to ascertain as most studies have been conduced on educated samples (Duriez & Van Hiel, 2002).

Another explanation lies in cultural differences in SDO levels. Pratto and colleagues (2000) reported in their investigation of the cross-culturally validity of SDO that a Chinese sample registered the highest SDO scores out of the other three surveyed countries of Canada, Israel and Taiwan. The culturally distinct samples registered scores within the expected ranges for North American samples except for East Asians (Levin, Pratto & Sidanius, 2000). As the scope of Pratto's study was not to assess cross-cultural differences in

absolute level, but rather to confirm the cross-cultural reliability of the SDO measure, it cannot be definitively stated whether Chinese participants or even East Asians in general generate higher scores. Thus this discrepancy in findings remains.

By another account, perceived group status could have factored into participant responding. For instance, recent studies in South Africa have found that Blacks scored higher in social dominance than Whites and when group status is unstable, SDO is associated with higher ingroup bias than when group status is stable (Levin, Pratto & Sidanius, 2006). It could be the case that the surveyed sample perceived their group's status to be higher, unstable or both as compared to other ethnic groups (Pratto & Sidanius, 2001; Levin, Sears, Sidanius & van Laar, 2008).

Studies in the past have indicated differences in parenting styles such as the increased use of AR parenting in Asian samples (Sung, 2010). This would not account for the SDO differential as PI parenting and not AR parenting registered higher SDO averages. Ethnic differences in parenting could still factor into the ethnic differences in SDO, as whilst there were no appreciable differences in ethnicity and parenting style, the sample size was limited. It is difficult to ascertain whether SDO is consistently higher in East Asians as far fewer studies are conducted on ethnic minorities (Heaven & Quintin, 2003). In fact many studies of SDO simply discard ethnic minority responses (Altemeyer, 1998). Further studies involving ethnic minorities with information on participants' socialization (e.g., attitudes, years since immigration, parenting norms) are required to advance understanding of this SDO differential.

Big Five personality factors. As often reported, individuals' temperaments and personalities impinge on SDO levels and the present study appears to confirm this observation (Levin, Pratto & Sidanius, 2006). The results aligned with the expected means and standard deviations on the BFI (Gosling et al., 2003). In this sample, females registered significantly higher levels of Neuroticism, consistent with research in prosperous, more egalitarian cultures (Allik, Realo, Schmitt & Voracek, 2008). The findings of a negative relationship with Agreeableness and Openness to Experience confirmed the most up-to-date meta-analysis of SDO and personality (Duckitt & Sibley, 2008). Further aligning with prior research, openness was no longer significant after controlling for other variables (Akrami & Ekehammar, 2006). Additionally, neuroticism was moderately negatively correlated with SDO, an observation occasionally replicated in the study of prejudice and Big Five personality dimensions (Duckitt & Sibley, 2008). It may be the case that these personality differences are a function of the measure used; for instance, the NEO Personality Inventory-Revised is longer with more attitudinal statements as compared to the BFI (John & Soto, 2009). Even so, this distinction could account only for the difference in magnitude as opposed to an overall change in direction.

The vast majority of available literature on the associations between personality and prejudice samples North America and Central Europe (Akrami & Ekehammar, 2006). Nevertheless, it is still expected that the effects of personality on ideology and prejudice would represent a generally universal phenomenon and correlations would be relatively consistent across cultures (Duckitt & Sibley, 2008). The results confirmed the above supposition of negligible cross-cultural differences, as there was an absence of significant distinctions in personality by ethnic group.

The issue of causation in the interplay of personality and prejudice could not be addressed in the immediate study. It is typically believed that personality influences prejudice, although there is virtually no evidence in this regard (Duckitt & Sibley, 2008). Although this trajectory seems plausible with the assumption that personality forms prior to social attitudes such as prejudice, no concrete substantiation exists. Nonetheless, scales like SDO can only be reliably administered in adolescence and beyond, while temperament can be addressed much earlier.

One promising area is in longitudinal research on political ideology, such that the issue of causality can be better understood. Block and Block's intriguing (2006) finding that preschool personality attributes were later linked to conservative versus liberal attitudes in young adulthood exemplifies how studies can attempt to pinpoint attitudinal development. Of particular interest, those children who were more easily offended and indecisive, less adventuresome, more reliant upon adults, suspicious and distrustful of others were more likely to become conservatives (Block & Block, 2006). Many of these dispositions can be said to apply to those children raised by PI, AR or PN parents as opposed to AV parents (Cooney, Shin An & Rothrauff, 2009; Maccoby & Martin, 1983). As stated earlier, AR has been linked to another predictor of prejudice, RWA (Altemeyer, 1996), while conservatism is linked to both SDO and RWA (Pratto & Sidanius, 2001). Consequently, it is tenable that PI parenting provides a link to SDO that is further related to conservatism. Certainly, the critical understanding is that of the nature of the interaction between inherited tendencies and experience, of which personality and parenting style are included (Block & Block, 2006).

