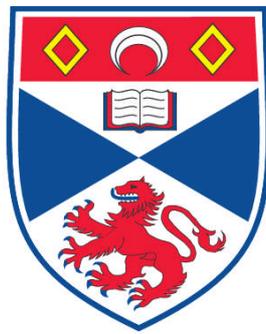


**GROUP IDENTIFICATION AND PERCEIVED DISCRIMINATION:
A STUDY OF INTERNATIONAL STUDENTS IN THE UK**

Miguel R. Ramos

**A Thesis Submitted for the Degree of PhD
at the
University of St. Andrews**



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**Group identification and perceived discrimination:
A study of international students in the UK**

A thesis for the degree of PhD

Submitted April 2009

by

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I, Miguel R. Ramos, hereby certify that this thesis, which is approximately 89,000 words in length, has been written by me, that it is the record of work carried out by me and that it has not been submitted in any previous application for a higher degree.

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Abstract

This thesis examined how international students experience life in the UK and, in particular, how these students respond to experiences with discrimination and social exclusion. Specifically, we drew on the rejection-identification model (Branscombe et al., 1999) in order to examine the impact of minority group identification as a coping strategy against perceptions of discrimination. Despite the number of studies supporting the rejection-identification model (e.g. Schmitt et al., 2002, Schmitt et al., 2003), discrepant findings were found in other research (e.g. McCoy & Major, 2003; Eccleston & Major, 2006). In order to solve these inconsistencies we proposed to extend this model in two important ways. Firstly, building on important work on the multidimensionality of social identification (e.g. Cameron & Lalonde, 2001; Ellemers et al., 1999; Jackson, 2002), we argued that a multidimensional perspective of the rejection-identification model is fundamental given that different dimensions of social identification (i.e. ingroup affect, centrality, and ingroup ties) have different effects on psychological well-being. Secondly, we hypothesised that the protective effect of the different dimensions of social identification depended upon individual preferences, beliefs and behaviours towards own and host group (i.e. acculturation strategies). These two extensions to the rejection-identification model were tested longitudinally with a sample of 160 international students. Results indicated that none of the dimensions of social identification serve to protect students from the harmful effects of discrimination. Indeed, support was found for the argument that it is important to investigate possible moderators of the rejection-identification relationship. Our results also indicated that when international students perceive discrimination, a separation strategy allows them to maintain ingroup affect, and in this way protect their self-esteem. Integration,

marginalisation, and assimilation strategies were associated with lower ingroup affect leaving these students without a successful strategy to cope with discrimination. Although the aim of this thesis was to examine the experiences of international students, in Chapter 7 we replicated our previous model with a sample of Polish immigrants (N = 66) in order to test whether our results could be generalised to other minority groups. Results supported the previous findings with international students. Finally, the discussion of this thesis focused on the importance of taking into account individual acculturation strategies in order to understand the relation between perceived discrimination, minority group identification, and well-being. We also focused on how the knowledge generated by this research may support international students.

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Chapter 1. PERCEPTIONS OF DISCRIMINATION AND MINORITY GROUP IDENTIFICATION

Overview

Previous research has highlighted that perceiving discrimination has negative consequences for the well-being of disadvantaged groups. However, the processes which relate perceived discrimination to psychological well-being are characterised by conflicting evidence in the literature. This chapter focused on the implications of group-based discrimination for the psychological well-being of disadvantaged group members. Firstly, it provided an overview of social identity theory (SIT) and self categorisation theory (SCT) as an important framework for understanding how group-based discrimination impacts on group membership. An insight into the ways in which a group process framework might be useful for the topic of perceived discrimination was also explored. Secondly, this chapter looked at how this framework has provided a crucial basis for the understanding of essential mechanisms in coping with discrimination. It examined in more detail models of coping, relevant research findings, and also inconsistencies found in the literature. Finally, this chapter aimed at addressing these inconsistencies in two important ways: (i) by extending existing models to a multidimensional perspective of social identification; and (ii) by taking into account minority group members' preferences, beliefs, and behaviours towards one's own and dominant group. More detail about these two extensions was given in the final section of the chapter.

The study of stereotypes, prejudice, and discrimination has been an important topic in psychology. Motivated by a concern to improve social problems, social psychological research initially focused on its source – dominant groups in societies. Until a decade ago, the main concern was investigating the perspective of dominant groups toward stereotypes, prejudice, and willingness to discriminate against outgroup members (Adorno, Frenkel-Brunswik, Levinson, & Sanford, 1950; Allport, 1954; Crosby, Bromley, & Saxe, 1980; Deaux, 1984; Gaertner & Dovidio, 1986; Duncan, 1976; Sidanius & Pratto, 1999). This research has been described as the psychology of the advantaged. It focuses on those who have the power within societies – the privileged groups. However, researchers only recently have started to concentrate on the perspective of the powerless. Since the last decade, there has been a flourishing interest in understanding how members of disadvantaged groups¹ respond to stereotypes, prejudice, and discrimination (e.g. Branscombe, Schmitt, & Harvey, 1999; Crocker, Major, & Steele, 1998; Jost, Pelham, Sheldon, Sullivan, 2003; Major & Eccleston, 2004; Major, Quinton, & McCoy, 2002; Miller & Kaiser, 2001; Sellers & Shelton, 2003; Steele, Spencer, & Aronson, 2002).

Early work had hypothesised about the negative consequences of prejudice and discrimination for its targets (e.g. Allport, 1954; Mead, 1934). It is surprising that only recently has research started to systematically adopt a perspective on the disadvantaged (Swim & Stangor, 1998). Recent reviews of the literature (e.g. Crocker et al., 1998; Major & O'Brien, 2005; Schmitt & Branscombe, 2002; Stangor, Swim, Sechrist, DeCoster, Van Allen, & Ottenbreit, 2003; Swim & Stangor, 1998), have shown that belonging to a disadvantaged group has a number of negative consequences for its members. Thus, in this thesis we feel that a perspective on the powerless is fundamental

¹ In the literature all the three terms - disadvantaged groups, stigmatised groups (term that will be explained in more detail further in this thesis), and minority groups - have been broadly used. In this thesis these three terms will be used interchangeably.

in order to fully understand the phenomena and correlates of stereotypes, prejudice, and discrimination.

Although both dominant and minority group members may stereotype and evaluate each other negatively, because the former controls the resources, it is natural that the consequences of these issues will have a greater effect on those who occupy less favourable strata in societies. Indeed, discrimination creates barriers for disadvantaged group members in a number of important domains such as the criminal justice system, health care, educational settings, and the workplace (Crandall & Eshleman, 2003; Sidanius & Pratto, 1999). These barriers increase the difficulties of disadvantaged group members in obtaining important resources such as employment, education, and housing for example. It has been shown that the barriers imposed by prejudice and discrimination directly affect the social status, academic achievement, physical health, and psychological well-being of disadvantaged group members (Allison, 1998; Braddock & McPartland, 1987; Clark, Anderson, Clark, & Williams, 1999; Crocker, Major, & Steele, 1998; Major & O'Brien, 2005). Another important aspect is that the disadvantaged position of these groups creates a self-reinforcing cycle that cannot be easily broken. For example, discrimination is often involved in determining the low status that disadvantaged groups endure within societies (Moore, 1981; Pettigrew, 1981). However, the resulting low social status may in turn cause more barriers and discrimination against them (Link & Phelan, 2001). That is, discrimination on the housing system for instance may impact on where low status groups are allowed to live. The location where these groups live often limits access to jobs and schools, which in turn limits access to income. As such, limited access to income will reinforce barriers to housing, education, and so forth.

Additionally, it is important to keep in mind that if dominant groups isolate other groups from contact with the mainstream norms and prevent the access to rewards resulting from these norms, there will be different standards and goals between groups. This low level of opportunity can be accompanied by resignation and low motivation (not putting effort in education for example), which perpetuates the disadvantaged position of minority groups (Simpson & Yinger, 1985). Because of the circular and self-reinforcing nature of these negative consequences, disadvantaged group members face barriers that are not easily breached.

Furthermore, it is not uncommon for disadvantaged group members to be confronted with experiences of interpersonal mistreatment, insults, rejection, and hostility (Crocker et al., 1998; McCoy & Major, 2003). They are exposed to a higher risk of contracting several health problems such as hypertension, coronary heart disease, stroke, and chronic pain (Contrada, et al., 2001; Klonoff, Landrine, & Cambell, 2000; Krieger 1990, 2000; Swim, Hyers, Cohen, & Ferguson, 2000; Taylor & Turner, 2002; Williams, Yu, Jackson, & Anderson, 1997).

Another important reason for adopting a perspective on the powerless relates to the fact that members of dominant and disadvantaged groups tend to approach each situation with a different understanding of their group status in the larger society. Hence, in the face of discrimination, responses of dominant and disadvantaged group members tend to differ significantly, despite context remaining constant (Branscombe, 1998; Inzlicht & Ben-Zeev, 2000; Schmitt & Branscombe, 2002; Sekaquaptewa & Thompson, 2002).

A final reason relates to the nature of the consequences of discrimination. That is, in discussing the negative consequences of belonging to a disadvantaged group, it is important to distinguish between direct and indirect consequences. For example,

prejudice and discrimination can have a direct influence through the previously mentioned barriers caused by housing or employment discrimination. However, it is crucial to also understand the indirect influence through perceptions on the part of disadvantaged group members (Stangor et al., 2003). The indirect nature of these consequences can only be examined by focusing on the experiences of disadvantaged group and will constitute the core of this thesis. In the section below, these indirect consequences will be explored in further detail.

1.1 – The concept of stigma and its effects

An important conceptualisation for research focusing on the powerless is the definition of stigma. This term was firstly used by Goffman (1963), referring to a characteristic or attribute that discredits a person. In other words, the person who is stigmatised possesses some characteristics that ‘call into question his or her full humanity – the person is devalued, spoiled or flawed in the eyes of others’ (Crocker et al., 1998, p. 504). These characteristics can be controllable or uncontrollable, visible or invisible, and associated with one’s appearance, behaviour, or group membership (Goffman, 1963). In stigmatisation, one’s stigma determines how one is judged and treated by others (Jones et al., 1984; Katz, 1981;).

Importantly, one’s discrediting characteristics are associated with negative evaluations and stereotypes (Jones et al., 1984), which are well known within cultures (Crocker et al., 1998; Steele, 1997). In fact, among members of a culture there is a unanimous agreement about the devalued characteristics and negative stereotypes that determine stigmatisation (Jost & Banaji, 1994). These negative evaluations and stereotypes shape the grounds for excluding and discriminating members of the stereotyped category (Leary & Schreindorfer, 1998; Major & Eccleston, 2004). These

negative stereotypes are also learned at an early age. For example, research has shown that children as young as three years old learn to devalue individuals with dark skin colour (Clark & Clark, 1947). More specifically, in the United States, Clark and Clark (1947) found that Black children tended to prefer a white over a black doll when asked to choose which doll they would like to play with, which one had the nice colour, and which one looked bad. It was speculated that non-white people tend to prefer white, not because whites are perceived to be better, but because people understand that some paths in society are better open for those who are white (Beuf, 1977). A similar pattern was also observed in the UK, where West Indian and Asian children also preferred the white dolls (Jahoda, Thomson, & Bhat, 1972; Milner, 1973). Yet, these studies were conducted around the early 50's to 70's. Thus, one might be inclined to think that, as result of a more tolerant and equalitarian society in which we live in today, these findings would be different. Indeed, research conducted after the 70's has shown a different pattern by demonstrating that some Black children identify with their race and manifest a preference for the black dolls (Aboud, 1980; Braha & Rutter, 1980; Vaughan, 1978). Nevertheless, despite the suppression of levels of overt racism in adults in modern society, children below the age of ten still tend to show bias and discrimination (Aboud, 1988). From these studies it was concluded that racial awareness begins at a very early stage in peoples' lives. Therefore, since an early age members of disadvantaged or stigmatised groups tend to recognise their disadvantaged status which tends to impact on their choices in life. It has also been found that other negative stereotypes are learnt in early childhood, including stigma associated with disabilities, obesity, and homosexuality (Dion & Berscheid, 1974; Sigelman & Singleton, 1986; Troiden, 1979).

Due to the wide scope of the field this thesis shall have to be selective. The focus will be on the indirect consequences of group-based discrimination. More specifically, the focus will be on the psychological consequences of belonging to a disadvantaged group. One of the principal reasons for this choice is that the literature in this particular field has been characterised by inconsistencies and contradicting theoretical opinions. In fact, although there has been significant agreement that discrimination is associated with direct negative consequences for disadvantaged group members, there has been less agreement about the psychological consequences of perceptions of discrimination.

Early discussions of stigmatisation (e.g. Allport, 1954; Fanon, 1952) argued that the stigmatised tend to internalise the devalued stereotypes, which in turn can alter or even damage one's personality. Accordingly, Lewin (1948) argued that a low social evaluation of one's group tends to be reflected in self-hatred. Belonging to a disadvantaged group and the resulting personal consequences lower their members' self-esteem. Other authors such as Mead (1934) and Cooley (1956) contended that one's self-concept is shaped by interacting with other individuals and their appraisals of oneself. When a negative view about one's group is recognised, it is followed by feelings of devaluation of this group and lowers members' self-esteem (Cartwright, 1950; Cooley, 1956; Erikson, 1956; Kardiner & Ovesey, 1951; Mead, 1934; Stryker & Serpe, 1982; Tajfel & Turner, 1979).

Indeed, empirical research has supported the idea that such devaluation is harmful to psychological well-being in general (Cozzarelli & Karafa, 1998; Crocker & Major, 1989). This is understandable if we acknowledge that humans are motivated to seek inclusion and avoid exclusion (Bowlby, 1969; Brewer, 1997; Maslow, 1968; Rosenberg, 1979; Tajfel & Turner, 1979). Supporting this hypothesis, different studies have found that social exclusion tends to result in low self-esteem (Leary, Tambor,

Terdal, & Downs, 1995), but also in anxiety (Bowlby, 1973), and depression (Frale, 1993). Discrimination has also been associated with negative affect and poor life satisfaction (Broman, 1997; Landrine & Klonoff, 1996). The perception of belonging to a devalued group, or that one is worse off compared to other groups, affects individuals negatively and has harmful psychological consequences.

More contemporary research has demonstrated that the harmful effects of discrimination and exclusion are present in different types of groups such as international students (Schmitt, Spears, & Branscombe, 2003), women (Schmitt, Branscombe, Kobrynowicz, & Owen, 2002; Swim, Hyers, Cohen, & Ferguson, 2000), African Americans (Branscombe et al., 1999; Broman, 1997; Jackson et al., 1996; Brown et al., 2000; Kessler, Mickelson, Williams, 1999; Sellers, Caldwell, Schmeelk-Cone, Zimmerman, 2003), Asian Americans (Patel, 1999 cited in Spencer-Rodgers & Collins, 2006); Chinese in the Netherlands (Verkuyten & Lay, 1998), Blacks in South Africa (Bornman, 1999), Jews (Dion & Earn, 1975), and gay men and lesbians (Diaz, Ayala, Bein, Henne, & Marin, 2001; Herek, Gillis, & Cogan, 1999). What is more, when individuals face discrimination on the basis of broad categories such as gender and race, they are more likely to understand that they might face exclusion on different occasions and in different settings (Deaux & Major, 1987; Kite, Deaux, & Miele, 1991). In sum, group-based discrimination as perpetrated by the majority excludes minorities from the mainstream. Facing this exclusion has negative psychological consequences for minority group members, especially when this exclusion is perceived to be pervasive.

However, recent research has demonstrated that different disadvantaged groups can have similar levels of self-esteem when compared to dominant groups (Crocker et al., 1994; Crocker et al., 1998; Major, Quinton, McCoy, & Schmader, 2000).

Accordingly, other research suggests that discrimination does not lead inevitably to low self-esteem (Crocker & Major, 1989; Tajfel, 1982; Tajfel & Turner, 1979, 1986). For example, Twenge and Crocker (2002) showed in their study that members of a stigmatised group such as the African-Americans had higher self-esteem than European Americans (non-stigmatised group). Moreover, Latino-Americans in the same study reported lower self-esteem on average when compared to the other groups. Overall, different studies have shown that belonging to a stigmatised group does not always result in poor psychological outcomes. This finding is supported by cogent empirical research and is consistently emphasised by reviews of empirical literature (e.g. Crocker et al., 1998; Major & O'Brien, 2005; Schmitt & Branscombe, 2002).

Taken together, these studies indicate that the link between discrimination and psychological well-being is not as straightforward as initially theorised. More complex models are needed in order to map the experiences of the stigmatised. According to Spencer-Rodgers and Collins (2006), the principal limitation of previous studies analysing the negative impact of discrimination on psychological well-being is that the positive effects of mitigating psychological variables have been completely neglected. The principal aim of this thesis is to analyse the ways in which mitigating psychological variables can have a positive impact on well-being. More broadly, the aim of this thesis is to develop current knowledge about how members of disadvantaged groups cope with discrimination and how experiences of discrimination impact on one's self-evaluations. The following section will provide a new and more complex model with the aim of accounting for the different empirical findings. Firstly, we will start by examining the phenomenon of discrimination as a group process (and also by justifying the use of such a perspective). Secondly, in line with the perspective of discrimination as a group process, we will provide an overview of social identity theory and self-categorisation

theory. Thirdly, we will draw upon recent research within the social identity framework in order to understand how individuals cope with perceptions of discrimination. We will then look at important questions raised by some inconsistencies found in the literature. Finally, we will provide a new framework for addressing these inconsistencies. This new framework will set the direction of the thesis.

1.2 – Discrimination as a group process

Discrimination is often directed towards individuals who share a particular group membership (e.g. race, ethnicity, or nationality). In these cases, discrimination stems not only from an isolated individual but also from large groups who share the same attitudes and beliefs. Put another way, stigmatisation is tied to negative stereotypes that are shared among members of a culture and are culturally transmitted. Furthermore, it is fundamental to keep in mind that the groups and categories people belong to are defined by society. Following Crocker et al.'s (1998) example, although one might be inclined to think that race is defined by genetic differences, race is instead socially constructed. In the case of the United States, the government defines race according to one's ancestry - any person of Black descent is defined as Black (Wright, 1994). In other cultures though, only one's skin colour might be used to categorise an individual as Black. Thus, the rules about who is a member of the category 'Black' are defined by norms, societies, and governments (rather than by nature). Other group memberships such as the visually impaired or physically handicapped are also socially constructed and unrelated to genetic differences (Scott, 1969). Because of the social nature that underpins the formation of categories and groups in societies, and because discrimination comes from a specific group towards another group, it makes sense to

understand discrimination as a group process (aspect that will be further developed below).

Stigmatised individuals in turn tend to develop a shared awareness of the negative views of dominant groups in societies. Their prior experiences and their exposure to the dominant culture result in the understanding that their group is devalued and that they could be targets of discrimination (Crocker, 1999; Crocker et al., 1998; Steele, 1997). These collective representations can affect the ways in which stigmatised individuals perceive or appraise different situations (Steele, 1997), reinforcing the significance of examining discrimination as a group process.

Another important reason for adopting a group perspective stems from the fact that societies provide the context for stigmatisation. For example, some characteristics or attributes might lead an individual to be stigmatised in one context but not in another. Being obese, for instance, has historically been considered a positive characteristic associated with wealth, whilst today it has been associated with stigma (Archer, 1985). The stigma association with obesity also varies significantly across cultures (Crandall, 1995). As such, understanding discrimination as a group process also provides the advantage of accounting for the contextual societal factors that are vital for the processes of discrimination to unfold.

On the other hand, because it often involves large groups and their often problematic relationship, the study of discrimination has been of public interest and extensively researched. Reynolds and Turner (2001), however, argue that research in this field often neglects group factors related to discrimination. That is, research has tried to identify the psychological causes that lead to discrimination and which personality and individual differences might predispose individuals to discriminate

against others. As such, these perspectives do not consider the group processes and social context in which discrimination is embedded.

Social identity theory (Tajfel & Turner, 1979) and self-categorisation theory (Turner, Hogg, Oakes, Reicher, & Wetherell, 1987) analyse the group processes inherent to intergroup differentiation and social conflict. For these theories group membership and intergroup context are determining factors of individuals' cognition and behaviour. Discrimination is a product of a complex set of group relations that cannot be systemised into an analysis of isolated individuals. For these reasons, social identity theory has been widely employed in the understanding of intergroup discrimination (Phinney, 1990).

1.2.1 - Social identity theory (SIT - minimal group studies)

Tajfel and colleagues (Tajfel, 1970; Tajfel, Flament, Billig, & Bundy, 1971) in a series of studies started what would later be developed and known as social identity theory. This set of studies originally sought to identify the minimal conditions that lead to intergroup discrimination. It examined the conditions under which members of one group would discriminate in favour of others who were part of the same group (the ingroup) and would discriminate against those who were part of another group (the outgroup).

In the first study (Tajfel, 1970), individuals were asked to estimate the number of dots on a screen. The experimenter then divided participants into two groups – underestimators and overestimators. The provided information led participants to believe that their allocation to a group was based on their estimation of the number of dots. In reality, however, their allocation was completely random. In the end, participants had to fill in a number of matrices which involved attributing points (that

symbolised a monetary reward) to an anonymous ingroup and outgroup member. From the analysis of these matrices it was found that the majority of participants allocated significantly more points to the ingroup compared to the amount allocated to the outgroup. Overall, individuals tended to favour other people who were identified as ingroup members compared to outgroup members. Findings from this study suggested that dividing people into two different groups on the basis of a random and unimportant categorisation (estimation of the number of dots on a screen) produced biased favouritism toward their ingroup.

For Tajfel et al.'s (1971) study, participants were once again divided into minimal groups². This time the matrices were rather different. Using the new matrices participants could only allocate (a) the same amount of reward to other ingroup and outgroup members; (b) give the greatest total reward to the two groups; (c) give the greatest total reward to ingroup members; or (d) give maximum difference favouring ingroup members. Findings from this study indicated that individuals displayed ingroup favouritism by adopting a reward strategy that maximised the difference between ingroup and outgroup. More specifically, participants opted for the strategy that attributed a maximum number of awards to other ingroup members relative to outgroup members even if this necessitated an absolute lower reward for other ingroup members (when compared to the other possible strategies).

In summary, the discussed studies suggested that the simple fact of dividing people into an unimportant and random category was sufficient to lead them to display ingroup favouritism. For participants, the awareness of being in a group opposed to another was sufficient to generate intergroup discrimination (Tajfel, 1978).

² *Minimal* because participants did not know who was in their group and did not interact with members of the other group. Allocating individuals into random and unimportant group categorisation allowed ruling out important factors of intergroup discrimination as conflicts of interest or personal interactions.

These findings were unexpected and in fact contradicted existing intergroup conflict theories (e.g. Sherif, 1967). In short, intergroup conflict theories argue that incompatible group interests (e.g. a desire for a limited resource) lead to intergroup competition, which is related to different negative outcomes such as group hostility and prejudiced behaviour, whilst compatible goals lead to positive outcomes such as fairness and tolerance. Tajfel et al.'s (1971) findings show that incompatible group interests are not necessary for intergroup discrimination to occur. There is evidence that examining intergroup competition and treatment of outgroup members cannot explain intergroup discrimination alone; ingroup memberships are vital to the understanding of intergroup discrimination (Tajfel & Turner, 1979).

The random allocation of individuals to fundamentally meaningless groups led to intergroup differentiation. In the next section, we will see how the implications of these findings turned out to be the core aspect of a new theory of intergroup relations.

1.2.1.1 - Implications of the minimal group studies

From the analysis of the minimal group findings, Tajfel and Turner developed social identity theory (SIT; Tajfel, 1972; Tajfel & Turner, 1979). A central point in social identity theory relates to the fact that when participants categorised or defined themselves as members of a group, they identified with one of the minimal categories (Tajfel, 1972). Apparently meaningless categories had an impact on how individuals defined themselves and others in group-based terms. As Tajfel (1972) argued, “distinction from the ‘other’ category provided ... an identity for their own group, and thus some kind of meaning to an otherwise empty situation” (p. 37). This group-based aspect of how individuals define themselves was termed social identity and was defined as “that part of an individual’s self-concept which derives from his [or her] knowledge

of his [or her] membership of a social group (or groups) together with the value and emotional significance attached to that membership” (Tajfel, 1978, p.63). Thus, our ingroup memberships (the groups that we belong to) are important in defining who we are by being characteristics intrinsic to our self-concept.

In order to explain why ingroup members allocated more points to their group, Tajfel (1978) argued that the need for a positive social identity is the essential mechanism responsible for ingroup favouritism. More specifically, individuals seek to achieve positive self-esteem by establishing a *positive distinctiveness* between ingroup and outgroup. In other words, when a particular group membership becomes significant for self-definition, individuals want to perceive their ingroup as better and distinctive from the outgroup. Relating to the minimal group experiments, participants identified themselves with one of the categories in comparison to the other category (distinctiveness from the outgroup). Then, positive distinctiveness was achieved by awarding more points to other ingroup members.

On balance, SIT posits that social identities are crucial parts of one’s self-concept. It is also argued that individuals are more likely to seek positive self-concepts. Hence, individuals are motivated to evaluate ingroups more positively than relevant outgroups (Turner, 1999). However, ingroup favouritism cannot be understood as a universal response to intergroup differentiation. In fact, Tajfel and Turner (1979) argued that ingroup favouritism is contingent upon the contribution of three important aspects: (a) whether a particular group membership is significant for one’s self-concept; (b) whether the context permits comparisons between groups; and (c) whether the comparative dimension to the intergroup comparison is perceived to be important. Therefore, ingroup favouritism can be displayed only when the group is significant to one’s self-concept, when it is possible to differentiate between groups, and the outgroup

is important for the involved comparison dimensions. With regard to the minimal group experiments, ingroup favouritism was displayed because: (a) their group membership was important in order to provide social meaning to an otherwise meaningless situation; (b) the situation allowed a clear division between two groups (e.g. overestimators in opposition to underestimators); and (c) the outgroup was competing for the only available dimension (reward allocations).

1.2.1.2 - Positive distinctiveness and relative group status

SIT was used to explain intergroup differentiation and positive distinctiveness. However, these were not the only contributions to the analysis of intergroup behaviour. Positive distinctiveness implies intergroup comparisons and this was the key point for another important set of ideas.

When seeking positive distinctiveness, intergroup comparisons suggest that one group is better than the other in respect to a valued dimension. This relative position of the ingroup vis-à-vis the outgroup increases awareness of group status. A favourable comparison with a given outgroup provides a high status to one's ingroup, whilst an unfavourable comparison conveys low status. Importantly, in order to attain a positive social identity individuals are motivated to associate themselves with high status and to be disassociated from low status groups (Tajfel, 1978). Because one's self-concept is defined by membership in different groups, the relative status of one's group memberships are likely to have an impact on the individual self (e.g. well-being and self-esteem). In fact, differences in group status are associated with negative consequences at both group and individual level. For example, members of groups with a low status tend to evaluate their group less positively, identify relatively less with their group, and favour their group less in outcome allocations (Brown & Wade, 1987;

Ellemers, Van Knippenberg, & Wilke, 1990; Turner & Brown, 1978). At an individual level, a low status can result in lower self-esteem and relatively greater anxiety during intergroup contact (Brown & Lohr, 1987; Stephan & Stephan, 1985).

In addition, how a subjective low status or even a threat of lower status is interpreted has an impact on reactions amongst low and high-status group members. Indeed, when low-status group members believe that it is possible to move between groups they might do so in order to improve their social status. However, in different situations (especially when a group membership is defined by categories as race, nationality, or gender) it might be impossible to pass between groups. SIT conveys that strategies to improve group status are dependent upon a subjective evaluation of the social structure.

SIT argues that responses to group relative status are based on three important sociostructural variables; stability, legitimacy, and permeability. Stability was defined as the extent to which an alternative status position for a group may be perceived. Legitimacy referred to the extent to which both high and low status groups perceive the status structure to be fair. Finally, permeability was defined as the extent to which one can leave a group to join another (Tajfel & Turner, 1979). How these sociostructural variables are perceived determines individuals' preferred strategies to achieve a positive social identity.

When boundaries between groups are seen as permeable, upward mobility is possible for low status group members. Thus, a strategy of *social mobility* can be achieved by passing from a low to a high-status group. This upward movement requires psychological disassociation with the low-status group and its members. Indeed, empirical support has shown that when individuals perceive that group boundaries are permeable, they tend to disidentify with their low status group and attempt to gain

acceptance in the high status group (Ellemers, van Knippenberg, & Wilke, 1990; Wright, Taylor, & Moghaddam, 1990). There are no changes in the intergroup context or status quo when individuals adopt this strategy. It is an individual mobility strategy which requires individuals to reduce their commitment to the low-status group by rejecting norms, values, or behaviours of this group (Tajfel & Turner, 1986). When boundaries between groups are perceived to be impermeable individuals face barriers to social mobility, i.e. there is the belief that one is unable to move between groups. Under these conditions, there are two possible strategies depending upon whether the ingroup status is perceived to be secure or insecure. When ingroup status is seen as secure (i.e. legitimate and/or stable), individuals tend to follow a strategy of *social creativity*. For this strategy, a positive social identity is achieved by changing the comparative dimension. Tajfel and Turner (1979) argue that changing the comparative dimensions can be attained by (a) comparing the ingroup to the outgroup in a new dimension (see Lalonde, 1992), (b) changing the quality of the attributes involved, so that negative attributes can be seen as positive (see Ellemers & Van Rijswijk, 1997), and (c) changing the comparison group to a lower-status group (Tajfel & Turner, 1986). This strategy (as with social mobility) is unlikely to be associated with changes to the intergroup context (Haslam, 2004).

In contrast, SIT posits that when ingroup status is perceived to be insecure (i.e. illegitimate and/or unstable), individuals tend to engage in *social competition*. In effect, the perception that intergroup relations are insecure leads to a sense that changes to the status quo can occur. In this situation ingroup members tend to strengthen identification with their group and engage in collective action in order to improve their status (Tajfel & Turner, 1979). The superiority of the outgroup is challenged by means of overt conflict, hostility, or antagonism. Social competition is the only strategy that will likely

result in intergroup conflict and changes to the status quo (Haslam, 2004). These ideas have received empirical support from other research showing that when individuals perceive that the ingroup status is insecure, they tend to show more ingroup favouritism (Caddick, 1982), strengthen ingroup identification (Ellemers et al., 1988; Ellemers, van Knippenberg, & Wilke, 1990; Ellemers, Wilke, & van Knippenberg, 1993), and also engage in collective action in order to improve the position of the group (Dion, 1986; Taylor et al., 1987; Walker & Mann, 1987). In summary, social identity theory is based on three important stages. First, individuals categorise themselves in terms of social identities. Then, individuals tend to engage in comparisons between ingroup and relevant outgroups. Finally, positive social identities are achieved by ingroup differentiation in favour of the ingroup. When individuals perceive that their group has a lower status, a number of strategies are available in order to attain a positive social identity. These strategies may include engaging in individual mobility, engaging in cognitive processes with the aim of redefining social comparisons, or initiating collective action to improve ingroup status.

1.2.2 – Self-categorisation theory (SCT)

Social identity theory “offers a relatively underdeveloped analysis of the cognitive processes associated with social identity salience” (Haslam, 2004, p. 42). Indeed, SIT does not specify the conditions that lead one to behave in interpersonal or intergroup terms. In other words, SIT does not explain under which conditions one might behave in terms of “I” or in terms of “us”. Self-categorisation theory (SCT; Turner et al., 1987) also has a broader scope than SIT such that it aims to understand group processes in general, as opposed to SIT’s perspective on intergroup relations (Turner & Oakes, 1997).

Of particular importance for SCT is the distinction between the self in terms of personal identity and social identity. More specifically, SCT proposes that a salient personal identity is associated with interpersonal behaviour, whilst a salient social identity is associated with intergroup behaviour. For SCT, personal identity and social identity represent different levels of inclusiveness of cognitive representations of the self. According to Turner (1999), these cognitive representations are self-categorisations of the self, which can have three important levels; (1) superordinate (where the self is categorised as human, in contrast to other species), (2) intermediate (where the self is categorised in terms of ingroup member, opposed to outgroup members), and (3) subordinate level (where the self is categorised as an individual, in contrast to other ingroup members). Certain categories are more inclusive than others (e.g. European is more inclusive than British). The less inclusive categories are therefore included in the more inclusive categories (all British are European), but the more inclusive are not included in the less inclusive (not all European are British). This principle parallels the distinction between personal and social identity, where the latter is more inclusive than the former. On this basis, personal and social identities are not opposite poles of a continuum. Instead, for SCT the self concept is seen as a function of different levels of inclusiveness of personal and social identities. Importantly, when one identity becomes more salient (i.e. cognitively activated) the others become less available to one's self-concept (Haslam, 2004).

Also of central significance to SCT is the process of depersonalisation and self-stereotyping. Depersonalisation is the process under which interpersonal behaviour is transformed into intergroup behaviour (Turner, 1999). In this process the perception that the self is more similar to other group members is enhanced. Self and other ingroup members are perceived to share representative ingroup attributes (Tajfel, 1981). As a

consequence, individuals tend to adopt these attributes and the overall characteristics of the group. The distinction of self and others is made in relation to group membership (Brown & Turner, 1981).

2.1.2.1 - Identity and salience

People have a number of different identities that are activated according to characteristics of the context in which these identities are embedded. The cognitive activation of a given identity is defined in SCT terms as salience. Turner (1999) argues that salience is crucial for depersonalisation but also in leading to group behaviour. Salience leads individuals to behave in terms of group norms and values (Turner, 1981), and to perceive other ingroup members as prototypical of their group (Haslam, 2004). Salience regulates the stereotypes related to the self and other ingroup members (Turner, 1999), and also enhances consensus and ingroup favouritism (Haslam, Oakes, Reynolds, & Turner, 1999). Overall, despite the number of different identities individuals have, it is the salient identity which will guide one's behaviour.

The concept of salience was further developed by defining two intrinsic aspects of salience – accessibility and fit (Haslam, Oakes, Turner, & McGarty, 1995). Accessibility is defined as the readiness to use a particular identity, whilst fit is defined as the degree of match between the category and reality. It is the interaction of these two concepts that leads individuals to act in terms of a particular identity (Oakes, 1987). The concept of fit can be further divided in comparative and normative fit. The comparative fit is defined by the principle of meta-contrast, i.e. an individual will choose a particular category if within this category the differences are smaller vis-à-vis differences between this category and other relevant categories. For normative fit, the content of the differences between categories should match the expectations that individuals have

about the involved categories. If these expectations are not met, then individuals would not define themselves in terms of that category. Importantly, when one's goals and values match with those of a particular category, it is more likely that this category will be chosen for self-reference (Haslam, 2004). Finally, both the concept of fit and the category chosen for self-reference depend upon the context. For example, a Portuguese student might identify as Portuguese when studying in the UK, but might identify as European if s/he is studying in the US.

Although a lot more could be written about SCT (and also SIT), the aim of this thesis is to apply the aforementioned principles to the topic of group-based discrimination, instead of presenting an exhaustive account of decades of research. In the next section we will examine how group membership can be an effective mechanism in coping with perceptions of discrimination.

1.3 - Coping with discrimination

As noted at the outset of this chapter, it has been recently demonstrated that different ethnic groups can have similar levels of self-esteem as dominant groups (e.g. Crocker et al., 1994). Even within the same minority group, there is great variation in individual levels of self-esteem (Friedman & Brownell, 1995). Coping or resilience theories suggest that minority group members have a number of mechanisms which help them to protect their self-concept from the negative evaluations of the society (e.g. Branscombe, Ellemers, Spears, & Doosje, 1999; Crocker et al., 1998; Major, Quinton, & McCoy, 2002). In a recent review Major and O'Brien (2005) argue that minority group members can cope with discrimination using three distinct strategies. (i) Individuals can attribute a negative outcome to discrimination rather than to themselves. Attributing a negative outcome or treatment to an external cause protects one's self-

esteem (Crocker & Major, 1989; Major, Quinton, & McCoy, 2002). For example, in a study with female participants, Crocker, Voelkl, Testa, and Major (1991) found that those who had the possibility of attributing a negative outcome to prejudice had lower levels of depression than others who did not have the chance of making a negative attribution to prejudice. (ii) Another way in which individuals may cope with discrimination is to disengage their self-esteem from domains or areas where they feel they might face discrimination or be targets of negative stereotypes (Keller & Dauenheimer, 2003; Major & Schmader, 1998, Steele, 1997). For example, Davies, Spencer, Quinn, and Gerhardstein (2002) found that women who were exposed to negative gender stereotypes preferred to answer questions related to verbal ability instead of mathematical questions. (iii) Finally, of particular relevance to this thesis is an increasing body of work pointing to the importance of group identification in coping with perceptions of discrimination (e.g., Branscombe et al., 1999; Schmitt et al., 2002). Minority group members may cope with discrimination by approaching and strengthening identification with their own minority group (Allport, 1954). Groups are important resources for emotional, instrumental, and informational support. Groups also provide a sense of belonging and social validation for our perceptions (Major & O'Brien, 2005).

1.3.1 – Perceptions of discrimination and minority group identification.

Tajfel (1978) argued that when one's minority group is discriminated against by the majority, the separateness of groups and impermeability of boundaries becomes particularly salient. In self-categorisation theory terms (Turner et al., 1987), perceiving discrimination might enhance perceptions of meta-contrast (accentuating within group

similarities and intergroup differences). In turn, this enhances perceptions of common fate and strengthens group identification (Haslam, 2004; Turner et al., 1987).

Despite the impact of perceptions of permeability on individual preferences for a particular strategy in coping with a devalued social identity, perceptions of permeability can also affect the extent to which one identifies with different group memberships. As mentioned earlier in this chapter, perceived permeability of group boundaries affects minority group identification (Tajfel & Turner, 1979). Findings from Ellemers' (1993) study with experimentally created groups suggested that when individual social mobility was impossible, low-status group members tended to identify more with their own group compared with when mobility between groups was possible. Consistent with these findings, research has demonstrated that minority group identification is more likely to increase when group boundaries between the majority and minority groups are perceived as impermeable rather than permeable (Ellemers et al., 1988; Ellemers et al., 1990; Ellemers et al., 1993). Thus, while one may intuitively expect that individuals facing group-based discrimination will distance themselves from the minority group that is the cause of their negative treatment empirical evidence has found support for the opposite. Because discrimination can be such a strong barrier to individual mobility between minority and majority, individuals tend to respond to perceived discrimination with increased identification with the devalued minority group (Branscombe et al., 1999; Jetten, Branscombe, Schmitt, & Spears, 2001; Schmitt & Branscombe, 2002; Schmitt, Branscombe, Kobrynowicz, & Owen, 2002; Schmitt, Spears, & Branscombe, 2003).

This positive relationship between discrimination and identification has been found in many disadvantaged groups, ranging from women (Crosby, Pufall, Snyder, O'Connell, & Whalen, 1989; Gurin & Townsend, 1986), to African-Americans

(Rollins, 1973; Branscombe et al., 1999), Jews (Dion & Earn, 1975), lesbians (Crosby, Pufall, Snyder, O'Connell, & Wallen, 1989), gay men (Simon et al., 1989), and international students (Schmitt et al., 2003). There is also experimental support for this relationship, confirming that perceiving discrimination leads to strengthened ingroup identification. Jetten et al. (2001, Exp 2) manipulated perceptions of discrimination against people with body piercings. Results showed that people with body piercings who were led to believe they could expect discrimination from the mainstream identified more strongly with others who had body piercings, when compared to those who expected positive treatment from the mainstream. It was concluded from this research that rejection from the majority leads to minority identification because the minority group is seen as a coping resource and identification with the minority group provides psychological shelter from the hostile treatment of the majority group (see also Schmitt & Branscombe, 2002). Overall, minority group members tend to identify with their own group in the face of discrimination. This relationship is crucial for the understanding of an important coping model: the rejection-identification model.

1.3.2 – Rejection-identification model

The approach examining the role of group identification in minority groups which has attracted most empirical attention is the rejection-identification model developed by Branscombe et al. (1999). This model draws on the evidence that discrimination is followed by increased minority group identification. The core argument of the model is that group-based rejection damages well-being, but that identification with the minority group counteracts the negative effects of discrimination on well-being (Figure 1).

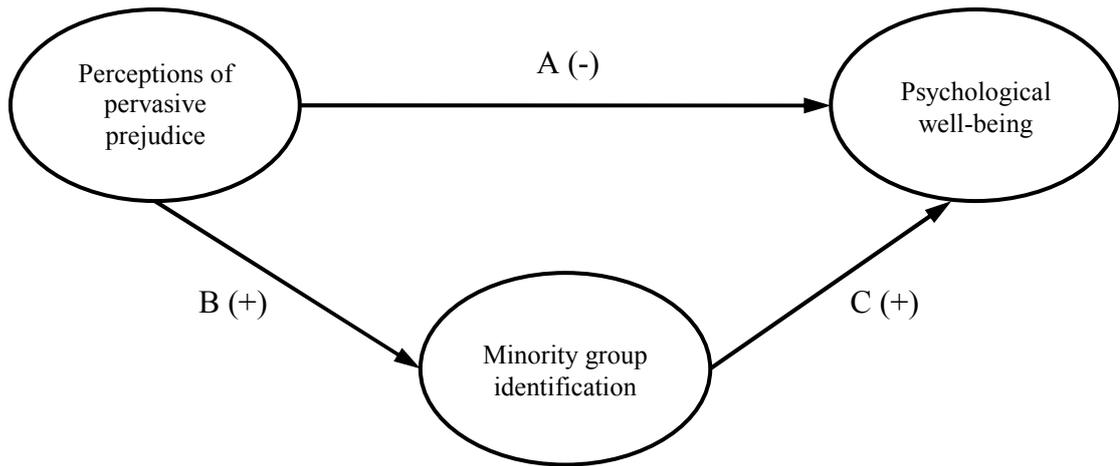


Figure 1. The rejection-identification model (Branscombe et al., 1999).

Branscombe and colleagues (1999) suggested that when individuals make stable attributions to prejudice, these have a negative impact on their self-esteem. It was predicted that perceptions of pervasive discrimination would have a negative impact on well-being (Path A, Figure 1). Drawing on social identity theory it was further predicted that perceiving discrimination would lead to the perception of impermeability of boundaries between minority and majority, enhancing in turn minority group identification (Path B, Figure 1). Finally, it was predicted that minority group identification would provide feelings of belongingness, thereby having a positive impact on psychological well-being (Path C, Figure 1).

In their study, Branscombe et al. (1999) distributed a questionnaire measuring perceptions of discrimination, group identification, and psychological well-being among a sample of African-Americans. To measure perceptions of discrimination, participants had to respond to a scale assessing their willingness to make attributions to prejudice and another assessing their past experiences with discrimination. More specifically, the first of the discrimination scales assessed the ‘extent to which participants believed that prejudice against them would be a probable cause for future negative outcomes’

(Branscombe et al., 1999, p. 140). The second scale assessed participants past attributions in their lives to racial prejudice. Psychological well-being was divided in personal and collective well-being. Personal well-being was measured by assessing participants' global self-esteem and also frequency of negative emotions. Collective well-being was measured with the Membership and Private Esteem subscales of Luhtanen and Crocker's (1992) Collective Self-Esteem Scale. Items in these subscales assessed how participants felt about their minority group membership. Participants also had to respond to a measure assessing minority group identification. Phinney's (1990) Multigroup Ethnic Identity Measure assessed the extent to which participants were identified with the group of African-Americans.