5:2 Parenting styles

While the primary purpose of this exploratory study was to gain insight into possible relationships between parenting styles and SDO, the principal research prediction of increased SDO scores in those raised by AR parents was disconfirmed and if anything, tended towards an inverse relationship. In direct contrast to the model proposed by Duckitt (2002), that low parental warmth contributes to heightened SDO; results indicated that those parenting styles that were high in warmth (AV, PI) were higher in SDO than those low in warmth (AR, PN). Moreover, PI parenting on the part of at least one parent was significantly positively related to SDO, proving to be a challenge to elucidate, due to the dearth of similar research. Thusly, it is imperative to investigate the possible mechanisms (e.g., socialization factors, confounding variables) and implications of the observations. Each of these will be discussed further.

A starting point for further understanding of the positive relationship between increased tolerance for social hierarchy and PI parenting resides in the examination of the distinguishing parental behaviour dimensions. Recall that Baumrind describes parental supportiveness or warmth as the "extent to which parents intentionally foster individuality, self-regulation, and self-assertion by being attuned, supportive, and acquiescent to children's special needs and demands" (1991). PI and AV parenting encapsulate this characteristic. Whereas AV parents are also high in demandingness or behavioural control, the PI parent is not. That is to say, the PI parent does not behave in a way to permit the child to "become integrated into the family whole", due to their lack of "maturity demands, supervision, disciplinary efforts and willingness to confront the child who disobeys" (Baumrind, 1991). Accordingly, in contrast to AV-raised children, who are often considered the most well-

adjusted, the PI parent does not make demands that fit with children's ability to take responsibility for their own behaviour (Clark, Jeglic & Schaffer, 2009).

Broadly stated, parental responsiveness predicts social competence and psychosocial functioning, while demandingness is associated with instrumental competence and behavioral control such as academic performance and obedience (Baumrind, 1991). In indulgent homes, it is this blend of low behavioural control and high warmth that is associated with children and adolescents who are more likely to be involved in problem behaviour, perform less well in school, and possess lower social responsibility, whilst having higher self-esteem, greater social skills, and lower levels of depression (Koo & Wing Chan, 2010). In theory, PI parents teach the child that they will receive warmth no matter the appropriateness or acceptability of the child's behaviour. Presumably, children who hold such schemas are unaccustomed to and/or would see no benefit in contributing to the family or later the community. This is consistent with the finding of lowered social responsibility and accountability as they may become less attuned to social demands or responsibilities (Azhar, Dorso, Renk & Silva, 2007).

Additionally, Clark, Jeglic & Schaffer (2009) found support for a model in which maternal permissive parenting contributed both directly and indirectly to antisocial behaviour via its effects on cognitive and emotional empathy development. The affective component of empathy requires the vicarious experience of emotions consistent with others, while the cognitive aspect involves the understanding of another's feelings by simple associations or more complex perspective taking (de Kemp, de Wied, Engels, Overbeek & Scholte, 2007). Moreover, this finding contributes to recent research showing that antisocial behaviour among youth from a minority background is more robustly associated with maternal

permissiveness than with punitive (AR) parenting (Clark, Jeglic & Schaffer, 2009). This offers another potential link to SDO in that those exhibiting higher levels of SDO could concurrently possess lower levels of empathy although research on empathy and adult outcomes is still in its infancy (Duriez, Goosens, Soenens & Vansteenkiste, 2007).

Darling & Steinberg (1993) argue that parenting style is most usefully considered as a constellation of attitudes of the parent toward the child that alters the efficacy of parenting and changes the child's openness to socialization. Adding support for the socialization of SDO is the finding that PI mothers bore a greater impact on children's SDO scores than fathers, consonant with past research. Acock and Bengston (1978) find that mothers exert the leading influence on their children's attitudinal orientations. The assumption then is that mothers are more successful at value transmission as a result of tending to spend more time with their children and being more concerned with their upbringing (Bao et al., 1999; De Vries, Jaspers & Lubbers, 2008). However, Dubas, Eichelssheim, Gerris, Hoeve, Smeenk & van der Laan (2009) were surprised to find in their meta-analysis of 161 studies on parenting and delinquency that less than 20% of the studies investigated parenting behaviour of fathers, despite the fact that the effect of low support by fathers was greater than poor maternal support, especially for sons. While the current study investigated both parent's styles, the quality of the relationship was not addressed thus explanations for this gender difference are restricted.

If one is to adopt the socialization stance, value transmission and formation could operate as both a function of the parent's personality and their value profile amongst other contributory variables. As the present study examined only adult children, parent specifics could not be taken into consideration. It is very well possible that contributing elements such

as parent personality and values might be exercising power upon the relationship between SDO and parenting styles by way of value orientations (Rohan & Zanna, 1996). Conceivably PI parents could be more likely to score higher on certain values than on others (e.g., high on power and hedonism, low on benevolence and univeralism). The evidence for intergenerational continuity in parenting style is robust across diverse study samples, different types of measurement, different lengths of time, and after controlling for a variety of variables (Belsky, Capaldi & Conger, 2009). Likewise, SDO has a strong intergenerational concordance rate (Chatard & Selimbegovic, 2008). As is the case for racism and prejudice, parent–adolescent similarity in SDO is likely influenced by both socialization (e.g., modeling and parenting) and genetic factors and their interaction (Koleva & Rip, 2007). The ultimate goal remains in understanding the interplay of genes and experience.

Koleva and Rip draw attention to attachment research and its relevance to the study of value orientations like prejudice and SDO as personal attachment history and style may come to shape political preferences (2007). However, there is a growing consensus that RWA and SDO do not develop until adolescence (e.g., Duckitt, 2001; Duriez, Pandelaere & Van Hiel, 2004), while attachment forms from infancy (Koleva & Rip, 2007). Furthermore, researchers contest that attachment is not related to SDO (Fincher & Thornhill, 2007). Although there seems to be high overlap between the concepts of attachment and parenting, attachment and not parenting styles reflect a person's ability to be intimate and their perception of others' relationship abilities (Frick-Horbury & Neal, 2001). It follows that as attachment pertains primarily to interpersonal close relationships, parenting style theoretically impacts upon worldviews developed in adolescence, a crucial period for values socialization (De Vries, Jaspers & Lubbers, 2008). Exactly which personal and interpersonal variables are affected by parenting style awaits additional research.

It is important to note that the lowest SDO group was seen in children who rated their parent(s) as PN, although the difference was not significant, and that the majority of these participants had attained at least an undergraduate degree. Previous research states that children raised in PN households cope the worst and are seen as the least competent of the four groups. They are further described as antisocial, lacking self-regulation, having more problems internalizing and externalizing, have lower scores on cognitive tests, and reject their parents as role models (Koo & Wing Chan, 2010). More single parent homes fall into this group than the high demand groups (Eastin, Greenberg & Hofschire, 2006). As the sample was primarily university educated with approximately only 1% from single parent households, the PN group seems to be self-selecting in that these children from PN households are more likely dissimilar to PN individuals who never attended university. It is therefore stressed that these results lack generalizability.

The present data appear to reaffirm the position that SDO scores are a product of multifactorial systems consisting of differences in social status, stable individual differences, and socialization experiences such as parenting. All of the aforementioned are active in the determination of individuals' orientations towards group-based social inequality. Prior hypotheses for parenting relationships to SDO assert that low warmth parenting contributes to the tough-mindedness that characterizes high SDO individuals (Koleva & Rip, 2009), a proposition that contradicts the current study's findings. It was only PI parenting that yielded significantly different results from the other three groups, presumably indicating that the combined effects of high affection and low control are related to heightened SDO levels. The dynamics of this association remain unclear.

5:3 Limitations

There were several additional limitations with this study beyond those already mentioned. First and foremost, the primarily university sample makes it difficult to generalize the findings. Some suggest that students and young people in general are predominantly liberal and have not fully formulated their attitudes or ideological beliefs (Buckingham, 2000). As this study asked for participants' education levels only and the designated majors were not included, this could have posed a confounding variable as research has shown that those in the social sciences have lower relative SDO levels than those in hierarchy-enhancing areas (e.g., business, marketing) (Dambrun, Duarte, Haddadi & Kamieski, 2010). Moreover, with respect to profession, which was not addressed, hierarchy-enhancing vocations such as law enforcement officer display higher levels of SDO than do hierarchy-attenuating (e.g., social worker)(Levin, Pratto & Sidanius, 2006).

Furthermore, although a literature-based selection of predictor variables were measured, participants were not instructed to indicate their place of birth, nationality, nor immediate location which meant that socio-cultural contexts could have played a role in observed differences. In so far as this exploratory study was of necessity confined in scale and scope, future larger-scale studies would do well to include additional predictor variables along such socio-cultural lines with a greater proportion of ethnic minorities. Likewise, retrospective measures and culturally-bound socially desirable responding, which may influence the validity of results, provide additional barriers to the interpretation of inventories such as SDO and RPS (Heine, 2008). Even as parenting measures are subject to social desirability effects (Chartard & Selimbegovic, 2008), Schwarts, Baron-Henry and Pruzinsky (1985) found that adolescents' reports of parental behaviour were more accurate than parents.