Using structural equation modelling, the authors loaded 'willingness to make attributions to prejudice' and 'past experiences with discrimination' into one latent factor tapping into participants' perceptions of pervasive prejudice. Accordingly, self-esteem and negative emotions were loaded into a 'personal well-being' factor, whilst the Membership and Private Esteem subscales were loaded into a 'collective well-being' factor. Results confirmed the predicted causal paths. That is, perceptions of pervasive prejudice were negatively associated with personal and collective well-being. Furthermore, perceptions of pervasive prejudice were positively associated with minority group identification, which in turn had a positive impact on personal and collective well-being. Importantly, minority group identification mediated the effect of perceptions of pervasive prejudice on personal and collective well-being. This mediated effect demonstrated that pervasive discrimination had a negative effect on well-being, but increased minority group identification could counteract this negative effect. It was argued that despite the low status of the minority group, a positive personal and collective well-being could be obtained by feelings of inclusion. This is consistent with

other research that has shown that minority group identification is related to lower depression (Arroyo & Zigler, 1995) and positive self-esteem (Bat-Chava, 1993, 1994; Phinney, 1989, 1991). It appears that the awareness of having others with whom minority group members share similar experiences (rejection in this case) provides feelings of inclusion and mitigates the harmful effects of discrimination.

Although being a less central issue for the rejection-identification model, the Branscombe et al.'s (1999) study also examined the effect of perceived discrimination on hostility towards the outgroup (White Americans). It was hypothesised that perceiving discrimination against African-Americans would be perceived as a threat to the ingroup. Threats to one's group and one's valued identity generally result in increased derogation of the threatening group (Branscombe & Wann, 1994). Indeed, the study's cross-sectional data revealed strong positive correlations between the two perceptions of discrimination measures (i.e. 'willingness to make attributions to prejudice' and 'past experiences with discrimination') and hostility towards White Americans.

Overall, the rejection-identification model has been supported by a significant number of studies. This model was also tested with other minority groups, showing that the protective effect of minority group membership can depend on relative group status. Schmitt et al. (2002) hypothesised that only low status groups would be able to counteract the negative effects of discrimination by identifying with their own group. Results demonstrated that among female participants who reported gender discrimination, strengthening identification with other women served to protect their self-esteem. Among male participants who experienced discrimination, group identification did not counteract the negative effects of discrimination.

Other studies showed the same protective effects of minority group identification. Schmitt et al.'s (2003) study showed that international students who identified with other international students in response to perceived discrimination from the host university were less likely to report lower levels of self-esteem. Also, Garstka et al. (2004) showed that older adults were able to protect themselves from the harmful appraisals of other groups by strengthening identification with other older adults. For young adults in the same study, group identification did not buffer³ against the deleterious effects of discrimination. This last finding replicated Schmitt et al.'s (2002) results by showing that group identification can only protect the well-being of low status groups.

There is also experimental support for the relationships in the rejection-identification model, confirming that perceiving discrimination strengthens ingroup identification. As already mentioned in the previous section, Jetten et al. (2001) with a group of people with body piercings demonstrated that rejection leads to minority group identification. In turn, by identifying with other people with body piercings, these individuals were able to protect their self-esteem from the hostile treatment of the majority.

1.3.3 – Theoretical critiques and empirical inconsistencies

Despite the empirical support for the findings described above, the rejection-identification model has been criticised on both theoretical and methodological grounds.

In theoretical terms Crocker and Major (1989) argue that the nature of the relationship between perceived discrimination and well-being is the opposite from that Branscombe et al. (1999) hypothesised. The rejection-identification model starts from

³ Throughout this thesis we will use the term 'buffer' which was introduced by Branscombe et al. (1999). This term was initially introduced to define the ability of minority group identification to counteract the negative effects of group-based rejection.

the assumption that perceiving discrimination has negative implications for one's well-being. Crocker and Major (1989), however, argue conversely that attributing an outcome to discrimination enhances psychological well-being. More specifically, it is suggested that when stigmatised group members face negative outcomes (e.g. negative feedback or treatment by others), their well-being can be protected by blaming these outcomes on discrimination rather than on themselves. In fact, the notion that individuals use attributional strategies to protect their self-concepts has been well supported in early attributional research. For example, it has been shown that individuals can protect their self-esteem by changing the cause of a negative outcome from a central aspect of the self to another that is less central, or also by changing from an internal stable attribution to an external unstable one (Snyder & Higgins, 1985; Weiner, 1985). As such, blaming a negative outcome on the prejudice of others changes the attribution from internal and stable to external and unstable, which in turn protects psychological well-being (e.g. Major et al., 2003). Studies such as Crocker et al.'s (1999, Study 1) provide experimental support for this argument. In this study the authors asked a group of female participants to produce an essay that was extensively criticised by a bogus male evaluator. The likelihood of attributing this negative outcome to prejudice was manipulated by inducing participants to believe that the male evaluator was or was not sexist. Results showed that women who were led to believe that the evaluator was sexist reported more positive mood when compared to those who were led to believe that the evaluator was not sexist.

However, it has been shown that attributing a negative outcome to prejudice or discrimination does not always protect one's self-concept. For example, Major and O'Brien (2005) contended that attributions to prejudice and discrimination can affect more than one outcome. That is, making an attribution to prejudice might protect one's

psychological well-being but it still affects one's social identity. By making an attribution to prejudice, individuals understand that their group is devalued by other groups. Because social identities are an important part of an individual's self-concept, making an attribution to prejudice can be seen as an internal attribution and, therefore, argued to be more damaging to self-esteem than a common external attribution (Schmitt & Branscombe, 2002). Furthermore, Crocker, Cornwell, and Major (1993) demonstrated that attributions to prejudice do not protect one's well-being when the stigmatised person believes they are responsible for the stigma, or that this stigma is legitimate. Results from a sample of overweight women showed that when participants were rejected by an attractive male evaluator, the negative outcome was attributed to their weight, which in turn resulted in more negative affect when compared with women of average weight. Additionally, Major, Quinton, and Schmader (2003) showed that attributing a negative outcome to prejudice is associated with self-esteem when discrimination is blatant. In contrast, in the absence of prejudice cues, attributing a negative outcome to prejudice is negatively related to self-esteem. Finally, research has shown that individuals who blame their failures on discrimination suffer social derogation (Kaiser & Miller, 2001). Thus, stigmatised individuals are more likely to attribute negative outcomes to prejudice in private (within the ingroup), when compared to public settings with outgroup members (Stangor, Swim, Van Allen, & Sechrist, 2002).

In a similar way, the literature also shows research findings that are inconsistent with the rejection-identification model. In fact, despite the number of studies providing evidence for the fact that minority group identification is a powerful mechanism in protecting individuals from group-based discrimination, conflicting evidence can be found in the literature. In McCoy and Major's (2003, Study 1) study, a group of female

participants were asked to respond to a group identification measure (identification with their gender group) and then to participate in a task that was assessed by a male evaluator who provided negative feedback. Half of the participants were led to believe that the negative feedback was due to the evaluator's sexist behaviour, whilst the other half was led to believe that the evaluator was not sexist, before completing a self-esteem measure. Results demonstrated that for women in the sexist condition the less they were identified with their gender group, the higher their self-esteem. In the non-sexist condition however, the higher the women were identified with their group, the higher their self-esteem. Likewise, Eccleston and Major (2006) did not find a direct relationship between self-esteem and group identification or perceived discrimination. In the two studies above, the authors reasoned that inconsistencies with previous research could have been due to differences in the methodological procedures, measurement, and conceptualisation of the relevant variables. Consistent with this idea, Ellemers et al.'s (2002) findings suggest that a threat to one's ingroup results in enhanced minority group identification for those who were highly identified. However, for those who were low in identification initially, a threat to the ingroup results in decreased identification with their minority group.

In addition, even though previous research has shown that rejection causes increased identification (Jetten et al., 2001), some have argued for the reversed causal relation, such that highly identifying minority members are more likely to perceive discrimination (Crocker & Major, 1989; Crocker, Major, & Steele, 1998). Crocker and Major (1989) argued that minority group identification might increase the likelihood of attributing a negative outcome to discrimination. More specifically, it is argued that highly identified individuals are more sensitive to intergroup inequalities and thus more inclined to attribute a negative treatment to prejudice or discrimination. Moreover,

Operario and Fiske (2001, study 2) found that when exposed to ambiguous behaviours of a White confederate highly identifying ethnic minority group members tended to make more attributions to discrimination, when compared to low identifying ethnic minority group members. In a similar vein, Shelton and Sellers (2000) showed that African Americans for whom race was a central part of their self-concept were more likely to attribute ambiguous events to discrimination, when compared to those for whom race was not an important part of their identity.

All these findings taken together contribute to an unclear picture of the protective effects of minority group identification. We thus argue that if we are to understand the mitigating processes of minority group identification, it is imperative to address these particular inconsistencies. In this thesis we aim at addressing these inconsistencies in two important ways: (i) by extending the rejection-identification model to a multidimensional perspective of social identification; and (ii) by taking into account minority group members' acculturation strategies towards own and dominant group. More specifically, research has argued that the conflicting results we summarised in this section are due to a lack of a precise conceptualisation of identification in the involved studies (Ashmore et al., 2004; Major & O'Brien, 2005). For example, it is possible for two people to be equally highly identified with their group but have distinct feelings about their group membership. It is therefore important to distinguish between different dimensions of social identification. Research has made great advances in this field by considering several components of social identification. In the section below we will inspect three important dimensions of social identification and will examine how a multidimensional perspective could be integrated in the rejection-identification model. Although a multidimensional approach has contributed to major theoretical advances to the field (as reviewed below), this work is also characterised by inconsistent findings

and an incomplete understanding of the underlying processes through which group identification might influence outcomes. With the aim of solving these further inconsistencies, towards the end of this chapter we will introduce a new aspect of the group context – acculturation - which, we argue, may determine the relationship between perceived discrimination, group identification, and key outcomes. This theoretical framework will be determinant for our new model, which we will further explore in Chapter 2. Finally, as mentioned earlier in this section, previous research has contested the causal assumptions of the rejection-identification model. This is a fundamental caveat given that all the rejection-identification model's studies have been based on cross-sectional data sets. In order to tackle this limitation, we decided to test the abovementioned extensions to the model within a longitudinal perspective. This issue however, will only be further explored in Chapter 3 when our methodological approach will be discussed.

1.4 - Multidimensionality of social identification

One important research question concerns whether social identification occurs in only one dimension, or whether it can have several separable dimensions (Brown, Condor, Mathews, Wade, & Williams, 1986; Deaux, 1996; Ellemers, Kortekaas & Ouwerker, 1999; Hinkle, Taylor Fox-Cardamone, & Crook, 1989). Multidimensional models posit that no single dimension of social identification can be representative of social identification itself. Different dimensions are associated with different outcomes (Sellers et al., 1998). For example, in a study with African Americans, Rowley et al. (1998) found that the affective components of identity were positively related to personal self-esteem only when individuals considered their ethnic group to be important for them. Also, Spencer-Rodgers and Collins (2006) demonstrated that group

attachment and affective components of ethnic identity mediated the relationship between perceived ingroup disadvantage and self-esteem. Overall, research has suggested that group identities have rather different effects depending on which dimensions are taken into account (Jackson & Smith, 1999).

Early work on the measurement of social identification discussed the fact that group membership can have different meanings to different people (Brown & Williams, 1984). Recently, research has been based on the premise that, depending on the dimension, a group membership can mean different things to the same person (Cameron, 2004; Cameron & Lalonde, 2001; Ellemers et al., 1999; Jackson, 2002). For example, an individual might feel that being British is an identity, but might feel that s/he does not have much in common with other British people, or might not be happy to belong to this group.

Tajfel's (1978) definition of social identity provides a detailed insight into the dimensions that are involved in this concept: social identity is "that part of an individual's self-concept which derives from his [or her] knowledge of his [or her] membership of a social group (or groups) together with the value and emotional significance attached to that membership" (Tajfel, 1978, p. 63). From this definition it is possible to unpick three different components of identification: a cognitive component (awareness of group membership); an evaluative component (group appraisal); and an emotional component (emotional aspects of attachment to the group) (Ellemers et al., 1999).

Although there is some agreement about the multidimensionality of social identification, less agreement is found about the nature and number of dimensions. For example, Karasawa (1991) indicated that identification with group membership and identification with group members are different aspects of social identification.

Ellemers et al. (1999) indicated that social identification is composed of three factors: group self-esteem, self-categorisation, and commitment to the group. Also, Jackson (2002) considered three different aspects of social identification: self-categorisation, emotional evaluation of the group, and emotional perceptions of solidarity and common fate. Cameron (2004) compared different existing measures of identification which were tested within and across different social groups. Three components emerged from this analysis – a cognitive, an affective, and an attachment component. More recently, Leach et al. (2008) conveyed a hierarchical two-dimensional model of social identification, identifying the dimensions of self-definition and self-investment. Leach and colleagues (2008) argued that these two dimensions are composed of five components in total; i.e. self-definition is composed by individual self-stereotyping and ingroup homogeneity, whilst self-investment is composed by satisfaction, solidarity, and centrality.

This thesis shall follow the three-factor model proposed by Cameron (2004) for the following reasons. Firstly, as previously outlined, despite the strong empirical support for the existence of several dimensions of social identification (e.g. Ellemers et al., 1999; Jackson, 2002; Sellers et al., 1998), no agreement has been found about the nature and number of these dimensions. Also, regarding the measurement of social identification, the methodological variation used across the different studies makes it difficult to clearly understand the diversity of factor structures. Cameron's (2004) hypothesised three-factor model is based on several previous factor analysis of identification (e.g. existing measures of social identification such as Brown et al., 1986 and Hinkle et al., 1989; also collective self-esteem, Luhtanen and Crocker, 1992; and work on the identification of women, Gurin and Markus, 1989 and Gurin and Townsend, 1986). This model was subjected to confirmatory factor analysis which enabled comparing a three-factor solution against a unidimensional model (reflecting

the way social identification has been traditionally assessed), and a two dimensional model, which reflected the distinction between cognitive and emotional aspect of identification argued by a number of studies (e.g. Brown et al., 1986; Deaux, 1996; Ellemers et al., 1999; Hinkle et al., 1989; Karasawa, 1991). Results indicated that a three-factor solution better accounted for the data than any of the competing models. From this analysis three important dimensions emerged tapping into a cognitive dimension, an affective dimension, and an attachment with other group members dimension. These dimensions were also compatible with previous research with ethnic identification (e.g. Boatswain & Lalonde, 2000). These three dimensions were termed centrality, ingroup affect, and ingroup ties respectively (more detail for each of these dimensions will be given in the section below).

The second reason for adopting Cameron's (2004) scale relates to the measurement of social identification. This model has the benefit of being tested across five independent samples and concerning three different social identities (university, gender, and nationality). Instead of being developed to measure a specific group, this measure has the advantage of being easily adaptable to any number of memberships, including large social categories such as nationality or ethnicity (Cameron, 2004). Moreover, the model was tested with additional personality and group specific measures enabling an evaluation of convergent and discrimination validity (this is a crucial point as to our knowledge no previous measure of social identification had been subjected to this testing). Results demonstrated that the hypothesised three dimensions were consistently related to different variables. For instance, a sense of belonging was uniquely associated with an attachment dimension (ingroup ties), whilst collective self-esteem was uniquely related to an affective dimension (ingroup affect). Overall, self-esteem, and independent and interdependent dimensions of self-construal were uniquely

associated with one of the three hypothesised dimensions of social identification. These results provided further evidence for the fact that each of the three dimensions tap into different constructs.

1.4.1 - Centrality, ingroup affect, and ingroup ties

People belong to a variety of groups, but not all of them are important at a given time. For individuals, these memberships are not equivalent in their psychological meaning (Deaux, Reid, Mizrahi, & Ethier, 1995). On the one hand, as we discussed when examining self-categorisation theory, contextual factors play a crucial role in making a given identity salient. On the other hand, some individuals are consistently readier to act in terms of a given identity to the detriment of other identities (Oakes, 1987; Gurin & Markus, 1989). For example, an international student in the UK might be more likely to behave in terms of his/her own national identity than other fellow international students. In this case, a national identity is relatively central to the individual. Cameron (2004) defined *centrality* as the extent to which a given group membership is important to one's self-concept, i.e. the frequency with which this particular group membership becomes activated in different contexts. Other authors define this concept in a similar way by arguing that it is associated with a subjective importance of a given group membership for the self (Hutnik, 1991; Rosenberg, 1979; Sellers et al., 1997).

Another important dimension of social identification relates to the affective component. Despite the importance of a group membership, it is also imperative to understand its emotional valence for the individual. Indeed, the emotional component of social identities is fundamental for social identity theory. This is reflected in most measures of social identity (e.g. Brown et al., 1986; Ellemers et al., 1999). This

affective component is also present in measures of ethnic identity (e.g. Phinney, 1992) and racial identity (e.g. Sellers et al., 1997). Cameron (2004) defined this affective component as *ingroup affect*, which reflects an evaluation of group membership, relating to the specific emotions which arise from a certain group membership. For example, some international students might feel good and like to be part of the group of international students, whilst others may hold a negative evaluation of their group.

Finally, it is also important to keep in mind the ties that group members develop with other ingroup members. These ties provide a sense of belonging and bring emotional closeness (Cameron, 2004). *Ingroup ties* regard the perception of being part of a group, it relates to “psychological ties that bind the self to the group” (Cameron, 2004, p. 242). In a similar way, others have conceptualised ingroup ties in terms of sharing a bond with the group or other group members (Cameron & Lalonde, 2001); or as a sense of belonging to the group (Phinney, 1992). For example, some international students may feel that they share a bond with other international students, whilst other may feel completely detached from the other group members.

1.4.2 – The three dimensions and the rejection-identification model

Despite the importance of a multidimensional perspective of social identification, research examining the rejection-identification model has tended to adopt a unidimensional perspective. Empirically, Branscombe et al. (1999) tested the model using a combination of items that resemble the dimensions of ingroup affect and centrality. In a similar vein, Schmitt et al.’s (2003) identification scale also included both cognitive and affective components of group identification. In both studies, the different dimensions were part of a single scale. Hence, although different items in the scale assessed different dimensions of identification, all items were factored together in

order to obtain a single identification score. Taken together, these studies had a unidimensional approach, thus raising some questions about how the different dimensions relate to perceptions of discrimination and psychological well-being.

The rejection-identification model becomes more intriguing when we incorporate examinations of the relationship between the different dimensions of social identification with well-being and perceptions of discrimination. The literature is supportive of different effects for each of the social identification dimensions in the face of group based discrimination. Interestingly, previous research does not provide strong support for the paths argued by the rejection-identification model. More specifically, Gurin and Markus (1989) demonstrated that female perceptions of discrimination are associated with an increased awareness of their gender membership. Likewise, it has been demonstrated that perceiving discrimination leads individuals to consider their minority group as an important part of their self-concept (Eccleston & Major, 2004). In fact, it has been shown that if a certain identity is important to one's self-concept (centrality) it is likely that a devaluation of that group's membership would result in lower self-esteem. For example, McCoy and Major's (2003) study with female participants demonstrated that women's self-esteem was lower when they considered gender as an important part of their self-concept. In sum, increasing the psychological centrality or salience of an identity that is devalued by others can be costly in terms of well-being, a finding to opposition to the rejection-identification model.

Moreover, based on the concept that aspects of self-relevant identities should be related to self-esteem (Cross, 1991; Rosenberg, 1979), Rowley et al. (1998) showed that ingroup affect is positively related to self-esteem. Ingroup affect is a key component of group or collective self-esteem, which relates positively to personal self-esteem (Crocker, Luhtanen, Blaine & Broadnax, 1994; Luhtanen & Crocker, 1992). However,

ingroup affect cannot possibly counteract the negative consequences of discrimination. Research has shown that perceived discrimination is related to negative feelings about minority group membership (e.g. Eccleston & Major, 2006). Therefore, perceptions of discrimination would increase negative feelings about one's group, which in turn would lower one's self-esteem.

Finally, there is an absence of research examining the relationship between ingroup ties and perceptions of discrimination. The only study that has tested this relationship was the Spencer-Rodgers and Collins' (2005) study which failed to show a relationship between ingroup ties and perceptions of discrimination. However, in the same study it was shown that ingroup ties have a positive impact on self-esteem. Close ties to others is not just beneficial but necessary for subjective experience of well-being (Baumeister & Leary, 1995). Furthermore, there is considerable evidence that ingroup ties are associated with well-being in minority groups (Frale, Platt, & Hoey, 1998; McKenna & Bargh, 1998; Spencer-Rogers & Collins, 2006). In effect, research has shown that when exposed to situational stressors, by developing ingroup ties disadvantaged group members can resist the negative effects of these stressors (Haslam & Reicher, 2006). Despite cogent evidence showing a positive relationship between ingroup ties and well-being, no support has been found for the impact of perceptions of discrimination on ingroup ties. Thus, more research examining these relationships is needed in order to test the paths (with ingroup ties) of the rejection-identification model.

Taken together, these findings do not provide support for the rejection-identification model. It appears that perceived discrimination is positively related to centrality, which in turn is negatively related to well-being. On the other hand, perceived discrimination is negatively related to ingroup affect, which in turn has a

negative impact on well-being. Perceived discrimination might not be related to ingroup ties, which in turn would exert a positive effect on individuals' well-being.

1.5 – Thesis direction

The lack of consensus in previous research findings limits the current knowledge of minority group identification as a coping process. As already mentioned, in this thesis we sought to test the rejection-identification model with two important extensions in order to understand the buffering role of group identification. As we saw from previous research findings on the multidimensionality of group identification, it appears that the first extension we proposed (i.e. analysing group identification as a three-dimensional concept) does not serve to show the mitigating effects of identification on its own. We believe however, that an attempt to incorporate meaningful moderators of the relationship between rejection and the different dimensions of identification can support the rejection-identification model's assumptions.

It becomes therefore crucial to answer an important question: under which conditions can minority group identification protect individuals from group-based discrimination? In order to answer this question we argue that it is important to examine more closely the relationship between perceptions of discrimination and minority group identification. In line with stress and coping approaches (e.g., Clark, Anderson, Clark, & Williams, 1999; Major, Quinton, & McCoy, 2002), we argue that the way in which minority group members make sense of and give meaning to experiences of discrimination will determine the relationship between discrimination and group identification, which in turn will have an impact on well-being. In this thesis we propose a new approach where the acculturation strategies of minority groups are introduced. For example, in SIT's minimal group paradigm, individuals were divided

into fundamentally meaningless categories. This was important so the researchers could disentangle specific attitudes of each individual towards the outgroup from the actual phenomenon of ingroup favouritism. In this thesis however, we argue that in real groups, individuals (as individuals or members of a group) hold different attitudes, beliefs, and opinions towards various groups, which can be manifested in preferences for contact and participation with both ingroup and outgroups. The way individuals categorise themselves has a crucial impact on intergroup discrimination (as shown by SIT), but we argue that individual attitudes, beliefs, and opinions towards the outgroup and ingroup may feed back into this process.

In this research we posit that to fully understand how group-based discrimination impacts on minority group identification, it is fundamental to take into account minority group members' preferences towards participation and contact with the majority and their own group. For example, an international student might perceive that the host community has a better status than the group of international students and also that group boundaries are permeable for upward mobility. However, this student might hold positive/negative beliefs, attitudes, and opinions about the host community. This in turn will determine his/her preferences for participation and contact. Therefore, even when boundaries are permeable, the student may stick to his/her own group if s/he is not interested in participating in the host community. Similarly, those who perceive that group boundaries are impermeable might still refuse to identify with their own group if they are not interested in participation and contact with other international students.

Acculturation research and, more specifically, acculturation strategies provide a framework where beliefs, attitudes, and preferences towards other cultural groups and own cultural group are taken into account. We believe that such a framework is able to

provide a more in-depth analysis into how minority group preferences, beliefs, and attitudes may relate to perceptions of discrimination and minority group identification. In the next chapter we will draw on the acculturation literature, examining these issues in more detail, and formulating the model that will be tested in this thesis.

Chapter 2. ACCULTURATION STRATEGIES.

Overview

The first chapter focused on the consequences of group-based discrimination for minority group members' psychological well-being. It provided an overview about different strategies used to buffer against perceptions of discrimination, and focused on the significance of group membership and identification as mechanisms to counteract the harmful effects of rejection. It also examined inconsistencies found with models of coping, some research questions raised by these inconsistencies, and how the present research will address these questions. In this chapter relevant work developed under the acculturation framework is summarised. This framework is characterised by having focused primarily on non-dominant groups. Furthermore, individual attitudes, behaviours, and strategies towards own and other groups are a central concern for acculturation. As a result of this focus we believe that the acculturation framework (and its research findings) can provide crucial information for the questions raised in the end of Chapter 1. Instead of aiming at a very inclusive summary of such a vast research field, we focused on particular concepts with critical relevance for this thesis, such as the concepts of acculturation strategies, adjustment, and adaptation. We started by providing a definition of acculturation, followed by an overview of important models of this framework, and a detailed review of the concept of acculturation strategies. We also provided an overview about some significant outcomes of acculturation. In the end, we tied these concepts to the present research and proposed a model for understanding how minority group members cope with group-based discrimination.

2.1 – The concept of acculturation

The concept of acculturation stemmed from anthropology and was further extended to other disciplines such as sociology and psychology. Today acculturation has become a crucial focus of cross-cultural psychology (Liebkind, 2000). The interest in the study of acculturation was initially based on a concern for the effects of European colonisation on indigenous peoples (Hallowell, 1945). It was followed by an interest in understanding how immigrants change when settling into a new society (Beiser, 2000). Recently, it has been focusing on the effects of contact between different ethnocultural groups in culturally diversified societies (Berry, 2003, 2005; Padilla, 1980). Due to the interdisciplinary nature of acculturation, a wide range of different definitions can be found in the literature. However, there is one definition that has been widely quoted in most acculturation literature:

“Acculturation comprehends those phenomena which result when groups of individuals having different cultures come into continuous first-hand contact, with subsequent changes in the original culture patterns of either or both groups...under this definition, acculturation is to be distinguished from cultural change, of which it is but one aspect, and assimilation, which is at times a phase of acculturation (Redfield, Linton, & Herskovits, 1936, p. 149-150).

In this definition, acculturation comprehends the cultural and psychological changes resulting from the contact between different cultural groups and their individual members. This contact can occur as a consequence of sojourning (e.g. tourism and international study), migration, military invasion, and colonisation (see Berry, 2005, for

a recent overview). Furthermore, this definition considers that the contact between different cultural groups has consequences for “either or both groups”. In effect, whilst acculturation has an impact on all the involved groups, it is expected to have a greater impact on non-dominant groups and their members (Berry, 2001). Therefore, much of the research within this framework has focused primarily on non-dominant groups such as immigrants, sojourners, and indigenous people.

According to Berry, Trimble, and Olmedo (1986), in psychology the reason for examining acculturation has been twofold. Firstly, it has been an important framework for accounting for experiences of cultural and social change (product of international study and industrialisation for example) that may interfere with comparative studies in psychology. Secondly, acculturation has also been the main focus of those interested in the psychological phenomena which emerge from the contact between individuals of different cultures. In fact, acculturation has become a crucial and central framework for cross-cultural psychology (Berry, 2003). This contention is supported by the inclusion of acculturation in several journals, handbooks (such as Berry & Sam, 1997; Liebkind, 2000; Ward, 1996, Ward et al., 2001) and textbooks (such as Berry, Poortinga, Segall, & Dasen, 2002; Segall, Dasen, Berry, & Poortinga, 1999).

Of particular relevance to this thesis is the concept of psychological acculturation. Graves (1967) introduced this concept by distinguishing between psychological and cultural aspects of acculturation. Specifically, it was argued that individuals who participate in a culture contact situation experience various psychological changes, due to both the influence of the external culture and also the changing culture of which they are part. This is an important distinction as (i) in the present research we are specifically interested in understanding how individuals interact with the cultural context within which acculturation occurs; and (ii) because different

individuals vary in respect to the degree of participation, the goals they intend to achieve, and also how they change in the culture contact situation.

Nonetheless, the specific characteristics of cultural aspects of acculturation are a vital issue for the understanding of acculturation at the individual level. In order to study the process of acculturation it is crucial to examine its cultural context and identify the key characteristics of the involved cultural groups. It is imperative to comprehend the characteristics of the involved groups before contact, the nature of the contact, and also the resulting cultural consequences for these groups. All these aspects define the process of acculturation at the cultural level (Berry, 2001).

The impact of these cultural aspects may produce cultural changes for the involved groups, which can range from being straightforwardly accomplished to being severely disruptive (Berry, 2005). Furthermore, it is essential to consider psychological changes at the individual level as well as the adaptation of individuals to the new context. These changes can range from minor behavioural shifts (e.g. dressing, eating, and mannerisms) to more problematic issues, which may have an impact on acculturative stress, anxiety, and depression (Berry, 1976). Adaptation and other outcomes of acculturation will be described in more detail further in this chapter. Firstly, it is crucial to keep in mind that there is much variation in how people choose to undergo the process of acculturation. As we describe below, different groups and individuals experience acculturation in different ways.

2.2 - Unidimensional and Bidimensional models

In the early studies of acculturation, the standard view was characterised by a unidimensional and unidirectional perspective (e.g. Olmeda, 1979). This unidimensional model conveys that immigrants (as sojourners and refugees) tend to

begin with a strong preference for maintaining their cultural heritage, which starts to decrease gradually upon intercultural contact. In the final stages of acculturation, it is assumed that these minority groups would have 'relinquished' their own cultural heritage and would have fully adopted the new cultural values, norms, and behaviours of the host society (Gans, 1979; Gordon, 1964). For this model, acculturation is an assimilation process where minorities fall into the irreversible process of losing their own cultural heritage and progress towards embracing the host community's culture. These unidimensional models are still popular in research, especially when measuring acculturation: for example, Suinn-Lew Asian Self-Identity Acculturation Scale (SL-ASIA; Suinn, Ahuna, & Khoo, 1992); the Acculturation Rating Scale for Mexican Americans (ARMSA; Cuéllar, Harris, & Jasso, 1980, cited in Cuéllar, Arnold, & Maldonado, 1995); the Greek Immigrant Acculturation Scale (Madianos, 1984); and the acculturation scale for Asian adolescents in Canada and the UK (Ghuman, 1994). More recently, Taylor (1991) argued in favour of a multifactorial unidimensional model. In more detail, it was conveyed that different topics (linguistic, social, economic, and legislative for example) develop along the acculturation continuum at different rates. Some of them may develop towards assimilation while others may go in the opposite direction, as a result of ethnic reaffirmation.

During the 1980s however, research suggested that minority group members could develop a strong identification with the host society while maintaining their own cultural heritage (Mendoza, 1984; Ramirez, 1984; Szapocznik & Kurtines, 1980). A unidimensional model could not account for the phenomenon of "biculturalism". In contrast to unidimensional models, a bidimensional perspective suggested that the degree to which minorities interact with the host society and the degree to which their cultural background is maintained can be seen in terms of two orthogonal domains (e.g.

Berry, 1980; LaFramboise, Coleman, & Gerton, 1993; Laroche, Kim, Hui, & Joy, 1996; Sayegh & Lasry, 1993; Sanchez & Fernandez, 1993). According to a bidimensional perspective, early conceptualisations of acculturation fail to consider other alternatives to assimilation, such as biculturalism (Dion & Dion, 1996) or even cases where minorities neither wish to maintain their cultural heritage nor wish to interact with the host society (Ward et al., 2001).

To examine these contrasting accounts, Ryder, Alden, and Paulhus (2000) used three studies to compare unidimensional and bidimensional models of acculturation. With a sample of first and second-generation individuals of Chinese descent in Canada, it was concluded that the bidimensional model provided a broader and more valid framework. Results from a factor analysis including the three studies distinguished two independent dimensions of acculturation (participation in larger society and own culture maintenance). Furthermore, the two dimensions were associated with different key demographic variables (such as percentage of time living abroad and generational status), and also different dimensions of personality (such as agreeableness, conscientiousness, extraversion, neuroticism, and openness). The unidimensional model was unable to detect any differences in respect to the different dimensions of personality and showed considerably smaller effect sizes for the correlations with demographic variables. Other studies have reached similar conclusions, emphasising the theoretical and empirical reasons for using a bidimensional perspective (e.g. Berry & Sam, 1997; Horenczyk, 1996; Hutnik, 1991, Laroche, Kim, Hui, & Joy, 1996; Taylor & Lambert, 1996).

2.3 – Combining the two dimensions: the four acculturation strategies

Berry's model for acculturation (1992, 1997, 2001) is perhaps the best-known illustration of the bidimensional approach. His model posits that individual attitudes and behaviours have their roots in two basic aspects of intercultural contact: (1) a preference for maintaining one's cultural heritage, and (2) a preference for having contact and participating in the host community, including other ethno-cultural groups. According to Berry (2001), by combining these two dimensions, four acculturation strategies⁴ can be identified. (i) *Assimilation* is defined by low culture maintenance and high interaction with the host culture. In this case, individuals might prefer to hide their cultural background and become absorbed into the host society. (ii) *Separation* occurs when members of minority groups wish to maintain their cultural heritage but avoid interaction with other cultures. In this case, individuals reject participation and contact with other cultural groups, i.e. they decide to focus only on their own cultural group. In contrast, (iii) *integration* happens when individuals maintain their cultural integrity but at the same time seek to take part in the larger society. Here, individuals seek to maintain their own cultural background and also to participate, as a member of their cultural group, in the larger society. Finally, (iv) *marginalisation* is defined when there is little interest or even possibility in cultural maintenance and a lack of willingness to interact with other cultures (often this is product of exclusion or discrimination). Individuals and groups engage in these four different acculturation strategies.

According to Berry (2003), the choice for a particular strategy depends upon antecedent cultural and psychological factors. For example, research has shown that individuals engaging in voluntary contact are more likely to seek participation in the

⁴ Berry has used the terms "strategies" and "attitudes" to refer to this concept. Other authors have used the terms "nodes", "styles" or even "positions". In this research we will use the term "strategies" as we believe it reflects more accurately what we aim to measure – minority group members' preferences, attitudes, and behaviours towards own and other cultural groups (Berry, 2003).

larger society (i.e. integration or assimilation) than those who do not have voluntary contact (Williams & Berry, 1991). Another important factor is the perceived differences in terms of physical differences. Those who are physically different from the dominant group are less inclined to endorse assimilation (Kim & Berry, 1986). Furthermore, a large number of people in one's minority group may increase preferences for own culture maintenance, which leads to integration or separation (Berry, 2003). Accordingly, Moise and Bourhis (1997, cited in Berry, 2005) found that the 'vitality' (the number of people in one's cultural group) is an important predictor of which acculturation strategies are adopted. It has been also argued that a weak sense of ingroup (or a weak ingroup network) is a strong predictor of a preference for assimilation (Berry, 2003). Overall, the different acculturation strategies are not randomly adopted. The preference for a particular acculturation strategy is the product of a complex network of relationships involving one's cultural group and the group's situation vis-à-vis the other groups (Berry, 2003).

Furthermore, acculturation strategies may depend upon the group context in which they are grounded. For example, Verkuyten and Wolf (2002) examined the acculturation strategies of a sample of Chinese immigrants in both an intragroup and intergroup contexts. Results showed that in the intergroup context participants strengthened the importance of maintaining their Chinese cultural heritage, whereas in the intragroup context participants placed less significance on this variable. This demonstrates that acculturation strategies are not an enduring, absolute and stable concept, but may depend upon the comparative group context. Overall, this research shows that when examining acculturation strategies it is crucial to adopt context sensitive approaches.

Different methods have been used to divide the two dimensions into acculturation strategies. One method consists in measuring assimilation, integration, separation, and marginalisation independently in four subscales. This method has been criticised on both conceptual and methodological grounds (Ward & Rana-Deuba, 1999). For example, as each of these subscales is theoretically interdependent, it is expected that a high score on one of the subscales should be associated with low scores on the remaining three. This has not been supported by previous research however, which has indicated that intercorrelations tend to vary widely and often contradict theoretical expectations (see Berry, Kim, Power, Young, & Bujaki, 1989). Other methods of dividing the two dimensions include the assessment of the two dimensions in separate subscales, which are then split at their midpoint in order to form four categories - the acculturation strategies (e.g. Dona & Berry, 1994; Lasry & Sayegh, 1993).

2.3.1 - Critiques of the bi-dimensional model

Although a bidimensional approach appears to be more accurate than a unidimensional perspective, there are a few criticisms that are important to keep in mind. One of the critiques relates to the fact that dividing the two dimensions into four strategies can be rather simplistic. It ignores specific issues that may arise depending on the context, which may affect and change acculturation strategies (Ward et al., 2001). Previous research has shown that these specific issues include language skills (Chataway & Berry, 1989; Clément & Noels, 1992), cultural proximity (Bochner, McLeod, & Lin, 1977) and physical differences (Ward et al., 2001).

A second criticism relates to the empirical basis of the four acculturation strategies, arguing that there is not enough empirical evidence for the existence of the four strategies (Rudmin & Ahmadzadeh, 2001). More recently however, in a study

including more than 5000 immigrants in thirteen different countries, Berry, Phinney, Sam, and Vedder (2006) assessed numerous variables such as acculturation strategies, ethnic and national identity, and language use. A cluster analysis of the study's data provided evidence for the existence of four acculturation profiles. The preference was for an integration strategy, then separation, assimilation, and finally marginalisation. These results therefore contradict Rudmin and Ahmadzadeh's (2001) criticisms. It appears that individuals have different ways in which they prefer to acculturate. Individuals choose different strategies, which in turn have an impact on how they undergo the acculturation process.

Finally, a third type of criticism relates to the theoretical content of the two dimensions. For instance, Pandilla (1980) used two dimensions termed cultural awareness and ethnic loyalty. The first of these relates to knowledge about one's own culture and dominant culture in respect to different issues such as language, ways of living, and values. The dimension of ethnic loyalty involves a relative preference for one's own culture or for the dominant culture. The nature of the two dimensions is also different; whilst cultural awareness is cognitive, ethnic loyalty is affective.

Despite the criticisms, Berry and colleagues have provided cogent empirical evidence for the bi-dimensional model in a number of studies. In effect, Berry's two dimensions resulted from several empirical studies analysing the views of Australian Aborigines (Sommerland & Berry, 1970) and has been consistently demonstrated with native people in Canada (Berry, 1976; 1999), Africa (Berry et al., 1986), and India (Mishra, Sinha, & Berry, 1996). The two dimensions have also emerged consistently among groups of sojourners, immigrants, refugees, and other ethnocultural groups in several countries (Berry & Sam, 1997). Overall, the work of Berry and colleagues has

indeed demonstrated that the two dimensions are represented in the acculturative situation of different groups and places in the world.

2.3.2 – *Acculturation strategies from the dominant group's perspective*

Although in this research we will not focus explicitly on the acculturation strategies of dominant groups, it is important to keep in mind that the acculturation strategies of minority groups can be enforced and restricted by the strategies of dominant groups. Sometimes members of minority groups may not be able to decide whether it will be possible to engage in intercultural relations. The host community may impose certain constraints, unilaterally determine how relations are managed, and whether intergroup boundaries are permeable or impermeable (Berry, 1974).

For Berry (1980), dominant groups can hold four distinct acculturation strategies: (i) the *melting pot* occurs when an assimilation strategy is enforced by the dominant group; (ii) *Segregation* occurs when the dominant group imposes separation; (iii) *Multiculturalism* in contrast occurs when diversity is accepted and the inclusion of diverse ethnocultural groups is established; and finally, (iv) *exclusion* is characterised by the enforcement of a marginalisation strategy.

Several studies considered that these strategies are important for the acculturation process (e.g. Bourhis et al., 1997; Van Oudenhoven, Prins, & Buunk, 1998). Bourhis and colleagues strengthened the argument that acculturation strategies are not confined to minorities; the host society also holds their own strategies towards different minority groups. They have their own concepts about how they want minorities to behave and interact with them. For example, Piontkowski, Florack, Hoelker, and Obdrzalek (2000) found that in Germany (as a host society) integration was preferred; also, Drieger (1996) found that integration was promoted by the

Canadian society; whereas Bourhis et al. (1997) found that the American society promotes assimilation.

Bourhis and colleagues in their Interactive Acculturation Model (IAM, Bourhis et al., 1997) conveyed that it is fundamental to understand the compatibility between dominant and minority acculturation strategies. For this model, it is vital to comprehend the ‘fit’, i.e. the match between dominant and minority preferences. By combining the different strategies of both groups, IAM distinguishes three different levels of ‘fit’: ‘consensual’, ‘problematic’, and ‘conflictual’ (see Table 1). In a few words, the criterion followed implies that the ‘fit’ should be worse (i.e. conflictual) whenever minority and dominant strategies accentuate the maintenance of own cultural heritage while refusing contact with each other (separation and segregation attitudes). ‘Consensus’ should occur only when there is an agreement on a strategy of integration or assimilation, whilst all the other possible combinations have a ‘problematic’ outcome. Furthermore, regarding consequences for intergroup relations, it is argued that ‘consensual fit’ leads to less stereotyping bias, positive intergroup relations, and low acculturative stress. In contrast, the ‘conflictual fit’ is often responsible for problematic intergroup outcomes and has negative implications for society and their individuals (Zagefka and Brown, 2002).

Host community strategies	Immigrant strategies			
	Integration	Assimilation	Separation	Marginalisation
Integration	Consensual	Problematic	Conflictual	Problematic
Assimilation	Problematic	Consensual	Conflictual	Problematic
Segregation*	Conflictual	Conflictual	Conflictual	Conflictual
Exclusion*	Conflictual	Conflictual	Conflictual	Conflictual

Note: * The equivalent to separation and marginalisation.

Table 1. The Interactive Acculturation Model (Bourhis et al., 1997).

2.4 - Outcomes of acculturation

Another important topic in this framework concerns the outcomes of acculturation. Acculturation can be relatively easy for some acculturating individuals and have positive outcomes for both dominant and minority groups. As mentioned in the previous section however, conflict and inconsistencies between minority and dominant acculturation strategies can be the source of difficulties for acculturating individuals.

The study of acculturation has been systematically examining two distinct types of outcomes – outcomes that begin early in this process (behavioural change and acculturation stress) and other long term outcomes (psychological and sociocultural adaptation) (Berry, 1992). More detail about these two types of outcome is provided below.

2.4.1 – Immediate outcomes

Immediate outcomes are characterised by behavioural shifts that result from the first contact with a new culture. It often includes changes in the behavioural repertoire of acculturating individuals and is characterised for being relatively straightforward and non-problematic (Berry, 2005). According to Berry (1992), this process is characterised by three subprocesses: culture shedding, culture learning, and culture conflict. The first two of these subprocesses encompass the selective, deliberate, or accidental loss of behaviours. These behaviours are then replaced by other actions which allow the acculturating individuals a better fit in the larger society. These behavioural changes are usually termed *adjustment* (Ward & Kennedy, 1993). Changes tend to occur within acculturating individuals, whilst only a few changes take place within members of the larger society (Ward et al., 2001). These adjustments are often non-problematic and are

made rather easily and smoothly, but cultural conflict can also occur, resulting in acculturative stress.

Acculturative stress is defined by greater levels of cultural conflict. It occurs when acculturation experiences are problematic but at the same time controllable (Berry, Kim, Minde, & Mok, 1987). This situation is different from behavioural change because acculturating individuals face problematic experiences resulting from intercultural contact. They also understand that the solution for these problematic experiences is not straightforward (by just adjusting or assimilating).

Recognising that a specific situation may be potentially stressful is likely to be influenced by social and situational aspects of the acculturation process. For instance, Zheng and Berry (1991) examined a range of potential stressors among Chinese sojourners in Canada, and also among Chinese and non-Chinese Canadians. Results showed that Chinese sojourners tended to perceive language communication, prejudice, and loneliness as more problematic than Chinese and non-Chinese Canadians. Chataway and Berry (1989) found a similar pattern in a study including Hong Kong Chinese, and French- and Anglo-Canadians. Results indicated that language communication and prejudice were more problematic for the Hong Kong Chinese when compared to the French- and Anglo-Canadians.

Finally, behavioural changes and acculturative stress have been related to the different acculturation strategies (Berry, 1997; Berry & Sam, 1997). For behavioural changes, separation is the strategy associated with fewer alterations, whilst assimilation is the strategy which results in more changes for acculturating individuals. Integration is characterised by a selective adoption of the new behaviours transmitted by the larger society and also by retention of the valued behaviours of one's own cultural heritage. In

contrast, marginalisation is often related to a loss of one's cultural heritage and associated with deviant behaviours (e.g. substance abuse and crime).

For acculturative stress a different pattern can be observed. Berry (1997) demonstrated that integration strategies are associated with less acculturative stress when compared to other strategies (especially when integration is supported by the larger society). In contrast, a marginalisation strategy is the most stressful. Assimilation and separation strategies are equally positioned in between integration and marginalisation. Research has shown that this pattern is also reflected on different indicators of self-esteem (Phinney, Chavira, & Williamson, 1992) and mental health (Berry & Kim, 1988; Schmitz, 1992).

2.4.2 – Long-term outcomes

Both behavioural changes and attempts to solve acculturative stress are the origins of long-term consequences that Berry (1992) termed as *adaptations*. According to this author, adaptations are stable changes that emerge as a consequence of the ways in which an acculturating individual or group respond to the external demands.

One important issue is the fact that adaptation may or may not improve the 'fit' between acculturating individuals and the larger society. Namely, adaptation does not imply that one has to assimilate and change according to the larger society. Adaptation may involve attempts to change the environment or to avoid intercultural contact with the larger society (i.e. by separation). Therefore, adaptation can be of either a positive or negative nature. Some individuals are well adapted and can cope with most of the changes of living in a new society, whilst other individuals adapt poorly and are unable to cope with these challenges (Berry, 2003, 2005).

Moreover, adaptation can be divided in psychological and sociocultural elements (Searle & Ward, 1990; Ward, 1996; Ward & Kennedy, 1993). Psychological adaptation refers to individuals' psychological and physical well-being (Schmitz, 1992). Sociocultural adaptation relates to how well one is able to manage everyday life in a new society. Despite being independent concepts and being predicted by different variables, psychological and sociocultural adaptations are usually empirically related. Furthermore, both types of adaptation are associated with different patterns. That is, psychological problems often increase in the beginning of the acculturation process and then tend to improve with time, whilst sociocultural adaptation is defined by a positive linear improvement. Generally, good psychological adaptation is predicted by social support, life change events, and personality variables. A good sociocultural adaptation is predicted by positive intergroup attitudes, degree of contact, and cultural knowledge (Ward, 1996). As an integration strategy promotes intercultural contact and minimal culture distance, it is also an important predictor of a good sociocultural adaptation (Ward & Kennedy, 1993; Ward, 1996). Adaptation has also been related to acculturation strategies. Research has shown that proponents of integration are those who are better adapted, whilst those who endorse marginalisation are the least well adapted. In a similar vein to acculturative stress, assimilation and separation are equally positioned in between integration and marginalisation (Berry, 1997; Ward, 1996).

Although some divergences on this pattern may be observed, research has demonstrated that it is remarkably consistent (Berry, 2003). For example, Berry et al. (2006) provided important support for this pattern. In their study of immigrant youth, psychological and sociocultural adaptation were assessed independently. The psychological component included measures such as psychological problems, self-esteem, and life satisfaction; whereas sociocultural adaptation included measures of

school adjustment and behavioural problems. Research findings suggested that proponents of an integration attitude had higher scores on both types of adaptation, whilst those who endorsed marginalisation had the lowest scores on both adaptations. Those who endorsed separation had high scores on the psychological adaptation, but poor sociocultural adaptation. Finally, those who endorsed assimilation were characterised by poor scores on both forms of adaptation. Although assimilation reflected poor scores, it was marginalisation that showed the lowest levels of adaptation on both psychological and sociocultural spheres.

2.5 – The proposed model

In Chapter 1 it was argued that to fully understand how group-based discrimination impacts on minority group identification, it is fundamental to take into account minority group members' preferences towards participation and contact with the majority and their own group. At this point it is important to examine acculturation research tying group-based discrimination and social identification with acculturation strategies so we can further develop our model and the relationships between its variables.

2.5.1 – Perceived discrimination and acculturation strategies

Most of acculturation research has essentially focused on intragroup rather than intergroup processes. There are, however, some well established acculturation studies which examine the impact of prejudice and discrimination on the acculturative process. These studies have analysed prejudice and discrimination as barriers for the acceptance of immigrant acculturation strategies such as integration or assimilation (e.g. Berry & Kalin, 1995; Kalin & Berry, 1995). These studies have emphasised the importance of a

wide range of intergroup factors such as prejudice, discrimination, acceptance of cultural diversity, and positive mutual attitudes among cultural groups. Although research has tended to be consensual that certain intergroup factors (e.g. absence of discrimination) are important for the success of immigrants' acculturation strategies, less cogent evidence has been found concerning its effects on immigrants' preferences for a given strategy. In fact, the impact on minorities' preferred acculturation strategies is a crucial issue for this thesis if we are to understand the perspective of minorities and stigmatised groups. In this specific case, a perspective on non-dominant groups is important because of the discrepancy that often occurs between what one prefers (and seeks) and what one is actually able to do. Acculturation research has focused on discrimination as a social constraint of what non-dominant group members are able to do (Camilleri, 1990; 1991; Berry, 2003). Unfortunately, these social constraints provide little information about one's preferences for participating in the larger society and maintenance of own cultural background.

Zagefka and Brown (2002) argued that there has been a dearth of academic research tying individuals' preferred acculturation strategies to intergroup relations. Furthermore, the few studies in this topic provide discrepant results and are far from contributing with conclusive findings. For example, research has argued that discrimination is associated with less willingness to participate in the larger society (Mainous, 1989). It has also been theorised that a marginalisation strategy can result from unsuccessful attempts at participating in the larger society, which can be caused by the prejudice and discriminatory behaviour of dominant groups (Berry, 2003). In contrast, other authors have analysed discrimination as an outcome variable. It has been showed that an assimilation strategy involves greater behavioural shifts, which in turn reduce one's experiences with discrimination (Mummendey & Wenzel, 1999). In a

similar vein, Jasinskaja-Lahti, Liebkind, Horenczyk and Schmitz, (2003) demonstrated that immigrants tended to perceive more discrimination when their acculturation strategies were in conflict with the strategies held by dominant groups. Adding to these findings, other research has shown that perceived discrimination is not associated with acculturation strategies (Zagefka & Brown, 2002).

A study of particular interest for this thesis was conducted by Zagefka and Brown (2002), as they focussed on intergroup relations and acculturation strategy preferences. In this study, the acculturation strategies of a sample of immigrants in Germany, the perceived acculturation strategies of the dominant group (Germans), and the actual acculturation strategies of the Germans towards other immigrants were examined. Intergroup variables such as ingroup bias, perceived intergroup relations, and perceived discrimination were also assessed. Importantly, this study followed Berry's bidimensional model. Acculturation strategies were examined by assessing willingness to participate in the larger society and own culture maintenance independently. It was hypothesised that: (i) integration would be the preferred strategy among immigrants and among Germans; (ii) The preferred acculturation strategies of the immigrant population would not correspond to the perceived acculturation strategies of the dominant group; (iii) Integration would be associated with less ingroup bias, more harmonious perceived intergroup relations, and less perceived discrimination; and finally (iv) it was hypothesised that a discrepancy between immigrants' preferred acculturation strategies and perceived acculturation strategies of the dominant group (or also the actual strategies of the Germans) would have a negative impact on intergroup relations.

Results indicated that integration was the preferred strategy among both immigrant and German samples⁵. Immigrants' perceptions of the acculturation

⁵ The four strategies were determined by a midpoint scale split of each dimension. After the midpoint split, scores of the two dimensions were combined to form the four acculturation strategies.

strategies held by the Germans corresponded to the actual acculturation strategies held by the German sample. Furthermore, it was found that integration was better associated with positive intergroup relations (i.e. less intergroup bias and perception of more favourable intergroup relations) than any of the other strategies.

An alternative method of data analysis was used on the remaining data⁶; regression analysis demonstrated that the more immigrants endorsed participation in the larger society, the lower their perception of intergroup bias became. Additionally, neither willingness to participate in the larger society, nor maintenance of own culture predicted the perception of harmonious intergroup relations. Perceptions of discrimination were not predicted by the two acculturation dimensions.

Finally, two types of 'fit' were also analysed – the 'fit' between immigrant's acculturation strategies and those of the Germans (relative fit), and the 'fit' between immigrants' acculturation strategies and their perceptions of the preferred strategies held by the Germans (discrepancy fit). For the 'relative fit' it was found that intergroup bias increased when the 'fit' was worse. The 'relative fit' did not predict any of the other outcome variables. Furthermore, for the 'discrepancy fit' it was found that the better the 'fit', the more harmonious the intergroup relations were perceived to be. It was also found that the worse the 'fit', the more immigrants perceived discrimination.

2.5.2 – Social identification and acculturation strategies

Acculturation research has focused essentially on ethnic identification. For these researchers ethnic identity becomes salient when immigrants establish contact with a new culture. However, the distinction between acculturation and ethnic identity has

⁶ The two dimensions of acculturation and the interaction between the two variables were introduced as independent variables in a regression equation. The variables assessing intergroup relations were introduced as outcome variables. This differs from the traditional method of performing a midpoint scale split and has the advantage of keeping the continuous nature of the variables.

been unclear (Liebkind, 2001; Phinney, 1990). In fact, these two concepts have been used interchangeably (Nguyen, Messé, & Stollak, 1999). In contrast, this thesis argues that acculturation and social identities are distinct constructs, and that the understanding of these concepts is fundamental for the model we set to develop. For acculturation research, ethnic identification involves one's 'sense of self in terms of membership in a particular ethnic group' (Phinney, Horenczyk, Liebkind, & Vedder, 2001, p. 496). Sometimes it can be used to express one's group affiliation however (Rumbaut, 1994), or other aspects such as self-identification, feelings of belongingness, or commitment to a group (Hutchinson & Smith, 1996; Phinney et al., 2001).

In this thesis we follow the steps of other research which argues that group identities (and ethnic identity) are distinct from acculturation. Acculturation is a broader concept, including a wide range of preferences, attitudes, and behaviours, which change with contact between cultures (Phinney et al., 2001). In fact, ethnic identity is a particular aspect of psychological acculturation (Verkuyten & Wolf, 2002). Research has demonstrated that ethnic identification is independent of other acculturation aspects (Hutnik, 1991; Phinney, 1990; Ward & Rana-Deuba, 1999). For instance, an immigrant may identify strongly with his own culture whilst having made crucial behavioural adjustments in order to adapt to a new host culture.

2.5.3 – This thesis' model

As we showed in Chapter 1, the focus of SIT and SCT research tradition has been principally on the dominant and powerful groups in societies. In contrast, acculturation research has predominantly focused on non-dominant group members. This characteristic of the acculturation framework is fundamental for the present work as it matches the perspective on disadvantaged groups that was set in Chapter 1.

Furthermore, research findings produced within the frameworks of SIT/SCT and acculturation have focused on different aspects of social psychological phenomena. For example, SIT/SCT has predominantly focused on intergroup relations, which contrasts with a focus of principally intragroup aspects of the acculturation framework (Verkuyten & Wolf, 2002). In this thesis we feel that it is important to combine these two theoretical frameworks. Following from the argument set in the previous chapter, we believe that the concept of acculturation strategies in particular is vital for addressing the limitations of the rejection-identification model. In order to facilitate the role of the reader a brief summary of the rejection-identification model will be provided. It will be followed by a detailed presentation of our model which aims to map more accurately the experiences of disadvantaged group members with group-based discrimination.

In the first chapter we saw that according to coping models ingroup identification can be a successful mechanism in coping against perceptions of discrimination. According to the rejection-identification model (Branscombe et al., 1999), perceived discrimination has negative consequences for psychological well-being (path A, Figure 2). However, drawing on SIT (Tajfel, 1978) it is argued that individuals tend to strengthen identification with their own minority group in the face of discrimination (path B), which in turn provides feelings of belongingness, increasing minority group members well-being (path C). The main argument of the model is that the positive effect of minority group identification suppresses the negative effect of perceived discrimination on well-being.

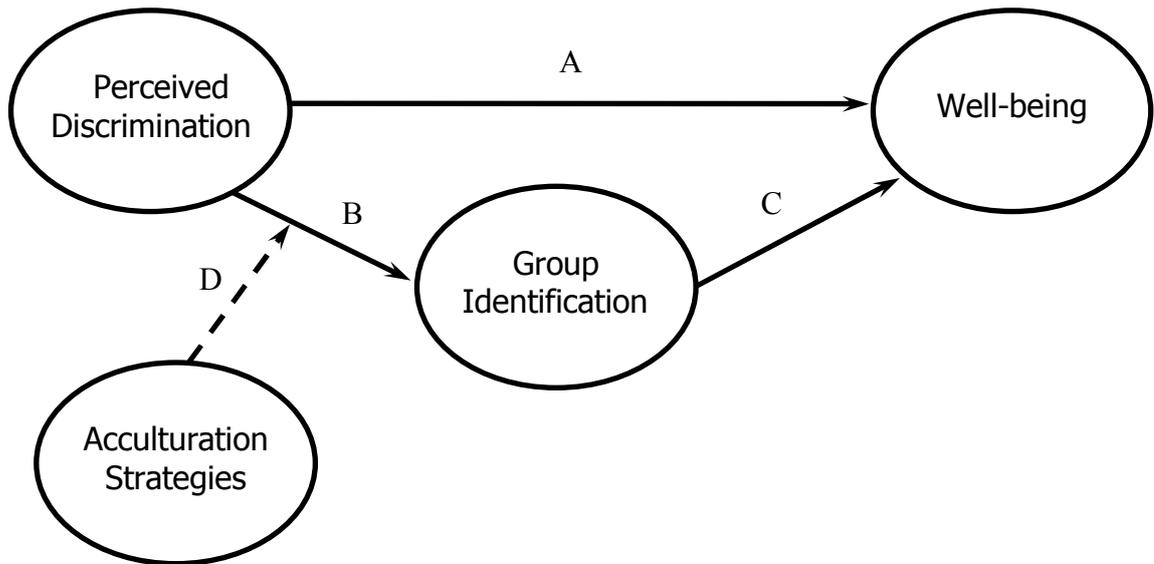


Figure 2. Rejection-identification model and acculturation strategies.

Although considerable support has been found for this model, inconsistent findings were obtained in the literature. Following the suggestions of previous research, we agree that these inconsistencies might be due to a unidimensional perspective of social identification in the involved studies. Nonetheless, an inspection of relevant research findings including three different dimensions of social identification, discrimination, and well-being, did not provide an understanding of the ways in which social identification counteracts the harmful effects of discrimination.

For the present research we argue that previous work has neglected differences between groups and individuals. That is, the rejection-identification model generalises its results for different minority groups and assumes that all individuals within a group respond in the same way. In contrast, we further posit that it is important to examine individual attitudes and behaviours towards the involved groups, and to also understand the ways in which these characteristics may feedback into the rejection-identification model. We therefore suggest that individual strategies towards contact and participation in both the larger society and own cultural groups can determine the effectiveness of

minority group identification as a coping strategy. More specifically, we hypothesise that the effect of perceived discrimination on minority group identification depends on individual acculturation strategies (path D, Figure 2), which in turn has implications for psychological well-being. That is, the protective effect of different components of social identification can vary as a function of different individual acculturation strategies.

2.5.3.1 – Separation

In this thesis we predict that the extent to which separation from the dominant group is sought out influences responses to perceiving group-based discrimination. We argue that when groups endorse a separation strategy, perceived group-based discrimination facilitates increased minority identification (i.e., rejection-identification hypothesis). For those who endorse a separation strategy, perceiving discrimination not only justifies and reinforces this strategy, but also reaffirms the separateness of groups, which gives meaning to the ingroup identity. In line with our reasoning, support for the relationship between discrimination and minority group identification has typically been obtained in contexts where there is a clear “us” versus “them” distinction, and where boundaries between groups are impermeable, such as for women (Crosby, Pufall, Snyder, O’Connell, & Whalen, 1989; Gurin & Townsend, 1986) and African-Americans (Branscombe et al., 1999; Rollins, 1973). Furthermore, experimental support for this relationship was obtained among people with body-piercings (Jetten et al., 2001), arguably a group that has a clear strategy of seeking distinctiveness and separation from the mainstream.

In social identity terms, these results suggest that when a minority group endorses a separation strategy, perceptions of group-discrimination enhance the “us” versus “them” distinction, which is one reason why group identification increases

following the perception of group-based discrimination (Tajfel, 1978). In terms of self-categorisation theory (Turner et al., 1987), we posit that an ideology of separation facilitates enhanced perceptions of meta-contrast (accentuating within group similarities and intergroup differences) following group-based discrimination. In turn, this enhances perceptions of common fate and strengthens group identification (Haslam, 2004; Turner et al., 1987). In other words, when a group cultivates and nourishes the perception of difference between ingroup and outgroup, rejection by outgroup members is not only expected, but reinforces the perception for minority members that it is better to ‘stick to one’s own’.

2.5.3.2 – Integration

When minority groups endorse an integration strategy, their focus is divided between the dominant and minority group. As a result, when confronted with group-based discrimination, minority members find themselves in an uncomfortable situation because they are rejected by those who they want to be close to. Moreover, because intergroup relations are directed at contact with the dominant group, rejected minorities may not automatically fall back on their minority group. Proponents of an integration strategy seek contact and participation in the host community whilst keeping interest in maintaining their own cultural heritage. Interests of the minority and dominant groups are perceived as interrelated, and actions of individual minority members are directed at enhancing opportunities for intergroup contact. As mentioned earlier in this chapter, there is evidence that integration attitudes are associated with more positive intergroup relations compared to other acculturation attitudes (Zagefka & Brown, 2002). We propose that because those who seek integration divide their focus between their own and the dominant group, increasing identification with the minority group following

discrimination is not perceived as the most obvious response and minority group identification should therefore be relatively unaffected. Furthermore, for those who endorse an integration strategy, perceiving discrimination may be particularly difficult to respond to as its occurrence suggests that the dominant group wants to maintain distance between themselves and the minority. Thus, the minority group's attempts to increase contact are thwarted, leaving these individuals without a strategy to cope with discrimination. A final reason why increasing minority identification in such situations would be unlikely to occur is because this could compromise the potential for future contact with the dominant group (which would go against the minority group's strategy).

2.5.3.3 – Assimilation and marginalisation

According to Berry's model (1992, 1997, 2001), both assimilation and marginalisation strategies are characterised by a lack of interest in maintaining own cultural heritage. Furthermore, Phinney et al. (2001) argued that although the concepts of acculturation and social identities are separate, there are often parallels between them. That is, marginalisation and assimilation strategies are often accompanied with a lack of interest for one's cultural, ethnic, or minority group identity. Moreover, Berry (2003) has argued that marginalisation and assimilation are often associated with attempts to hide and relinquish one's own cultural heritage. Taking these arguments together, we argue that it is unlikely that identification with one's own minority group would provide a meaningful and positive social identity for these individuals. Their intention is to avoid contact with 'their own', thus a strong identification with their minority group would be against their preferred strategy. In sum, research has shown that proponents of assimilation and marginalisation are often interested in hiding or relinquishing their minority group identities. Enhancing identification with their

minority group would therefore not be the preferred strategy for these individuals, i.e. they will not respond to perceived discrimination with enhanced minority group identification.

On balance, we hypothesise that minority group members are led to a collective response - minority group identification – in the face of perceived discrimination, when a separation strategy is endorsed. In contrast, individuals who support an assimilation, marginalisation, or integration strategy should not increase their minority group identification after perceived discrimination.

2.5.3.4 – The moderating effect of acculturation strategies on the different dimensions of social identification

As we argued in Chapter 1, this thesis will explore further the relationship between group-based discrimination and minority group identification by disentangling different dimensions of social identification. Due to the unique nature of the proposed model, previous research does not allow us to predict how the acculturation strategies would moderate the relationship between perceived discrimination and the different dimensions of social identification. However, in line with our argument that the protective effect of minority group identification would vary as a function of different acculturation strategies, some tentative theories can be proposed. Firstly, research has shown that only ingroup affect and ingroup ties are positively associated with psychological well-being (e.g. Crocker et al., 1994; Spencer-Rogers & Collins, 2006). Thus, only these two dimensions could possibly buffer against the harmful effects of perceived discrimination on well-being.

We subsequently argue that those who wish to maintain their own cultural heritage, but do not seek contact and interaction with their new environment (i.e.

separation), will respond to experiences of discrimination by increasing their positive evaluation of their minority group and group members (i.e. ingroup affect and ingroup ties). In contrast, it is expected that those who are concerned with integration (or those alienated from their own culture, endorsing assimilation or marginalisation) will demonstrate negative evaluations of their minority group and group members as a response to perceived discrimination. No specific predictions were made for centrality.

As proponents of separation might increase their positive evaluations of their group and group members in the face of perceived discrimination, it is expected that this effect in turn will result in positive evaluations about one's self-concept, and improve psychological well-being in general. In contrast, because proponents of integration, assimilation, and marginalisation might hold negative evaluations of their group and group members in the face of discrimination, it is expected that this effect in turn will have a negative impact on one's self-esteem and psychological well-being.

2.6 – Research questions

So far we have provided an overview of relevant literature, which identified a number of inconsistencies in previous research. We subsequently suggested a new approach in order to address these inconsistencies and further explain how individuals cope with group-based discrimination. This final section will set the research questions and predictions that will guide our research.

This group of research questions set out to address the accuracy and consistency of the model put forward in this chapter (Figure 2, p. 65). More specifically, their principal goals are to understand how perceptions of discrimination, minority group identification, and acculturation strategies would fit into our model, and whether the model is efficient in predicting psychological well-being. These questions are followed

by specific predictions which aim to test particular paths in the model. The following questions were therefore generated.

(i) Does group-based discrimination exert similar effects among the three dimensions of identification?

Whilst the rejection-identification model posits a positive effect of discrimination on group identification, this thesis predicts that the precise nature of this effect will vary according to the dimension of identification. Accordingly, previous work suggests that group-based discrimination increases awareness of one's minority group membership (Gurin & Markus, 1989; Eccleston & Major, 2006), but is negatively related to feelings about this membership (Eccleston & Major, 2006). It is thus expected that perceptions of discrimination will increase the awareness of minority group membership (i.e. centrality) but also enhance a sense of belonging to a devalued group, which in turn will be reflected in negative feelings for one's group (i.e. ingroup affect and ingroup ties).

(ii) In which ways do the different dimensions of identification relate to psychological well-being? Does group-based discrimination have harmful consequences for one's psychological well-being?

In a study with female participants by McCoy and Major (2003), it was shown that self-esteem was lower among those who considered their gender to be an important part of their self-concept. Accordingly, in this thesis it is predicted that centrality will be negatively related to self-esteem. In other words, it is reasoned that increasing the psychological centrality or salience of an identity that is devalued by others will be costly in terms of self-esteem. Additionally, ingroup affect is a key component of group

or collective self-esteem, which relates positively to personal self-esteem (Crocker, Luhtanen, Blaine & Broadnax, 1994; Luhtanen & Crocker, 1992). Furthermore, there is considerable evidence that ingroup ties are associated with well-being in minority groups (Frable, Platt, & Hoey, 1998; McKenna & Bargh, 1998; Spencer-Rogers & Collins, 2006). As such, it is predicted that ingroup affect and ingroup ties will be positively related to psychological well-being. Furthermore, it is important to understand the extent to which rejection impacts on one's psychological well-being. According to previous research (e.g. Schmitt et al., 2002), it is expected that perceiving discrimination will exert a negative impact on self-esteem and other indicators of well-being, such as anxiety and depression. It is also expected that this negative impact of perceived discrimination on psychological well-being would be counteracted by minority group identification, but only under specific conditions (see point below).

(iii) Do perceptions of discrimination interact with individual acculturation strategies to impact on the different dimensions of group identification?

To recapitulate our model (Figure 2, p. 65), it is predicted that the relationship between perceived discrimination and minority group identification will vary as a function of individual acculturation strategies. We argue that for those who endorse a separation strategy, perceiving discrimination reinforces the separateness of groups, and gives meaning to the ingroup identity. We therefore predict that individuals will maintain or strengthen ingroup identification after perceptions of discrimination. In contrast, proponents of the other three strategies will weaken ingroup identification following from perceptions of discrimination. According to previous research however, only ingroup affect and ingroup ties are positively related to psychological well-being (e.g. Crocker et al., 1994; Spencer-Rogers & Collins, 2006). Thus, particular attention

will be given to these two dimensions of social identification. In line with the previous predictions, it is further anticipated that proponents of separation will respond to experiences of discrimination by increasing positive evaluations of their minority group and group members (i.e. ingroup affect and ingroup ties). In contrast, for those who endorse integration, assimilation, or marginalisation, it is expected that negative evaluations of their minority group and group members will emerge as a response to perceived discrimination. No specific predictions were made for centrality.

(iv) Will every strategy help individuals to protect themselves from the harmful effects of discrimination?

As a sequence to the final predictions, we argue that some acculturation strategies will be less successful in allowing ingroup identification to counteract the negative effects of discrimination. That is, according to our predictions, in the face of discrimination, individuals who endorse a separation strategy tend to adopt a collective strategy by strengthening ingroup identification. In contrast, for proponents of the other strategies, such a collective response to discrimination is somewhat diluted, leaving these individuals more vulnerable to the actions of the majority. It is thus expected that a separation strategy, leading to ingroup identification (by enhancing ingroup affect and ingroup ties), will serve to protect minority group members' well-being from the harmful appraisals of the dominant group. In contrast, it is anticipated that integration, assimilation, and marginalisation strategies will not be associated with ingroup identification, thereby leaving these individuals without a successful strategy to cope with discrimination.

(v) *Can minority group identification (as a coping strategy) have a negative impact on other outcomes?*

Most studies tend to focus on only one outcome when examining the impact of discrimination on minority groups (Major & O'Brien, 2005). Coping or resilience strategies may exert a positive effect on self-esteem whilst being counter-productive for other important outcomes. Hence, this thesis will address another important outcome - hostility. As we saw in Chapter 1, Branscombe et al.'s (1999) study demonstrated that perceptions of discrimination were associated with hostility towards the dominant group. Although not explicitly addressed in Branscombe and colleagues' final model, it was also found that hostility was highly correlated with minority group identification. We thus feel that it is important to examine hostility as another outcome of the rejection-identification relationship.

Within our multidimensional approach of social identification we predict that perceptions of discrimination will result in increased centrality. Indeed, according to SIT, when individuals perceive discrimination, intergroup differentiation becomes salient (Tajfel & Turner, 1986). In a similar vein, other work has suggested that group-based discrimination increases one's awareness of minority group membership (i.e. centrality) (Gurin & Markus, 1989; Eccleston & Major, 2006). We further predict that increasing the awareness of a group identity that is being threatened with discrimination will result in increased hostility towards the group that composes that threat. In short, we predict a dual effect of perceptions of discrimination on hostility. The first is a direct positive effect between perceptions of discrimination and hostility. The second is an indirect effect, where it is anticipated that perceptions of discrimination will increase centrality, which in turn will be associated with hostility towards the dominant group.

In the next chapter the target population of this thesis will be introduced. A detailed plan of the methodology that will be used to address the questions outlined in this chapter will also be provided. Importantly, the research questions above have the purpose of testing the core assumptions of our model. Once we test these assumptions, there are other significant concerns that need to be analysed at a deeper level, such as the causality assumed between the variables in our model. In addition, there are important research questions that will be specific to our target population. In the next chapter we will give particular attention to these issues.

Chapter 3. INTERNATIONAL STUDENTS

Overview

In the first two chapters the theoretical framework of this thesis was introduced. We suggested a new model and a number of research questions in an attempt to further explain peoples' experiences with discrimination. This chapter, however, sets out to define and examine the target population of this thesis. Initially, the chapter provides an overview about the importance of international students for the countries that host their education. Despite their importance for UK institutions and economy, there has been a surprising lack of research examining their experiences. Thus, we also provide a literature review of previous studies in other countries, giving an insight into the specific problems, difficulties, and support available in the specific context of international education. Finally, this chapter addresses the ways in which our model will be tested with international students. Research questions and the methodology that will be used during this research are also introduced.

Although sojourning for academic purposes can be tracked to Ancient Rome, the systematic study of these travellers only began 50 years ago (Ward et al., 2001). International students are a type of sojourners, among others such as diplomats, members of the armed forces, business people, aid workers, volunteers, and missionaries. These sojourners are characterised for the voluntary and temporary nature of their travelling goals. They are different from tourists because they stay for longer in a new location, a fact that is often reflected in greater commitment. Nonetheless, they are different from immigrants as their return is often planned and decided beforehand. This chapter focuses on the characteristics and importance of this specific type of sojourners – international students.

3.1 – Brief historical context

In their book, Fraser and Brickman (1968) examined in detail the history of international education. They contend that sojourning for educational purposes can be tracked back to 272-22 BC. During this period intercultural education took place in locations like India and the University of Taxila in Asia Minor. Within the following thousand years, important centres for education were founded in Egypt, Greece, Persia, China, and Japan. The Romans, for example, were amongst the first to document and also undertake official policies controlling the admissions of foreign students (Marrou, 1964).

Only in the Middle Ages other countries in Europe contributed to intercultural education with the foundation of the Universities of Seville, Paris, and Bologna. Other countries such as England, France, Germany, and Russia were crucial in stimulating the increase of visiting students and scholars. Ultimately, in the nineteenth century international education was extended to the American continent with a vibrant

participation of North American universities (Fraser & Brickman, 1968). Due to the closing of many European Universities during the Second World War, as well as favourable policies from the American government, and the immigration to the US of European scientists and professors escaping the Nazi persecution, the US escalated to become the world centre for international education (Brickman, 1965).

Historically the goals and purposes of international education have also changed. Initially, foreign policy purposes stimulated intercultural education. This was characterised by an effort in extending political and commercial influence. In a subsequent period, international education served to spread the values of dominant cultures (values such as democracy or particular educational practices). After the Second World War international education was particularly characterised by a flourishing number of students travelling abroad for higher education. The motivation behind this exchange was to either assist countries that were economically affected by the war, or to support those who still relied on weak educational infrastructures. This period was also defined by an interest in promoting international harmony and peace between countries. Taken together, these goals served to support the greater aim of extending countries' socio-political influence overseas (Furnham & Bochner, 1986).

Today, international students occupy a rather different position. Intercultural study does no longer serve to foster economic or political influence. Instead, international students are seen as part of a profitable market for the countries that attract these students (Ward et al., 2001).

3.2 – The importance of international students

Each year thousands of international students travel abroad with the hope of receiving better education and professional experience. This cross-cultural opportunity

has several benefits for the students. It broadens their perspectives; promotes professional, academic, and personal growth; whilst providing the understanding of another world-view (Furnham & Bochner, 1986). However, despite the benefits for international students themselves, there are vast benefits for the countries and institutions that host these students. Furthermore, from a theoretical perspective, the characteristics of this group provide an enormous opportunity for investigating cross-cultural and intergroup phenomena. Taken together, international students are an increasing and important group for host countries such as the UK. Below, the characteristics and reasons of their importance to the UK (and thus this thesis) will be further explored.

3.2.1 - Numeric importance

With changes in the global economy and increased availability of communication and transportation networks, the numbers of international students have dramatically increased over recent decades. The latest report from the Higher Education Statistics Agency (HESA, 2004) quantifies an amount of 3 million students worldwide. Most of these students are attracted by English speaking countries such as the USA, UK, Canada, Australia, and New Zealand. Among these countries the UK is one of the most successful in attracting international students. Indeed, in 2004 the UK had 11 per cent of the international students' market share, coming second only to the USA which dominated the market with a share of over 20 per cent (HESA, 2004).

The global increase in the number of international students is also reflected in British higher education. For example, there were 95,900 full-time international students enrolled during the academic year of 1995/96 in the UK (Greenway & Tuck,

1995). One decade after, 330,080 full-time international students were attending British universities (HESA, 2007).

In the UK there is a critical difference between students coming from the EU and non-EU countries. Because students who come from countries within the EU are subsidised by the UK government, they pay the same tuition fees as their domestic peers. In contrast, students from non-EU countries have to pay full tuition fees which are above three times more expensive in average. Despite this fact, the number of non-EU students is far superior than the number of students coming from EU countries. In the academic year of 2005/06, there were 106,225 EU students, whilst 223,855 came from countries outside the EU (HESA, 2007). In percentages, EU students represented 32% of the total number of international students, whilst students from countries from outside EU composed 68% of the total number of international students in the UK.

Within the UK international students are distributed differently between the different countries. The majority of international students are located in England (275,795 students - 83%⁷), and then fewer in Scotland (32,370 students - 10%), Wales (16,030 students - 5%), and Northern Ireland (5,895 students - 2%). Regarding the origins of international students, most of these students come from China (52,675 students – 16%), Greece (19,685 students – 6%), and India (16,685 students – 5%). Furthermore, the preferred subjects of study are business and administrative studies (83,745 students – 25%); followed by engineering and technology (40,590 students – 12%); and social, economical, and political studies (29,810 students – 9%) (HESA, 2007).

Overall, there has been a global increase in the number of international students. The UK is one of the principal host countries for students coming from abroad. Today,

⁷ Percentages presented in this paragraph are relative to the total number of international students in the UK.

international students make up 13% of all students in British higher education. This percentage is more pronounced in Scotland (15%), and then England (13%), Wales (12%), and Northern Ireland (11%) (HESA, 2007).

3.2.2 – *Economic importance*

The presence of international students is vital for the UK as it brings several benefits both to the economy and society in general. Firstly, it is important to consider the large revenue incurred from tuition fees. For example, in the academic year of 2004/05, international students from non-EU countries paid a total of £1.5 billion in tuition fees (HESA, 2004). Vickers and Bekhradnia (2007) estimated a total of £180 million in tuition fees from EU students, summing to a total £1.68 billion contributed to the UK economy in 2004. Another important economic benefit for the UK results from international students' expenditure on living costs. Because these students come from diverse backgrounds, their spending patterns tend to be considerably heterogeneous. Nonetheless, using survey data, the UNITE Student Experience Report (2006) estimated an expenditure average of £182 per week, per student in 2004/05. Therefore, in the same year, a total of £2.5 billion were spent by international students on living costs.

Secondly, another important benefit of hosting international students incurs from the several thousand graduated students who every year remain in the UK to undertake highly qualified work (Vickers & Bekhradnia, 2007). The beneficial impact on the economy can be twofold. On the one hand, there is an important fiscal impact, i.e. the government receives income taxes, national insurance, and other types of taxation such as VAT. Vickers and Bekhradnia (2007) estimated a total net fiscal gain of over £352 million annually. On the other hand, it produces a significant net increase in GDP, leading to the economic growth of the UK. It is estimated that the presence of

these graduated international students contributes with a further £2 billion to the economy (Vickers & Bekhradnia, 2007).

Overall, international higher education is an extremely important market in the UK, as its profits exceed those of significant export industries such as alcoholic drinks (£2.5 billion in 2005), textiles (£2.8 billion), and cultural and media industries (£3.7 billion in 2006) (Vickers & Bekhradnia, 2007).

3.2.3 – *Societal and cultural importance*

The presence of international students has benefits beyond those generated by financial and economic issues. For example, there are key benefits generated by the large amount of graduated international students that are exported each year. More specifically, these students who lived in the UK are familiar with the country's products and are likely to contribute further by purchasing and advertising these products to others. They are also more likely to advertise the quality of the education in the UK. In addition, there are also benefits for foreign policies and diplomacy, which result from the fact that some well positioned individuals in foreign countries were educated in the UK. It is important to also consider the pedagogical benefits derived from a multicultural environment. These include cooperation, cross-cultural contact, and mutual enrichment and understanding within the academic community. Finally, during their studies some international students (often postgraduates) tend to undertake teaching roles in their departments. These postgraduate tutors not only contribute to a multicultural learning experience for other international students, but are also fundamental for the functioning of some departments (Vickers & Bekhradnia, 2007).

3.2.4 – *Theoretical importance*

Within social psychology, it is increasingly recognised that international students have a number of characteristics with important theoretical significance (Schmitt et al., 2003). Researchers have recently begun to see international students as a valuable resource for examining theoretical assumptions pertaining to the phenomena of intercultural contact (Ward et al., 2001). A large part of these theoretical propositions derive from the fact that international students resemble other minorities as they also differ from the dominant group in terms of nationality, race, ethnicity, cultural norms, or linguistic background.

Of particular importance to this thesis is the fact that it is not uncommon for international students to experience racial discrimination and more general difficulties in becoming socially accepted (Sodowsky & Plake, 1992; Schmitt et al., 2003; Ward et al., 2001), issues which they are unlikely to have faced prior to arriving in the UK. Additionally, because of the heterogeneity of international students as a group and also because they do not have any prior history as a group, new group identities are formed upon arrival and defined in the intergroup context, as is often the case with many minority social categories (Gurin, Hurtado, & Peng, 1994; McLemore, 1991; Phinney, 1990).

International students also have a continuous and firsthand contact with a host culture, which provides the context for the development of acculturation strategies. An increasing number of studies demonstrate the relevance of an acculturation perspective for understanding the experiences of international students (e.g., Castillo, Conoley, Choi-Pearson, Archuleta, Phoummarath, & Van Landingham, 2006; Lee, Koeske & Sales, 2004; Jung, Hecht, & Wadsworth, 2007). Furthermore, international students

often have to find their own accommodation, seek part-time jobs and experience the same problems of relocation as immigrant populations.

Because international students are often more accessible to researchers than other sojourners or immigrants, these students have provided more opportunities for important research (Ward et al., 2001). Furthermore, as the concern for an 'international' psychology grows due to the increased intercultural contact of different peoples, international students have come to play a vital role in facilitating knowledge about intercultural relationships (Heppner, 2006).

3.3 – International student research

With the beginning of the Cold War, there was a substantial increase in the amount of studies focusing on international students. These students were a valuable resource for the initial testing of theoretical assumptions which aimed at identifying the nature and outcomes of intercultural contact (Ward et al., 2001). Accordingly, Web of Science indicates a dramatic increase in the number of studies with international students. There were 228 studies in the period of 1950-2000 compared to 264 in 2001-2008. Moreover, Web of Science reveals a total of 194 published studies with international students in the area of psychology alone. However, only 13 of these studies examined the experiences of students in the UK. In fact, most of the research focusing on international students has been conducted in 'countries of the new world' such as the USA, Canada, Australia, and New Zealand. Despite the enormous importance of international students within UK higher education, there is a surprising dearth of academic research examining their experiences (Bailey, 2005; Leonard, Pelletier & Morley, 2003; Zhou, Jindal-Snape, Topping, & Todman, 2008). The very little research that can be found is marketing-oriented, and thus oriented at investigating

student satisfaction with the aim of attracting more students in the future (Pelletier, 2003).

This thesis will draw on previous research with international students in other countries and contexts. An inspection of the literature will serve to identify the key problems of international students and, in particular, how these problems can be better included in our model. According to Hammer (1992), the literature on international students has covered essentially the problems of these sojourners, the impact of social interaction and communication, psychological reactions to a new culture, and the impact of social support. Most of this research has been conducted under the framework of cross-cultural psychology.

3.3.1 – *The problems of international students*

Despite the benefits resulting from the presence of international students for both students and host countries, the accommodation of these students has not been without challenge. The understanding of the problems faced by international students is fundamental if we are to preserve the benefits of intercultural education and promote future exchanges between different countries (Terry, Pelly, Lalonde, & Smith, 2006). Despite the common problems faced by all university students (such as academic challenges, stressors associated with the transition to university life, or even identity conflict between late adolescence and early adulthood), international students endure a different set of difficulties that are exclusive to their international status. They face a demanding situation by having to adapt to a new culture, language, and academic and social environment (Mori, 2000).

3.3.1.1 – Linguistic, financial, and interpersonal problems

Difficulties and problems of international students tend to differ considerably between studies due to the heterogeneity of the group and also due to the use of different methodological approaches (Ward et al., 2001). Nonetheless, Church (1982) in a review of three decades of research with sojourners showed that the most common problems of international students pertained to language difficulties, financial problems, and perceived discrimination. Similarly, Mori (2000) indicated that linguistic, financial, and interpersonal problems were among the most cited five sources of problems for international students.

Other studies have produced similar results. For example, in a study with American undergraduate students in Europe, Rohrlach and Martin (1991) found that the greatest concerns for these students were language, coursework, money, and housing. Likewise, among Asian students in the United States, Henderson, Milhouse, and Cao (1993) showed that 97 per cent of these students had language difficulties, followed by financial problems. Similar findings were reported by Matsubara and Ishikuma (1993) who found that international students in Japan who used university counselling services sought more often for assistance associated with language and financial problems, instead of assistance in psychological adversities.

Indeed, linguistic problems tend to be fundamental during their sojourn, as second-language confidence plays a key moderating role in the adaptation process (Clement, Noels & Deneault, 2001). Likewise, because of financial problems, students are impeded from joining in campus activities, making it more difficult for them to make UK friends (UKCOSA, 2004). Interpersonal problems resulting from

discrimination are also fundamental as they tend to impact on students' well-being⁸ and adaptation.

In addition to these difficulties, international students often also have to cope with other problems generated from their insufficient cultural skills. It is not uncommon to find students struggling with jokes, cultural references, and historical perspectives (Peters, 2005). Other difficulties are related to adaptation to climate and food (Mok, 1985, cited by Chataway & Berry, 1989), unfamiliarity with new customs and social norms (Lee et al., 2004). International students often have to stay in poor quality accommodation, a fact that is associated with lower mental health (Evans, Chan, Wells, & Saltzman, 2000). Generally, international students have more difficulties in beginning friendships than their host counterparts (Zheng & Berry, 1991), and these relationships also tend to be less satisfying (Furnham & Tresize, 1981). Facing all these challenges often has negative consequences for psychological adaptation, well-being, and students' academic performance.

3.3.1.2 – Psychological adaptation and stress

Adaptation to life in a new cultural environment is often marked by loneliness, self-doubt, confusion, feelings of inferiority, lack of support, and considerable distress (Pedersen, 1991; Yeh & Inose, 2003). These challenges are often followed by stress and other negative psychological outcomes such as depression and anxiety (Jung et al., 2007). Accordingly, research has shown that international students report more psychological and social difficulties than their host peers (Furnham & Bochner, 1982). They often suffer from more stress and other psychological problems than their domestic counterparts (Chataway & Berry, 1989; Furnham, 1988). They also tend to

⁸ See Chapter 1 for a detailed description of the consequences of discrimination.

experience more difficulties in sociocultural adaptation than their compatriots who stayed in their home country (Kennedy, 1999 cited by Ward et al., 2001; Ward & Kennedy, 1993). For example, in a study with students in Canada, Chataway and Berry (1989) found that international students experienced more prejudice, lower perceived social support of friends, and more adaptation and academic problems than their Canadian peers. International students of this study also reported poorer health and coping satisfaction when compared to their Canadian counterparts.