5:5 Future research

The present study is important for furthering our understanding of SDO as it appears to suggest that those with one or more PI parents have higher levels of SDO than their counterparts; certainly, this interaction may hinge on other confounding variables. Due to the dearth of literature in the socialization processes contributing to SDO, much work is required to substantiate initial findings. Ideally, future longitudinal cross-sectional studies would allow for the analysis of actual versus perceived parenting style. Potentially, this more complex design would permit the identification of theorized sensitive periods for the transmission of SDO whilst accounting for other socio-cultural factors beyond the scope of this study (e.g., acculturation).

The development of a consistently validated measure of retrospective parenting style to capture grown children's perceptions of rearing in childhood and adolescence is necessary not only in the immediate field of prejudice antecedent research but in the study of parent-child interactions as well (Ribiero, 2009). Although the immediate measures serve well to capture the more nuanced parent-child dynamic, additional measures of responsiveness and demandingness as well as both parent and adult child value orientations could allow for increased insight into the primary factors at play in observed SDO differences.

The study of SDO development and potential transmission requires further research of the genetic and epigenetic processes that contribute to similarities and dissimilarities in parenting across generations (Belsky, Capaldi & Conger, 2009). Researchers can aide the development of this field by adopting a multi-faceted approach (Kupper & Zick, 2010) to address the cultural, social, developmental and individual-level antecedents. Just as Soenens, Vansteenkiste and Duriez (2007) draw attention to goal orientations and their relation to

adolescent SDO scores, corresponding inquiry into value orientations and the parent-child relationship are needed to disentangle the mechanisms at work in the observed differences. Clearly, value profiles themselves are difficult to conceptualize and finding a culturally sensitive measure provides further complexity. Localizing whether certain value orientations lend themselves towards a certain style of parenting could offer a more clear illustration of the development and/or transmission of SDO.

5:6 Conclusion

In the long-standing study of prejudice, recent attention has fallen upon SDO and its covariates. This construct, which detects the tendency to prefer disparity between groups, has proven invaluable to the understanding of individual-level differences and social processes at work in the prediction of prejudice. As expected, interest into the developmental underpinnings of SDO has lead researchers to investigate its transmission yet few studies have examined the parent-child relationship in relation to the construct. Initial information on parenting style relationships to personality, select socio-demographic factors and SDO supported the existing literature, whilst providing new data on a link between certain parenting styles and SDO. The findings of this study can inform current theory in the study of personality, relationship and attachment, and prejudice. In addition, there is the opportunity for applied education through suggesting ways to "encourage the transmission of those values and attitudes that will promote mutually rewarding relationships among people" (Rohan & Zanna, 1996).

Although many gaps remain in the area of SDO and parenting style, it appears that permissive-indulgent parenting may be one mechanism through which the preference for group-based dominance is perpetuated and maintained. Given that children learn values

orientations in part from their parents and how they were raised, learning that the construct is related to certain parenting styles and individual difference variables suggests more research in this domain is required to determine if this is one mechanism by which SDO can be attenuated.

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Table 2

Means, standard deviations (SD), ranges, variances and normality statistics for scores on the measured variables (Social Dominance Orientation (SDO), age, gender, ethnicity, education, Big Five Inventory (BFI) factors, Remembered Parenting Style (RPS) for Mother and Father, and RPS Absolute

	Range			Normality Statistics		
Variable/Measure (N=200)	**Mean (SD) SDO value for variable**	**Minimum-Maximum SDO value for variable**	**Variance**	**Skew**	**Kurtosis**	**Komolgorov-Smirnov (*p*)**
SDO	2.45 (.81)	1.0-4.6	.30	.11	-.09	.74
Age[a]	22.8 (.40)[a]	18-35[a]	.59	.96	.59	.20*
Female[b] (131)	2.33 (.77)	1.0-4.0	.59	.13	-.80	.20*
Male[b] (69)	2.68 (.85)	1.3-4.6	.72	.20	-.63	.20*
Caucasian[c] (131)	2.31 (.85)	1.00-4.56	.72	.56	-.35	.10
East Asian[c] (15)	3.04 (.60)	2.00-3.81	.36	-.79	-.23	.10
Other[c] (18)	2.62 (.49)	1.75-3.44	.24	-.19	-.61	.09
Mixed[c] (8)	2.86 (.36)	2.56-3.38	.13	1.05	-1.06	.06
Secondary[d] (98)	2.45 (.78)	1.00-4.56	.61	.28	-.41	.20*
Technical[d] (8)	2.75 (.91)	1.63-3.81	.82	-.29	-1.9	.20*
Undergrad[d] (70)	2.39 (.85)	1.00-4.31	.72	.31	-.60	.20*
Postgrad[d] (24)	2.53 (.83)	1.00-4.00	.69	-.24	-.38	.20*
Openness	3.66 (.56)[e]	2.10-4.90[e]	.36	-.23	.16	.38
Conscientiousness	3.31 (.67)[e]	1.63-4.87[e]	.78	-.02	-.56	.19
Extraversion	3.14 (.81)[e]	1.15-4.85[e]	.45	-.10	-.65	.51
Agreeableness	3.56 (.61)[e]	1.70-4.87[e]	.69	-.55	.59	.06
Neuroticism	3.21 (.61)[e]	2.00-4.56[e]	.33	.25	-.62	.36