There are also considerable differences among different groups of international students, as their ability to adapt is often affected by their cultural background (Furnham & Bochner, 1986; Ward & Searle, 1991). For example, Chinese students tend to report more difficulties in adaptation than their Canadian peers at American universities (Johnson, 1997). Likewise, other research has demonstrated that Asian students tend to perceive more acculturative stress in American universities than their European peers, due to the greater cultural gap between American and Asian cultures (Cross, 1995; Parr, Bradley, & Bingi, 1992; Kaul, 2001 cited in Wei et al., 2007). As such, the adaptation of international students to the host culture is often a problematic and stressful matter (Mori, 2000).

3.3.1.3 – Depression, academic performance, and other problems

Because of adaptation, stress, and acculturation difficulties, international students tend to be vulnerable to depression (Lin & Yi, 1997; Smart & Smart, 1995). In fact, depression is one of the most common problems among international students who seek assistance from university counselling services (Nilson, Berkel, Flores, & Lucas, 2004; Yi, Lin, & Yuko, 2003). Moreover, research has demonstrated that acculturative stress is associated with higher levels of depression among Korean (Lee et al., 2004),

Taiwanese (Ying & Hang, 2006), and Asian international students (Yang & Clum, 1995).

On the other hand, international students sojourn with the aim of obtaining a degree. Because of this aim, academic performance is a crucial component of cross-cultural adaptation. Therefore, the aforementioned problems tend to impact negatively on the academic performance of international students. In fact, academic problems are ranked among the most salient difficulties by international students (Chataway & Berry, 1989; Lin & Yi, 1997). Research has shown that academic demands are more problematic for international students than their local peers (Burns, 1991). For many students their education in the UK represents an extraordinary financial effort from their family, which creates great pressure for these students to achieve academically (Bailey, 2005). Additionally, a successful adaptation of international students to the host culture is vital for their academic performance. Research has emphasised that cultural isolation significantly restrains the academic achievement of international students (Hull, 1978; Pyle, 1986; Adams, 1992; Speck, 1997). The cultural distance between students' culture and host culture is another important factor in accounting for problematic academic outcomes. Different international students have different assumptions about learning styles, and expectations of the role of academic staff (Cortazzi & Jin, 1997).

Other common problems among international students are loneliness (Sam & Eide, 1991) and homesickness (Lu, 1990; Sandhu & Asrabadi, 1994), which were found to be more severe among international students than in domestic students (Zheng & Berry, 1991). With a sample of South American students in the US, Crano and Crano (1993) found that these students were also more prone to experience difficulties pertaining to dating and moral issues. It was shown in this research that these problems resulted in a lower self-concept among the South American sample.

In addition to the aforementioned psychological problems, it is not uncommon to find also other problems such as respiratory disorders (Allen & Cole, 1987), headaches and feelings of low energy (Thomas & Althen, 1989), loss of appetite, fatigue, and affected sleeping patterns (Lin & Yi, 1997).

3.3.2 – *Friendship networks*

During their stay international students develop a number of important friendship networks. In one of the few studies conducted with international students in the UK, Eller, Abrams, and Zimmermann (2005) analysed with a longitudinal survey important issues such as international students' contact with British people. The researchers analysed the development of perceived frequency and quality of contact with British hosts. The study also examined students' perceived interpersonal closeness with the British, and students' knowledge about Britain and the British. Eller and colleagues found that international students tend to develop positive relationships and friendships with the British during their stay. This increase in contact with British people was accompanied by an increased knowledge about the British and feelings of interpersonal closeness.

In addition to these positive effects, friendship networks can be beneficial for international students in a number of different ways. For example, for these sojourners, one way to alleviate their problems is by establishing friendship networks. Bochner, McLeod, and Lin's (1977) functional model of friendship networks is one of the most influential in the field. In effect, this model contends that international students tend to have three distinct social networks, each serving a specific psychological purpose. The first network comprises the relationships developed with other fellow compatriots. According to Bochner et al.'s (1977) model, the main purpose of this network is to

provide cultural support, enhancing self-esteem and cultural identity. It can also provide other benefits such as practical help, and emotional and spiritual support (Maudeni, 2001). Studies with international students in New Zealand and Singapore have suggested that a greater interaction with fellow compatriots is associated with stronger cultural identity (Ward & Kennedy, 1993; Ward & Searle, 1991), which in turn is positively related to students' psychological well-being (Searle & Ward, 1990).

Bochner et al.'s (1977) model also highlights the significance of relationships with local students. This network has an instrumental purpose, providing support for language and academic difficulties. Likewise, interaction with host peers tends to improve communication skills and provides better adaptation competence (Zimmerman, 1995). It is also associated with lower levels of stress (Redmond & Bunyi, 1993) and better psychological adjustment (Searle & Ward, 1990). For example, research peer-pairing programmes tend to be effective and students participating in these programmes often show better sociocultural adaptation than those who do not (Abe, Talbot, Geelhoed, 1998).

The third network is composed by interactions with other foreign students. The purpose of this network is mainly to find social support (Kennedy, 1999 cited by Ward et al., 2001). Being with peers who share the same problems tends to be important for social support. However, as Ward and colleagues (2001) contended, there is a lack of research regarding the importance and outcomes of contact with this network.

Although research tends to link different social networks to psychological well-being, other authors have shown opposite effects. For example, Pruitt (1978) demonstrated with a sample of African students in the US that psychological adjustment was poorer for those students who had more African friends. In a study with British immigrants in Australia it was also found that overall satisfaction was lower for

immigrants who had more British friends (Richardson, 1957). Similarly, other research has further emphasised the association between contact with host friends and lower psychological well-being (Ward & Kennedy, 1992, 1993).

Finally, in order to explain the contradictory results found for the effects of different social networks, Minde (1985, cited in Chataway & Berry, 1989) suggested examining the discrepancies between desired and actual contact. It is suggested that contact with co-national or host friends can exert a negative impact on well-being when there are discrepancies between actual and desired levels of contact. Accordingly, Minde (1985, cited in Chataway & Berry, 1989) showed with a sample of international students in Canada that contact discrepancies were associated with increased stress. Likewise, Zheng and Berry (1991) reported that discrepancies between actual and desired contact were associated with difficulties in adaptation of Chinese sojourners in Canada.

3.3.3 – *Social support*

Another important way of alleviating the problems of international students is the presence of social support. Mallinckrodt and Leong (1992) asserted that social support facilitates coping with stressful life changes and adaptation to a new cultural environment. Numerous studies conducted in the last two decades have supported the suggestion that social support alleviates homesickness, stress, depression, anxiety, and physical health problems (e.g. Cohen & Syme, 1985; Crockett, Iturbide, Stone, McGinley, & Carlo, 2007; Hannigan, 1997; Lee et al., 2004; Payne & Jones, 1987; Veiel & Baumann, 1992). Likewise, social support is associated with psychological satisfaction and well-being (Tanaka et al., 1997). For example, Jou and Fukuda (1996), found that social support tend to counteract the effects of stress on somatic problems.

Similarly, in Chataway and Berry's (1989) study in Canada, it was found that for international students, support from friends was associated with better adaptation; whilst for their Canadian peers, support from family was associated with psychological well-being. However, research has pointed out that international students tend to be reluctant to make use of support services provided by their university, due to inhibitions and social stigma (Cheng, Leong, & Geist, 1993; Murphy-Shigematsu, 2001).

Universities also realised the importance of social support. These academic institutions stimulate the formation and involvement of students in thematic clubs (they can be based on culture, religion, or similar interests). Common names for these groups are for example, the Chinese Association or the Muslim Society. These peer groups tend to help other international students in their arrival, in adaptation, and in the formation of students social networks. Indeed, research conducted over the last decade suggests that international students who are involved in such activities and clubs are more satisfied with their university experience (Quintrell & Westkwook, 1994; Abe et al., 1998).

3.3.4 – The specific characteristics of international students

Even though it is not uncommon for international students to face discrimination and other difficulties endured by different disadvantaged groups, they are an atypical minority group. In effect, international students differ in important ways from typical minority groups such as immigrants. For example, these students often have a relatively high status compared to other immigrants, they tend to be more educated, and their stay in the host country is often temporary.

Nonetheless, Schmitt et al.'s (2003) study suggested that international students can use the same coping mechanisms as immigrants and other disadvantaged groups. We feel that it is therefore crucial to investigate the ways in which international students

may differ from immigrant populations or other minority groups. The reason for investigating this concern is twofold. Firstly, by exploring differences and similarities between these groups, we will enhance our knowledge about international students and minority groups in general. Secondly, by understanding the extent to which international students differ from other more typical minority groups, it will allow us to make claims about the generalisability of our findings. For these reasons, towards the end of this thesis, we will briefly test with an immigrant group the same core predictions we aim to test with international students. The core predictions that will be tested with both international students and immigrants are those set in Chapter 2. These predictions are general and derived from a set of research questions aiming to examine the accuracy and fit of our model.

Nonetheless, in the present chapter we provided a detailed account of the particular issues of international students. We saw that these students often have to endure with specific issues including psychological adaptation, stress, depression, and academic performance. We also outlined the importance of friendship networks and social support in alleviating international students from their problems. Thus, in addition to the research questions defined in Chapter 2, in this chapter we will outline a new set of questions pertaining to the specific situation of international students. In contrast to the research questions in Chapter 2, the following questions will be more specific and will be tested only with international students.

3.4 – Research questions

So far we have seen that international students are a very important group for the countries that host their studies. Despite their importance there has been a surprising lack of academic research examining their experiences in the UK. Furthermore, as

emphasised by Terry et al. (2006), although there has been research arguing for the importance of contextual aspects such as host country's strategies or status (e.g. Berry, 1997); most of the literature relating to the adaptation of international students has been embedded in an individual perspective. Therefore, in this thesis a novel approach is proposed, where both individual and intergroup factors will be examined in order to better explain the experiences of international students.

In the present chapter the target population of this thesis was introduced. As demonstrated by previous research, discrimination and exclusion are common problems among international students. Previous research also highlighted other problems specific to these students such as language confidence and academic performance. At this stage we feel that to better understand the experiences of international students with discrimination, it is crucial to examine these experiences within the context of language confidence and academic performance. Furthermore, as we saw in this chapter it is also important to consider other relevant forms of support to these students (i.e. friendship networks and social support). In this final section the key effort will be to integrate some of the specific issues of international students in our model. This will be accomplished by an additional set of research questions that will guide our research.

The research questions in this chapter were generated from four broader concerns. What are the specific contextual factors of international students in the UK? What is the impact of students' friendship networks on their academic experiences? What is the impact of discrimination on the academic performance of international students? What are the advantages of having a longitudinal approach of our model?

3.4.1 – *The context of international students in the UK*

Firstly, it is crucial to understand the contextual characteristics in which students' experiences are embedded. It is important to understand for example how international students perceive discrimination, which dimensions of discrimination are significant to them, and in which situations they tend to face these experiences. It is expected that knowledge about these issues will be fundamental for testing the proposed model. Due to the exploratory nature of these initial questions, no hypotheses or predictions were formulated. This initial concern generated the following questions.

(i) Which dimensions of discrimination are relevant to international students?

Research focusing on racial discrimination has contended that discrimination can be related to major events in one's life or to more specific day-to-day experiences (e.g. Williams, Spencer, & Jackson, 1999). Discrimination can also be blatant or subtle. Likewise, other research has highlighted the significance of further dimensions such as perceived outgroup privilege and willingness to make attributions to discrimination (e.g. Schmitt et al., 2002). It is therefore crucial to understand which of these dimensions are relevant for the experiences of international students in the UK.

(ii) Where/when do students usually experience discrimination? Who discriminates against them?

Furthermore, it is important to understand where international students experience discrimination. Is it in the university context? Is it in public services and places? Additionally, it is crucial to investigate who they feel that discriminates against them in the UK (e.g. Scottish, English, or British). Where students have these

experiences and who discriminates against them will likely affect students in different ways. For example, perceiving discrimination in an academic context might have a greater impact on their academic performance when compared to feelings of rejection in a public place. Also, feeling rejected by the English might have a deleterious impact upon their experiences in England but not in Scotland.

(iii) Among international students what are the common causes for being discriminated against (e.g. ethnicity, religion, and/or nationality)?

It is vital to examine which are the perceived causes for discrimination. It is imperative to investigate if different students differ in the ways they feel disadvantaged or stigmatised in order to understand how discrimination affects their well-being.

(iv) Which aspects of the psychological well-being of international students are affected by experiences of discrimination?

In Chapter 1 it was demonstrated that among minority groups, group-based discrimination has negative consequences for self-esteem, depression, anxiety, and affect. It is then necessary to investigate if international students are affected in the same way, i.e. if there is an impact of perceived discrimination on all these indicators of psychological well-being.

3.4.2 – *The impact of students' networks on their academic experiences*

As already discussed in this chapter, social networks are crucial for psychological and sociological adjustment. In this section we aim at understanding the ways in which social networks might alleviate the problems faced by international students. Our research questions aim to identify the ways in which students form their

social networks and how these social networks might impact on their academic experiences. The following research questions were generated.

- (i) Which factors might impact on students' choices of friendship networks?

We initiated an inspection of the significance of international students' social networks by examining how these networks are formed. Previous research has shown that acculturation strategies are important for preferences for contact with different networks (e.g. Berry, 2001). As already emphasised, perceived cultural and physical differences between ingroup and host groups are important factors in the adaptation of international students. Likewise, second language confidence is crucial for a successful adaptation process (Clement et al., 2001). We predicted that willingness to participate in the larger society and perceived English skills would be associated with having more British and foreign friends. In contrast, willingness to maintain one's own cultural background and perceived cultural and physical differences would be associated with having more co-national friends.

- (ii) Does having more co-national or foreign friends impact on students' academic experiences?

Research has shown that different friendship networks tend to serve different types of support. We saw for example that the relationship with local students tends to have the instrumental purpose of improving communication skills and academic difficulties (Searle & Ward, 1990). Likewise, a greater interaction with fellow compatriots is associated with a stronger cultural identity (Ward & Kennedy, 1993; Ward & Searle, 1991), which in turn is positively related to students' psychological well-being (Searle & Ward, 1990). Nonetheless, other research has shown that these

friendship networks can be associated with lower psychological well-being (Ward & Kennedy, 1992, 1993). In this research we feel that examining the impact of friendship networks in the context of the rejection-identification model would provide more information about the outcomes of these networks. Thus, we aim to examine how international students' different friendship networks might relate to perceptions of discrimination, group identification, and psychological well-being. The discrepancies found in the literature did not allow us to formulate any predictions.

Nonetheless, following the steps of previous research (e.g. Minde, 1985 cited in Chataway & Berry, 1989) we anticipate that the positive effect of the amount of friends from a particular network on well-being will vary as a function of students' desire for contact with that network. In other words, it is predicted that students' friendship networks will have a positive impact on psychological well-being when actual contact with these networks matches the level of desired contact.

3.4.3 – The impact of discrimination on the academic performance of international students

In this set of research questions our aim is to examine academic performance as an outcome of both the rejection-identification model and our model. Furthermore, it is our goal to understand how issues such as social support and English proficiency interact with our model. The following research questions aim to integrate the concerns of international students in our overall model.

(i) Can minority group identification counteract the negative effects of perceived discrimination on the academic performance of international students?

As argued earlier in this chapter, academic performance is a crucial component of international students' life abroad. Thus, we will also test academic performance as an outcome variable of the rejection-identification model. Previous research does not allow formulating specific hypothesis about this question. However, it has been shown that self-esteem is associated with academic performance (Lane, Lane, & Kyprianou, 2004). It is therefore expected that the social identification components that are associated with self-esteem (i.e. ingroup ties and ingroup affect) will be able to counteract the negative effects of rejection on academic performance. It was expected that acculturation strategies would moderate this process in the same way as we described for psychological well-being.

(ii) What is the role of friendship networks and social support within this model?

As argued earlier in this chapter, social support can be an important variable in providing psychological assistance to international students (Mallinckrodt & Leong, 1992). According to our previous predictions, proponents of integration, separation, and marginalisation are not able to protect their psychological well-being in the face of discrimination. It is thus our plan to test whether other coping resources such as friendship networks and social support would be more beneficial for these students than for those who endorsed a separation strategy. In order to tackle this question, it is our intention to test friendship networks and social support as mediator of the relationship between perceived discrimination and well-being. It is also planned to test if this mediation effect would vary according to the different acculturation strategies.

(iii) In which ways do students get penalised by low English skills?

Research has shown that poor English skills tend to be associated with poor academic performance and difficulties in making British friends. However, language proficiency is an important variable in students' adaptation. In a similar way to acculturation preferences, language proficiency also has a significant impact on students decisions relating to contact with own and dominant culture. Therefore, we are also interested in knowing if poor language skills are associated with coping strategies. It is our aim to test whether the possible protective effect of minority group identification on the relationship between perceived discrimination and academic performance, would vary as a function of students' English skills. Previous research did not allow making specific predictions for this question.

3.4.4 – The advantages of a longitudinal perspective

Support for the rejection identification model (e.g. Schmitt et al., 2002; Garstka et al., 2004) has been demonstrated among cross-sectional studies. However, having a cross-sectional analysis of our model might be problematic as the processes of acculturation seem to be in constant development among acculturating individuals and groups. In effect, we saw in Chapter 2 that the adaptation of individuals in a new cultural environment changes over time. It is thus crucial to understand how the acculturation strategies of international students develop over the period of their stay in order to further impact on students' coping strategies. The following questions relate to the plausible effects of time and adaptation.

(i) Do international students' perspectives change with time?

Previous literature has shown that sojourners and immigrants tend to struggle with adjustment problems particularly during the initial phase of transition. This is not surprising if we bear in mind that this period is characterised by a great number of life changes and a lack of coping resources (Ward et al., 2001). Longitudinal studies have corroborated this perspective. For example, a study with Japanese students in New Zealand assessing students' psychological adaptation at their arrival and then again at 4, 6, and 12 months after, showed that depression levels were at their highest point at the beginning and then tended to decrease with time (Ward et al., 1998). Other studies with sojourners have shown that psychological adaptation tends to improve with time (Lu, 1990; Ward & Kennedy, 1996). Likewise, sociocultural adaptation tends to improve after the initial stages (Kennedy, 1999, cited by Ward et al., 2001). It is therefore expected that, as time goes by, international students will tend to report higher levels of psychological well-being. Previous research does not allow formulating predictions about possible changes for the other variables of our model. Nonetheless, we also aim to examine whether there are changes in perceptions of discrimination and group identification during the course of their studies.

(ii) How are acculturation strategies formed and how do they develop?

In the literature there is no consensus about the relationship between the two acculturation dimensions (i.e. participation in the larger society and own culture maintenance). While some researchers argue that they are independent (e.g., Mendoza, 1984; Ramirez, 1984; Szapocznik & Kurtines, 1980), others argue that they are interrelated (e.g., Olmeda, 1979; Taylor, 1991). We propose that both dimensions are orthogonal and, in fact, different aspects determine each dimension. Keeping in mind that the two dimensions relate to an orientation toward different cultural groups (own

and host), we argue that different processes are involved in their formation. In fact, it has been shown that acculturation strategies can result from a number of contextual factors, including variables such as perceived cultural and physical differences for example (Berry, 2003). In Chapter 1 we saw that sociostructural variables are crucial factors in deciding which strategy individuals adopt when aiming to improve social status. Hence, perceptions of permeability, legitimacy, and stability might have implications particularly for how minority group members deal with the dominant group. It is thus expected that perceptions of group permeability, legitimacy, and stability will be associated with willingness to participate in the larger society. In contrast, variables such as language skills and perceived cultural differences (between own and dominant culture) may limit intergroup relations and be better predictors of willingness to maintain own culture.

Furthermore, unidimensional models of acculturation argue that individuals initially tend to have a strong preference for maintaining their cultural heritage, which starts to decrease gradually upon intercultural contact. According to this perspective, acculturation is an assimilation process where individuals fall into the irreversible process of losing their own cultural heritage and progress towards embracing the host community's culture. Thus, following from a unidimensional perspective, it would be expected that international students' acculturation strategies would change towards assimilation. However, in this thesis we argue in favour of a bi-dimensional perspective and expect that the two acculturation dimensions will vary and change independently of one another.

It is also crucial to understand how the acculturation strategies of minority group members might develop over the period of their stay in order to further impact on their coping strategies. That is, if acculturation strategies change over time, according to our

model these changes would also impinge modifications on the ways in which individuals cope with discrimination. For example, minority group members may change their acculturation strategies with time, in order to improve psychological and social adaptation. Following from our model's predictions, we predict that by developing a separation strategy, individuals might improve their psychological well-being.

(iii) What are the causes of problematic academic experiences?

Research has consistently regarded low self-esteem as a possible cause for poor academic achievement (Covington, 1984; Purkey, 1970; Scheirer & Kraut, 1979; Lane, Lane, & Kyprianou, 2004). In this thesis we aim to test whether psychological well-being mediates the relationship between perceived discrimination and perceived academic performance. It is predicted that perceptions of discrimination during international students' initial period in the UK will have a long term negative impact on their psychological well-being. It is further predicted that in turn the latter effect will have negative consequences for international students' academic performance.

Research has also shown that the cultural distance between students' culture and host culture is another important factor in accounting for problematic academic outcomes (Cortazzi & Jin, 1997). Thus, we also plan to test whether perceived cultural differences during students' initial period in the UK would be associated with problematic academic performance in the long term. Furthermore, other research (e.g. Berry, 2003) has emphasised the importance of physical differences in the adaptation of sojourners and immigrant groups. Although there was no support from previous research, we plan to test whether perceived physical differences would also exert a negative impact on academic performance.

(iv) Do the causal relationships work in the directions we are predicting?

Support for the rejection identification model (e.g. Schmitt et al., 2002; Garstka et al., 2004) has been demonstrated among cross-sectional studies. Although the causal relationships between specific paths of the model have been tested before (e.g. Jetten et al., 2001), other models suggest causal relationships contradicting those of the rejection-identification model (e.g. Crocker & Major, 1989; Crocker et al., 1998).

As we saw in Chapter 1, these models (e.g. Crocker & Major, 1989) argue that highly identified individuals are more sensitive to intergroup inequalities and are thus more inclined to attribute negative treatment to prejudice or discrimination. Nonetheless, this thesis' model is an extension of the rejection-identification model. As such, we maintain and aim to test the same predictions that perceived discrimination impacts on minority group identification and not the reverse.

(v) How do perceptions of discrimination relate to willingness to make attributions to discrimination?

Previous research has argued that in order to understand the effects of discrimination on well-being it is more important to understand one's willingness to make attributions to discrimination rather than assessing previous experiences with discrimination (Crocker & Major, 1989). Other authors argue that when examining the effects of discrimination on well-being, it is important to understand one's experiences with perceptions of pervasive discrimination by assessing individuals' past experiences with discrimination (Branscombe et al., 1999). At this stage we feel that a longitudinal approach would serve to further examine the predicting effects of each of the abovementioned variables. In this research we follow the predictions of the rejection-identification model, anticipating that previous experiences with discrimination would be a better predictor of minority group identification and psychological well-being.

(vi) Does social support improve international students' experiences in the UK?

As stated previously, research has demonstrated that social support is associated with psychological satisfaction and well-being of international students (Tanaka et al., 1997). However, to our knowledge the link between social support and well-being has not been tested over a period of time with international students in the UK. It was predicted that social support during students' initial period in the UK would result in better psychological well-being outcomes in the long term.

3.5 – Methodology

The methodology and studies designed for this thesis were motivated by our research questions. These questions were generated from our initial concern in Chapter 2 of testing the fit and accuracy of our model, and four other concerns added in the present chapter. These four concerns were related to (i) the context of international students in the UK; (ii) the impact of students' friendship networks on their academic experiences; (iii) the impact of discrimination on the academic performance of international students; and (iv) the advantages of a longitudinal perspective.

We feel that before initiating a test of our model it is fundamental to understand the specific context and characteristics of international students in the UK. Due to the lack of research in the UK this concern will have an exploratory nature in this thesis. Here, we are not interested in testing hypotheses; we are instead interested in grasping international students' perspectives regarding the quality of their experiences and difficulties in the UK. In order to tackle this concern, we conducted a pilot study that will be described in Chapter 4. This study comprised a questionnaire and interviews with international students. The questionnaire encompassed several measures and was

also exploratory. The principal goal of the pilot study was to improve our understanding of the contextual situation and characteristics of international students in the UK. The knowledge generated by the pilot study was crucial for designing not only this thesis' longitudinal study with international students but also the measures that were involved in all studies.

Secondly, our strategy was to address the research questions presented in Chapter 2 and those introduced in this chapter by means of a longitudinal study. There were two important reasons for choosing a longitudinal design. Firstly, due to the evolving nature of the acculturation phenomena we feel that, when testing our model, it is imperative to have a complete understanding of the changes occurring during international students' period of stay in the UK. Secondly, a longitudinal perspective would serve to examine in further detail some of the controversial causal relationships hypothesised by the rejection-identification model (see Chapter 1 for a detailed account of the involved controversies). From the information gathered in the pilot study, a questionnaire was developed and distributed to international students that were beginning their undergraduate studies. These students were followed for a period of over one year.

Despite the relatively large number of questions and predictions, there are two common issues underpinning all these concerns. The first issue relates to the issue of whether the variables in our model are related in the ways we predicted (e.g. positive or negative correlations, mediation, moderation, etc.). This issue includes the first research questions that were set in Chapter 2. Addressing these questions will not only provide important information regarding our predictions but would also allow examining the fit of our model. We included this first approach to our model in a cross-sectional analysis of the longitudinal study. Thus, Chapter 5 will address the research questions set in

Chapter 2 and will test the core predictions of our model. In Chapter 5 we will examine with regression analysis the overall effect of group identification as a coping mechanism against group-based discrimination. We will also analyse academic performance as an outcome and the role of social support within our model (i.e. the research questions pertaining to the impact of discrimination on the academic performance of international students set in this chapter).

We will then provide a more detailed level of analysis which is related to the specific causal relationships between variables. This issue can only be addressed by a longitudinal analysis of the data. Chapter 6 will focus principally on these relationships. Initially we will be testing some of Chapter's 5 research findings longitudinally and then we will address in detail the research questions generated in the present chapter. Chapter 6 will also include more complex modelling in order to account for change over time when mapping the experiences of international students.

Finally, as mentioned previously, we also aim to test the core predictions of our model with a different sample in order to understand the specificity of international students. This concern was tackled by addressing the research questions set in Chapter 2 with a study with Polish immigrants living in Scotland. This study included a questionnaire with measures developed from the pilot study with international students. It was also our aim to test the robustness of our results by analysing our predictions under different methods. Therefore, in Chapter 7 this last study had an experimental design. By manipulating the extent to which Polish immigrants perceive discrimination we were in a position to test the causal effects of discrimination on our outcome variables.

Due to the relatively large number of research questions we feel that it is fundamental to provide a summary divided by study and chapter. It was expected that the following approach would contribute to the knowledge of international students in the UK, whilst expanding our theoretical understanding of the dynamics between social psychological and acculturation theories.

Chapter 4 (Pilot study):

- (i) Which dimensions of discrimination are relevant to international students?
- (ii) Where/when do students usually experience discrimination? Who discriminates against them?
- (iii) Among international students what are the common causes for being discriminated against (e.g. ethnicity, religion, and/or nationality)?
- (iv) Which aspects of the psychological well-being of international students are affected by experiences of discrimination?

Chapter 5 (Longitudinal study – cross-sectional analysis):

- (i) Does group-based discrimination exert similar effects among the three dimensions of identification?
- (ii) In which ways do the different dimensions of identification relate to psychological well-being? Does group-based discrimination have harmful consequences for psychological well-being?
- (iii) Do perceptions of discrimination interact with individual acculturation strategies to impact on the different dimensions of group identification?
- (iv) Will every strategy help individuals to protect themselves from the harmful effects of discrimination?

- (v) Can minority group identification (as a coping strategy) have a negative impact on other outcomes? In which ways can this relationship be moderated by the various acculturation strategies?
- (vi) Can minority group identification counteract the negative effects of perceived discrimination on the academic performance of international students?
- (vii) What is the role of friendship networks and social support within this model?
- (viii) In which ways do students get penalised by low English skills?

Chapter 6 (Longitudinal study – longitudinal analysis):

- (i) Do international students' perspectives change with time?
- (ii) How are acculturation strategies formed and how do they develop?
- (iii) What are the causes of problematic academic experiences?
- (iv) Do the causal relationships work in the directions we are predicting?
- (v) How do perceptions of discrimination relate to willingness to make attributions to discrimination?
- (vi) Which factors might impact on students' choices of friendship networks?
- (vii) Does having more co-national or foreign friends impact on students' academic experiences?

Chapter 7 (Study with Polish immigrants):

- (i) Will immigrant groups be affected by perceptions of discrimination in the same way as international students?
- (ii) Will acculturation strategies from immigrant groups also interact with perceptions of discrimination to impact on ingroup identification? Will

immigrant groups protect their well-being in the same way as international students?

- (iii) Does perceived discrimination invariably result in hostility towards the dominant group? In which ways can this relationship be related to the various acculturation strategies?
- (iv) How might immigrants' social networks impact on their life experiences?

In the next chapters we will introduce the empirical studies included in this research.

We will start by introducing the pilot study in the next chapter.

Chapter 4. PILOT STUDY

Overview

So far this thesis has provided an insight into the theoretical framework and research questions that have guided the present research. This chapter is the first of a set of empirical chapters, and aims to grasp the specific context of international students in the UK, and further assist in developing a questionnaire for the longitudinal study. In order to achieve these goals, we followed two phases: the first included a literature review which examined, identified, and selected items from measures commonly used in previous studies. This approach served to develop a pilot questionnaire. Psychometric data from the pilot questionnaire was subsequently presented, and a number of measures were refined. The second phase included a set of interviews aiming to understand whether the previous measures tapped into the relevant issues and problems of international students in the UK. The interviews were part of a confirmatory approach to the measures defined in the first phase (rather than serving the common exploratory purpose of a qualitative perspective). Results from the interviews were presented and used to further refine our measures. Following from these two phases, a final questionnaire was presented including previously validated measures, alongside new items designed specifically for this study. Finally, we discussed the strengths and limitations of the present study.

The study presented in this chapter aimed to address the first set of questions outlined at the end of Chapter 3 (section 3.4.1). To reiterate, these questions sought to understand and identify the particular contextual characteristics of international students in the UK. It was expected that this information would contribute to the broader goal of assisting in the development of the questionnaire for the longitudinal study.

More specifically, in the present study there were six issues that were addressed in more detail. (i) The first issue related to the measurement of acculturation strategies. As we discussed in Chapter 2, there are different methods of assessing the four acculturation strategies. In this chapter, the rationale and choice for a particular method was evaluated. Additionally, most measures assessing the acculturation strategies within a bidimensional perspective have been designed for a specific ethnic or national group. As no previous measures have been designed for heterogeneous groups such as international students, it was crucial to understand how these strategies have been assessed in the literature and how new items could be developed for this thesis' research. (ii) Another issue related to the dimensions of discrimination that might be relevant to international students. It was crucial for this research to understand how, and in which contexts, international students perceive discrimination. Tackling this issue encompassed a revision of different measures and ways of assessing past experiences of discrimination. Special attention was given to the adaptation of these measures to the experiences of international students. (iii) It was essential to identify, from the perspective of international students, who discriminates against them. It was fundamental to understand whether such experiences stem from the university and/or public services, or from English, Scottish, and/or British people. (iv) To our knowledge previous work has only produced a few

measures to assess minority groups' hostility towards a dominant group. In this study, previous measures were therefore analysed to assist in the development of a new measure, specific to the experiences of international students. (v) Social identification and the specific components of ingroup ties, centrality, and ingroup affect are key concepts of this thesis. It was therefore fundamental to examine previous measures tapping into these dimensions and adapt them to the case of international students. It was also vital to understand which group memberships were important to international students themselves. (vi) A final issue relates to the measurement of well-being. This chapter also sought to identify the relevant indicators of psychological well-being in terms of international students' experiences with discrimination. Several measures were analysed and their inclusion in the study was discussed.

In order to achieve these goals, this chapter was divided into two phases. In the first phase we examined existing scales and conducted a literature review based on our variables and goals, selected and identified items from existing scales, and developed new items. This approach served to develop a pilot questionnaire that was distributed to a sample of international students. In the final stage of this phase we provided an overview of how psychometric and other statistical data from the pilot questionnaire were used to refine all measures.

For the second phase we interviewed a sub-sample of those who completed the questionnaire. The aim of the interviews was to understand whether the questionnaire tapped into the fundamental issues and problems of international students in the UK. It also had the aim of checking whether all the measures in the questionnaire were clear and easy to understand. The information gathered during the interviews was used to further refine our questionnaire.

4.1 - Phase 1. Pilot questionnaire

4.1.1 - Existing measures and literature review

4.1.1.1 - Acculturation.

Previous work used a variety of scales to measure acculturation. Scales based on Berry's acculturation model have tended to focus either on items assessing each acculturation strategy in a separate subscale (assimilation, integration, separation, and marginalisation) or items assessing the two dimensions (participation in the larger society and maintenance of own culture).

The problem of measuring each acculturation attitude separately is related to the nature of the items - most of them involve double-barrelled questions. To measure assimilation for example, participants would have to indicate the extent to which they agreed with the following phrase: "I do not value my own culture but instead I value the host culture". In addition, because each of these subscales is theoretically interdependent, it is expected that a high score on one of the subscales should be associated with low scores on the remaining three. However, previous research has indicated that intercorrelations tend to vary widely and often contradict theoretical expectations (Berry et al., 1989). On the other hand, scales measuring the two dimensions separately also have their limitations. According to this technique, individual scores for each dimension are dichotomised into 'high' or 'low' after a midpoint scale split. Individuals are then categorised into each acculturation strategy by combining the 'high' and 'low' scores achieved in both dimensions. This is problematic as dichotomising the two dimensions can reduce continuous variables into categories, resulting in the loss of important statistical information.

In this thesis however, we decided to assess the four strategies by measuring the two independent subscales (the two dimensions of acculturation). In order to

address the disadvantage of reducing continuous data into categories, we propose a different approach in this thesis. Due to the characteristics of our model, both measures (the two dimensions) will be specified in the analysis as continuous variables, allowing richer information to be collected for each participant. It is possible to perform this analysis with multiple regression, where the two dimensions and an interaction term can be introduced in order to examine the combined effects of the acculturation dimensions (see Zagefka & Brown, 2002, for a similar approach). This will provide a better understanding of how individuals position themselves between both continua.

Most of the existing scales focus on a specific emigrant population (e.g. the case of Mexicans - ARMSA by Cuéllar, Arnold, and Maldonado, 1995; or Vietnamese - Nguyen & von Eye, 2002, both in the USA). Since our target population is comprised of individuals from several different countries and cultures, none of the above-mentioned measures was suitable for use in this study. One exception is the Vancouver Index of Acculturation (Ryder et al., 2000). Although this measure was developed to capture the acculturation strategies of heterogeneous immigrant groups, it was designed for the North American host culture. Hence, in this thesis a new measure had to be developed in order to tap into the general attitudes, behaviours, and beliefs of international students. In order to address this issue, several items were selected and adapted from different scales to form two separate subscales. Each subscale assessed one dimension (see Tables 2 and 3 for a list of the items and respective sources). Items were chosen based on three repertoires which have been consistently represented in most bidimensional acculturation measures (e.g. Ryder et al., 2000; Nguyen & Eye, 2002). These repertoires include culture orientation, group interaction, and language.

Although existing items tapping into culture orientation and group interaction could easily be adapted and applied to international students, existing items for the language repertoire were not adequate for the reality of these students. These items were embedded in the specific cultures assessed in previous scales. New items were therefore developed for this thesis, with the purpose of reflecting language orientation. For the development of the new items it was reasoned that participation in the larger society can be assessed by the extent to which students feel oriented to use the English language. Likewise, culture maintenance was assessed by the extent to which they feel oriented to use their national language.

Overall, a total of 26 items were developed for the two subscales, with items distributed across the group interaction, culture orientation, and language repertoires (see Tables 2 and 3).

Group interaction

- 1 - I feel at ease with British people¹
 - 2 - I am comfortable being with people from the UK²
 - 3 - I have a lot of difficulty making British friends²
 - 4 - I would like to live in an area where there are British people³
 - 5 - I feel very uneasy with British people³
 - 6 - I want to speak with British people and know more about them⁴
 - 7 - I don't want to 'hang out' with British people⁴
-

Culture orientation

- 8 - It is important to me to incorporate British ways¹
 - 9 - I would like to adopt or take up the British way of life¹
 - 10 - I want to learn more things about the British culture⁴
 - 11 - I like British culture and I will do my best to be part of it⁴
 - 12 - I am not interested in British culture⁴
-

Language

- 13 - I feel comfortable to speak English with friends⁵
 - 14 - I make an effort to improve my English⁵
-

1. Nguyen & Eye (2002) 2. Barry (2005) 3. Ghuman (2000)
 4. Ramos (2005) 5. Items developed specifically for this study

Table 2. Items for assessing 'participation in larger society'.

Group interaction

- 1 - Most of my closest friends are from my own country¹
 - 2 - I feel at ease with people from my country¹
 - 3 - I enjoy going to gatherings or parties from people of my own nationality¹
 - 4 - I would not like to live in an area where there are only people from my nationality³
 - 5 - I would like to have more friends from my own nationality⁴
 - 6 - I don't want to 'hang out' with people from my country⁴
-

Culture orientation

- 7 - I have no wish to go back to my own country³
 - 8 - It is important to me to preserve my own cultural heritage⁴
 - 9 - The culture of my country is not interesting⁴
 - 10 - The culture from my own country is something that I value⁴
-

Language

- 11 - If I could I would only use my own national language in my day life⁵
 - 12 - I prefer to speak my own national language all the time⁵
-

1. Nguyen & Eye (2002) 2. Barry (2005) 3. Ghuman (2000) 4. Ramos (2005)
 5. Items developed specifically for this study

Table 3. Items for assessing 'culture maintenance'.

4.1.1.2 – Perceptions of discrimination.

As we saw in Chapter 3, it is not uncommon for international students to experience discrimination. However, few studies have focused on international students in the UK, and experiences of discrimination have similarly received little attention (Pelletier, 2003). The only information available is from a limited number of non-academic reports (e.g. Eller, Abrams, & Zimmermann, 2005). The Heist (1994) and UKCOSA (2004) surveys, for example, reported a wide range of students' perspectives pertaining to experiences of discrimination and exclusion. In these reports some students conveyed that British people were cold and hostile towards foreigners, and also held prejudices against specific ethnicities and religions. Other students, in contrast, reported that the UK is a multicultural country where foreigners are welcomed and widely accepted.

In addition, it is important to keep in mind that students have experiences with discrimination in various settings, including within the university context. For example, research has shown that British students are often unwilling to work in group assessments with non-native English speakers (Ledwith & Seymour, 2001; Tomlinson & Egan, 2002; Cathcart et al., 2005). Also, in a set of interviews with international students, Maundeni (2001) found reports of students who felt that they were discriminated against during some lectures because of their race. For example, some students reported the case of a lecturer who expressed a negative attitude and disbelief towards the high marks of a Black student. Other students argued that both university staff and their domestic peers did not show interest in their comments during a lecture.

In this thesis, perceptions of discrimination were assessed in terms of both general events and day-to-day experiences. This approach has been followed in a number of studies investigating the implications of discrimination on well-being (e.g. Kessler, Mickelson, & Williams, 1999; Williams, Spencer, & Jackson, 1999). Qualitative studies of discrimination have also provided evidence for the importance of both general events and day-to-day experiences with rejection (Essed, 1991; Feagin, 1991). According to Williams et al. (1997), general events of discrimination are defined by major experiences which tend to interfere with social achievement, and have consequences for life changes and well-being. Although there were already several validated scales assessing experiences with general events of discrimination in the existing literature, items from previous scales had to be adapted to this study. Indeed, previous measures assessing general events of discrimination have focused essentially on race discrimination and also on situations that might be uncommon for the case of international students (e.g. being fired from a job or being treated unfairly

by the police). We therefore selected and adapted several items from a number of existing scales (see Table 4 for a list of the items and respective sources) in order to redress this imbalance.

Importantly, we adopted the same stance as the only study examining the rejection-identification model among international students (i.e. Schmitt et al., 2003) and worded the scales in terms of nationality (see below).

General discrimination

- 1 - I feel like I am personally a victim of society in the UK because of my nationality¹
- 2 - I consider myself a person who has been deprived of the opportunities that are available to the British because of my nationality¹
- 3 - Prejudice in the UK against people from my country has affected me personally¹
- 4 - I feel British people look down on me because of my nationality²
- 5 - British people have discriminated against me because I am not from the U.K.²
- 6 - People of my country face discrimination in the UK²
- 7 - In the UK there is prejudice against people of my country²
- 8 - On average, people in the UK society treat British and foreigners equally³
- 9 - It is easy to understand why foreign groups in the UK are still concerned about societal limitations of their opportunities³
- 10 - Society in the UK has reached a point where foreigners and British have equal opportunities for achievement³

¹Adapted from Schmitt, Branscombe, Kobrynowicz, & Owen (2002)

²Adapted from Ramos (2005)

³Adapted from McConahay (1986).

Table 4. Items for assessing general discrimination.

Day-to-day experiences with discrimination involve specific situations where individuals might have been discriminated against. These experiences were assessed employing a measure developed by Williams et al. (1997). For this scale students were asked ‘Looking at the following events please state how often you experienced them in the UK because of your nationality’. Students had to rate each event in a scale from ‘*never*’ to ‘*always*’ (see Table 5 for a list of all the included items).

Day-to-day discrimination

- 1 - Being treated with less courtesy by a British person.
 - 2 - Being treated with less respect by a British person.
 - 3 - Received worse service (e.g. in a restaurant or a shop).
 - 4 - People acted as if they think you are not intelligent.
 - 5 - People acted as if they are afraid of you.
 - 6 - People acted as if you are dishonest.
 - 7 - People acted if they are better than you.
 - 8 - People called names or insulted you.
 - 9 - People threatened or harassed you
-

Table 5. Items for assessing specific contexts of discrimination.

4.1.1.3 - Outgroup privilege

We also measured perceptions of discrimination by assessing outgroup privilege. Here, perceived disadvantage does not stem from an inferior treatment from the outgroup, but instead from the perception that the outgroup has more privileges than one's own group. That is, outgroup privilege relates to a perceived advantage of members of the dominant or host culture. For example, an international student may have never experienced disrespectful behaviour from the British because of her/his nationality. Nevertheless, this student may still perceive that international students are a disadvantaged group if they perceive the British to be highly privileged. This is an important aspect because, as shown by research, perceived ingroup disadvantage following from perceptions of outgroup privilege tends to affect one's psychological well-being (e.g. Schmitt et al., 2002). As British citizens have some legitimate and recognised privileges (such as voting), this measure focused on the university context, where it should not be expected that nationality would confer privileges automatically. Furthermore, previous research has measured international students' perceptions of discrimination in the university context (Schmitt et al., 2003). Thus, it was felt that in order to better understand the experiences of international students we need to assess students' perceptions with discrimination in different contexts. We

therefore adapted the items from Schmitt et al. (2002) (see Table 6) to understand participants' perceptions of inequality in the university context.