	Range			Normality Statistics		
Variable/Measure (N=200)	**Mean (SD) SDO value for variable**	**Minimum-Maximum SDO value for variable**	**Variance**	**Skew**	**Kurtosis**	**Komolgorov-Smirnov (*p*)**
AR Father (67)	2.31 (.83)	1.00-3.81	.70	.06	-1.2	.20*
PI Mother (40)	2.77 (.82)	1.38-4.31	.68	.20	-.96	.20*
PI Father (34)	2.71 (.79)	1.44-4.56	.63	.31	-.55	.14
AV Mother (83)	2.37 (.87)	1.00-4.56	.68	.17	-.72	.20*
AV Father (67)	2.42 (.85)	1.00-4.31	.72	.24	-.58	.20*
PN Mother (9)	1.98 (.33)	1.31-2.31	.12	-1.4	1.7	.09
PN Father (19)	2.24 (.65)	1.13-3.56	.43	.19	-.47	.20*
AR Parent(s) (56)	2.29 (.78)	1.00-3.81	.61	-.040	-1.10	.20*
PI Parent(s) (59)	2.76 (.81)	1.38-4.56	.66	.23	-.75	.20*
AV Parent(s) (111)	2.44 (.86)	1.00-4.56	.73	.16	-.68	.13
PN Parent(s) (25)	2.16 (.62)	1.13-3.56	.38	.37	-.19	.20*

Note. Ethnicity indicated by participants was collapsed into Caucasian, East Asian, mixed ethnicity or other ethnicity. Participants selected one of four education level categories: secondary, technical/apprenticeship training, undergraduate, and postgraduate. RPS was comprised of four parenting style categories: Authoritarian (AR), Permissive-Indulgent (PI), Authoritative (AV), and Permissive-Neglectful (PN). Absolute parenting scores at the bottom of the table indicate the presence of at least one parent displaying the given style (e.g., PI parent(s)).

[a] Age mean, standard deviation, maximum and minimum

[b] Female coded as 0 and male coded as 1

[c] Ethnicity dummy coded with Caucasian coded as 1

[d] Education dummy coded with Undergraduate coded as 1

[e] BFI means, standard deviations, maximums and minimums

* Lower bound of the true significance

Table 3.

Pearson's correlations and partial correlations between predictor variables (age, gender, education, ethnicity, Big Five Inventory (BFI) factors, Remembered Parenting Style (RPS) mother, father, absolute, and Social Dominance Orientation (SDO)

		SDO
Predictor variables	**Pearson r (significance)**	**partial r[a] (significance)**
1 Age	.046 (.582)	.068 (.475)
2 Male	.202* (.014)	.196* (.035)
Education		
3 Secondary	.004 (.959)	.092 (.333)
4 Technical	.070 (.397)	.161 (.088)
5 Undergraduate	-.056 (.503)	-.140 (.136)
6 Postgraduate	.037 (.653)	.122 (.198)
Ethnicity		
7 Caucasian	-.250** (.003)	-.339*** (.000)
8 East Asian	.240** (.005)	.274** (.003)
9 Other	.080 (.359)	.139 (.137)
10 Mixed	.126 (.144)	.094 (.319)
BFI		
11 Openness to Experience	-.196* (.019)	-.157 (.081)
12 Conscientiousness	-.105 (.215)	-.118 (.192)
13 Extraversion	-.063 (.454)	-.087 (.335)
14 Agreeableness	-.157 (.062)	-.250** (.005)
15 Neuroticism	-.248** (.003)	-.332*** (.000)
RPS		
16 Authoritarian Mother	-.067 (.418)	-.202* (.025)
17 Authoritarian Father	-.082 (.329)	-.045 (.624)
18 Authoritative Mother	-.091 (.271)	-.056 (.539)
19 Authoritative Father	-.021 (.806)	-.034 (.708)
20 Permissive-Indulgent Mother	.233** (.004)	.251** (.005)
21 Permissive-Indulgent Father	.178* (.034)	.141 (.125)
22 Permissive-Neglectful Mother	-.136 (0.101)	-.051 (.572)
23 Permissive-Neglectful Father	-.093 (.270)	-.071 (.441)
RPS Absolute		
24 Authoritarian	-.130 (.125)	-.167 (.068)
25 Authoritative	.004 (.958)	.046 (.621)
26 Permissive-Indulgent	.315*** (.000)	.309** (.001)
27 Permissive-Neglectful	-.149 (.077)	-.090 (.327)

Note. RPS Absolute indicates presence of one or more parents of the denoted style

[a] Partial correlations controlling for age, gender, ethnicity, education and BFI factors

* Correlation significant at the p<.05 level (2-tailed), ** p<.01 level, *** p<.001 level

LIST OF APPENDICES

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Appendix A

Personality and Group Preference

Participant Information Sheet

You are being invited to take part in a research study as part of a student project for completion of a Master's level degree. The aim of the research is to understand how personality impacts upon group preference. Before you decide it is important for you to understand why the research is being done and what it will involve. Please take time to read the following information carefully and discuss it with others if you wish. Please contact me if there is anything that is not clear or if you would like more information. Take time to decide whether or not you wish to take part. Thank you for reading this.

For those who have spoken English for less than ten years, your interest is appreciated but participation is not required.

Who will conduct the research?

Aiden Sisler, MEd Student

School of Education
Ellen Wilkinson Building
The University of Manchester
Oxford Road
Manchester
UK
M13 9P

Title of the Research

Personality and Group Preference

What is the aim of the research?

To investigate the relationship between personality and an individual's beliefs about groups.

Why have I been chosen?

You have received a request for your involvement as well as other individuals in your age category (18-30 years) via an email send-out. The 18-30 year age range has been selected as

the target demographic for the study as measures within the survey have been validated on this age bracket primarily. There will be approximately 150 other participants.

What would I be asked to do if I took part?

You will be asked to complete a short ten-minute survey online.

What happens to the data collected?

Data will be analyzed by myself, the researcher, using statistical software and discussed in a formal write-up.

How is confidentiality maintained?

All data is anonymous and will be kept secure and confidential throughout the course of the research; password protected files and secure sites will be utilized as per University of Manchester standards. Participants will be issued a coded number for protection of anonymity and therefore will not be traceable with respect to personal information.

What happens if I do not want to take part or if I change my mind?

It is up to you to decide whether or not to take part. If you do decide to take part you should print off a copy of this information sheet for your own records. If you decide to take part you are still free to withdraw at any time without giving a reason and without detriment to yourself.

Will I be paid for participating in the research?

There will be no compensation for participation.

What is the duration of the research?

10 minutes.

Where will the research be conducted?

From an available computer with internet access of your choice.

Will the outcomes of the research be published?

Results may be published and if this were the case, participants would be contacted and asked for their permission.

Contact for further information

Aiden.Sisler@postgrad.manchester.ac.uk

07552141721

What if something goes wrong?

Please refer to the contact list on the debriefing form for resources.

Additionally, If there are any issues regarding this research that you would prefer not to discuss with members of the research team, please contact the Research Practice and Governance Co-ordinator by either writing to 'The Research Practice and Governance Co-ordinator, Research Office, Christie Building, The University of Manchester, Oxford Road, Manchester M13 9PL', by emailing: Research-Governance@manchester.ac.uk, or by telephoning 0161 275 7583 or 275 8093

Appendix B

Demographic Questions from Questionnaire

Please indicate the following:

1. Have you spoken English for at least ten years? Yes/No.

2. What is your age: _____.

3. What is your gender: _____.

4. Please indicate your ethnicity: _____.

5. Please indicate your highest level of education: Secondary School,

Technical/Apprenticeship, Undergraduate Degree, Postgraduate Degree.

Appendix C

Big Five Inventory (BFI)

John, O. P., Donahue, E. M., & Kentle, R. L. (1991). The Big Five Inventory--Versions 4a and 54. Berkeley, CA: University of California, Berkeley, Institute of Personality and Social Research.

How I am in general

Here are a number of characteristics that may or may not apply to you. For example, do you agree that you are someone who *likes to spend time with others*? Please write a number next to each statement to indicate the extent to which **you agree or disagree with that statement.**

1	2	3	4	5
Disagree Strongly	Disagree a little	Neither agree nor disagree	Agree a little	Agree strongly

I see myself as someone who...