Outgroup privilege
1 - British students have opportunities that they would not have if they were from my country
2 - There are privileges that British students receive that they would not have if they were from my country
3 - British students receive preferential treatment because of their nationality

Table 6. Items for assessing outgroup privilege.

4.1.1.4 - Willingness to make attributions to prejudice

This final scale assesses the extent to which participants believe that a negative outcome might be due to prejudice against their foreign nationality. In fact, this measure can be an indicator of the extent to which participants believe that prejudice against their group would be a probable cause for negative outcomes, which would likely exert a direct and harmful effect on well-being (Branscombe et al., 1999).

This measure was developed from the six item scale by Schmitt et al. (2002). The items represent negative events that are attributionally ambiguous. Participants were asked to indicate how likely they would be to attribute each event to prejudice (see table 7). Responses were made by ticking a probability from 0% to 100%, with 10% increments for each event.

Willingness to make attributions to prejudice

- 1 - Suppose you apply for a job in the UK that you believe you are qualified for. After the interview, you are told that you didn't get the job
 - 2 - Suppose you want to join an organisation in the UK whose members are mostly British. You are told that they are not taking new members at this time
 - 3 - After a lecture at St. Andrews, you approach the lecturer to ask a question about the lecture, but the lecturer abruptly ends your conversation and begins talking to another student
 - 4 - At St. Andrews, you are assigned to a group of six students in order to complete a project. You are the only foreign member in the group. The other members of the group are not very friendly and don't pay much attention to what you have to contribute to the project
 - 5 - You are having a conversation with a group of individuals, all British. They laugh at everything you say, even though you are not trying to be funny
 - 6 - You repeatedly ask a teaching assistant to help you prepare for the upcoming test. This teaching assistant seems to be more helpful to British students
-

Table 7. Items for assessing the likelihood of attributing an event to prejudice.

4.1.1.5 - Hostility

No previous measures assessing international students' feelings of hostility towards the host community were found in the literature. The following scale was developed specifically to measure students' feelings of hostility toward the host group (see Table 8). The first two items were adapted from Branscombe et al. (1999), whilst the remaining two items were taken from Ramos (2005).

Hostility

- 1 - When I see a British person, I can't help but think bad things about them
 - 2 - I have used some bad terms to refer to British people
 - 3 - I feel annoyed when British people are close to me
 - 4 - If a British person is hostile to me, I easily become aggressive
-

Table 8. Items for assessing hostility toward the host group.

4.1.1.6 - Group Identification

As outlined in Chapter 1, in this thesis we will follow a multidimensional perspective of social identification. The three dimensions proposed by Cameron (2004) will be assessed. These dimensions include ingroup ties, centrality, and ingroup affect. By comparing different existing measures of social identification, Cameron (2004) developed a measure tapping into the aforementioned dimensions (Table 9). The reason for including Cameron's (2004) measure is twofold. On the one hand, it taps nicely into the three dimensions that the present research proposes to assess. On the other hand, instead of being developed specifically to a given group, this measure has the advantage of being easily adaptable to any number of memberships, including large social categories such as nationality or ethnicity.

Additionally, due to the heterogeneity of international students as a group, there are a limited number of group memberships that can be examined. There are two identities which are potentially important and relevant to every international student. The first is students' national identity. This group membership might not have been important prior to students' arrival in the UK, but in SCT terms, this identity might emerge by both perceptions of contrast with the host nationality, and perceptions of intra-group similarity. Moreover, this group membership can be an important source of psychological well-being (Ward & Rana-Deuba, 2000). Another potentially significant group membership is that of international students. Despite the heterogeneity of this group, international students share the experiences of being in a different culture, country, and also share the fact that they might be treated as foreigners or outsiders (see Schmitt et al., 2003 for a similar argument), irrespective of their country of origin. In this case identification with other international students could emerge as a function of common treatment by the host culture. Research has

also shown that this group identity is a crucial resource for counteracting the negative impact of rejection on psychological well-being (Schmitt et al., 2003). Thus, identification with other co-national peers and with other international students were both measured in this pilot study. It is also essential to keep in mind that these two group memberships have distinct characteristics. Identification with co-national peers might emerge by common intra-group traits, and is a chronic identity. In contrast, identification with other international students is a new identity (formed upon arrival), and is likely to emerge by perceptions of common treatment by the host culture.

Three-Factor Model of Social Identity

Ingroup Ties

- 1 - I have a lot in common with other international students (students from my country).
 - 2 - I feel strong ties to other international students (students from my country).
 - 3 - I find it difficult to form a bond with other international students (students from my country).
 - 4 - I don't feel a sense of being "connected" with other international students (students from my country).
-

Centrality

- 5 - I often think about the fact that I am an international student (students from my country).
 - 6 - Overall, being an international student (student from my country) has very little to do with how I feel about myself.
 - 7 - In general, being an international student (student from my country) is an important part of my self-image.
 - 8 - The fact that I am an international student (student from my country) rarely enters my mind.
-

Ingroup Affect

- 9 - In general, I'm glad to be an international student (students from my country).
 - 10 - I often regret that I am an international student (students from my country).
 - 11 - I don't feel good about being an international student (students from my country).
 - 12 - Generally, I feel good when I think about myself as an international student (students from my country).
-

Table 9. Items for assessing group identification with the group of international students and other co-national peers.

4.1.1.7 – Psychological well-being

In order to assess psychological well-being four different indicators were included – self-esteem, positive affect, anxiety, and depression. The first measure included the personal self-esteem scale by Rosenberg (1979), which is a well validated measure that has been widely used in the rejection-identification model

research, and also in work focusing on stigma and rejection. All items were included in the pilot questionnaire and no modifications were necessary for this measure. Although some research exploring the rejection-identification model has also examined collective self-esteem (e.g. Jetten et al., 2001; Schmitt et al., 2002), in this study we decided to include only personal self-esteem. We chose this approach because collective self-esteem is very similar to the concept of ingroup affect, which also assesses a self-evaluation of the ingroup. In effect, the way ingroup affect is commonly assessed shares item content with other well-know scales such as Luhtanen and Crocker's (1992) private collective self-esteem scale. As we have argued in this thesis, an ingroup evaluation (i.e. ingroup affect) is an important mediator of the relationship between perceived discrimination and psychological well-being. Therefore, we opted to not include collective self-esteem as an indicator of psychological well-being.

Lyubormirsky, King, and Diener (2005) argued that positive affect is related to optimism, self-efficacy, and self-esteem. Research with the rejection identification model supported this contention by finding a positive correlation between self-esteem and positive affect (Schmitt et al., 2002). We therefore piloted for this measure by including the items from Schmitt et al. (2002).

Finally, we assessed anxiety and depression with the Hospital Anxiety and Depression Scale by Zigmond and Snaith (1983). HADS is a well-validated and reliable scale commonly used with non-clinical samples (see Zigmond & Snaith, 1983). This scale comprises 14 items divided into two subscales (7 items assess anxiety and the other 7 depression). Items from this measure were included in the pilot questionnaire without modifications.

4.1.1.8 - Sociostructural variables

Perceptions of stability, legitimacy of status relations, and permeability of group boundaries were assessed by adapting Mummendey, Kessler, Klink, and Mielke's (1999) measure. In their study, Mummendey and colleagues measured these sociostructural variables among a sample of East Germans after the German unification. Table 10 shows the adapted items that were tested in this pilot study.

Sociostructural variables
<i>Stability</i> 1 - Discrimination between the British and foreign students will not change easily. 2 - I think that the relationship between foreign students and the British will remain the same for the next years.
<i>Legitimacy</i> 3 - The British are entitled to be better than foreign students. 4 - It is justified that the British have a superior status when comparing to foreign students.
<i>Permeability</i> 5 - It is very easy for a foreign student to be accepted into British society. 6 - For a foreign student it is nearly impossible to be regarded as British.

Table 10. Items for assessing stability, legitimacy, and permeability.

4.1.1.9 – Demographics

In the last part of the questionnaire we collected some demographic information. In the last page, participants were asked about their age, gender, nationality, parents' nationality, first language, ethnicity, type of religion, time living in the UK, and subject and year of academic study.

4.1.2 – Method

4.1.2.1 - Participants

Fifteen international students from 9 different countries (9 students from Europe and 6 from Asia)⁹ at the University of St. Andrews volunteered to participate in this study. All participants were recruited using fliers posted in the School of Psychology, and in student accommodation buildings. They were contacted by email and asked if they were interested in taking part in the present investigation which would involve completing the questionnaire booklet. The researcher was also identified as an international student. The sample comprised 6 males and 9 females, and their ages ranged from 21 to 29 ($M = 24$) years. Nine of the participating students were undergraduate students, 5 were postgraduate students, and 1 did not specify.

4.1.2.2 - Procedure and measures

A questionnaire booklet was distributed to the students who took part in the study. In both phases the study was introduced as an investigation into international students' perceptions of British culture, assessing how they felt about studying at a British university. The measures in the questionnaire were those summarised above. All responses were made on a 7-point Likert-type scale with endpoints ranging from 1 '*strongly disagree*' to 7 '*strongly agree*'. The three exceptions were the day-to-day discrimination measure, which included responses on a 7-point Likert-type scale ranging from '*never*' to '*always*'; the willingness to make attributions to prejudice measure, where respondents ticked a probability from 0% to 100%, with 10% increments; and HADS, where participants responded on a scale ranging from 1 to 4.

⁹ Greece (n=2), Austria (n=2), Sweden (n=1), France (n=1), Japan (n=2), China (n=3), Netherlands (n=1), Portugal (n=1), Denmark (n=1), and India (n=1).

4.1.3 - Results

This study was purely exploratory and the main goal was to pilot each measure and reduce the questionnaire to a coherent set of items. Firstly, a factor analysis was performed for the scales that have more than one dimension. Reliability and construct validity analyses were subsequently performed for all the scales, eliminating items when appropriate. In this section we had the aim of presenting psychometric data, identifying problematic measures, and eliminating items according to statistical criteria. Only after the current section will the final refinements to the scales be made, and the final version of the questionnaire presented.

4.1.3.1 - Factor Analysis

This section started by inspecting the factor structure of the acculturation and group identification scales. Although the relatively small sample would prevent us from achieving conclusive results, an exploratory factor analysis was performed for both measures. The decision criteria for eliminating items were as follows: (i) Eigenvalues of <1 ; (ii) items which had a loading below 0.32; (iii) items that have a loading in the 0.32–0.399 range while having a loading of >0.20 on another factor(s); (iv) items that have a loading in the 0.40–0.499 range while having a loading of >0.30 on another factor(s); and (v) items that do not make conceptual, or theoretical sense within a factor. All subsequent statistical analyses are based upon these criteria as recommended by Tabachnik and Fidell (2001).

(i) Acculturation

For the two subscales (participation in larger society and culture maintenance), analysis was performed keeping in mind the three basic repertoires the items appear to

represent (culture orientation, group interaction, and language). Firstly, for participation in larger society an exploratory factor analysis with oblimin rotation was performed (see Table 11). An oblimin rotation was chosen as it was expected that the different factors would be related. Factor analysis yielded three factors which explained 78.35% of the total variance. Factor 1 (group interaction) accounted for 51.91% of the variance, and included items such as: 'I feel at ease with British people'. Factor 2 (culture orientation) accounted for 15.92% of the variance and included items such as 'I like British culture and I will do my best to be part of it'. Factor 3 (language) accounted for 10.52% of the variance and included items such as 'I feel comfortable to speak English with friends'. Overall, all items loaded onto the expected factors apart from the language item 'I make an effort to improve my English' which loaded onto the culture orientation factor (factor 2). Nevertheless, it was decided to keep this item as it makes conceptual sense within the overall measure, and also because a strong relationship between language and culture orientation should be expected. Furthermore, in order to balance the number of items between the three factors, one item from the group interaction factor was deleted: 'I feel very uneasy with British people'. This item was chosen as it is very similar to another item with a stronger loading in the same factor ('I feel at ease with British people'). Finally, the item 'It is important to me to incorporate British ways' was also deleted. It was decided to delete this item as 'British ways' can be rather ambiguous and students might hold different conceptualisations about this matter.

Items	1	2	3
1 - I feel at ease with British people	.920	.177	-.030
2 – I am comfortable being with people from the UK	.832	.320	-.087
3 - I have a lot of difficulty making British friends	.596	.142	.573
4 - I would like to live in an area where there are British people	.725	-.067	-.081
5 – I feel very uneasy with British people	.788	.192	.165
6 – I want to speak with British people and know more about them	.866	.291	.244
7 – I don't want to 'hang out' with British people	.580	.406	.046
8 - It is important to me to incorporate British ways	.333	.811	-.198
9 – I would like to adopt or take up the British way of life	.516	.694	.162
10 – I want to learn more things about the British culture	.275	.929	-.095
11 – I like British culture and I will do my best to be part of it	.388	.861	.190
12 – I am not interested in British culture	.119	.716	.612
13 – I feel comfortable to speak English with friends	-.067	-.252	.830
14 - I make an effort to improve my English	.014	.903	-.187

Table 11. Loadings for the three factors of the 'participation in larger society' subscale (only the items in bold matched our criteria).

Secondly, the same analysis was performed for the culture maintenance subscale (see Table 12). Factor analysis yielded four factors accounting for 83.42% of the total variance. Factor 1 (group interaction) accounted for 39.45% of the variance, and included items such as 'I would like to have more friends from my nationality'. Factor 2 (culture orientation) accounted for 20.38% of the variance and included items such as 'It is important to me to preserve my own cultural heritage'. Factor 3 (language) accounted for 14.60% of the variance and included items such as 'If I could I would only use my own national language in my day life'. Importantly, factor analysis yielded a fourth factor which accounted for 8.99% of the variance and was represented by the item 'I have no wish to go back to my own country'. Although a three-factor structure was expected, it was decided to keep this item as it represented a relevant dimension for international students, and also because it made conceptual sense in the overall measure. Furthermore, despite the correct loading of the item 'I prefer to speak my own language all the time' onto the language factor, we decided to

delete this item. The justification is that the term ‘prefer’ elicits a comparison with other languages. When responding to this question, students would have to choose a favourite language, and as such, it does not allow for dual orientation.

Items	1	2	3	4
1 - Most of my closest friends are from my own country	-.193	.138	.439	.720
2 - I feel at ease with people from my country	.569	.376	-.033	.525
3 - I do not enjoy going to gatherings or parties from people of my own nationality	.827	.115	-.194	-.017
4 - I would not like to live in an area where there are only people from my nationality	.736	-.331	.195	.394
5 - I would like to have more friends from my own nationality	.865	.116	.249	.018
6 - I don't want to 'hang out' with people from my country	.859	.133	.350	-.078
7 - I have no wish to go back to my own country	.175	.194	.224	.844
8 - It is important to me to preserve my own cultural heritage	.153	.913	.197	-.095
9 - The culture of my country is not interesting	-.069	.684	.288	.309
10 - The culture from my own country is something that I value	.138	.863	-.092	.302
11 - If I could I would only use my own national language in my day life	.183	.157	.907	.162
12 - I prefer to speak my own national language all the time	.153	.075	.891	.302

Table 12. Loadings for the three factors of the ‘culture maintenance’ subscale (only the items in bold matched our criteria).

(ii) Group identification

Two separate factor analysis were performed for the measures assessing identification with other international students and other students from the same nationality. It was expected that each factor analysis would yield three factors (ingroup ties, centrality, and ingroup affect).

For identification with other international students, an exploratory factor analysis with oblimin rotation yielded 4 factors, which explained 82.84% of the total variance (Table 13). Factor 1 (centrality) accounted for 40.46% of the variance, and included items such as ‘The fact that I am an international student rarely enters my mind’ (reverse scored). Factor 2 (ingroup ties) accounted for 16.31% of the variance and included items such as ‘I have a lot in common with other international students’.

Factor 3 (ingroup affect) accounted for 15.09% of the variance and included items such as ‘In general, I’m glad to be an international student’. Factor analysis yielded a fourth factor which accounted for 11.02% of the variance and included items such ‘I don’t feel good about being an international student’ (reverse scored). This fourth factor included two items from ingroup affect. The difference between factor 3 and 4 was that factor 3 was composed by the positive ingroup affect items, whilst factor 4 was composed by the negatively worded items of ingroup affect. Despite the evidence for a four-factor structure, in this thesis it was decided to maintain the original three factors and thus exclude some of the items assessing ingroup affect.

The principal reason for this decision related to the fact that Cameron’s (2004) factor analysis was performed across different large samples, whilst our analysis was performed with a relatively small sample. Therefore, although Cameron’s (2004) analysis had not been performed with international students, it was advisable to keep the original structure of this scale instead of using our results. Another reason for keeping the three-factors pertained to the overall structure the scale. That is, because our factor analysis had revealed two items for ingroup ties and centrality, it was decided keep a balance between the different dimensions by maintaining only two items for ingroup affect. Hence, it was further decided to exclude the items loading onto factor 4 as these accounted for a smaller portion of the total variance when compared to items in factor 3.

Items	1	2	3	4
1 - I have a lot in common with other international students.	.266	.858	-.113	.145
2 - I feel strong ties to other international students.	.508	.771	.088	-.107
3 - I find it difficult to form a bond with other international students.	.066	.566	.476	.383
4 - I don't feel a sense of being "connected" with other international students.	.008	.858	.116	-.086
5 - I often think about the fact that I am an international student.	.697	.412	.311	.142
6 - Overall, being an international student has very little to do with how I feel about myself.	.912	.097	.050	-.113
7 - In general, being an international student is an important part of my self-image.	.680	-.076	.564	.108
8 - The fact that I am an international student rarely enters my mind.	.871	.260	.065	.005
9 - In general, I'm glad to be an international student.	.188	.252	.865	.093
10 - I often regret that I am an international student.	-.112	-.110	-.269	.902
11 - I don't feel good about being an international student.	.102	.148	.362	.822
12 - Generally, I feel good when I think about myself as an international student	.110	-.080	.941	-.101

Table 13. Loadings for the measure 'identification with international students'.

For identification with other students from the same nationality, the same analysis was performed. The factor analysis yielded 3 factors, which explained 82.18% of the total variance (Table 14). Factor 1 included items of ingroup affect and centrality. This factor accounted for 57.97% of the variance. Factor 2 was composed by items tapping into ingroup affect and ingroup ties. It accounted for 15.81% of the variance. Finally, factor 3 included one item from the centrality dimension. This factor accounted for 8.41% of the variance. Overall, this factor analysis was not very informative and actually contradicted some theoretical expectations. Thus, for choosing items for the final questionnaire, we used the information provided from the factor analysis of identification with international students. The items that were kept for identification with international students were used for identification with other students from the same nationality.

Items	1	2	3
1 - I have a lot in common with other students from my country.	.762	.416	.116
2 - I feel strong ties to other students from my country.	.574	.605	.301
3 - I find it difficult to form a bond with other students from my country.	-.022	.737	.392
4 - I don't feel a sense of being "connected" with other students from my country.	.330	.914	.093
5 - I often think about the fact that I am a student from my country.	.893	.008	.231
6 - Overall, being a student from my country has very little to do with how I feel about myself	.053	.179	.957
7 - In general, being a student from my country is an important part of my self-image.	.509	.477	.661
8 - The fact that I am a student from my country rarely enters my mind.	.882	.040	-.144
9 - In general, I'm glad to be a student from my country.	.810	.260	.062
10 - I often regret that I am a student from my country.	.199	.871	.080
11 - I don't feel good about being a student from my country.	.635	.516	.283
12 - Generally, I feel good when I think about myself as a student from my country.	.831	.322	.242

Table 14. Loadings for the measure 'identification with other students from same nationality'.

4.1.3.2 - Reliability

Reliability tests were also performed for each scale. For the acculturation and group identification measures, only the items that were not deleted after our factor analysis were included. Table 15 shows the alpha coefficients for each scale.

Overall, most measures were reliable, reporting alpha coefficients above .60. One exception was the 'hostility' scale which had a low alpha coefficient (.49). Likewise, the dimension 'centrality' with students from own country revealed a very low alpha coefficient (.04). The same unsatisfactory alpha coefficient was found for the items measuring permeability (.04). As a consequence, hostility, centrality (with own country) and permeability were not included in this section's further analysis. More attention will be given to these measures once we take the next step in refining our measures in section 4.4.

Measure	α
1 - Acculturation (participation in larger society)	.83
2 - Acculturation (culture maintenance)	.83
3 - General discrimination	.89
4 - Day-to-day discrimination	.86
5 - Outgroup-privilege	.93
6 - Willingness to attribute to prejudice	.84
7 - Hostility	.49
8 - Ingroup ties (international students)	.79
9 - Centrality (international students)	.87
10 - Ingroup affect (international students)	.86
11 - Ingroup ties (students from own country)	.80
12 - Centrality (students from own country)	.04
13 - Ingroup affect (students from own country)	.74
14 - Self-esteem	.90
15 - Positive affect	.79
16 - Anxiety	.86
17 - Depression	.76
18 - Stability	.62
19 - Legitimacy	.95
20 - Permeability	.04

Table 15. Alpha coefficients for all measures.

4.1.3.3 - Criterion validity

It was possible to test criterion validity by performing correlation tests between measures that were assessing the same construct. These measures were those assessing the constructs of perceived discrimination and well-being.

Table 16 gives the correlations for each discrimination measure. Apart from ‘day-to-day discrimination’ all variables were highly correlated. ‘Day-to-day discrimination’ is positively associated with ‘general discrimination’ but only

marginally correlated to the other measures. Overall, the discrimination measures tended to be highly correlated with each other.

Measures	1	2	3	4
1 – General discrimination	-			
2 – Day-to-day discrimination	.60*	-		
3 – Outgroup privilege	.75**	.35	-	
4 – Willingness to attribute to prejudice	.61*	.43	.66**	-

* $p < .05$ ** $p < .01$

Table 16. Correlations between the perceived discrimination measures.

The same procedure was followed for the well-being measures. Given that a higher score for the ‘anxiety’ and ‘depression’ subscales meant higher levels of these variables, a negative correlation between them and the other well-being measures was expected. Correlation analysis were performed and revealed that all measures were highly correlated (see Table 17) apart from ‘positive affect’ that was only marginally correlated with ‘anxiety’.

Measures	1	2	3	4
1 – Self-esteem	-			
2 – Positive affect	.57*	-		
3 – Anxiety	-.55*	-.40	-	
4 – Depression	-.70**	-.53**	.80**	-

* $p < .05$ ** $p < .01$

Table 17. Correlations between the well-being measures.

4.1.3.4 - Descriptive Statistics

After examining all measures, descriptive analysis were examined. Table 18 presents means, standard deviations, and obtained and possible ranges for all measures. Inspection of the means revealed that scores in the participation in the larger society subscale were above the scale's midpoint ($M = 4.99$), indicating that the sample had some interest in participating in the larger society. Scores in the culture maintenance subscale were also above the midpoint of the scale ($M = 4.12$), indicating that students leaned towards maintaining their cultural heritage. Perceptions of discrimination fell around the midpoint of the scale ($M = 3.46$) and below ($M = 2.29$) for both general and day-to-day measures of discrimination. This may suggest that the sample had some experience with discrimination, but that discrimination may not have been pervasive. The mean value for outgroup privilege fell around the middle point ($M = 3.46$) of the scale, whereas willingness to make attributions to prejudice was relatively low ($M = 2.55$). Participants felt relatively related to other international students ($M = 5.37$). They also revealed that being an international student was relatively important for them ($M = 4.87$) and that they felt good about this identity ($M = 5.20$). Regarding the group of co-national peers, students felt somewhat connected to other students from the same country ($M = 4.18$), and they also felt good for being a member of their national group ($M = 4.70$). For the well-being measures students scored above the middle point of the scale for self-esteem and positive affect ($M = 4.76$ and $M = 4.52$ respectively). Students showed relatively low levels of depression ($M = 2.95$), but did display some anxiety ($M = 3.40$). As for the sociostructural variables, students perceived intergroup status as relatively stable ($M = 4.30$), and somewhat illegitimate ($M = 2.37$).

Measure	<i>M</i> (<i>SD</i>)	Obtained range	Possible range
1 - Acculturation (participation in larger society)	4.99 (0.93)	2.85 – 6.45	1.00 – 7.00
2 - Acculturation (culture maintenance)	4.12 (1.13)	2.00 – 6.47	1.00 – 7.00
3 - General discrimination	3.46 (1.24)	1.56 – 5.33	1.00 – 7.00
4 - Day-to-day discrimination	2.29 (0.89)	1.00 – 4.33	1.00 – 7.00
5 - Outgroup-privilege	3.47 (2.02)	1.00 – 7.00	1.00 – 7.00
6 – Willingness to attribute to prejudice	36.22 (19.68)	10.00 – 73.33	0 – 100
7 – Ingroup ties (I.S.)	5.37 (1.47)	2.00 – 7.00	1.00 – 7.00
8 – Centrality (I.S.)	4.87 (1.46)	1.50 – 7.00	1.00 – 7.00
9 – Ingroup affect (I.S.)	5.20 (1.07)	3.00 – 7.00	1.00 – 7.00
10 – Ingroup ties (O.C.)	4.18 (1.94)	1.00 – 7.00	1.00 – 7.00
11 – Ingroup affect (O.C.)	4.70 (1.67)	2.00 – 7.00	1.00 – 7.00
12 - Self-esteem	4.76 (1.08)	3.00 – 6.20	1.00 – 7.00
13 - Positive affect	4.52 (0.84)	2.83 – 5.83	1.00 – 7.00
14 - Anxiety	3.40 (0.61)	2.57 – 4.57	1.00 – 4.00
15 – Depression	2.95 (0.44)	2.43 – 3.71	1.00 – 4.00
16 – Stability	4.30 (1.42)	2.00 – 7.00	1.00 – 7.00
17 – Legitimacy	2.37 (1.58)	1.00 – 6.00	1.00 – 7.00

Table 18. Descriptive statistics for the key variables.

Table 19 shows the correlations between all measured variables. At this stage we did not focus on the nature of the relationships between the study's variables, as this will be further analysed in the next chapter with the longitudinal study. However, we would still like to give some emphasis to a number of important emerging patterns. For example, none of the discrimination measures were related to the well-being measures.

Measure	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
1 - Acculturation (p. in larger society)	-																
2 - Acculturation (culture maintenance)	-.29	-															
3 - General discrimination	-.35	-.09	-														
4 - Day-to-day discrimination	-.14	-.08	.60*	-													
5 - Outgroup-privilege	-.27	.13	.75**	.35	-												
6 - Willingness to attribute to prejudice	-.25	-.07	.61*	.43	.66**	-											
7 - Ingroup ties (I.S.)	.09	-.21	.11	-.07	.30	-.02	-										
8 - Centrality (I.S.)	-.34	.27	.14	-.07	.23	.25	.31	-									
9 - Ingroup affect (I.S.)	-.17	.11	-.56*	-.31	-.49	-.44	.09	.24	-								
10 - Ingroup ties (O.C.)	-.26	.75**	-.37	-.22	-.16	-.39	.02	-.01	.40	-							
11 - Ingroup affect (O.C.)	.09	.76**	-.44	-.28	-.20	-.39	-.25	-.04	.40	.78**	-						
12 - Self-esteem	-.27	.56*	.07	-.05	.13	-.17	.31	.15	-.01	.57*	.37	-					
13 - Positive affect	-.38	.49	.40	.14	.37	-.06	.10	.21	-.04	.52	.37	.57*	-				
14 - Anxiety	-.15	-.31	.08	.19	.11	.66**	-.12	.18	.12	-.32	-.40	-.55*	-.40	-			
15 - Depression	.14	-.34	-.15	.14	-.09	.31	-.28	-.16	.02	-.24	-.25	-.70**	-.53*	.80**	-		
16 - Stability	-.19	.41	.47	.14	.56*	.53*	.11	.29	-.60*	.20	-.02	.32	.44	.08	-.01	-	
17 - Legitimacy	-.20	.38	.34	-.05	.48	.14	-.11	-.21	-.52*	.25	.29	.25	.27	-.35	-.21	.50	-

Table 19. Correlations for the measured variables.

* p < .05 **p < .01 (Note: I.S. = International students; O.C. = Own Country)

The identification measures were positively associated with own culture maintenance and also with self-esteem. Perceptions of general discrimination were negatively correlated with ingroup affect. Finally, perceptions of stability were positively correlated with outgroup privilege and willingness to make attributions to discrimination. Stability and legitimacy were negatively correlated with ingroup affect.

4.1.4 – Discussion and scale alteration

From the analysis of the pilot questionnaire there were a number of emerging concerns that warrant some further attention. In this section those concerns were discussed and our measures were further changed (or adapted) when appropriate.

4.1.4.1 - Acculturation

The acculturation measure tested in this pilot study was developed according to Berry's (1990) model of acculturation and was operationalised according to group interaction, group orientation, and language. Following from our factor analysis five items were deleted from the participation in the larger society subscale, and three items were deleted from the own culture maintenance subscale. After deleting these items support was found for the three factors (i.e. group interaction, group orientation, and language). Furthermore, reliability analysis indicated that both subscales were reliable. Thus, no further changes were necessary. The final acculturation measure used for the longitudinal study included the items in Table 20 (in order to balance the number of positive and negative items, some items were reversed).

Additionally, descriptive statistics supported the validity of our acculturation measure by showing results that were consistent with our theoretical expectations.

Acculturation subscales showed that students leaned both towards participation in the larger society and towards maintaining their own cultural heritage (integration strategy). This was consistent with previous research showing that amongst acculturating individuals integration is often the preferred strategy (Berry et al., 2006), and that not many of these individuals assimilate completely by giving up their original cultural heritage (Laroche et al., 1996).

Acculturation Measure

<i>Participation in the larger society</i>
1 - I feel at ease with British people ¹
2 – I feel uncomfortable being with people from the UK ¹ (reverse scored)
3 - I would like to live in an area where there are British people ¹
4 – I want to speak with British people and know more about them ¹
5 – I don't want to learn more things about the British culture ² (reverse scored)
6 – I like British culture and I will do my best to be part of it ²
7 – I don't feel comfortable to speak English with friends ³ (reverse scored)
8 - I make an effort to improve my English ³
<i>Own culture maintenance</i>
1 - I enjoy going to gatherings or parties from people of my own nationality ¹
2 - I would like to live in an area where there are only people from my nationality ¹
3 - I would like to have more friends from my own nationality ¹
4 - I want to 'hang out' with people from my country ¹
5 - I have no wish to go back to my own country (reverse scored)
6 - It is important to me to preserve my own cultural heritage ²
7 – The culture of my country is not interesting ² (reverse scored)
8 - The culture from my own country is something that I value ²
9 - If I could I would only use my own national language in my day life ³

1 – Group interaction; 2 – Culture orientation; 3 – Language
 Table 20. Final acculturation measure divided by the two acculturation dimensions.

4.1.4.2 – Discrimination

Following from our previous analyses, all the discrimination measures were reliable. An analysis of students' scores in these measures also showed that they had

some experiences of discrimination. The only alteration to the discrimination measures was related to the number of items. It is crucial to avoid presenting a final questionnaire that is too long and tedious, and as such, all efforts should be made to cut down the number of items wherever it would be possible. In particular in the general discrimination measure, as this scale did not have any dimensions, we felt that the initial 9 items were too numerous. By performing simple correlations between items and selecting those with higher intercorrelations, the general discrimination measure was reduced from 9 items to 6 (see Table 21). There was also a concern in maintaining a high reliability rate and in having all items loading onto just one factor⁹.

General discrimination

- 1 - I have personally been a victim of discrimination in the UK because of my nationality.
 - 2 - I feel British people look down on me because of my nationality.
 - 3 - British people have discriminated against me because I am not from the U.K.
 - 4 - In the UK there aren't any prejudices against people of my country.
 - 5 - On average, people in the UK society treat British and foreigners equally
 - 6 - It is easy to understand why foreign groups in the UK are still concerned about societal limitations of their opportunities
-

Table 21. Final general discrimination measure.

No important issues were found for the measures assessing day-to-day experiences with discrimination, outgroup privilege and willingness to make attributions to discrimination. Thus, all the initial items were maintained without modifications.

⁹ A factor analysis indicated only one factor, which explained 69.29% of the variance. Reliability analysis showed an alpha coefficient of .91.

4.1.4.3 – Hostility

Although the measure assessing hostility towards the host community had been successfully used in another study with international students (see Ramos, 2005), the reliability coefficient in this pilot study was somewhat unsatisfactory. Because this measure had had a satisfactory reliability with a sample of international students, we believe that the problematic alpha coefficient in this pilot might have been due to the relatively small size of our sample. There is no reason to expect any conceptual differences between the items. Nevertheless, for addressing this issue we developed two new items (items 5 and 6 in Table 22) that were added to the measure. As this measure had previously been used successfully with international students, our aim was to add new items that did not differ conceptually from the initial items.

 Hostility towards the host community

- 1 - When I see a British person, I can't help but think bad things about them
 - 2 - I have used some bad terms to refer to British people
 - 3 - I feel annoyed when British people are close to me
 - 4 - If a British person is hostile to me, I easily become aggressive
 - 5 - I tend to feel angry quite easily when I'm with British people
 - 6 - For me it is inevitable to have some bitter feelings for British people
-

Table 22. Final measure for assessing hostility towards the host community.

4.1.4.4 – Social identification

International students were relatively identified with the group of international students and also with the group of other co-national peers. This measure included the three dimensions proposed by Cameron (2004). Accordingly, a factor analysis of identification with international students suggested the existence of the three distinct factors – ingroup ties, centrality, and ingroup affect. Surprisingly, a factor analysis of

identification with the group of co-national peers did not support some of the measure's theoretical expectations. Rather, the three factors yielded by factor analysis were composed of a mixture of items from ingroup ties, centrality, and ingroup affect. Furthermore, the alpha coefficients for identification with students from own nationality were non satisfactory. Keeping in mind the heterogeneity of nationalities in our sample and also the small sample size, it was decided to use only the information from the first factor analysis (identification with international students) for choosing the items that will be part of the measure used for the longitudinal study. Whilst the second factor analysis (identification with other co-national peers) did not allow for any conclusions to be drawn, the factor analysis of identification with international students supported our theoretical expectations. Decision over which items were included in the final questionnaire could therefore only possibly be based on identification with the group of international students. Following from the factor analysis in the previous section, six items were deleted and other six were maintained (see Table 23 for a list of the items).

Identification with international students / students from own country

- 1 - I have a lot in common with other international students (students from my country)
 - 2 - I don't feel a sense of being "connected" with other international students (students from my country)
 - 3 - Overall, being an international student (student from my country) has very little to do with how I feel about myself
 - 4 - The fact that I am an international student (student from my county) rarely enters my mind
 - 5 - In general, I'm glad to be an international student (student from my country)
 - 6 - Generally, I feel good when I think about myself as an international student (student from my country)
-

Table 23. Final measure for assessing identification with international students and students from the same country.

4.1.4.5 – Well-being measures

Regarding the well-being measures, international students scored around the midpoint of the scale for most measures. An exception was the levels of depression which were towards the lower end of the scale. The different well-being measures were highly correlated with each other, and reliability analyses also indicated high alpha coefficients for all measures. Thus, no modifications were sought for the anxiety, depression, or self-esteem scales.

Although we initially aimed to measure only positive affect, we included negative affect in the final questionnaire. This decision was motivated by previous research showing that positive and negative affect are separate aspects of psychological well-being (Watson, Clark, & Tellegen, 1988). In addition, anxiety and depression can be associated with both positive and negative affect. It has been found that negative affect can be related to both depression and anxiety, whilst the absence of positive affect is often related to depression (Boon & Peeters, 1999). In order to avoid increasing the number of items, some of the positive affect items were exchanged for negative items (see Table 24).

Positive and negative affect
<i>Positive affect</i>
1 – Enthusiastic
2 – Good natured
3 – Upbeat
<i>Negative affect</i>
1 – Pessimistic
2 – Unhappy
3 – Unsatisfied

Table 24. Final measure of positive and negative affect.

4.1.4.6 – Sociostructural variables

An inspection of the mean values of the sociostructural variables suggests that participants felt that status relations were somewhat stable but not very legitimate. All variables seemed reliable apart from permeability, which yielded an unsatisfactory alpha coefficient. One reason for the low reliability of permeability might be related to the wording of the item ‘for a foreign student it is nearly impossible to be regarded as British’. This item might be confusing and for the final questionnaire it will be changed to ‘for a foreign student it is nearly impossible to be included in British groups’. It was also decided to include a new item (item 7 in Table 25) which was developed according to the same concept of the two initial items.

 Sociostructural variables

Stability

- 1 - Discrimination between British people and foreign students will not change easily
- 2 - I think that the relationship between foreign students and British people will remain the same for the next years

Legitimacy

- 3 - British people are entitled to have a better treatment than foreign students
- 4 - It is justified that British people have a superior status when compared to foreign students

Permeability

- 5 - It is very easy for a foreign student to be accepted into British society
 - 6 - For a foreign student it is nearly impossible to be included in British groups
 - 7 - If you wanted to, it would be easy for you to become involved in social activities with British students
-

Table 25. Final measure assessing the three sociostructural variables.

Although the measure assessing legitimacy was reliable, we felt that the wording of the items could be improved. Therefore, we changed the item ‘The British are entitled to be better than foreign students’ to ‘British people are entitled to have a better treatment than foreign students’. The item ‘it is justified that the British have a

superior status when comparing to foreign students' to 'it is justified that British people have a superior status when compared to foreign students'. All the changes mentioned above were summarised in Table 25.

4.2 - Phase 2. Semi-structured Interviews

In the second phase of the pilot study we aimed to gain more insight into our measures by interviewing a sub-sample of those who had completed the questionnaire. The purpose of these interviews was to verify: if the items were clear; if the questionnaire was easily understood; to ensure that all variables assessed their relevant dimensions; and finally to assess whether the questionnaire missed any important questions relating to the experiences of international students in the UK. Therefore, instead of aiming at an exhaustive qualitative approach examining the experiences of international students, the aim of the interviews was to further refine our questionnaire. We were particularly interested in refining some issues that previous research had not addressed when examined in the context of international students. These issues were related to the ways in which students perceive discrimination, the sources of discrimination, and the development of acculturation strategies amongst international students.

The interviews were semi-structured (see interview schedule in Appendix) and tapped the following issues:

- (i) Previous contact with other places in the UK - prior to their studies, students may have had contact with other places in the UK. It is important to understand if different past experiences had influenced students' current attitudes towards Scotland.

- (ii) The category of ‘British’ – the questionnaire refers to the dominant culture (or host community) as ‘British’, but this category may elicit different responses, depending on students’ perceptions. For some students, ‘British’ may be related only to the Scottish, since their only experience with British people was in Scotland. In contrast, others might have a broader perspective and also consider the English, for example. Thus, students were questioned about perceived differences between Scottish and English, and what their perceptions of the category ‘British’ involved.
- (iii) The different dimensions of perceived discrimination – it is important to understand if the pilot questionnaire is assessing the relevant dimensions of perceived discrimination (ever vs. recently; major events vs. everyday type of events). The questionnaire assumes that students are discriminated against because of their foreign nationality. Thus, it is crucial to identify whether nationality is a relevant source of discrimination for international students, or whether there are more relevant sources of discrimination such as religion or ethnicity for example.
- (iv) The determinants of students’ acculturation attitudes – since acculturation is a central concept in this thesis it is important to understand how students develop their acculturation attitudes. Students were questioned about their perceived role of university services and whether they were feeling that their acculturation attitudes were being imposed by the host community (e.g. British

people could impose a separation attitude by suggesting that they have to be segregated from the larger society).

- (v) Intentions after graduation – the length of their stay abroad might have an impact on their decisions, friendship networks, and strategies whilst they are studying in Scotland. Thus, we asked students about their intentions and if they thought their intentions had an impact on decisions while studying at a Scottish university.

Finally we asked interviewees if the questionnaire layout, instructions, and items were clear. We also asked students for their comments and suggestions.

4.2.1 – Method

4.2.1.1 - Participants

From the total of 15 students who filled in the questionnaire, a sub-sample was invited to participate in the interviews. The first six volunteers composed the sub-sample used for the interviews (4 students from Europe and 2 from East Asian). These six students were interviewed right after responding to the questionnaire. The sub-sample for the interviews included 6 female participants, with an age range from 22 to 24 ($M = 23$) years, and all studied at the undergraduate level.

4.2.2 - Results

Each interview was approximately 45 minutes in duration. All six interviews were tape-recorded and fully transcribed. The interviews were of an exploratory nature and analysis was performed by identifying emerging similarities among

participants' answers. This analysis followed the interview questions listed earlier (p. 147-49).

(i) Previous contact with other places in the UK

International students who had been in the UK before starting their studies argued that their previous experiences did not have an impact on their opinions about St. Andrews. They were expecting that St. Andrews would be an atypical location of Scotland due to its international student community, isolated position, and international tourism.

(ii) The category of 'British'

Regarding the difference between Scottish and English, it was consensual among Asian students that both groups are very similar. Asian students did not perceive any differences between both groups. European students had a slightly different idea, considering the Scottish to be friendlier and to have more cultural activities (e.g. Ceilidh). No major differences were pointed out between the two groups however, and the same cultural barriers were referred to for both groups. This opinion is illustrated in Extract 1, where a Swedish student refers to the barriers between international and British students. As this participant put it 'And most of them [her friends] are foreign as well...that I'm also surprised because...I find British people quite hard to...get close to. They are all very nice but...in kind of a shallow level than I'm used to'. Here the participant clearly uses the category 'British' to refer to host students. Then when the student was asked whether this situation would be different between Scottish or English students, no differences were referred to. In effect, the participant elaborated more on this issue by stating that 'I guess you are in

sort of a disadvantage because you don't know the same background culture that they do and you don't watch what they do (laughs) ...and...a lot of stuff like that. I wouldn't say that they are hostile...but sometimes I feel that they are not really interested'. Thus, despite this student's efforts to have more contact with host friends, cultural barriers and lack of interest are mentioned as important barriers. Importantly, the perceived barriers were the same for Scottish and English students.

This dialogue illustrates some of the difficulties that international students have in establishing contact with their host counterparts. This point is further elaborated in the next questions where we saw that these barriers can be sometimes the basis for feeling excluded.

Extract 1. (Interview with a female Swedish participant)

- 1 *Interviewer:* Umm, and most of your friends are from psychology or from other departments?
2 *P.03:* Most of them are from psychology. And most of them are foreign as well...that I'm also
3 surprised because...I find British people quite hard to...get close to. They are all very nice
4 but...in kind of a shallow level than I'm used to.
5 *I.:* Yeah, I see. But do you think it's different, if they were Scottish or English, or is just
6 British people in general?
7 *P.03:* (pause) I don't know, I think it's general.
8 *I.:* So you are saying that it is kind of difficult to have British friends. Why do you think this
9 happens?
10 *P.03:* I don't know (pause), I feel (pause), I guess you are in sort of a disadvantage because
11 you don't know the same background culture that they do and you don't watch what they do
12 (laughs)...and...a lot of stuff like that. I wouldn't say that they are hostile...but sometimes I feel
13 that they are not really interested.

(iii) The different dimensions of perceived discrimination

Discrimination was perceived in different settings and in both subtle and blatant terms. Subtle discrimination occurred when students felt that they were excluded from groups of British people because they do not have the same background (e.g. being left out of conversations about TV programmes from the UK,

or because they do not understand jokes – see Extract 2). These differences are often barriers to contact between groups but, more importantly, they can be perceived as a source for exclusion. Indeed, in Extract 2 this is illustrated by a Japanese student who mentioned that ‘because of the background I sometimes...of course I feel a bit left out too’.