___1. Is talkative ___
___2. Tends to find fault with others ___
___3. Does a thorough job ___
___4. Is depressed, blue ___
___5. Is original, comes up with new ideas ___
___6. Is reserved ___
___7. Is helpful and unselfish with others ___
___8. Can be somewhat careless ___
___9. Is relaxed, handles stress well ___
___10. Is curious about many different things ___
___11. Is full of energy ___
___12. Starts quarrels with others ___
___13. Is a reliable worker ___
___14. Can be tense ___
___15. Is ingenious, a deep thinker ___
___16. Generates a lot of enthusiasm ___
___17. Has a forgiving nature ___
___18. Tends to be disorganized ___
___19. Worries a lot ___
___20. Has an active imagination ___
___21. Tends to be quiet ___
___22. Is generally trusting ___
23. Tends to be lazy
24. Is emotionally stable, not easily upset
25. Is inventive
26. Has an assertive personality
27. Can be cold and aloof
28. Perseveres until the task is finished
29. Can be moody
30. Values artistic, aesthetic experiences
31. Is sometimes shy, inhibited
32. Is considerate and kind to almost everyone
33. Does things efficiently
34. Remains calm in tense situations
35. Prefers work that is routine
36. Is outgoing, sociable
37. Is sometimes rude to others
38. Makes plans and follows through with them
39. Gets nervous easily
40. Likes to reflect, play with ideas
41. Has few artistic interests
42. Likes to cooperate with others
43. Is easily distracted
44. Is sophisticated in art, music, or literature

Appendix D

Parent Prototype Descriptions

(Rohan & Zanna, 1996)

Please read the following 4 descriptions and select how well each description matches your father/mother when you were growing up. Additionally, indicate which example best describes your mother/father when you were growing up. If this does not apply to you please continue on to the next page.

A) Authoritarian Parent Prototype (Participants did not see this label)
My mother has a strict and unchanging set of standards by which she tries to shape, control, and judge my behaviour and attitudes. She places great importance on obedience, and she favours forceful measures when my actions or beliefs conflict with her standards of acceptable conduct. She has tried to teach me conventional values such as work, tradition, respect for authority, and preservation of order. She does not encourage verbal give and take, because she believes that children should accept parents' word for what is right.
Strongly Agree, Agree, Neutral, Disagree, Strongly Disagree

B) Permissive-Indulgent Parent Prototype My mother is tolerant and accepting. She makes few demands of me. Whenever possible she avoids asserting her authority, and she avoids imposing controls or restrictions. She does not try to structure or influence what I say or do. She does not insist that I conform to standards made by other people, and allows me to decide for myself what is right and wrong. My mother allows me to make my own decisions, and gives me whatever I ask for.
Strongly Agree, Agree, Neutral, Disagree, Strongly Disagree

C) Authoritative Parent Prototype

My mother sets clear standards for me. She expects me to do what she says, and she explains the reasoning behind her requests and decisions. She listens to my opinions, and she will give me what I ask for or want if she thinks it is reasonable. She believes in having form control, but she does not overload me with rules and restrictions. She will admit to her mistakes and she is loving and supportive. She thinks it is important for me to be both happy and productive. She wants me to be independent and assertive as well as respectful, and be able to fit in with others.

Strongly Agree, Agree, Neutral, Disagree, Strongly Disagree

D) Permissive-Neglectful Parent Prototype (Participants will not see this label)

My mother is heavily involved in other activities, and has little time to spare me. She does not pay much attention to me, but also makes few demands of me. She responds to my immediate demands in a way that quickly resolves the problem. My mother does not have clear standards for the way she wants me to behave, and she intervenes only when it is absolutely necessary. My mother does not have the time or motivation to think about my needs.

Strongly Agree, Agree, Neutral, Disagree, Strongly Disagree

Now please indicate which description best describes your father/mother.

Parent Type A

Parent Type B

Parent Type C

Parent Type D

Appendix E

Social Dominance Orientation

(Sidanius and Pratto, 1994)

Please rate the following items on a scale from 1-7 with 1= Very Negative and 7= Very Positive

1. Some groups of people are just more worthy than others
2. It would be good if all groups could be equal
3. In getting what your group wants, it is sometimes necessary to use force against other groups
4. Group equality should be our ideal
5. All groups should be given an equal chance in life
6. Superior groups should dominate inferior groups
7. We should do what we can to equalize conditions for different groups
8. To get ahead in life, it is sometimes necessary to step on other groups
9. If certain groups of people stayed in their place, we would have fewer problems
10. Increased social equality would be a good thing
11. It's probably a good thing that certain groups are at the top and other groups are at the bottom
12. We would have fewer problems if we treated different groups more equally
13. Inferior groups should stay in their place
14. We should strive to make incomes more equal
15. No one group should dominate in society
16. Sometimes other groups must be kept in their place

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Appendix F

Participant Debriefing Form

Thank-you for your participation, it is greatly appreciated. If you have any questions or concerns regarding the study please contact me at: aiden.sisler@postgrad.manchester.ac.uk or by mobile at 07552141721. Additionally, should you wish to retract your submitted questionnaire you may do so by contacting me with your time of completion without incurring any penalty.

For results of the study, let me know of your interest and I will send-out the findings once they have been collated.

Below are some useful resources that you may wish to get in touch with should anything have arisen during the course of the study.

Samaritans- 08457 90 90 90 http://www.samaritans.org/
Samaritans provides confidential non-judgmental emotional support, 24 hours a day for people who are experiencing feelings of distress or despair

Nightline- A confidential listening and information service
http://www.nightline.ac.uk/Home.aspx

Support Line UK- 01708 765200
http://www.supportline.org.uk/
Offers confidential emotional support to children, young adults and adults by telephone, email and post. Works with callers to develop healthy, positive coping strategies, an inner feeling of strength and increased self esteem to encourage healing, recovery and moving forward with life. Also keeps details of counselors, agencies and support groups throughout the UK.

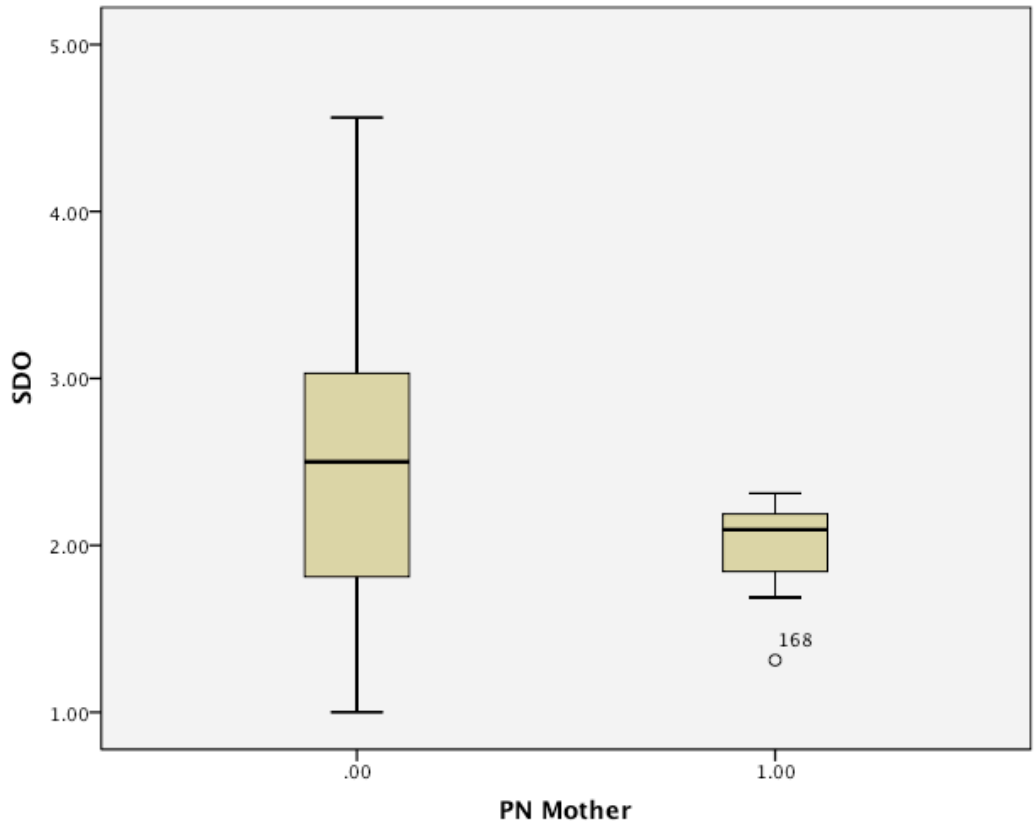
National Society for the Prevention of Cruelty to Children (NSPCC)- 0800 800 500 http://www.nspcc.org.uk/

Respond- 0808 808 0700
http://www.respond.org.uk/
Supporting people with learning disabilities, their families, careers and professionals affected by trauma and abuse

WHO Child Maltreatment-
http://www.who.int/topics/child_abuse/en/

Appendix G.

Tests for parametric assumptions



Box plots indicating example of extreme score for PN Mother