Extract 2. (Interview with a female Japanese participant)

- 1 I.: I was thinking if sometimes you would feel a bit left out.
2 P.06: Yeah, yeah, true, because we don't share the same cultural background like references
3 and stuff, you know, cultural references. Of course that sometimes when they talk about like what
4 they watch when they were little...TV programmes and stuff of course I don't understand. And
5 yeah, British jokes as well, sometimes a bit too ironic and too sarcastic for me. Sometimes I don't
6 get it. Ahhh, I think I got used to it, I don't know...when first I came here I didn't really get the
7 jokes and stuff but I think now I learned something.
8 I.: Hum, hum.
9 P.06: Of course because of the background I sometimes...of course I feel a bit left out too.

Some students also reported that in the University context they were disadvantaged compared to their British peers, as international students pay higher tuition fees, and also because of language skills (Extract 3). As a Japanese participant put it ‘And...in class it's hard to be involved in discussions because I still have linguistic difficulties’, which suggested that due to her English skills it was difficult to be included in discussions during lectures. The interviewee subsequently developed this issue however, by stating that even in the case where students have good English skills they are still disadvantaged. Thus, English proficiency might be a source for being excluded. This is more evident when the student refers another international student who has good English skills but can still be treated differently in the grounds of not being a native speaker: ‘But some people still think, you know, she's not a native English speaker, you know...some people...’.

Extract 3. (Interview with a female Japanese participant)

- 1 I: As an international student have you ever been treated differently in the UK?
2 P.05: Yes. Maybe it's because I'm thinking that I'm different but...well, but first of all our
3 tuition fees are different, you know, like ten times as much as a local student. And...in class it's
4 hard to be involved in discussions because I still have linguistic difficulties. Ummm, I don't
5 know...I think that international students have lots of disadvantages because of language
6 problems, even somebody like (*name of the person deleted*) who speaks perfect English. But
7 some people still think, you know, she's not a native English speaker, you know...some people...

More blatant forms of discrimination were also perceived (e.g. receiving bad service at a restaurant or by the way they were treated in NHS). International students reported that these events occurred only in public settings, outside of the university context. Furthermore, these blatant events appeared to be more evident among Asian students who even reported hostile behaviour against them (Extract 4). Indeed, as a Japanese participant said 'They [local people] swear at you or they say something nasty to you, like saying like you know "you Chinese go home, go back to your country" or something. They say all...I even got water, someone spiting water on me'. This statement illustrates that outside the university context discrimination may take other forms, i.e. international students can be victims of offensive language and hostile behaviour.

Importantly, students reported that they were discriminated against because they are foreign and look different. This is illustrated in the interaction in Extract 4 when the interviewer asked the student whether she had been treated differently before. The Japanese student replied 'Of course, since I came here. Because I look different I get of course some kind of discrimination'. Moreover, none of the other interviewed students felt that they had been discriminated against because of their particular nationality.

Extract 4. (Interview with a female Japanese participant)

- 1 I: Did you ever feel that you were being treated differently because you are an international
2 student?
- 3 P.06: Oh, yes, yes! You mean, if wanted to get a job or in general?
- 4 I: Yes, in general.
- 5 P.06: Of course, since I came here. Because I look different I get of course some kind of
6 discrimination.
- 7 I: Yes? But what happened? Can you describe an episode?
- 8 P.06: They swear at you or they say something nasty to you, like saying like you know “you
9 Chinese go home, go back to your country” or something. They say all...I even got water,
10 someone spiting water on me.

(iv) The determinants of students' acculturation attitudes

When international students were asked about their acculturation preferences, all students mentioned contact with co-national and host counterparts. It was consensual among all participants that the easiest option is to have co-national or other foreign friends. This is illustrated in Extract 5 when the interviewee mentions that ‘Ah, most of my friends are international students. And you know, they can understand me and I can understand them. It’s not difficult to understand each other’.

Nevertheless, the interviewed students acknowledged that they loose most of the benefits of studying abroad if they only have co-national friends. Thus, they make an effort to interact with British students. This is illustrated in Extract 5 where a Japanese student compares her perspective with the perspective of the other Japanese students. Although contact with co-national peers might be easier, the interviewed student acknowledges that contact with host and other foreign students can be important in order to develop her English skills: ‘Because (laughs) I wanted to learn English and...the first two years I had a Japanese boyfriend and I was always with him...and I didn’t learn anything. It’s not good for me’.

Also, all the interviewees preferred an integration strategy. However, their preferences did not always match the contact that they have with British students. Apart from the barriers that were already referred in previous questions, students also mentioned the lack of confidence to speak English. As the student in Extract 5 put it when explaining why she only had friends from her country ‘well, I didn’t have confidence to speak English...I was too shy’. Again, language emerged as an important barrier for the adaptation and inclusion of international students.

Extract 5. (Interview with a female Japanese participant)

- 1 I: But where are your friends from?
- 2 P.05: Ah, most of my friends are international students. And you know, they can understand
3 me and I can understand them. It’s not difficult to understand each other.
- 4 I: And are they from your country or from any other country?
- 5 P.05: Well...it doesn’t matter. But some people, some Japanese people live in a in a very,
6 very small society in St. Andrews...the Japanese society.
- 7 I: I see...but why?
- 8 P.05: Why? Because (laughs) because I wanted to learn English and...the first two years I had
9 a Japanese boyfriend and I was always with him...and I didn’t learn anything. It’s not good for
10 me. And I still enjoy living in St. Andrews but I found that I wanted something more...and then I
11 changed my life (laughs)
- 12 I: (laughs)
- 13 P.05: I think that a lot of international students have a dilemma...you know, they want to have
14 other friends, but, you know, for the (*incoherence*).
- 15 I: Yeah, I see. But why do you think that the Japanese group only wants to stay with other
16 Japanese?
- 17 P.05: Well, my friend told me that she enjoys more with Japanese.
- 18 I: Yes...
- 19 P.05: And I’m more like...of course that I enjoy with them (pause) but, I don’t know...I enjoy
20 the international environment.
- 21 I: Yes, from their perspective do you know why they want to stay only with the Japanese and
22 not to relate other people?
- 23 P.05: Well, I was like that before...and for me I was...well, I didn’t have confidence to speak
24 English...I was too shy.

(v) Intentions after graduation

Students' future plans seemed to have no effect on their acculturation strategies. All of them said that they did not want to stay in St. Andrews after their studies. Some of them, however, said they would like to stay in the UK, but did not show any differences from those who reported that they would be leaving to their home countries after finishing their academic studies.

Finally, interviewees stated that the questionnaire and all items were clear for them.

4.2.3 – Discussion and scale alteration

From the analysis of the interviews there were a number of emerging concerns that warrant further attention. In this section those concerns were discussed and our measures were changed (or adapted) when appropriate.

4.2.3.1 - Acculturation

Data from the interviews was compatible with the questionnaire data which had shown that integration was the preferred strategy amongst international students. The interviewed students reported several advantages for participating in British culture and engaging in contact with their British peers. Despite the recognised struggle in approaching British students, all the interviewees favoured an integration strategy. No further changes were made to the two acculturation subscales.

4.2.3.2 – Discrimination

Data from the interviews supported the questionnaire's data, by showing that international students had some experiences with discrimination. During the

interviews we gathered data showing that students tend to endure episodes that can go from subtle discrimination to overt discrimination and hostile behaviour. Importantly, two issues emerged from the interviews. The first was that students tend to perceive that the causes for being discriminated against are often related to their physical appearance and their foreign status. The second issue related to the fact that students tend to perceive the treatment received within the university context rather differently from the treatment received outside this context (e.g. shops, restaurants, etc). As outlined below, two measures were modified because of these two issues.

The first scale to be altered was the measure assessing general discrimination. In the pilot questionnaire students' nationality had been considered to be the source for being discriminated against. However, we saw that some students think they are discriminated against because of their physical appearance. This would imply that a category such as 'ethnicity' or 'race' would be an important source of discrimination among international students. Framing our questions in terms of race or ethnicity would be problematic however, due to the heterogeneity of international students as a group. That is, it is our plan to include in the longitudinal study all international students regardless of nationality. Being discriminated against in terms of 'ethnicity' might be important for students who are ethnically different, but it might not be an issue for European students for example. Thus, we feel that in order to tackle this issue, we need to use a category that is less specific than 'race' or 'ethnicity'. Although it is conceptually different, it was decided to use the category 'foreigner'. Hence, expressions such as 'because of my nationality' or 'against people of my country' were modified in a way that would reflect students' foreign status (e.g. 'because I'm a foreigner' or 'because I'm not from the UK'). We argue that the category 'foreigner' is more general than 'race' or 'ethnicity' and that, for

international students, the latter two can be included in ‘foreigner’. By following this approach, we present a category that might be relevant for those students who think they are discriminated against because of their physical appearance, because of their culture, or just because of their foreign status. Table 26 presents the final version of the general discrimination measure.

General discrimination
1 - I have personally been a victim of discrimination in the UK because of I’m from a foreign country
2 - I feel British people look down on me because I’m from a foreign country
3 - British people have discriminated against me because I am not from the U.K
4 - In the UK there aren’t any prejudices against foreign people
5 - On average, people in the UK society treat British and foreigners equally
6 - It is easy to understand why foreign groups in the UK are still concerned about societal limitations of their opportunities

Table 26. Final general discrimination measure.

The other modified measure was day-to-day discrimination, as this measure did not grasp the particular context and situations of discrimination that international students specified during the interviews. It was important to develop a measure which tapped into experiences of discrimination in both university and outside university contexts, and also assessed subtle and blatant episodes of discrimination. Table 27 shows the items that were developed for this new measure of day-to-day discrimination. For example, items such as ‘In a public place people have treated you with less courtesy’ reflect experiences outside the university context, whilst ‘During tutorials other students have acted if you are not intelligent’ reflect experiences within the university context. In a similar way, items such as ‘You felt that others didn’t invite you to go out’ assesses experiences with subtle discrimination, whilst items

such as ‘In town people have called you names or insulted you’ assesses episodes of blatant discrimination.

In order to answer these items, students will be provided with the following initial information ‘Looking at the following events please state how often you experienced them in the UK because you are from a foreign country’. Responses are measured by a 7-point Likert-type scale ranging from ‘Never’ to ‘A lot’.

No important issues were found for the measures assessing outgroup privilege and willingness to make attributions to discrimination. Thus, these measures were maintained without modifications.

Day-to-day discrimination

- 1 – When working with classmates, other students have acted as if they are better than you.
 - 2 – During tutorials other students have acted if you are not intelligent.
 - 3 – While having a discussion during tutorials other students didn’t take you seriously.
 - 4 – People weren’t interested in your opinion about an academic topic.
 - 5 – During tutorials you felt that you have less opportunities to talk.
 - 6 – In town you have received worse service (e.g. in a restaurant or shop).
 - 7 – In town people have called you names or insulted you.
 - 8 – In a public place people have treated you with less courtesy.
 - 9 – At the University other students have treated you with less respect.
 - 10 - Within a group of students you felt excluded from some conversations.
 - 11 - You felt that others didn’t invite you to go out.
 - 12 - You felt it was difficult to get close to another group of students.
 - 13 - You felt that other students weren’t interested in including you in their group of friends.
-

Table 27. Final day-to-day discrimination measure.

Finally, throughout the questionnaire the category ‘British’ will be used to refer to the host culture. During the interviews some students distinguished between ‘Scottish’ and ‘English’ whereas others did not. For those who made a distinction, the ‘Scottish’ tended to appear friendlier. Nonetheless, the referred barriers in

communication and in approaching both groups were the same. Thus, it was decided to keep the category 'British' because it is more inclusive. In this way, we feel that it can better capture the experiences of international students in the UK.

Moreover, the interviewed students mentioned that their previous experiences did not affect their views towards St. Andrews because they expected it to be an atypical place (i.e. very international and opened to different cultures). However, for the longitudinal study we plan to include international students from different places in Scotland, where students might have different expectations which might impact on their experiences. For this reason, we decided to include a question asking for how long they were living in the UK.

In a similar vein, some students referred 'ethnicity' or 'race' as an important source for being discriminated against. For the reasons already mentioned however, the longitudinal questionnaire will use the category 'foreign'. Because of this aspect, we feel that it is important to also ask students about their ethnicity, nationality, and religion. By following this approach, we are in a better position of identifying and controlling for differences due to time spent in the UK, ethnicity, religion, or nationality. The final version of the questionnaire is attached in appendix.

4.3 – Phase 1 and 2's limitations and suggestions for future research

Although the results from the questionnaire and interviews permitted us to develop a questionnaire focusing on the experiences of international students in the UK, there are important limitations that warrant some discussion. The first limitation relates to the fact that this pilot study included an extremely small sample. Ideally, in order to perform factor and reliability analysis the sample size would have been larger. The pilot questionnaire was available for testing only towards the end of the

undergraduate academic year, where students were revising for exams and it was extremely difficult to collect data. Due to time constraints we had to proceed with the available data. Nonetheless, despite the small sample, factor analysis for example revealed results consistent with previous research. In addition, the only students who volunteered for the interviews were female students. This limitation therefore did not allow us to examine in more detail the experiences of male students. Nevertheless, the data gathered from the interviews were consistent with previous research with international students. For example, the interviewed students showed the same barriers to adaptation, and also referred to some common experiences with discrimination.

Another important limitation is the fact that this pilot study was conducted in St. Andrews and the longitudinal study will focus on international students studying at the principal universities in Scotland. This is a crucial concern as the student environment in a relatively small town such as St. Andrews might differ in important ways from the environment of universities located in large urban areas such as Edinburgh, Dundee, and Glasgow. Despite the specific characteristics of St. Andrews, during the interviews international students mentioned difficulties and opinions consistent with previous research. For example, in comparison with previous reports (e.g. UKCOSA, 2004), students in St. Andrews reported identical experiences of discrimination. When asked about their problems and difficulties they were in line with those of other international students in the UK as, for example, they mentioned interpersonal problems (UKCOSA, 2004), and cultural concerns (Peters, 2005). Consistent with previous research (e.g. Cross, 1995; Kaul, 2001 cited in Wei et al., 2007) it appeared that the interviewed Asian students tended to face more difficulties than their European counterparts. Hence, it is suspected that different environments

might be associated with the dimension of these problems (which will be assessed by the questionnaire), but not with their quality or nature.

A more specific limitation relates to the fact that our discrimination measures were worded in terms of 'nationality'. We also saw from the quantitative analysis that all the discrimination measures were reliable. Due to the data collected during the interviews however, we changed the category from 'nationality' to 'foreign'. It is important to mention that although we do not expect any differences, it is plausible that the scales might not preserve the same psychometric properties. There were also new scales such as the day-to-day discrimination scale, and also new items added to other measures such as permeability and hostility. The pilot study therefore did not provide a completely tested questionnaire for the longitudinal data. Nevertheless, these measures compose a small proportion of the final questionnaire and in the longitudinal study the psychometric characteristics of all scales will be reviewed.

As for future research, it would be interesting to have a more detailed qualitative analysis of the experiences of international students in the UK. The aim of this chapter was to use the pilot questionnaire as the principal source for developing the final questionnaire, and to use the interviews to polish specific aspects. Therefore, our approach and analysis of the interviews were very simple where they could have been more detailed and systematic. Given the richness of the interviews, we feel that a more detailed approach would have been extremely informative and could have been a separate study in this thesis.

Finally, it would be interesting to examine international students' perceived sources of discrimination. During the interviews it was mentioned that students may feel discriminated against because they 'look different'. As we already mentioned, for the final questionnaire we decided to forgo categories such as 'ethnicity' or 'race' and

to use ‘foreigner’ instead. Although we think this is the best approach, we acknowledge that by analysing the group of international students as a whole, we might be losing some interesting information. Future research could for example examine the ways in which Asian or African students might differ from European students. How being discriminated against in the grounds of ‘ethnicity’ might differ from feeling discriminated against because of ‘nationality’ or other category. Furthermore, it would be interesting to study the ways in which feeling discriminated against because of different categories might impact on students’ psychological well-being.

During this chapter we used a pilot study to assist in the development of the questionnaire for the longitudinal study. In the next chapter the longitudinal study will be introduced.

Chapter 5. THE LONGITUDINAL STUDY

Overview

Building on important work on the multidimensionality of social identification (e.g. Cameron & Lalonde, 2001; Ellemers et al., 1999; Jackson, 2002), we firstly tested the rejection-identification model (Branscombe et al., 1999) with a sample of 160 international students. We included the social identification dimensions of ingroup ties, centrality, and ingroup affect. Support was found for the prediction that group identities have rather different effects on students' self-esteem depending upon which dimensions are taken into account. However, none of the group identification dimensions buffered against the negative effects of perceived discrimination on self-esteem. These results emphasised the importance of investigating possible moderators of the rejection-identification relationship. Secondly, we proposed that individual preferences, beliefs and behaviours (towards own and host group) would moderate the effect of perceived discrimination on identification. Specifically, it was proposed that minority group members' responses to discrimination would depend on their acculturation strategies, i.e. different acculturation strategies might determine whether minority group identification can counteract the negative effects of rejection. Results supported the prediction that group identification (in the face of perceived discrimination) can exert different effects on self-esteem as a function of acculturation strategies.

This chapter set out to test our model by means of a longitudinal study, which we divided between two chapters. The present chapter addressed the questions defined in Chapter 2 by performing a cross-sectional analysis of the data of the first and second time points separately. Chapter 6 will address the research questions defined in Chapter 3. More specifically, it will examine the nature of the relationships between the variables in the model, addressing the issue of causality and change by modelling students' responses at both time points. For the sake of facilitating the reader's task, the present chapter will start by providing a brief overview of the questions and predictions for testing the model of this thesis. A figure summarising our model was provided in order to help relating each prediction with the overall model.

The model presented in Chapter 2 aimed at examining the mitigating effects of group membership against perceptions of group-based discrimination. In order to address some of the limitations of the rejection-identification model, we proposed to extend it in two ways. First, we planned to examine identification as a three- rather than one-dimensional construct; and second, we proposed to analyse the role of acculturation strategies as a moderator of the relationship between perceived discrimination and minority group identification. This set of ideas was used to generate the questions and predictions set in Chapter 2, which we outlined below:

(i) Does group-based discrimination exert similar effects among the three dimensions of identification?

Prediction 1 - Perceptions of discrimination will be associated with higher centrality (path B). In contrast, perceptions of discrimination will be associated with lower ingroup ties and affect (path C).

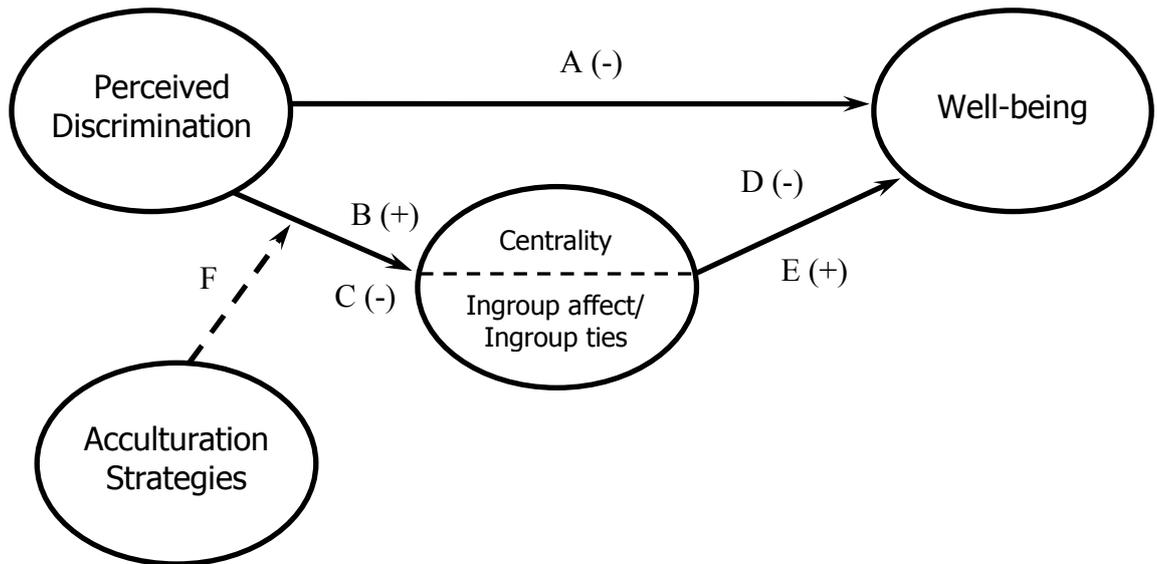


Figure 3. The rejection-identification-acculturation model.

(ii) *In which ways do the different dimensions of identification relate to psychological well-being? Does group-based discrimination have harmful consequences for one's psychological well-being?*

P2 - Centrality will be negatively associated with psychological well-being (path D). Ingroup ties and affect will be positively related to psychological well-being (path E).

P3 - Perceptions of discrimination will exert a negative impact on well-being (path A, Figure 3).

(iii) *Do perceptions of discrimination interact with individual acculturation strategies to impact on the different dimensions of group identification?*

P4 - Acculturation strategies will interact with perceptions of discrimination to impact on the different dimensions of group identification (path F).

P5 - Proponents of a separation strategy will increase or maintain ingroup identification as a response to discrimination; whilst those who endorse integration,

assimilation, and marginalisation will tend to reduce ingroup identification in the face of perceived discrimination.

(iv) Will every strategy help individuals to protect themselves from the harmful effects of discrimination?

P6 – The protective effects of minority group identification will vary as a function of acculturation attitudes. Thus, proponents of separation by enhancing or maintaining identification with the ingroup will be able to protect themselves from group-based discrimination. Proponents of integration, assimilation, and marginalisation will be unable to use ingroup identification to counteract the negative effects of rejection.

(v) Can minority group identification (as a coping strategy) have a negative impact on other outcomes? In which ways can this relationship be moderated by the various acculturation strategies?

P7 – Perceived discrimination will increase hostility directly and also indirectly through centrality.

P8 - A separation strategy will serve to protect individuals' well-being, but it will enhance levels of hostility towards the host culture. For those who endorse integration, assimilation, and marginalisation, no changes on hostility are expected.

(vi) Can ingroup identification counteract the negative effects of perceived discrimination on the academic performance of international students?

P9 – The rejection-identification-acculturation model will also hold for academic performance. More specifically, endorsing a separation strategy will protect students' academic performance following from perceptions of discrimination. For

proponents of the other strategies, perceiving discrimination will exert a negative impact on academic performance.

(vii) What is the role of friendship networks within this model?

P10 - Proponents of integration, assimilation and marginalisation will protect their well-being by means of support from friendship networks instead of ingroup identification.

Finally, in this chapter not all of our variables were included in the analyses. Following the steps of previous research with the rejection-identification model and international students (Schmitt et al., 2003), this chapter focused only on general discrimination as an indicator of perceived discrimination; whilst self-esteem was used as an indicator of psychological well-being. The reason for adopting this strategy related to our aim of framing this chapter as an initial approach to the longitudinal results. We began by using multiple regression, which served to provide a more fine grained perspective of the proposed model. Including all the variables would require a more complex modelling, which will be explored further, nonetheless, on the next chapter. Thus, in this chapter the aim of the analysis was to provide a simple and clear perspective of the basic relationships of the model. The next chapter will take the analysis a step further by including all variables and using more complex statistical modelling techniques.

5.1 – Method – Time 1

5.1.1 - Participants and Procedure

One hundred and sixty international students from 34 different countries¹⁰ from seven universities in Scotland¹¹ volunteered to participate in this study. Participants were recruited through adverts put around each university and also through each University's International Students Support Services. Volunteers contacted the researcher by email. They were then asked if they would be interested in taking part in the present investigation by completing the questionnaire booklet. The researcher presented himself as a fellow international student. The sample comprised 63 males and 97 females, and their ages ranged from 17 to 30 years ($M = 20$). The most common academic subjects were Economics (representing 17% of the total sample), International Relations (14%), Psychology (8%), Medicine (7%), and Management (5%). All participants were registered as first year undergraduate students and English was not their first language.¹²

5.1.2 - Measures

The questionnaire included all the measures tested in the pilot study (Chapter 4). As previously mentioned however, in this chapter the analysis included only the following measures: acculturation strategies; general discrimination; ingroup ties,

¹⁰ Sweden (n=6), Norway (n=2), Poland (n=19), Russia (n=2), Germany (n=24), Portugal (n=6), Estonia (n=1), Mexico (n=1), Belgium (n=3), France (n=3), Denmark (n=2), Kazakhstan (n=2), China (n=33), Malaysia (n=10), Italy (n=6), Holland (n=1), Greece (n=3), Slovakia (n=3), Latvia (n=1), India (n=2), Finland (n=4), Singapore (n=2), Japan (n=7), Saudi Arabia (n=1), Brazil (n=2), Croatia (n=1), Vietnam (n=2), Taiwan (n=2), Hungary (n=1), Cyprus (n=1), Nigeria (n=3), Congo (n=1), Mauritius (n=1), Lithuania (n=2).

¹¹ Universities of Glasgow, Strathclyde, Dundee, Napier, Heriot-Watt, Edinburgh, and St. Andrews.

¹² The questionnaire booklet was distributed in the beginning of the calendar year (between January and March). The reason for starting the research at the beginning of the calendar year instead of the academic year, was based on the argument that students need some time to establish contact with the host culture so they can shape their acculturation strategies. Also, it is possible that right after their arrival a large proportion of students would have never thought about some of the issues asked in the questionnaire. It was suspected that in the beginning of the academic year the questionnaire would be tapping into expectations, rather than opinions and preferences that can only be shaped after some time and experiences with the host culture.

centrality, and ingroup affect (with both identification with international students and identification with own national group); hostility towards the host community; self-esteem; academic performance, and social networks Academic performance and social networks were not included in the pilot study and were introduced in this chapter.

5.1.2.1 - Academic performance

Academic performance was assessed by averaging responses to five items developed for the longitudinal study. The five items were: ‘How competent do you feel in your subject of study?’; ‘To what extent are you satisfied with your performance on your course?’; ‘How satisfied are you with your course?’; ‘Overall, how well do you think you adjusted to the University?’, and ‘Overall, how do you rate your academic performance so far?’. Responses were made on a 7-point scale with endpoints ranging from 1 (indicating ‘*very incompetent*’, ‘*very dissatisfied*’, ‘*not adjusted at all*’, or ‘*very bad*’) to 7 (indicating ‘*very competent*’, ‘*very satisfied*’, ‘*completely adjusted*’, or ‘*excellent*’).

5.1.2.2 – Social networks

Contact with social networks was measured by asking students the percentage of friends from their own country, from the UK, and from other foreign countries. Responses were given on a scale ranging from 0 to 100%, with 10% increments. International students were also asked how often they kept contact with their parents at home and other friends in their home country. Responses were made on a scale ranging from 1 ‘*never*’ to 7 ‘*a lot*’.

Finally, we asked participants’ nationality, religion, age, gender, and for how long they had been living in the UK.

5.2 – Results – Time 1

Before initiating a test of the predictions that had been put forward in the beginning of this chapter, it is crucial to begin by testing the psychometric strength of the study's measures. This testing followed the same strategy outlined in the pilot study. A second aim of this initial testing was to examine the robustness of the new measures.

5.2.1 – Preliminary analysis

5.2.1.1 – Reliability analysis

Table 28 presents the alpha coefficients for all measures. The alpha coefficients suggested that all the included measures were reliable. The scale with the lowest reliability coefficient was the measure assessing own culture maintenance (.66). However, we kept this variable's item structure given that deleting items did not improve the alpha coefficient.

When it came to group identification scales, correlations were computed instead of alpha coefficients, because these measures were composed of two items each. Overall, all dimensions were defined by strong intercorrelations between their items. Considering the items that measure identification with the group of international students, the items in ingroup ties ($r = .46, p < .001$), centrality ($r = .45, p < .001$), and ingroup affect ($r = .72, p < .001$) were moderately to highly correlated. A similar pattern was found for identification with own national group. Ingroup ties ($r = .63, p < .001$), centrality ($r = .50, p < .001$), and ingroup affect ($r = .65, p < .001$) were also moderately to highly correlated.

Measure	α
1 - Acculturation (participation in larger society)	.71
2 - Acculturation (culture maintenance)	.66
3 - General discrimination	.80
4 - Hostility	.80
5 - Self-esteem	.85
6 - Academic performance	.80

Table 28. Alpha coefficients for the study's variables.

5.2.1.2 – Factor analysis

Importantly, high intercorrelations were expected between the different dimensions of group identification. A factor analysis was performed in order to ascertain if different dimensions were being discerned by the group identification scales. Two separate factor analyses were conducted for identification with international students and own national group.

Firstly, identification with international students yielded the factor structure represented in Table 29. A principal component analysis with oblimin rotation revealed 3 factors, which explained 78.38% of the total variance. Factor 1 included the items from ingroup affect and explained 37.03% of the variance. Factor 2 included the items from ingroup ties and explained 26.54% of the variance. Lastly, factor 3 included the items from centrality and explained 15.09% of the variance. Likewise, identification with own national group yielded the factor structure summarised in Table 30. In a similar way, a principal component analysis suggested 3 factors which explained 80.28% of the total variance. Factor 1 was composed by the items assessing ingroup ties

Items	1	2	3
1 - I have a lot in common with other international students	.177	.843	-.074
2 - Overall, being an international student has very little to do with how I feel about myself	.046	-.099	.883
3 – In general, I’m glad to be an international student	.865	.319	-.040
4 - I don’t feel a sense of being “connected” with other international students	.167	.802	.190
5 - The fact that I am an international student rarely enters my mind	-.179	.229	.797
6 – Generally, I feel good when I think about myself as an international student	.933	.086	-.079

Table 29. Factor loadings for identification with international students.

Items	1	2	3
1 - I have a lot in common with other students from my country	.886	.157	.099
2 - Overall, being a student from my country has very little to do with how I feel about myself	.020	.118	.869
3 – In general, I’m glad to be a student from my country	.074	.901	.093
4 - I don’t feel a sense of being “connected” with other students from my country	.895	.102	.137
5 - The fact that I am a student from my country rarely enters my mind	.217	-.016	.836
6 – Generally, I feel good when I think about myself as a student from my country	.182	.890	.014

Table 30. Factor loadings for identification with students from own country.

and accounted for 39.30% of the variance. Factor 2 included the items assessing ingroup affect and explained 22.61% of the variance. Factor 3 was composed by the items assessing centrality and explained 18.37% of the variance. From this analysis it was concluded that all items loaded onto the factors that they represented and, thus, further analyses with this measure could be performed without reservations.

5.2.1.3 – Descriptive analysis

Table 31 presents means, standard deviations, skewness, and kurtosis for all variables. To recapitulate, all variables ranged on a scale from 1 to 7. An exception were the percentages of friends from own country, the UK, and other foreign countries that ranged from 0 to 100.

Measure	Mean (SD)	Skewness	Kurtosis
1. Participation in larger society	5.51 (0.85)	-.562	.660
2. Maintenance of own cultural heritage	4.33 (0.84)	-.443	-.253
3. General discrimination	3.79 (1.21)	.424	-.708
4. Ingroup ties (IS)	4.92 (1.45)	-.539	-.215
5. Centrality (IS)	4.18 (1.63)	-.305	-.828
6. Ingroup affect (IS)	5.30 (1.53)	-.784	-.208
7. Ingroup ties (OC)	4.77 (1.69)	-.523	-.613
8. Centrality (OC)	4.11 (1.67)	-.164	-.929
9. Ingroup affect (OC)	5.37 (1.37)	-.678	-.030
10. Hostility towards the host community	1.80 (0.91)	1.901	4.415
11. Self-esteem	5.47 (0.98)	-.639	-.128
12. Academic performance	5.03 (1.10)	-.408	-.163
13. Percentage of friends from own country	32.20 (22.51)	.656	-.794
14. Percentage of friends from the UK	38.18 (24.93)	.397	-.926
15. Percentage of friends from other foreign countries	33.27 (22.20)	.785	.166
16. Contact with parents at home	5.58 (1.37)	-.869	.081
17. Contact with friends at home country	4.86 (1.57)	-.651	-.490

Table 31. Descriptive statistics for all variables.

Inspection of the means reveals that scores on the willingness to participate in the host community measure were rather high ($M = 5.51$), whilst scores on the maintenance of own culture measure were around the midpoint of the scale ($M = 4.33$). Perceptions of discrimination were around the midpoint of the scale ($M = 3.32$) suggesting that the sample did have some experience with discrimination, but that discrimination may not have been pervasive. Participants' identification scores showed that individuals were identified with other international students regarding ingroup ties ($M = 4.92$), centrality ($M = 4.18$), and ingroup affect ($M = 5.30$). Participants were also identified with students from their own country in the dimensions of ingroup ties ($M = 4.77$), centrality ($M = 4.11$), and ingroup affect ($M = 5.37$). Hostility revealed a low score ($M = 1.80$) suggesting that students did not feel hostility towards the host

community. International students had relatively high self-esteem ($M = 5.47$) and were pleased with their academic performance ($M = 5.03$). Regarding their friendship networks, on average, co-national friends composed 32% of their social groups, whilst friends from the UK and other foreign countries composed 38% and 33% respectively. Finally, participants maintained frequent contact with their parents ($M = 5.58$) and with friends at home ($M = 4.86$).

An inspection of the skewness and kurtosis values suggests that most measures are approximate to a normal distribution. Tabachnik and Fidel (2001) argued that skewness values above 1 or kurtosis above 2 might compose violations of the normal distribution and transformations should be sought. The only variable that violates this rule is hostility, with a high positive skewness and kurtosis. In order to solve this concern, a logarithmic transformation was applied to the hostility measure. After the transformation, hostility was approximate to the normal distribution ($M = 0.21$; $SD = 0.18$; skewness = 0.75, kurtosis = -0.02).

Table 32 shows the correlations between the key measured variables. From all the correlations observed in the table, we will flag only the most relevant for this thesis' predictions. Perceived discrimination was related to identification with both international students and own national group, indicating that the higher the levels of perceived discrimination, the lower the ingroup affect with both international ($r = -.23$, $p = .005$) and own country students ($r = -.23$, $p = .004$). In contrast, perceived discrimination was positively related to centrality with international students ($r = .37$, $p < .001$) and own country students ($r = .32$, $p < .001$), indicating that the higher the levels of perceived discrimination, the higher the centrality of both group identities. Perceptions of discrimination were not related to ingroup ties in either international ($r = -.06$, $p = .491$) or own country students ($r = -.02$, $p = .765$). Perceived discrimination

was also related to the different outcome variables. Correlations analysis suggested that the higher the levels of perceived discrimination, the higher the hostility towards the host community ($r = .38, p < .001$). In contrast, perceived discrimination was associated with lower self-esteem ($r = -.28, p < .001$) and lower academic performance ($r = -.19, p = .019$). Depending on the dimension, group identification was differentially related to the outcome variables. Centrality with international and own national students was negatively associated with self-esteem ($r = -.35, p < .001$, and $r = -.29, p < .001$) and academic performance ($r = -.26, p < .001$, and $r = -.18, p = .022$), but positively associated with hostility towards the host community ($r = .20, p = .014$, and $r = .29, p < .001$). In contrast, ingroup affect with international students was associated with higher levels of self-esteem ($r = .20, p = .014$) and academic performance ($r = .29, p < .001$), whilst ingroup affect with own national group was associated with lower hostility ($r = -.19, p = .019$) and higher levels of self-esteem ($r = .24, p = .003$). In a similar way, ingroup ties with international students was associated with higher self-esteem ($r = .19, p = .019$), whilst ingroup ties with own national group was not related to any of the outcome variables.

Measures	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
1 - Acculturation (participation in larger society)	-																
2 - Acculturation (culture maintenance)	-.23**	-															
3 - General discrimination	-.38**	.11	-														
4 - Ingroup ties (I.S.)	-.03	.12	-.06	-													
5 - Centrality (I.S.)	-.31**	.18*	.37**	.13	-												
6 - Ingroup affect (I.S.)	.20*	-.01	-.23**	.39**	-.12	-											
7 - Ingroup ties (O.C.)	-.10	.40**	-.02	.35**	-.04	.08	-										
8 - Centrality (O.C.)	-.39**	.35**	.32**	.03	.52**	-.15	.27**	-									
9 - Ingroup affect (O.C.)	.22**	.27**	-.27**	.10	-.15	.41**	.28**	.14	-								
10 - Hostility	-.38**	.06	.38**	.04	.20*	-.14	.12	.29**	-.19*	-							
11 - Self-esteem	.23**	-.09	-.28**	.19*	-.35**	.20*	.14	-.29**	.24**	-.29**	-						
12 - Academic performance	.34**	-.10	-.19*	-.08	-.26**	.16*	-.08	-.18*	.10	-.11	.33**	-					
13 - % of friends from own country	-.27**	.13	.15	.03	.04	-.26**	.39**	.12	-.02	.19*	-.12	-.25**	-				
14 - % of friends from the UK	.35**	-.12	-.01	-.27**	-.14	.10	-.36**	-.19*	.02	-.14	.15	.36**	-.63**	-			
15 - % of friends from other countries	-.02	-.03	-.14	.31**	.07	.29**	-.01	.09	.11	-.06	.01	-.17*	-.35**	-.33**	-		
16 - Contact with parents at home	-.01	.22**	-.04	.01	.01	.10	.09	-.02	.16*	-.14	.05	.03	.01	-.02	.04	-	
17 - Contact with friends at home country	-.04	.18*	-.17*	.05	-.14	.06	.14	.01	.15	-.09	.01	.04	-.03	-.01	.06	.40**	-

Table 32. Intercorrelations for the key variables. Note: I.S. = International Students; O. C. = Own Country * p < .05 ** p < .01

5.2.1.4 – Analysis of the demographic variables

It is also fundamental to examine if there were any differences amongst international students regarding their background. For this purpose, several ANOVAs and correlation coefficients were calculated on the various outcome variables and for demographic information.

Correlation analysis revealed that the outcome variables (hostility, self-esteem, and academic performance) were not related to age and time spent in the UK. In turn, analysis of variance suggested that there were no differences among nationality, religion, and subject of study among hostility, self-esteem, and academic performance. An exception, however, was gender. More specifically, men reported higher self-esteem ($M = 5.85$) than women ($M = 5.22$), $F(1,156) = 14.57, p < .001$. Given that gender might be a significant covariate, all future analyses will control for this variable.

5.2.2 – Main analyses

To test our predictions our main analyses was divided into three parts. First, we analysed the rejection-identification model according to a multidimensional perspective of group identification. Second, we tested the rejection-identification model with other outcome variables (hostility and academic performance). Finally, we analysed the rejection-identification-acculturation model.

5.2.2.1 - Rejection, group identification, and self-esteem

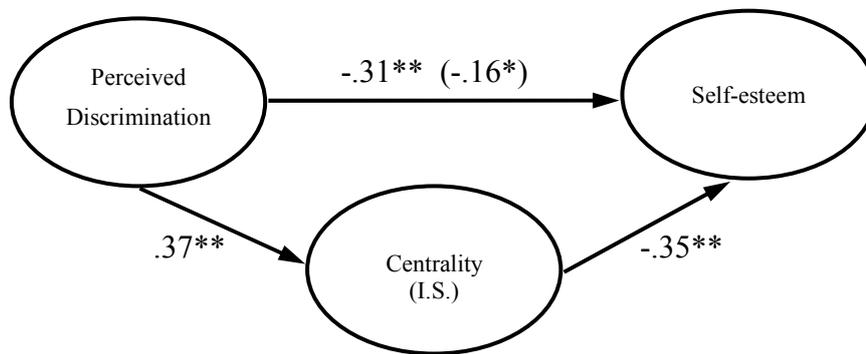
In order to test the rejection-identification model, we examined whether group identification mediated the relationship between perceived discrimination and self-esteem. To test for a mediation effect, we followed the four-step method outlined by Baron and Kenny (1986). For this method it is fundamental to (1) test the relationship

between the predictor (perceptions of discrimination) and the outcome variable (self-esteem). In a following step, (2) it is imperative to test the relationship between the predictor and the mediator (minority group identification). In another regression (3) we need to test the relationship between the mediator and outcome variable. Lastly, (4) we need to test the relationship between the predictor and outcome variable while controlling for the mediator. A successful mediator is found when the relationship between the predictor and the outcome variable is weakened after introducing the mediator into the regression equation. Specifically, a regression analysis of the first step examining the effect of perceived discrimination on self-esteem, indicated that perceptions of discrimination were negatively associated with self-esteem, $\beta = -.31$, $t(151) = 4.15$, $p < .001$. Hence, below we tested whether this effect was weakened after introducing group identification as a mediator. In the following analyses we tested separately the two identities included in this study; i.e. identification with international students and own national group. For each of these identities we tested the mediation effects of centrality and ingroup affect. As we saw in Table 32, ingroup ties were associated with neither perceptions of discrimination nor self-esteem. Thus, ingroup ties were not included in the mediation analyses. As previously mentioned, we controlled for gender in all analyses.

The first analysis was performed on identification with international students. The analysis for centrality demonstrated that higher levels of perceived discrimination were related to higher centrality ($\beta = .37$, $t(156) = 4.94$, $p < .001$). In contrast, the higher the centrality, the lower the self-esteem ($\beta = -.35$, $t(156) = 4.57$, $p < .001$). When examined together, perceptions of discrimination and centrality were associated with lower self-esteem, ($\beta = -.16$, $t(154) = 2.08$, $p = .040$; $\beta = -.26$, $t(154) = 3.39$, $p = .001$)¹³.

¹³ Degrees of freedom change for each analysis due to missing values.

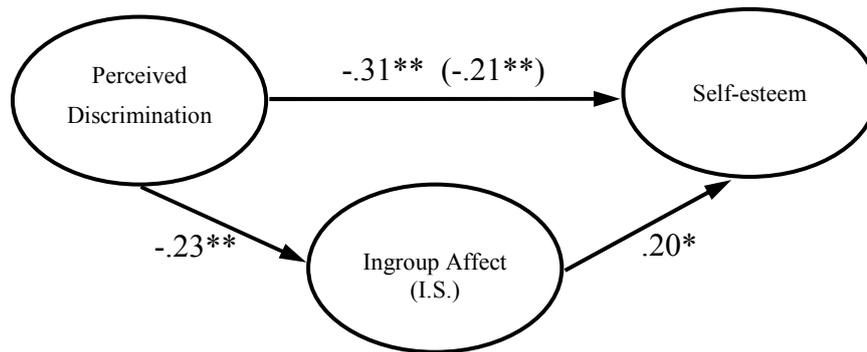
Both direct and indirect (mediated through centrality) paths had a negative impact on self-esteem. The Goodman (1960) test for mediation confirmed that the mediated path was greater than zero, $z = -2.83$, $p = .005$. Furthermore, gender was a significant covariate $\beta = .29$, $t(154) = 4.05$, $p < .001$, indicating that men tended to rate their self-esteem higher than women. Figure 4 summarises the mediation effect found with centrality.



* $p < .05$ ** $p < .01$ I.S. = International Students.
 Note: The number in parenthesis indicates the relationship between perceived discrimination and self-esteem after controlling for the mediator.

Figure 4. Rejection-identification model with centrality with international students.

Likewise, the analysis for ingroup affect revealed that higher levels of perceived discrimination were related to lower ingroup affect ($\beta = -.23$, $t(155) = 2.94$, $p = .004$). In contrast, the higher the ingroup affect, the higher their self-esteem ($\beta = .20$, $t(155) = 2.49$, $p = .014$). When examined together, discrimination was associated with lower self-esteem, whilst ingroup affect was marginally related to self-esteem ($\beta = -.21$, $t(153) = 2.81$, $p = .006$; $\beta = .14$, $t(153) = 1.87$, $p = .064$). As a consequence the Goodman (1960) test was marginally significant, $z = -1.66$, $p = .098$. Similar to the mediation effect of centrality, both direct and indirect (through the marginal effect of ingroup affect) paths had a negative impact on self-esteem (see Figure 5).



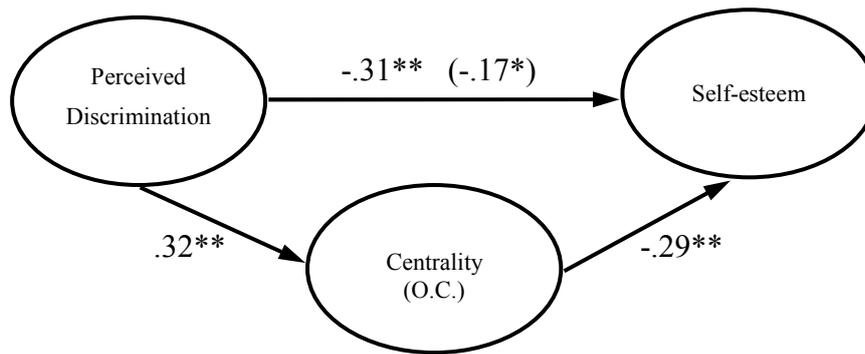
* $p < .05$ ** $p < .01$ I.S. = International Students.

Note: Number in parenthesis indicates the relationship between perceived discrimination and self-esteem after controlling for the mediator.

Figure 5. Rejection-identification model with ingroup affect with international students.

In sum, our analyses showed that the two group identification dimensions have opposing effects on self-esteem. It was also found that perceived discrimination exerts opposing effects on centrality and ingroup affect. Overall, our results indicated that identification with international students does not offer protection against perceptions of discrimination.

For identification with own national group a similar pattern was revealed. Perceived discrimination was related to centrality ($\beta = .32$, $t(154) = 4.23$, $p < .001$). In contrast, centrality was associated with lower self-esteem ($\beta = -.29$, $t(154) = 3.72$, $p < .001$). When analysed in the same regression equation, it was demonstrated that higher levels of perceived discrimination and centrality were related to lower self-esteem ($\beta = -.17$, $t(152) = 2.32$, $p = .022$; $\beta = -.22$, $t(152) = 2.90$, $p = .004$). Both direct and indirect (mediated through centrality) paths had a negative impact on self-esteem. The Goodman (1960) test for mediation confirmed that the mediated path was greater than zero, $z = -2.44$, $p = .015$. Figure 6 summarises the mediation effect for centrality with own country.

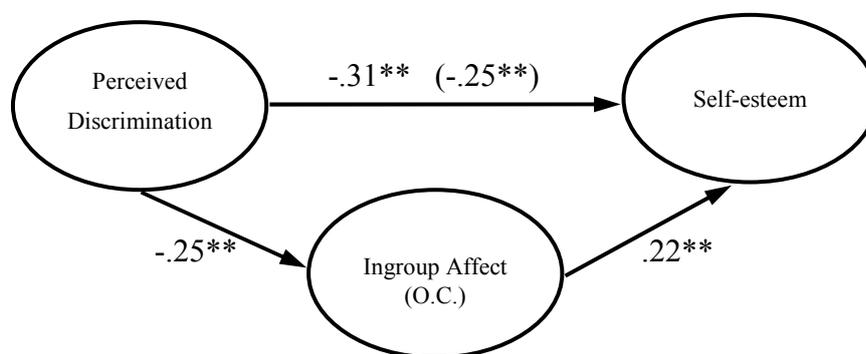


* $p < .05$ ** $p < .01$ O.C. = Own Country.

Note: The number in parenthesis indicates the relationship between perceived discrimination and self-esteem after controlling for the mediator.

Figure 6. Rejection-identification model with centrality with own country.

Moreover, the analysis for ingroup affect revealed that higher levels of perceived discrimination were related to lower ingroup affect ($\beta = -.25$, $t(148) = 3.06$, $p = .003$). In contrast, the higher the ingroup affect, the higher students' self-esteem ($\beta = .22$, $t(148) = 2.91$, $p = .004$). Similar to the mediation effect of centrality, both direct and indirect (through ingroup affect) paths had a negative impact on self-esteem ($\beta = -.25$, $t(146) = 3.27$, $p = .001$; $\beta = .16$, $t(146) = 2.01$, $p = .046$). The Goodman (1960) test confirmed the mediation effect, $z = -2.04$, $p = .041$. Figure 7 summarises the mediation effect.



* $p < .05$ ** $p < .01$ O.C. = Own Country.

Note: The number in parenthesis indicates the relationship between perceived discrimination and self-esteem after controlling for the mediator.

Figure 7. Rejection-identification model with ingroup affect with own country.

Thus, similar to identification with international students, centrality and ingroup affect had opposing effects on self-esteem. In addition, perceived discrimination exerted opposing effects on centrality and ingroup affect. Overall, our results indicated that amongst international students, identification with own national group does not offer protection against perceptions of discrimination.

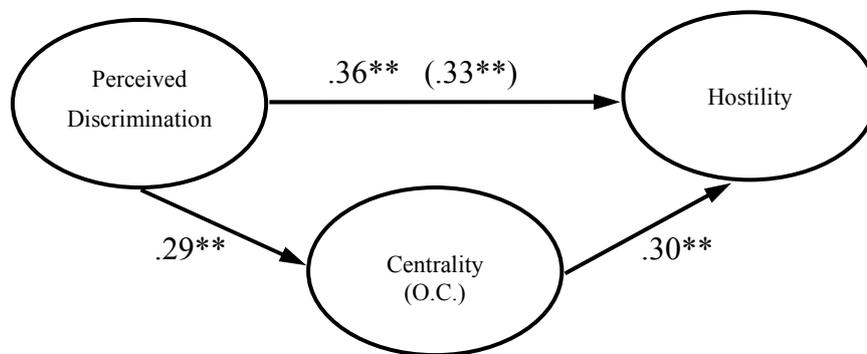
5.2.2.2 - Rejection, group identification, and other outcomes

Another aspect examined by our analysis was the mediation effect of group identification between perceived discrimination and two other outcomes: hostility and academic performance. Identification with international students and own national group were tested separately. We began our analysis by examining identification with international students. Hostility was regressed on perceived discrimination, while controlling for centrality and gender. It was found that hostility was predicted by perceptions of discrimination but not by centrality, $\beta = .37$, $t(154) = 4.55$, $p < .001$, and $\beta = .06$, $t(154) = .79$, $p = .431$. This analysis indicated that the higher the levels of perceived discrimination, the higher the hostility towards the host community. It also indicated that centrality does not mediate the relationship between perceptions of discrimination and hostility. Gender was not a significant covariate $\beta = .13$, $t(154) = 1.80$, $p = .074$.

For the second regression equation, centrality was substituted by ingroup affect. No mediation effects were found as ingroup affect did not predict hostility, $\beta = -.14$, $t(155) = 1.75$, $p = .082$.

Identification with own national group revealed a similar pattern. For international students, the higher the centrality the higher the hostility, $\beta = .30$, $t(150) = 3.84$, $p < .001$. The same mediation procedure was performed by regressing hostility on

perceived discrimination, while controlling for centrality and gender. It was found that hostility was predicted by perceptions of discrimination and centrality, $\beta = .33$, $t(152) = 4.24$, $p < .001$, and $\beta = .18$, $t(152) = 2.32$, $p = .022$. This analysis indicated that the higher the levels of perceived discrimination and centrality, the higher the hostility towards the host community. The Goodman (1960) test indicated a mediation effect, $z = 2.07$, $p = .039$. The mediation effect of centrality with own country is summarised in Figure 8.



* $p < .05$ ** $p < .01$ O.C. = Own Country.
 Note: The number in parenthesis indicates the relationship between perceived discrimination and self-esteem after controlling for the mediator.

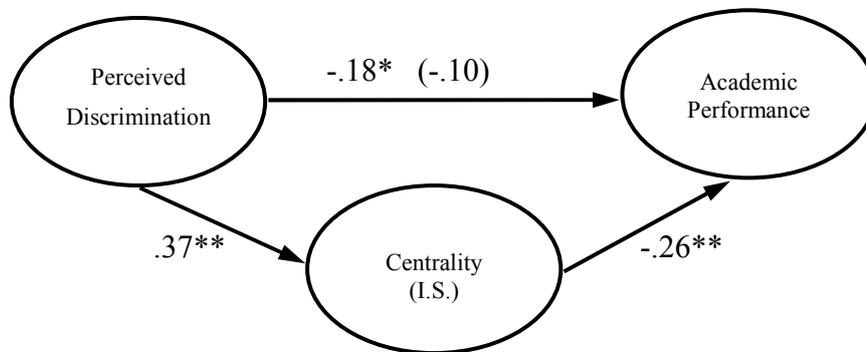
Figure 8. Rejection-identification model with centrality with own country.

For the second regression equation, centrality was substituted by ingroup affect. No mediation effects were found as ingroup affect did not predict hostility, $\beta = -.09$, $t(150) = 1.20$, $p = .232$.

For academic performance, perceptions of discrimination and centrality (with international students) were associated with lower academic performance, $\beta = -.18$, $t(155) = 2.25$, $p = .026$; $\beta = -.26$, $t(156) = 3.28$, $p = .001$. When examined together in the same regression equation, perceived discrimination was no longer associated with academic performance, $\beta = -.10$, $t(154) = 1.22$, $p = .223$; whilst centrality exerted a negative impact on academic performance, $\beta = -.21$, $t(154) = 2.55$, $p = .012$. Gender

was not a significant covariate, $\beta = .10$, $t(154) = 1.30$, $p = .195$. The Goodman test indicated a mediation effect, $z = -2.33$, $p = .020$. Figure 9 summarises the mediation effect of centrality with own country.

When we tested ingroup affect, it was found that this variable did not predict academic performance, $\beta = .13$, $t(153) = 1.63$, $p = .106$. When examining identification with own national group, neither centrality nor ingroup affect predicted this outcome variable, $\beta = -.17$, $t(152) = 1.73$, $p = .086$, and $\beta = .08$, $t(150) = .99$, $p = .323$.



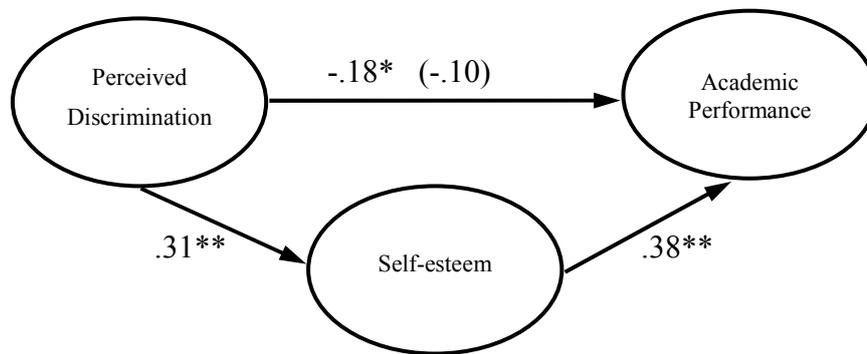
* $p < .05$ ** $p < .01$ I.S. = International Students.

Note: The number in parenthesis indicates the relationship between perceived discrimination and self-esteem after controlling for the mediator.

Figure 9. Rejection-identification model with centrality with own country.

As well-being measures were highly correlated with academic performance, in addition to testing our predictions, we also examined self-esteem as a mediator of the relationship between perceived discrimination and academic performance. Firstly, we regressed academic performance on perceived discrimination. Results demonstrated that perceived discrimination negatively predicts academic performance, $\beta = -.18$, $t(155) = 2.25$, $p = .026$. Also, self-esteem was positively associated with academic performance, $\beta = .38$, $t(151) = 4.76$, $p < .001$. Then we regressed academic performance on perceived discrimination while controlling for self-esteem and gender. The regression analysis shows that perceived discrimination was not related to academic performance, $\beta = -.10$,

$t(153) = 1.28, p = .203$. On the other hand, self-esteem was positively related to academic performance, $\beta = .30, t(153) = 3.55, p = .001$. Higher levels of self-esteem were related to higher academic performance, while there was no effect of perceived discrimination on academic performance. Gender was not a significant covariate. The Goodman (1960) test confirmed the mediation effect, $z = -2.54, p = .011$. Figure 10 summarises the mediation effect of self-esteem.



* $p < .05$ ** $p < .01$

Note: The number in parenthesis indicates the relationship between perceived discrimination and self-esteem after controlling for the mediator.

Figure 10. Self-esteem as a mediator of the relationship between perceived discrimination and academic performance.

5.2.2.3 - A rejection-identification-acculturation model

In this section we analysed a moderated mediation model. Specifically, we tested whether the mediation effect of group identification between perceived discrimination and self-esteem would change as a function of the acculturation strategies. For a moderated mediation analysis we followed the method proposed by Muller, Judd, and Yzerbyt (2005). This method consists of three different regression equations. In the first equation the independent variable (perceived discrimination), the two moderators (willingness to participate in the larger society and maintenance of own cultural background), and their interaction terms need to be introduced as predictors of the outcome variable (self-esteem). The aim is to examine whether the independent variable

successfully predicts the outcome variable. It is also important that none of the moderators moderates this relationship. In the second regression the exact same predictors need to be tested but with the mediator (group identification) as the outcome variable. The aim of this equation is to test whether there is a moderation effect of the two moderators on the mediator. Finally, the third regression equation requires that we introduce the previous predictors, and add the mediator and the interactions between the mediator and moderators. The outcome variable should be the same as in the first equation. A moderated mediation effect is found when the mediator significantly predicts the outcome variable. In a similar vein to simple mediation, it is also expected that introducing the mediator in the regression equation would weaken the effect of the independent variable on the outcome. In order to test our model, all variables were centred and then separate analyses of centrality and ingroup affect were performed. Similar to previous analyses, identification with international students and own national group were examined separately.

We began our analysis by examining centrality with international students. Results were summarised in Table 33.

Predictors	Self-esteem		Centrality (IS)	
	<i>b</i>	<i>t</i>	<i>b</i>	<i>t</i>
PD	-.24	2.87**	.34	4.04**
PLS	.19	2.26*	-.17	2.01
OCM	-.06	0.73	.11	1.27
PD x PLS	.04	0.66	.10	1.27
PD x OCM	.16	0.54	.02	0.28
PLS x OCM	-.10	1.91	.05	0.61
PD x PLS x OCM	-.09	1.12	.03	0.34
Gender	.31	4.10**	-.06	0.84

Note. PD = perceived discrimination; PLS = participation in larger society; OCM = own culture maintenance
* $p < .05$ ** $p < .01$

Table 33. Moderated mediation with centrality with international students.

In the first equation (left column of Table 33), there was a main effect of perceptions of discrimination and also of participation in the larger society. The higher the international students perceived discrimination, the lower their self-esteem. Also, the more international students were willing to participate in the host community, the higher their self-esteem. None of the interaction terms predicted self-esteem, indicating that the magnitude of the effect of perceived discrimination on self-esteem did not depend on the two acculturation dimensions. In the second regression (right column of Table 33), the interaction terms indicated that the two acculturation dimensions did not moderate the relationship between perceptions of discrimination and identification. Thus, acculturation strategies could not possibly moderate the mediation effect of centrality and no further analyses were performed.

The same analysis was performed for ingroup affect with international students (results are summarised in Table 34). The left column presents the same initial analysis as before, where it was found that perceptions of discrimination are associated with lower self-esteem, and also that none of the interaction terms predicted self-esteem. When the same predictors were regressed on ingroup affect however, different results were found (middle column of Table 34). Perceived discrimination was associated with lower ingroup affect. Also, there was a marginal effect ($p = .056$) of the two acculturation dimensions and perceptions of discrimination on ingroup affect. Because this effect approached statistical significance the next step for moderated mediation was performed.

In the third regression (right column of Table 34), perceived discrimination had a negative effect on self-esteem, whereas ingroup affect did not. In this case, ingroup affect did not mediate the relationship between perceptions of discrimination and self-esteem, so moderated mediation could not be confirmed.

Predictors	Self-esteem		Ingroup Affect (IS)		Self-esteem	
	<i>b</i>	<i>t</i>	<i>b</i>	<i>t</i>	<i>b</i>	<i>t</i>
PD	-.24	2.87**	-.27	3.00**	-.21	2.44*
PLS	.19	2.26*	.14	1.55	.19	2.18*
OCM	-.06	0.73	-.04	0.40	-.06	0.70
PD x PLS	.04	0.66	.10	1.22	-.07	0.80
PD x OCM	.16	0.54	.07	0.74	.03	0.37
PLS x OCM	-.10	1.91	.01	0.04	.18	2.09*
PD x PLS x OCM	-.09	1.12	-.18	1.93+	-.13	1.43
IA					-.10	1.30
IA x PLS					.05	0.54
IA x OCM					.03	0.36
IA x PLS x OCM					.14	1.55
Gender	.31	4.10**	-.08	0.95	.31	4.04**

Note. PD = perceived discrimination; PLS = participation in larger society; OCM = own culture maintenance; IA = ingroup affect. * $p < .05$ ** $p < .01$ + $p < .10$

Table 34. Moderated mediation with ingroup affect with international students.

Results were subsequently analysed for identification with own national group. Results for the analysis of centrality are summarised in Table 35. In the first equation (left column of Table 35), a significant main effect of perceived discrimination indicated that the higher participants perceived discrimination, the lower was their self-esteem. None of the interaction terms predicted self-esteem. This regression equation revealed that the magnitude of the effect of perceived discrimination on self-esteem did not depend on the acculturation dimensions.

For the second regression, centrality was regressed on the same predictors as in the previous regression equation (middle column of Table 35). It was found that centrality was predicted by perceived discrimination and participation in the larger society. The more discrimination was perceived, the more own national group was an important group membership for international students. Also, the more students valued participation in the larger society, the less important their own national group was for their self-concept. The interaction term between perceived discrimination and participation in the larger society was significant, suggesting a two-way moderation

effect. Simple slope analysis¹⁴ revealed that for those who did not value participation in the larger society, centrality did not change across different levels of perceived discrimination, $\beta = .08$, $t(143) = 0.77$, $p = .440$. Those who valued participation in the larger society had higher levels of centrality following perceived discrimination, $\beta = .40$, $t(143) = 3.36$, $p = .001$ (see Figure 11).

In the third regression (right column of Table 35), results demonstrated a main effect of perceived discrimination and centrality. The more international students perceived discrimination and considered their nationality as important part for their self-concept, the lower was their self-esteem. All the other variables and interaction terms did not predict self-esteem. This regression equation revealed that once we control for centrality, the overall effect of perceived discrimination on self-esteem is reduced.

These results

Predictors	Self-esteem		Centrality		Self-esteem	
	<i>B</i>	<i>t</i>	<i>b</i>	<i>t</i>	<i>b</i>	<i>t</i>
PD	-.24	2.87**	.24	3.02**	-.18	2.20*
PLS	.19	2.26*	-.27	3.22**	.09	1.01
OCM	-.06	0.73	.07	0.90	-.08	0.81
PD x PLS	.04	0.66	.17	2.06*	.02	0.28
PD x OCM	.16	0.54	-.05	0.64	.03	0.35
PLS x OCM	-.10	1.91	.05	0.64	.07	0.74
PD x PLS x OCM	-.09	1.12	-.02	0.19	-.13	1.55
Centrality					-.21	2.47*
Centrality x PLS					-.14	1.75
Centrality x OCM					.09	1.03
Centrality x PLS x OCM					.10	1.11
Gender	.31	4.10**	.02	0.30	.30	4.05**

Note: PD = perceived discrimination; PLS = participation in larger society; OCM = own culture maintenance

* $p < .05$ ** $p < .01$

Table 35. Moderated mediation with centrality with own national group.

¹⁴ Simple slope analysis was performed by using the software developed by Preacher, Curran, and Bauer (2006). This software was used to plot the slopes in the regression of the outcome on the predictor at specific values of the moderator. We used the most conventional values of the moderator (i.e. 1SD above and 1SD below the mean). The same software also indicated whether these slopes differed significantly from zero.

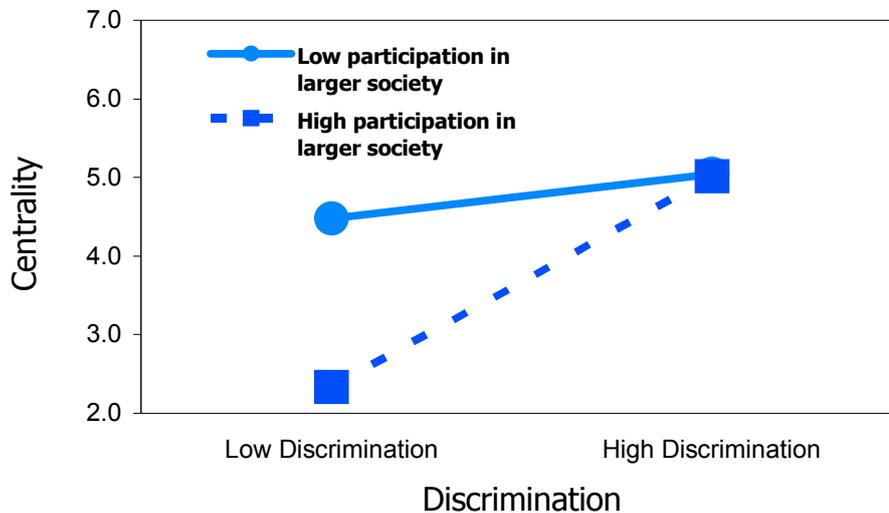


Figure 11. 2-way interaction: Impact of willingness to participate in the larger society.

confirmed moderated mediation because (1) the effect of perceived discrimination did not vary as a function of participation in the larger society (first equation); (2) the indirect effect via centrality varied as a function of willingness to participate in the larger society (second equation); and thus, (3) the residual direct effect decreased once we controlled for a significant moderator (centrality in the third equation).

An inspection of the results for the overall model demonstrated that when discrimination is perceived, those who value participation in the larger society tend to increase the importance of their national group for their self-concept (Figure 10), which in turn has a negative impact on their self-esteem. Those who did not wish to participate in the larger society tend to maintain the same levels of centrality, maintaining their self-esteem.

Analysis with ingroup affect revealed similar results (Table 36). In the first equation (left column of Table 36), there was a main effect of perceptions of

discrimination and also of participation in the larger society. The higher international students perceived discrimination, the lower their self-esteem. Also, the more international students were willing to participate in the host community, the higher their self-esteem. None of the interaction terms predicted self-esteem, indicating that the magnitude of the effect of perceived discrimination on self-esteem did not depend on the two acculturation dimensions.

Predictors	Self-esteem		Ingroup Affect		Self-esteem	
	<i>b</i>	<i>t</i>	<i>b</i>	<i>t</i>	<i>b</i>	<i>t</i>
PD	-.24	2.87**	-.24	2.85**	-.17	1.92
PLS	.19	2.26*	.23	2.76**	.13	1.40
OCM	-.06	0.73	.26	2.90**	-.14	1.47
PD X PLS	.04	0.66	.13	1.61	-.05	0.64
PD X OCM	.16	0.54	.08	1.01	.03	0.32
PLS X OCM	-.10	1.91	.03	0.38	.17	1.71
PD X PLS X OCM	-.09	1.12	-.19	2.15*	-.03	0.35
IA					.22	2.44*
IA X PLS					.12	1.18
IA X OCM					-.04	0.39
IA X PLS X OCM					.15	1.34
Gender	.31	4.10**	-.07	0.92	.34	4.50**

Note. PD = perceived discrimination; PLS = participation in larger society; OCM = own culture maintenance; IA = ingroup affect. * $p < .05$ ** $p < .01$

Table 36. Moderated mediation with ingroup affect with own national group.

For the second regression, ingroup affect was regressed on the same predictors as in the previous regression equation (middle column of Table 36). It was found that participation in the larger society, own culture maintenance, and perceived discrimination predicted ingroup affect. The more students perceived discrimination, the less they valued their national group membership. In contrast, the more they sought contact with the host community and were willing to keep their cultural heritage, the more they valued their national group membership. Furthermore, a 3-way interaction between the two moderators and perceptions of discrimination was revealed. In other

words, perceived discrimination had a different impact on ingroup affect as a function of differences in both participation in larger society and own culture maintenance (see Figures 12 and 13). Simple slope analysis revealed that for students with a low score for participation in the larger society (Figure 12), ingroup affect did not change as perceived discrimination increased, when they held a high score in maintenance of own culture (i.e. separation strategy), $\beta = -.07$, $t(133) = 0.46$, $p = .644$. On the other hand, when students held a low score in maintenance of own culture (i.e. marginalisation strategy), ingroup affect decreased as perceived discrimination increased, $\beta = -.65$, $t(133) = 3.15$, $p = .002$. When students had a high score in participation in larger society (Figure 13), ingroup affect slightly decreased as perceived discrimination increased, if they also held a high score in maintenance of own culture (i.e. integration strategy), $\beta = -.23$, $t(133) = 1.23$, $p = .220$. On the other hand, if students held a low score in maintenance of own culture (i.e. assimilation strategy), ingroup affect did not change as perceived discrimination increased, $\beta = .03$, $t(133) = 0.18$, $p = .861$.

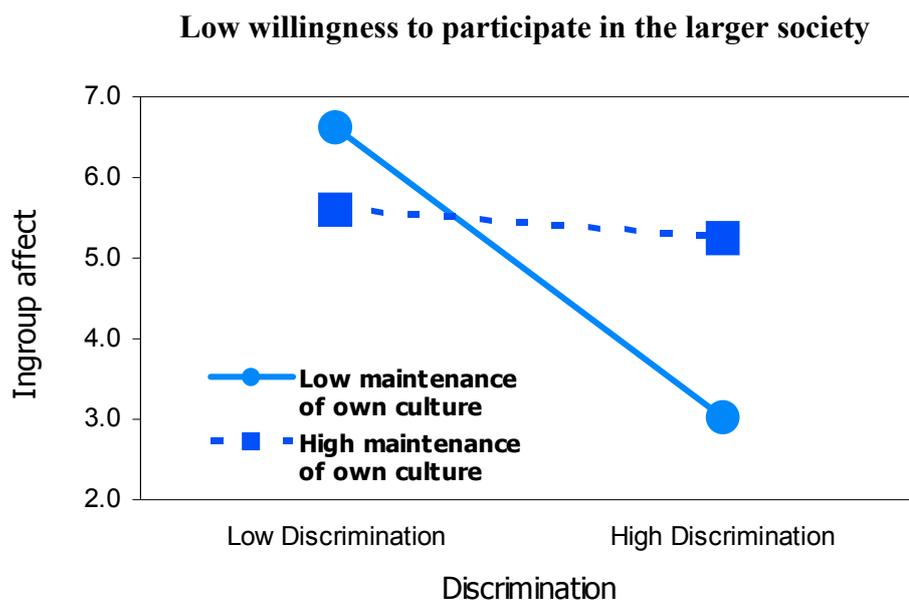


Figure 12. 3-way interaction: Impact of own culture maintenance for low levels of participation in the larger society.

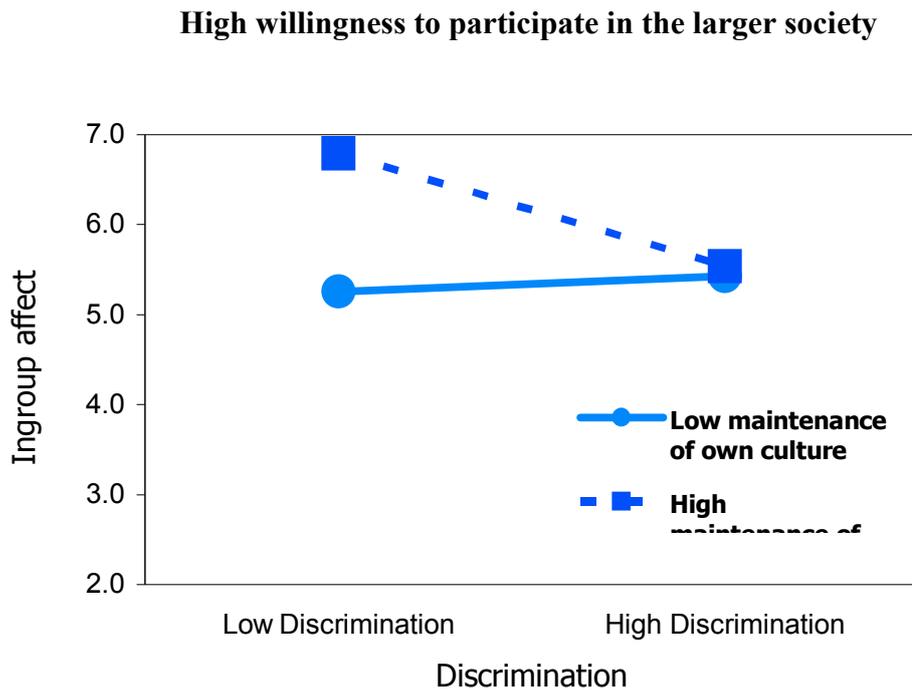


Figure 13. 3-way interaction: Impact of own culture maintenance for high levels of participation in the larger society.

In the third regression (right column of Table 36, p. 195) results demonstrated that self-esteem was predicted by ingroup affect, showing that the more international students valued their group, the higher their self-esteem. Importantly, self-esteem was not predicted by perceived discrimination. All the other variables and products similarly did not predict self-esteem. This regression equation revealed that once we controlled for ingroup affect, the overall effect of perceived discrimination on self-esteem is reduced. In sum, these results allowed to confirm moderated mediation because (1) the effect of perceived discrimination does not vary as a function of the acculturation dimensions (first equation); (2) the indirect effect via ingroup affect varies in function of the acculturation dimensions (second equation); and thus, (3) the residual direct effect decreased once we controlled for ingroup affect (third equation).

An inspection of the results for the overall model demonstrates that when discrimination is perceived, those who valued integration or marginalisation strategies tended to decrease ingroup affect (Figures 12 and 13, p. 196 and 197), which in turn had a negative impact on self-esteem. In contrast, those who valued separation and assimilation strategies tended to maintain levels of ingroup affect (Figures 12 and 13, p. 196 and 197), with no negative impact on self-esteem. Thus, the indirect effect of perceived discrimination on self-esteem (via ingroup affect) was negative for those who valued an integration or marginalisation strategy but neutral for proponents of separation and assimilation strategies.

5.2.2.4 – Academic performance, social networks, and hostility

In this section, the previous moderation mediation model was tested with academic performance as the outcome variable. As we have shown in section 5.2.2, only centrality with international students mediated the relationship between perceived discrimination and academic performance. As all other identification dimensions did not mediate this relationship, we did not test the moderated mediation model with these variables. The only variable that could possibly be included in the moderated mediation was centrality with international students. Reiterating what was tested earlier however (see Table 33, p. 190), the acculturation strategies did not moderate the effect of perceived discrimination on centrality with international students. Therefore, none of the identification dimensions met the conditions for a moderation mediation test.

Secondly, in this section we analysed whether friendship networks could also counteract the negative effects of discrimination on self-esteem and academic performance. We tested whether those who could not use identification as a coping strategy (proponents of integration, marginalisation, and assimilation) would benefit

more from the support of friendship networks when compared to those who endorse a separation strategy. For this purpose we tested a moderation mediation model. The aim was to test whether the supporting effects of different friendship networks could be moderated by the different acculturation strategies. The correlation matrix (Table 32, p. 180) indicated that the percentage of friends from the three networks (own country, UK, and other foreign countries) and contact with parents at home were not associated with perceptions of discrimination. These variables therefore could not possibly mediate the relationship between discrimination and self-esteem or academic performance. Contact with friends in students' home country were negatively associated with perceptions of discrimination but were not associated with either self-esteem or academic performance. Thus, contact with friends in home country could not be a possible mediator.

Finally, we also analysed whether the effect of discrimination on hostility would vary as a function of the different acculturation strategies. For this purpose we performed a regression analysis which analysed the interaction between perceptions of discrimination and the acculturation strategies. Perceptions of discrimination, participation in the larger society, own culture maintenance, and its interaction terms were entered as predictors of a regression which had hostility as the outcome variable. Results reaffirmed that perceived discrimination increases hostility towards the host community, $\beta = .29$, $t(149) = 3.50$, $p = .001$. In contrast, participation in the larger society in contrast had a negative impact on hostility, $\beta = -.24$, $t(149) = 2.88$, $p = .005$. A higher preference to participate in the larger society was associated with lower hostility. Own culture maintenance and all the interaction terms were not statistically significant, indicating that the effect of perceived discrimination on hostility did not vary as a function of the acculturation strategies.

5.3 – Method – Time 2

5.3.1 – Participants, procedure, and measures

One year later¹⁵, 113 international students participated in the follow-up questionnaire. These participants were contacted through email or telephone and were asked to respond to the second questionnaire. This questionnaire was the same as the one distributed during their first year. Of the total initial sample, 72% of the students participated in the second part of the longitudinal study. This sample comprised 49 males and 64 females, and their ages ranged from 18 to 30 years ($M = 21$).

5.4 – Results – Time 2

The present analysis followed the same strategy as the first time point of the longitudinal study. The same structure and order were maintained when examining the results of the data collected during students' second year of studies. The only exception was a missing data analysis which initiated this section. To recapitulate, our aim for this analysis was to examine the data collected at Time 2 separately from Time 1. The two time points will be analysed in conjunction and compared to each other in the subsequent chapter.

5.4.1 – Preliminary analysis

5.4.1.1 – Missing data analysis

According to Tabachnik and Fidel (2001), it is fundamental to understand the reasons underpinning the missing values, as these reasons might provide vital information about our study and variables. Following the recommendations of the same authors, a new variable was created where '1' was attributed to those who participated

¹⁵ When students were in their second year and in the same period as the first questionnaire (i.e. between January and March).

in the second questionnaire, and '0' was attributed to those who failed to complete the study. For the purpose of understanding if there were any differences between students who participated in both time points and students who dropped out, a logistic regression was performed. In this regression the new variable mentioned above was entered as an outcome variable and then demographic variables were entered as predictors. All the other variables involved in the study were also introduced as predictors in another block. Results indicated that age was a significant predictor of participation in the second questionnaire, $\beta = -.28$, $wald = 9.70$, $p = .002$. Older students were more likely to drop out after the first questionnaire¹⁶. None of the other variables predicted participation at Time 2.

5.4.1.2 – Reliability analysis

Table 37 presents the alpha coefficients for all measures. All measures maintained a high alpha coefficient apart from participation in the larger society which yielded a somewhat lower alpha (.62). Because this scale was reliable in both the previous questionnaire and the pilot study, it was kept with the same item structure.

Measure	A
1 - Acculturation (participation in larger society)	.62
2 - Acculturation (culture maintenance)	.66
3 - General discrimination	.77
4 - Hostility	.85
5 - Self-esteem	.81
6 - Academic performance	.84

Table 37. Alpha coefficients for the study's variables at Time 2.

¹⁶ The majority of students who dropped out were 20 years old or more. Because of other difficulties that these older students often endure, they are more likely to drop out of undergraduate courses. Thus, we considered that these students might have dropped out because of personal issues and not because of important variables in our study such as perceptions of discrimination. This argument will be further explored in the discussion section.

Regarding the group identification measures, similar to the analysis at Time 1, correlations were computed instead of alpha coefficients. Overall, all dimensions were defined by strong intercorrelations between their items. Considering the items which measure identification with the group of international students, the items in ingroup ties ($r = .52, p < .001$), centrality ($r = .49, p < .001$), and ingroup affect ($r = .74, p < .001$) were moderately to highly correlated. A similar pattern was found for identification with own national group. Ingroup ties ($r = .72, p < .001$), centrality ($r = .51, p < .001$), and ingroup affect ($r = .74, p < .001$) were also moderately to highly correlated.

5.4.1.2 – Factor analysis

A factor analysis was also performed in order to ascertain if the group identification measure was assessing the three different dimensions of ingroup ties, centrality, and ingroup affect. Two factor analyses were conducted for identification with international students and own national group separately.

Firstly, identification with international students yielded the factor structure presented in Table 38. A principal component analysis with oblimin rotation revealed three factors, which explained 76.47% of the total variance. Factor 1 included the items from ingroup affect and explained 33.01% of the variance. Factor 2 included the items from ingroup ties and explained 27.90% of the variance. For last, factor 3 included the items from centrality and explained 15.56% of the variance. Secondly, identification with own national group yielded the factor structure summarised in Table 39. Similarly, a principal component analysis suggested 3 factors which explained 80.01% of the total variance. Factor 1 was composed by the items assessing ingroup ties and accounted for 37.14% of the variance. Factor 2 included the items assessing ingroup affect and explained 26.70% of the variance. Factor 3 was composed by the items assessing

centrality and explained 16.17% of the variance. From this analysis it was concluded that all items loaded onto the factors that they represented and thus analysis with this measure could be performed without reservations.

Items	1	2	3
1 - I have a lot in common with other international students	.136	.839	-.063
2 - Overall, being an international student has very little to do with how I feel about myself	.038	-.051	.939
3 – In general, I’m glad to be an international student	.922	.150	-.039
4 - I don’t feel a sense of being “connected” with other international students	.136	.712	.159
5 - The fact that I am an international student rarely enters my mind	-.267	.476	.641
6 – Generally, I feel good when I think about myself as an international student	.911	.100	-.054

Table 38. Factor loadings for identification with international students.

Items	1	2	3
1 - I have a lot in common with other students from my country	.126	.025	.874
2 - Overall, being an student from my country has very little to do with how I feel about myself	.086	.880	.055
3 – In general, I’m glad to be a student from my country	.902	-.019	.233
4 - I don’t feel a sense of being “connected” with other students from my country	.114	.257	.802
5 - The fact that I am a student from my country rarely enters my mind	-.083	.845	.200
6 – Generally, I feel good when I think about myself as an student from my country	.939	.028	.031

Table 39. Factor loadings for identification with students from own country.

5.4.1.3 – Descriptive analysis

Table 40 presents means, standard deviations, skewness, and kurtosis values for all variables. All variables ranged on a scale from 1 to 7 apart from percentage of friends from own country, the UK, and other countries that ranged from 0 to 100. Inspection of the means reveals identical scores to those found in the first part of this study. Willingness to participate in the host community scores were rather high ($M = 5.44$), whilst maintenance of own culture measure scores were around the midpoint of the scale ($M = 4.44$). Perceptions of discrimination were around the midpoint of the

scale ($M = 3.93$) suggesting that students did have some experience with discrimination. Participants' identification scores showed that individuals were identified with other international students regarding ingroup ties ($M = 4.71$), centrality ($M = 4.04$), and ingroup affect ($M = 5.34$). Participants were also identified with peers from their own country in the dimensions of ingroup ties ($M = 4.57$), centrality ($M = 4.13$), and ingroup affect ($M = 5.47$). Hostility revealed a low score ($M = 2.03$) suggesting that students did not feel hostility towards the host community. International students had relatively high self-esteem ($M = 5.40$) and were pleased with their academic performance ($M = 4.96$). Regarding their friendship networks, on average friends from their own country composed 39% of their friends, whilst friends of the UK and other foreign countries composed 38% and 35% respectively. Also, participants maintained frequent contact with their parents ($M = 5.49$) and with friends at home ($M = 4.48$).

Measure	Mean (SD)	Skewness	Kurtosis
1. Participation in larger society	5.44 (0.85)	-1.074	2.162
2. Maintenance of own cultural heritage	4.44 (0.77)	-.284	-.254
3. General discrimination	3.93 (1.12)	.135	-.660
4. Ingroup ties (IS)	4.71 (1.55)	-.410	-.741
5. Centrality (IS)	4.04 (1.56)	-.197	-.835
6. Ingroup affect (IS)	5.34 (1.43)	-.918	.171
7. Ingroup ties (OC)	4.57 (1.73)	-.504	-.902
8. Centrality (OC)	4.13 (1.59)	-.233	-.837
9. Ingroup affect (OC)	5.47 (1.28)	-.811	.056
10. Hostility towards the host community	2.03 (1.05)	1.651	3.754
11. Self-esteem	5.40 (0.95)	-.662	.662
12. Academic performance	4.96 (1.20)	-.782	-.053
13. Percentage of friends from own country	30.00 (25.36)	.589	-.932
14. Percentage of friends from the UK	38.48 (23.87)	.559	-.592
15. Percentage of friends from other foreign countries	34.87 (21.51)	.723	.108
16. Contact with parents at home	5.49 (1.39)	-.846	.030
17. Contact with friends at home country	4.48 (1.56)	-.376	-.743

Table 40. Descriptive statistics for all variables.

Transformations were performed for hostility and participation in the larger society as they showed high values of skewness and kurtosis. Because participation in the larger society was negatively skewed, we squared the scores of this measure. After this transformation, participation in the larger society was characterised by the following descriptive statistics: $M = 30.29$; $SD = 8.57$; skewness = -0.42 ; kurtosis = 0.15 . Identical to the analysis at Time 1, a logistic transformation was performed for hostility. The final descriptive statistics for this variable were: $M = 0.26$; $SD = 0.20$; skewness = 0.57 ; kurtosis = -0.47 .

The correlations between the key measured variables were also analysed (see Table 41). These correlations were very similar to those examined at the first time point. Perceived discrimination was associated with the different dimensions of identification with both international students and own national group. The higher the levels of perceived discrimination, the lower the ingroup affect with both international and own country students ($r = -.32, p < .001$ and $r = -.24, p = .010$). In contrast, perceived discrimination was positively related to centrality with international and own country students ($r = .19, p = .039$ and $r = -.24, p = .010$), indicating that the higher the levels of perceived discrimination, the higher the centrality of both group identities. Perceptions of discrimination were negatively associated with ingroup ties with international students ($r = -.21, p = .028$) but not with own national group ($r = -.13, p = .173$). Perceived discrimination was also related to the outcome variables. Correlations analysis suggested that the higher the levels of perceived discrimination, the higher the hostility towards the host community ($r = .31, p = .001$). In contrast, perceiving discrimination was associated with lower self-esteem ($r = -.35, p < .001$). Depending on the dimension, group identification was differently related to the outcome variables.

Centrality (with international and own country

Measures	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
1 - Acculturation (part. in larger society)	-																
2 - Acculturation (culture maintenance)	-.17	-															
3 - General discrimination	-.27*	.14	-														
4 - Ingroup ties (I.S.)	.11	.16	-.21*	-													
5 - Centrality (I.S.)	-.20*	.17	.19*	.20*	-												
6 - Ingroup affect (I.S.)	.11	.04	-.32**	.33**	-.08	-											
7 - Ingroup ties (O.C.)	.01	.41**	-.13	.49**	.16	.20*	-										
8 - Centrality (O.C.)	-.12	.25**	.22*	.05	.64**	-.17	.25**	-									
9 - Ingroup affect (O.C.)	.05	.33**	-.24*	.06	-.09	.53**	.21*	-.16	-								
10 - Hostility	-.31**	.12	.29**	-.04	.01	-.05	-.07	.02	-.08	-							
11 - Self-esteem	.37**	-.07	-.35**	.14	-.27**	.36**	.05	-.30**	.33**	-.16	-						
12 - Academic performance	.24**	-.13	-.17	.09	-.20*	.30**	-.02	-.19*	.27**	-.17	.57**	-					
13 - % of friends from own country	-.23*	.23*	-.08	.24**	.20*	-.09	.48**	.10	.18	-.02	-.09	-.17	-				
14 - % of friends from the UK	.17	-.18	.13	-.38**	-.26**	-.05	-.42**	-.10	-.06	-.05	.07	.20*	-.67**	-			
15 - % of friends from other countries	.06	-.07	-.04	.24*	.02	.21*	.01	.01	-.01	.13	.07	-.02	-.38**	-.22*	-		
16 - Contact with parents at home	-.06	.19*	-.01	.06	.03	-.06	.10	-.05	.13	-.14	.19*	.04	.13	-.16	-.02	-	
17 - Contact with friends at home country	-.17	.23*	-.05	-.04	.13	.04	.15	.12	.22*	-.10	.07	-.02	.21*	-.21*	-.08	.50**	-

Table 41. Intercorrelations for the key variables at time 2.

Note: I.S. = International Students; O. C. = Own Country

* p < .05 ** p < .01

students) was negatively associated with self-esteem ($r = -.27, p = .004$ and $r = -.30, p = .001$) and academic performance ($r = -.20, p = .035$ and $r = -.19, p = .040$), but positively associated with hostility towards the host community ($r = .31, p = .001$). In contrast, ingroup affect with international and country students was associated with higher levels of self-esteem ($r = .36, p < .001$ and $r = .33, p < .001$) and academic performance ($r = .30, p < .001$ and $r = .27, p = .004$). Ingroup ties with both group identities was not associated with any of the outcome variables.

5.4.1.4 – Analysis of the demographic variables

In this section ANOVAs and correlation coefficients were calculated with the different outcome variables and demographic information. Correlation analysis revealed that the outcome variables (hostility, self-esteem, and academic performance) were not related to age and time spent in the UK. In turn, analysis of variance suggested that there were no differences among nationality, religion, and subject of study among hostility, self-esteem, and academic performance. Similar to the data of the first questionnaire, men reported higher self-esteem ($M = 5.66$) than women ($M = 5.21$), $F(1,111) = 6.33, p = .013$. Men also reported higher hostility towards the host community ($M = 0.30$) than women ($M = 0.22$), $F(1,111) = 4.00, p = .048$. All the future analyses controlled for gender.

5.4.2 - *Rejection, group identification, and self-esteem*

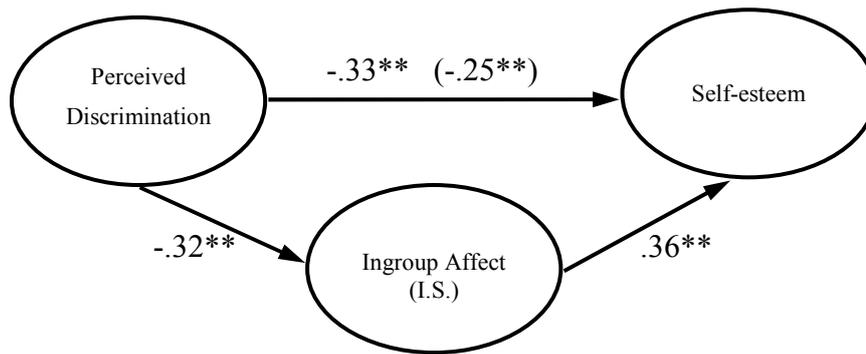
The analysis in this section began with by testing the rejection-identification model. Identical to Time 1 analysis, it was examined whether group identification mediated the relationship between perceived discrimination and self-esteem. More specifically, self-esteem was regressed on perceived discrimination while controlling for

centrality (or ingroup affect) and gender. Identification with international students and identification with own national group were examined separately.

The first analysis was performed on identification with international students. The analysis for centrality demonstrated that higher levels of perceived discrimination were related to higher centrality ($\beta = .19, t(112) = 2.08, p = .039$). In contrast, the higher the centrality, the lower the self-esteem ($\beta = -.27, t(112) = 2.90, p = .004$). When examined together, perceptions of discrimination and centrality were associated with lower self-esteem, ($\beta = -.30, t(112) = 3.39, p = .001$; $\beta = -.19, t(112) = 2.11, p = .037$). The Goodman (1960) test did not confirm a mediation effect of centrality, $z = -1.58, p = .113$. Furthermore, gender was a significant covariate $\beta = .19, t(112) = 2.14, p = .034$, indicating that men tend to rate their self-esteem higher than women.

The analysis for ingroup affect revealed that higher levels of perceived discrimination were related to lower ingroup affect ($\beta = -.32, t(112) = 3.59, p < .001$). In contrast, the higher the ingroup affect, the higher the participants' their self-esteem ($\beta = .36, t(112) = 4.04, p < .001$). When examined together, discrimination was associated with lower self-esteem, whilst ingroup affect was associated with higher self-esteem ($\beta = -.25, t(112) = 2.83, p = .006$; $\beta = .25, t(112) = 2.75, p = .007$). In sum, both direct and indirect (through ingroup affect) paths had a negative impact on self-esteem. The Goodman (1960) test confirmed the mediation effect, $z = -2.25, p = .025$. Figure 14 summarises the mediation effect of ingroup affect.

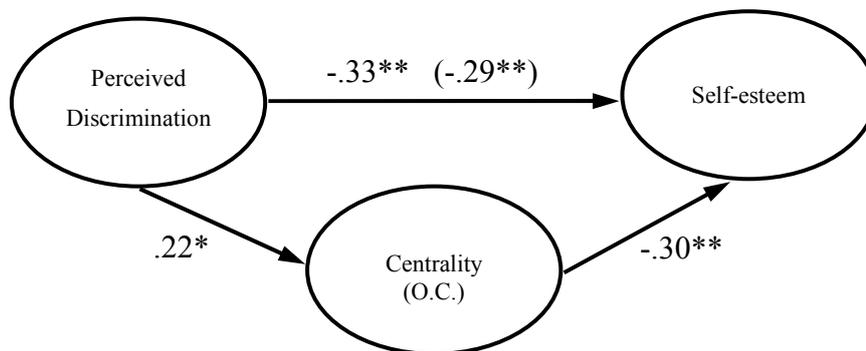
The analyses above demonstrated that the two group identification dimensions had opposing effects on self-esteem. In addition, perceived discrimination also exerted opposing effects on centrality and ingroup affect. Overall, our results indicated that identification with international students did not offer protection against perceptions of discrimination.



* $p < .05$ ** $p < .01$ I.S. = International students.
 Note: The number in parenthesis indicates the relationship between perceived discrimination and self-esteem after controlling for the mediator.

Figure 14. Rejection-identification model with ingroup affect with international students.

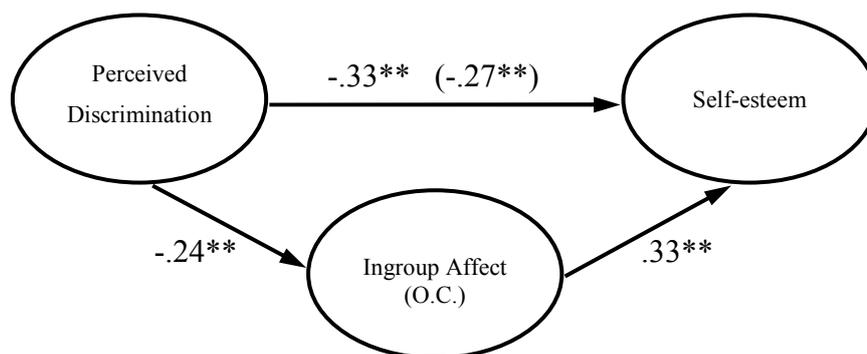
For identification with own national group similar patterns were revealed. Perceived discrimination was related to centrality ($\beta = .22, t(112) = 2.34, p = .021$). In contrast, centrality was associated with lower self-esteem ($\beta = -.30, t(112) = 3.33, p = .001$). When analysed in the same regression equation, it was demonstrated that higher levels of perceived discrimination and centrality were related to lower self-esteem ($\beta = -.29, t(112) = 3.27, p = .001$; $\beta = -.22, t(112) = 2.46, p = .015$). The Goodman (1960) test indicated a marginal mediation effect, $z = -1.77, p = .077$ (see Figure 15).



* $p < .05$ ** $p < .01$ O.C. = Own Country
 Note: The number in parenthesis indicates the relationship between perceived discrimination and self-esteem after controlling for the mediator.

Figure 15. Rejection-identification model with ingroup affect with international students.

Moreover, the analysis for ingroup affect revealed that higher levels of perceived discrimination were related to lower ingroup affect ($\beta = -.24$, $t(112) = 2.61$, $p = .010$). In contrast, the higher the ingroup affect, the higher their self-esteem was ($\beta = .33$, $t(112) = 3.72$, $p < .001$). When analysed together, it was found that higher levels of perceived discrimination were related to lower self-esteem, whilst higher levels of ingroup affect were associated with higher self-esteem ($\beta = -.27$, $t(112) = 3.10$, $p = .002$; $\beta = .26$, $t(112) = 3.03$, $p = .003$). In sum, both direct and indirect (through ingroup affect) paths had a negative impact on self-esteem (see Figure 16). The Goodman (1960) test confirmed the mediation effect, $z = -2.04$, $p = .042$.



* $p < .05$ ** $p < .01$ O.C. = Own Country.

Note: The number in parenthesis indicates the relationship between perceived discrimination and self-esteem after controlling for the mediator.

Figure 16. Rejection-identification model with ingroup affect with international students

Our data indicated that in a similar vein to identification with international students, centrality and ingroup affect had opposing effects on self-esteem. In addition, perceived discrimination exerted opposing effects on centrality and ingroup affect. Overall, results indicated that amongst international students, identification with own national group did not offer protection against perceptions of discrimination.

5.4.3 - Rejection, group identification, and other outcomes

We examined the mediation effect of group identification between perceived discrimination and two other outcomes: hostility and academic performance. Identification with international students and own national group were tested separately. We began by examining identification with international students. Hostility was regressed on perceived discrimination, while controlling for centrality and gender. It was found that hostility was predicted by perceptions of discrimination but not by centrality, $\beta = .31$, $t(112) = 3.42$, $p = .001$, and $\beta = -.02$, $t(112) = .25$, $p = .801$. This analysis indicated that the higher the levels of perceived discrimination, the higher the hostility towards the host community. It also indicated that centrality does not mediate the relationship between perceptions of discrimination and hostility. Gender was a significant covariate, $\beta = .23$, $t(112) = 2.55$, $p = .012$.

For the second regression equation centrality was substituted by ingroup affect. It was found that discrimination predicted hostility ($\beta = .31$, $t(112) = 3.32$, $p = .001$), but no mediation effects were found as ingroup affect did not predict hostility, $\beta = .02$, $t(112) = .21$, $p = .837$.

Identification with own national group revealed a similar pattern. The same procedure was followed by regressing hostility on perceived discrimination, while controlling for centrality and gender. It was found that hostility was predicted by perceptions of discrimination but not by centrality, $\beta = .31$, $t(112) = 3.40$, $p < .001$, and $\beta = -.02$, $t(112) = .22$, $p = .828$. Therefore, centrality could not potentially mediate the relationship between perceived discrimination and hostility.

For the second regression equation centrality was substituted by ingroup affect. Discrimination predicted hostility ($\beta = .30$, $t(112) = 3.28$, $p = .001$) but no mediation

effects were found as ingroup affect did not predict hostility, $\beta = -.02$, $t(112) = .21$, $p = .838$.

For academic performance, perceptions of discrimination were not associated with academic performance, $\beta = -.17$, $t(112) = 2.25$, $p = .080$. Because perceptions of discrimination were not related to academic performance, no further mediation analyses were performed. Gender was not a significant covariate, $\beta = .11$, $t(112) = 1.18$, $p = .240$.

5.4.4 - A rejection- identification-acculturation model

In this section we analysed a moderated mediation model. Specifically, we tested if the mediation effect of group identification between perceived discrimination and self-esteem would change as a function of the acculturation strategies. We followed the method proposed by Muller et al. (2005) by performing a moderated mediation analysis recurring to three different regression equations. All variables were centred and then separate analyses were performed for centrality and ingroup affect. Similar to the previous analysis, identification with international students and own national group were examined separately.

Results for centrality of identification with international students are summarised in Table 42.

Predictors	Self-esteem		Centrality (IS)	
	<i>B</i>	<i>t</i>	<i>b</i>	<i>t</i>
PD	-.26	2.98**	.12	1.23
PLS	.28	3.12**	-.12	1.23
OCM	.06	0.67	.08	0.83
PD x PLS	.06	0.63	.09	0.97
PD x OCM	-.02	0.27	.06	0.58
PLS x OCM	-.09	0.93	.11	1.05
PD x PLS x OCM	.17	1.75	-.14	1.33
Gender	.21	2.43*	-.10	1.10

Note. PD = perceived discrimination; PLS = participation in larger society;
OCM = own culture maintenance

* $p < .05$ ** $p < .01$

Table 42. Moderated mediation with centrality with international students (Time 2).

In the first equation (left column of Table 42), there was a main effect of perceptions of discrimination and also of participation in the larger society. The higher international students perceived discrimination, the lower their self-esteem. Also, the more international students were willing to participate in the host community, the higher their self-esteem. None of the interaction terms predicted self-esteem, indicating that the magnitude of the effect of perceived discrimination on self-esteem did not depend on the two acculturation dimensions. In a second regression (right column of Table 42), the interaction terms indicated that the two acculturation dimensions did not moderate the relationship between perceptions of discrimination and identification. Also, perceived discrimination was not associated with centrality. Thus, acculturation strategies could not possibly moderate the mediation effect of centrality and no further analyses were performed.

Performing the same analysis, Table 43 summarises the results for ingroup affect with international students. When the same predictors were regressed on ingroup affect similar results were found. Perceived discrimination was associated with lower ingroup

Predictors	Ingroup Affect (IS)	
	<i>b</i>	<i>t</i>
PD	-.31	3.26**
PLS	.05	0.50
OCM	.08	0.86
PD x PLS	.07	0.70
PD x OCM	.13	1.33
PLS x OCM	-.01	0.10
PD x PLS x OCM	-.01	0.04
Gender	.13	1.41

Note. PD = perceived discrimination; PLS = participation in larger society;
OCM = own culture maintenance **p* < .05 ***p* < .01

Table 43. Moderated mediation with ingroup affect with international students (Time 2).

affect. However, there were no moderation effects, as the interaction terms were not statistically significant. Hence, the acculturation strategies could not moderate the mediation effect of ingroup affect.

Results were then analysed for identification with own national group. Results for the analysis of centrality are summarised on Table 44. No main effects were found and perceived discrimination did not predict centrality. Acculturation strategies did not interact with perceptions of discrimination to impact on centrality. Due of the lack of a moderation effect, no further analyses were performed.

Predictors	Centrality (OC)	
	<i>b</i>	<i>t</i>
PD	.15	1.60
PLS	.03	0.29
OCM	.14	1.45
PD x PLS	.10	1.07
PD x OCM	-.02	0.21
PLS x OCM	.14	1.37
PD x PLS x OCM	-.16	1.80
Gender	-.13	1.45

Note. PD = perceived discrimination; PLS = participation in larger society;
OCM = own culture maintenance **p* < .05 ***p* < .01

Table 44. Moderated mediation with centrality with own national group (Time 2).

Analysis with ingroup affect revealed different findings (Table 45). Results indicated a main effect of perceptions of discrimination and also of own culture maintenance. The higher international students perceived discrimination, the lower their self-esteem. Also, the more international students maintained their cultural heritage, the higher was their self-esteem. None of the interaction terms predicted self-esteem, indicating that the magnitude of the effect of perceived discrimination on ingroup affect did not depend on the two acculturation dimensions.

Predictors	Ingroup affect (OC)	
	<i>b</i>	<i>t</i>
PD	-.31	3.54**
PLS	.04	0.44
OCM	.43	4.75**
PD x PLS	.14	1.60
PD x OCM	-.12	1.40
PLS x OCM	.08	0.88
PD x PLS x OCM	.16	1.67
Gender	.01	0.14

Note. PD = perceived discrimination; PLS = participation in larger society;
OCM = own culture maintenance * $p < .05$ ** $p < .01$

Table 45. Moderated mediation with ingroup affect with own national group (Time 2).

5.4.5 – Academic performance, friendship networks, and hostility

In this section we began by examining academic performance. As we saw in previous analyses, perceptions of discrimination did not interact with acculturation strategies. As such, no moderated mediation could potentially be found for academic performance. Furthermore, due to the lack of significant relationships between perceived discrimination, the different friendship networks, and academic performance, the supporting effect of friendship networks was not analysed either.

Finally, we analysed whether the effect of perceived discrimination on hostility would vary as a function of the different acculturation strategies. For this purpose we performed a regression analysis which tested the interaction between perceptions of discrimination and the acculturation strategies. Perceptions of discrimination, participation in the larger society, own culture maintenance, and its interaction terms were entered as predictors of a regression which had hostility as the outcome variable. Results reaffirmed that perceived discrimination increases hostility towards the host community, $\beta = .28$, $t(110) = 3.14$, $p = .002$. It was also found that participation in the larger society had a negative impact on hostility, $\beta = -.28$, $t(110) = 3.21$, $p = .002$. A higher preference to participate in the larger society was associated with lower hostility. There were no main effects for own culture maintenance. There was a marginally

significant 3-way interaction between the two acculturation dimensions and perceptions of discrimination, $\beta = .19$, $t(110) = 1.98$, $p = .051$. In other words, perceived discrimination had a different impact on hostility as a function of differences in both participation in larger society and own culture maintenance (see Figures 17 and 18). Simple slope analysis revealed that for those with a low score for participation in the larger society (Figure 17), hostility did not change as perceived discrimination increased, if they held a high score in maintenance of own culture (i.e. separation strategy), $\beta = .19$, $t(104) = 0.90$, $p = .373$. On the other hand, if students held a low score in maintenance of own culture (i.e. marginalisation strategy), hostility increased as perceived discrimination increased, $\beta = -.70$, $t(104) = 3.39$, $p = .001$. When students had a high score in participation in larger society (Figure 18), hostility did not change as perceived discrimination increased, if they also held a high score in maintenance of own culture (i.e. integration strategy), $\beta = .14$, $t(104) = 0.74$, $p = .461$. Similarly, if students held a low score in maintenance of own culture (i.e. assimilation strategy), hostility did not change as perceived discrimination increased, $\beta = -.02$, $t(104) = 0.10$, $p = .923$.

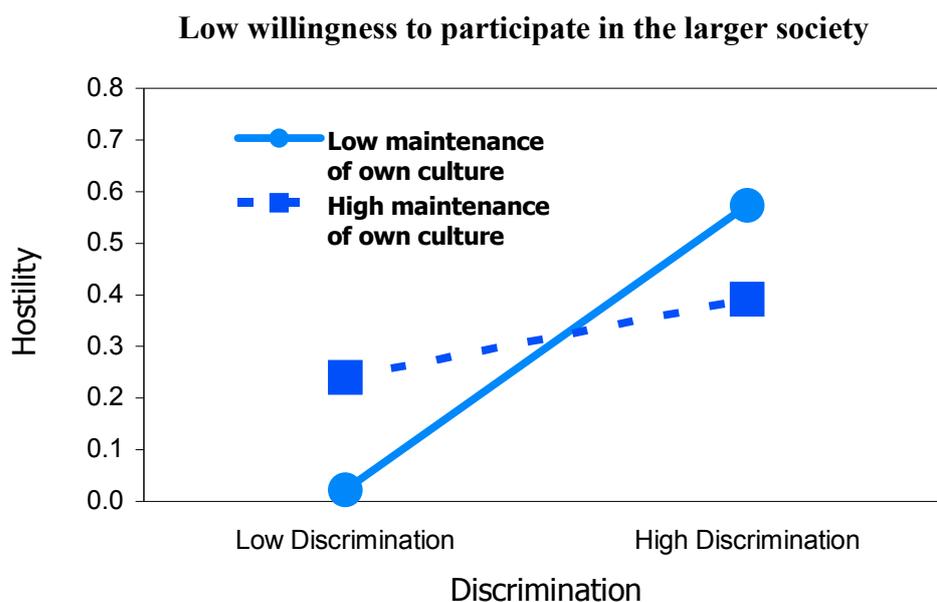


Figure 17. 3-way interaction: Impact of own culture maintenance for low levels of participation in the larger society.

High willingness to participate in the larger society

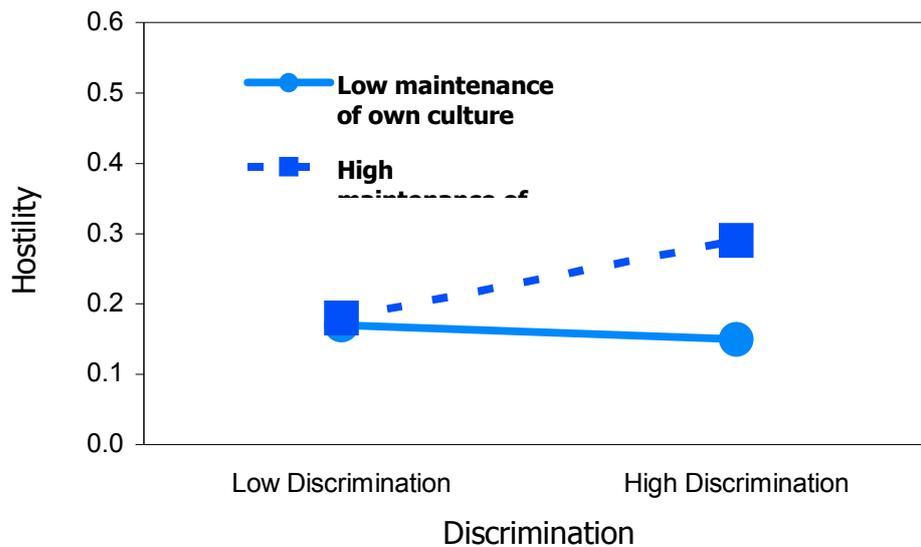


Figure 18. 3-way interaction: Impact of own culture maintenance for high levels of participation in the larger society.

5.4.6 – Summary of results

In order to facilitate the task of the reader, all important results for the two time points of the longitudinal research were summarised below (Tables 46 and 47).

<i>Time 1</i>	<i>Time 2</i>
Centrality (IS) mediated the relationship between perceived discrimination and self-esteem (see Figure 4, p. 183).	Centrality (IS) <i>did not</i> mediate the relationship between perceived discrimination and self-esteem
Ingroup affect (IS) marginally mediated the relationship between perceived discrimination and self-esteem (see Figure 5, p. 184).	Ingroup affect (IS) mediated the relationship between perceived discrimination and self-esteem (see Figure 14, p. 209).
Centrality (OC) mediated the relationship between perceived discrimination and self-esteem (see Figure 6, p. 185).	Centrality (OC) marginally mediated the relationship between perceived discrimination and self-esteem (see Figure 15, p. 209).
Ingroup affect (OC) mediated the relationship between perceived discrimination and self-esteem (see Figure 7, p. 185).	Ingroup affect (OC) mediated the relationship between perceived discrimination and self-esteem (see Figure 16, p. 210).

Note: I.S. = International students; O. C. = Own Country

Table 46. Summary of research findings for the two time points (part I).

<i>Time 1</i>	<i>Time 2</i>
Centrality and ingroup affect had opposing effects on self-esteem and PD. No effects were found for ingroup ties	Centrality and ingroup affect had opposing effects on self-esteem and PD. Ingroup ties (IS) was negatively associated with PD
Identification with IS and OC <i>did not</i> counteract the negative effects of PD on self-esteem	Identification with IS and OC <i>did not</i> counteract the negative effects of PD on self-esteem
Centrality (OC) mediated the relationship between discrimination and hostility (see Figure 8, p. 187).	Centrality (OC) <i>did not</i> mediate the relationship between discrimination and hostility
Centrality (IS) mediated the relationship between perceived discrimination and academic performance (see Figure 9, p. 188).	Centrality (IS) <i>did not</i> mediate the relationship between perceived discrimination and academic performance
Self-esteem mediated the relationship between perceived discrimination and academic performance (see Figure 10, p. 189).	Self-esteem <i>did not</i> mediate the relationship between perceived discrimination and academic performance.
Participation in the larger society moderated the mediation effect of centrality (OC) (see Table 35, p. 193).	Participation in the larger society <i>did not</i> moderate the mediation effect of centrality (OC) (Table 44, p. 214).
Acculturation strategies moderated the mediation effect of ingroup affect (OC) (see Table 36, p. 195).	Acculturation strategies <i>did not</i> moderate the mediation effect of ingroup affect (OC) (Table 45, p. 215).
Acculturation strategies <i>did not</i> moderate the relationship between perceived discrimination and hostility	Acculturation strategies moderated the relationship between perceived discrimination and hostility (see Figures 17 and 18, p. 216-7).

Note: I.S. = International students; O. C. = Own Country

Table 47. Summary of research findings for the two time points (part II).

5.5 - Discussion

The present study demonstrates the importance of taking into account different dimensions of social identification and acculturation strategies when studying the experiences of international students. Specifically, analysis of the two time points

indicated that the negative impact of perceived discrimination on self-esteem was mediated by ingroup identification. Perceived discrimination had different effects on cognitive (centrality) and affective (ingroup affect) components of identification with other international students and also with one's own country students. However, neither dimensions buffered against the negative consequences of rejection. This study also provided evidence that the rejection-identification model can vary as a function of individual acculturation strategies. More specifically, by maintaining ingroup identification in the face of group-based discrimination, students who endorsed a separation strategy were the only individuals who were able to protect their self-esteem. It was also found that increased importance and awareness of one's national identity (centrality with own country students) resulted in hostility toward the host community. Finally, our analysis showed that the relationship between perceptions of discrimination and hostility towards the host community can vary as a function of the different acculturation strategies endorsed by international students. That is, for students who endorsed a marginalisation strategy, perceiving discrimination was associated with hostility; whereas this association was not demonstrated for proponents of the other acculturation strategies.

Firstly, the results found for the two time points were in line with the rejection-identification model (Branscombe et al., 1999) concerning the association between perceived discrimination and low self-esteem. This finding is consistent with other work showing that perceiving that one's own group is devalued by the majority can have negative implications for the self-esteem of different minority groups (Bornman, 1999; Landrine & Klonoff, 1996). However, analysis of the two time points showed that minority group identification did not counteract the negative effects of rejection. Supporting previous research (Eccleston & Major, 2006; Gurin & Markus, 1989;

McCoy & Major, 2003), it was found that perceived discrimination was associated with increased centrality, which in turn was associated with low self-esteem. In line with previous studies examining ingroup affect (Crocker et al., 1994; Eccleston & Major, 2006; Luhtanen & Crocker, 1992), our results showed that perceived discrimination was associated with a negative evaluation of one's own group, which in turn was related to feelings of low self worth. Overall, in our study, minority group identification alone did not serve to counteract the negative effects of perceived discrimination.

5.5.1 - Acculturation strategies as a moderating variable

Although identification with international and other students from the same country appeared to be an ineffective mechanism for coping with perceived discrimination, our findings suggested that minority group identification can successfully counteract the negative effects of rejection under specific conditions. Specifically, analysis of the first time point showed that endorsing a separation strategy protected international students against the negative consequences of group-based discrimination. For proponents of integration, assimilation, and marginalisation strategies, perceived discrimination had negative consequences on their self-esteem.

Results from the first time point suggested that the extent to which perceived discrimination elicited the importance and awareness of one's own national identity (centrality with own country students) depended only on willingness to participate in the larger society. Importantly, the actions of minority group members who seek participation in the larger society (i.e. who value integration and assimilation strategies) are directed at enhancing intergroup contact. Indeed, Zagefka and Brown (2002) demonstrated that among the four acculturation strategies, integration is the strategy that best promotes favourable intergroup relations whereas a marginalisation strategy is the

least favourable to intergroup relations. Perceiving discrimination indicates to minority group members that their participation is not desirable. This clashes with minority group members' preferred acculturation strategy and enhances awareness of group boundaries (centrality) and feelings of belonging to a disadvantaged group. In turn, this has negative implications for their self-esteem.

On the other hand, other individuals are not interested in participating in the larger society and contact with other groups is avoided. In our study, those who were not interested in participating in the larger society tended to consider their own national group as an important membership to their self (centrality with own country students) across different levels of perceived discrimination. The pattern found suggests that for these individuals the focus tends to be on the ingroup. Thus, perceiving that their contact is not desired by the dominant group did not change the importance and salience of one's minority group (centrality), and in this way self-esteem was also maintained.

When examining the moderation effect of acculturation on ingroup affect with own country students, the results permitted to combine the two acculturation dimensions, and thus to analyse results for the four acculturation strategies separately. For proponents of integration strategies, perceiving discrimination signalled that their contact is not valued. These individuals might feel pressure to assimilate into the host culture, which was partially reflected in negative feelings towards own minority group membership (ingroup affect), resulting in low self-esteem. Furthermore, those who endorse an assimilation strategy often avoid interaction with other members of their cultural group or even hide their cultural background (Berry, 2005). Thus, these individuals by avoiding their own group are attempting an individual strategy, with the aim of being included in the host group. Perceiving discrimination, to a certain extent, emphasises the importance of this individual effort. More specifically, because their

minority group is rejected, it is suggested that international students could only be included in the host group if they did not belong to the discriminated group. In this case, perceiving discrimination can act as a reinforcement of one's preferred acculturation strategy. In these cases, the students' preferred acculturation strategy matches perceived inter-group relations and as a consequence it does not affect their self-esteem levels.

For proponents of a separation strategy, because contact with the dominant group is not valued, perceiving discrimination did not interfere with how they felt about their own group. The focus of these individuals is on their minority group, thus perceiving that their contact is not valued might involve strengthening ingroup cohesion by sharing a collective positive evaluation of their group. In this way, the self-esteem of these individuals is not affected in the face of group-based rejection. In contrast, proponents of a marginalisation strategy do not value either cultural group. The fact that they do not have a cultural group for support was perhaps reflected in the direct negative impact of discrimination on evaluations towards the ingroup (ingroup affect), which in turn resulted in low self-esteem.

Of particular importance to this thesis was the fact that the moderated mediation effects were only found for an existing identity (identification with own country students) but not with a new identity such as identification with other international students. Perhaps new identities would require more time to allow identification to be associated with well-being. In fact, by looking at the correlation matrix of the two time points, the relationship between the different dimensions of identification with international students and self-esteem appears stronger in the second time point.

Finally, a comparison between the results found for the two time points suggests that centrality was a strong mediator during the students' first academic year. During students' second year however, it appears that ingroup affect can be more useful as a

mediator for understanding the effects of group-based discrimination. Indeed, centrality mediated the relationship between perceived discrimination and self-esteem at Time 1, whilst in second year this relationship is mediated by ingroup affect instead. The relationship between perceived discrimination and hostility also supported this argument. In other words, in students' first year it appears that the cognitive dimension of group identification determines how perceived discrimination affects most of the outcome variables. During the second year, the importance of the cognitive dimension is substituted by ingroup affect. In fact, new group identities are formed upon arrival and defined in the intergroup context (McLemore, 1991; Phinney, 1990). As such, it is not surprising that identities such as the international student identity or national identity become particularly activated upon arrival into the UK. The liking for the group (ingroup affect) represents a more stable construct often related to self-esteem (Luhtanen & Crocker, 1992) and therefore may need more time to tie to perceptions of discrimination.

5.5.2 - Rejection, group identification, and other outcomes

When examining the rejection-identification model with hostility at the first time point, it was found that the negative effect of perceptions of discrimination on hostility was explained by centrality (with own country students) and not by ingroup affect. According to social identity theory (Tajfel & Turner, 1979), perceiving discrimination makes intergroup boundaries salient, which in turn enhances ingroup favouritism. Furthermore, being discriminated against can be a threat to ingroup status, and threats to a valued group membership can increase derogation of the threatening group (Branscombe & Wann, 1994). For international students, perceived discrimination was associated with an increasing awareness of own national group (centrality with own

country students) membership, which in turn elicited hostility toward the host community. Furthermore, for proponents of a marginalisation strategy, perceived discrimination was associated with higher hostility. Despite not being able to protect their self-esteem in the face of discrimination, those who endorse a marginalisation strategy may pave the path for intergroup conflict by increasing hostility towards the host community. This finding is consistent with previous research in acculturation arguing that marginalisation strategies often result in the most problematic relationships between minority groups and majority (Bourhis et al., 1997).

When we examined academic performance, only centrality with international students mediated the relationship between perceived discrimination and this outcome. Identification with an existing identity such as identification with one's own country students did not mediate this relationship. Perhaps being an international student is more strongly associated with academic performance when compared to being a student from a foreign country. Furthermore, personal self-esteem was important in understanding the negative effect of perceptions of discrimination on academic performance. Perceiving discrimination lowered the self-esteem of international students, which in turn had negative consequences for their academic performance. Low self-esteem has been often regarded as a possible cause for poor academic achievement (Covington, 1984; Lane, Lane, & Kyprianou, 2004; Purkey, 1970; Scheirer & Kraut, 1979). However, in this study results went further by showing that amongst international students perceived discrimination was associated with low self-esteem, which in turn was linked to poor academic performance. In this context, investigating the conditions under which international students protect their self-esteem in the face of perceived discrimination becomes important if we are to understand how international students adapt in their academic environment.

No mediation effects were found for friendship networks. That is, students' friendship networks did not counteract the negative effects of perceived discrimination on self-esteem or academic performance. Previous research has shown that social support provided by friendship networks can be beneficial for the academic performance of international students (Quintrell & Westkwook, 1994; Abe et al., 1998). To a certain extent our research supported these findings by indicating that contact with British friends was associated, for example, with better academic performance. However, none of the examined friendship networks served to alleviate the negative effects of rejection.

5.5.3 - Limitations

Although most results were supportive of our predictions, there are important limitations that warrant some discussion. The first limitation relates to the relatively low alpha of participation in the larger society (.62) assessed during the students' second year. However, when analysing the correlation matrix of this variable at the two time points, it is possible to see that the relationships with other variables were maintained. Also, the lack of a moderated mediation effect in the second time point was mostly due to the lack of a mediation effect of the identification dimensions. As we will see in the next chapter, high order effects were found with participation in the larger society assessed at Time 2. A problematic low alpha would have not allowed such effects to be detected.

Secondly, older students were more likely to drop out of the study. One of the possible explanations is that it is more likely for older students to drop out of undergraduate studies. These students often have their own dependents and face additional difficulties that most of their younger counterparts do not need to endure. Furthermore, when analysing the data of the first time point, age was not a significant

covariate. In order to test this argument we examined whether Time 1's results would be different if we excluded the students who dropped out at Time 2. For parsimony reasons this analysis was not included in the results section. However, results supported our argument indicating that there were no differences in Time 1's results after excluding the students who had not participated in the second time point.

Also, Branscombe et al.'s (1999) study demonstrated that in the face of group based discrimination individuals tend to increase minority group identification, which in turn protects their self-esteem. We found this buffering effect of group identification for proponents of separation. However, it is important to observe that patterns were somewhat different from those found in the Branscombe et al.'s (1999) study. For international students who endorsed a separation strategy, identification with own national group did not change across different levels of perceived discrimination and thus their self-esteem was maintained. Importantly, most of the international students perceived discrimination on the basis of being foreigners (e.g. being discriminated because they are not British), differing from other traditional minority groups where discrimination is targeted at their nationality, race, ethnicity, or religion. Therefore, the national group membership of international students might be less important when compared to other minority groups where their specific nationality can be more clearly the basis for being discriminated against. It is possible that because of this difference, identification with own national group was maintained and did not increase, like it would be expected from the pattern observed in Branscombe et al.'s (1999) study.

Although there has been an association between ingroup ties and well-being in past research, no associations were found for ingroup ties and self-esteem in this study. One of the reasons for that might relate to the fact that a large proportion of students do not have enough compatriots in Scotland to develop these ties with. Despite the large

representation of some nationalities such as the Chinese, German, or Polish, most of other international students' networks can be limited to a few compatriots. In this case, students might develop ties with other international students of different nationalities than their own. However, as it was hypothesised before, more time might be needed to develop ties to a new group and identity. This might be supported by the fact that ingroup ties with international students at the second time point were related to several variables including perceptions of discrimination when compared to no correlations at the first time point.

Finally, another important limitation concerns the causal relationships between variables. Due to the cross-sectional nature of our analyses, cause and effect could not be properly inferred. In the next chapter however, this concern will be further explored. The next chapter will also serve to develop in more detail some of the research findings discussed in this chapter and address some of the limitations raised in this section.

5.5.4 - Conclusion

This study sheds light on how group-based discrimination impacts on different components of group identification and how these components can protect international students from rejection. Expanding the rejection-identification model (Branscombe et al., 1999), it was found that group-based rejection had opposing effects on cognitive and affective components of group identification. However, neither of these components served to protect international students' self-esteem. It was found that the protective effect of minority group identification depended upon individual preferences relating to participation in the larger society and maintenance of own culture. A separation strategy served to protect international students' self-concept from the harmful appraisals of the dominant group, whereas the other acculturation strategies left these students vulnerable to the actions of the dominant group.

Chapter 6. LONGITUDINAL ANALYSIS

Overview

The present chapter aimed to address some of the limitations of previous research. A longitudinal perspective permitted us to perform a detailed analysis of the rejection-identification-acculturation model's causal relationships. Results replicated Chapter's 5 findings and confirmed the predicted causal directions after an analysis using the full longitudinal data and different statistical techniques. More specifically, it was found that the negative impact of perceptions of discrimination on psychological well-being could be attenuated by ingroup affect. As we anticipated, this effect varied as a function of student's acculturation strategies. Subsequently, building on important work on the adaptation of international students in other countries (e.g. US, Australia, and Canada), we examined the causes of problematic academic experiences. Thirdly, we tested the effects of social support with international students in the UK. It was examined whether social support would relate to students' experiences of discrimination, their psychological well-being, and academic performance. Finally, the implications of our findings for both academic experiences of international students and social psychological theory were discussed.

This chapter set out to address the research questions presented in Chapter 3 by analysing the longitudinal data of our study. Chapter 5 addressed most of the questions pertaining to our model by performing a cross-sectional analysis of the data of the first and second time points separately. In the present chapter however, we addressed the nature of the relationships in our model, with special emphasis on change and causality by modelling students' responses at both time points. In order to facilitate the reader's task, we started by providing a brief overview of the questions and predictions that were examined in this chapter.

Support for the rejection identification model (e.g. Garstka et al., 2004; Schmitt et al., 2002) has been demonstrated among cross-sectional studies. Although one of the causal relationships of the model was tested before (i.e. impact of perceived discrimination on minority group identification, Jetten et al., 2001), a longitudinal examination of all the causal relationships has never been performed. This is particularly important in a field where other models contradict the causal relationships of the rejection-identification model (e.g. Crocker & Major, 1989; Crocker et al., 1998). In addition, as we outlined in Chapter 2, the adaptation of individuals in a new cultural environment may change over time. It is thus crucial to understand how the acculturation strategies of international students might develop over the period of their stay. This is a particularly important point if we are to understand how international students develop and change their strategies to cope with group-based discrimination. The following questions concern the causal relationships between the different variables in the model, and the effect of time and adaptation. More specifically, in this chapter we aimed at addressing and testing the following questions and predictions:

(i) *Do international students' perspectives change with time?*

Prediction 1 – Due to adaptation, international students will report higher self-esteem, and lower depression, anxiety, and negative emotions in their second year than during first year.

Previous research does not allow us to formulate predictions about other possible changes. Nevertheless, we also aim to examine whether there will be changes to the extent international students perceive discrimination, hostility, academic performance, English skills, permeability, stability, legitimacy, social identification, physical and cultural differences, and whether there will be any differences in students' friendship networks.

(ii) *How are acculturation strategies formed and how do they develop?*

P2 – The two acculturation dimensions will vary and change independently of one another.

P3 – Perceived cultural and physical differences will decrease willingness to participate in the larger society and will increase willingness to maintain own cultural heritage.

P4 – The perception that group boundaries are impermeable will discourage international students to participate in the larger society. Furthermore, perceptions of legitimacy and stability will increase students' willingness to participate in the larger society.

(iii) *What are the causes of problematic academic experiences?*

P5 – Perceiving discrimination during international students' first year will have a

negative impact on their psychological well-being, which in turn will have negative consequences for their academic performance in second year.

P6 – Perceived cultural differences during students' first year will be associated with a problematic academic performance during their second year. Although there is no support from previous research, we will also test whether perceived physical differences exert a negative impact on academic performance.

(iv) *Do the causal relationships work in the directions we are predicting?*

P7 - Perceptions of discrimination will impact on minority group identification and not the opposite.

P8 – The rejection-identification-acculturation model will provide a better fit for the longitudinal data than the other possible causal alternatives.

P9 – Our model will successfully predict other outcomes such as anxiety, depression, negative emotions, hostility, and academic performance.

(v) *How do perceptions of discrimination relate to willingness to make attributions to discrimination?*

P10 – Perceptions of global discrimination will have a stronger impact than willingness to make attributions to prejudice on minority group identification and the outcome variables (i.e. self-esteem, hostility, anxiety, depression, and negative affect).

Without making any specific predictions we will also test the two possible causal effects between perceptions of discrimination and willingness to make attributions to prejudice.

(vi) *Which factors might impact on students' choices of friendship networks?*

P11 – Willingness to participate in the larger society will predict contact with students from the UK or other countries. In contrast, it is anticipated that willingness to maintain own cultural background will predict contact with co-national friends, and contact with parents and other friends at home. It is also predicted that English skills, and few (rather than many) cultural and physical differences will predict contact with British friends.

P12 – Contact with co-national friends will have negative implications for students' English skills; whereas contact with British friends will predict English competence.

(vii) Does contact with co-national, British, or other foreign friends impact on students' academic experiences?

P13 – Due to discrepant results found in the literature, this thesis aims to test the relationship between social networks and perceptions of discrimination, self-esteem, and social identification, but without making any specific predictions for these relationships. We predict however, that a possible positive effect of contact with friends from a particular network on well-being will vary as a function of students' desire for contact with that network. Thus, it is anticipated that contact with friends from a given social network will have a positive effect on well-being only when this contact is desired by international students.

(viii) *Does social support improve international students' experiences in the UK?*

P14 – Participation in university activities and clubs during students' first year will result in higher self-esteem and lower anxiety, depression, and negative emotions during their second year.

All the predictions above will be tested in this chapter using regression analyses. However, in the questionnaire used in this thesis, some constructs were assessed by multiple measures. For example, perceptions of global discrimination, day-to-day discrimination, outgroup privilege, and willingness to make attributions to prejudice were all part of the broader construct of perceived discrimination. Additionally to the regression analyses testing the predictions above, we will use structural equation modelling in the end of this chapter to factor together different measures into the broad constructs of perceived discrimination and psychological well-being. We will use this technique to replicate some of the regression analyses. Namely, we will test the causal relationships between perceived discrimination and minority group identification, and also between perceived discrimination and psychological well-being.

Lastly, we will use structural equation modelling to further understand the relationship between perceptions of discrimination, acculturation, and perceived permeability. One of the principal relationships hypothesised by our model is that the impact of perceived discrimination on minority group identification is moderated by acculturation strategies. It is thus particularly important to examine the relationship between the independent variable and the moderator. For example, it is crucial that acculturation strategies do not have a causal impact on perceived discrimination. According to previous research with cross-sectional data, acculturation strategies were

not associated with perceived discrimination (Zagefka & Brown, 2002). However, in this study we will perform a longitudinal analysis to further understand this relationship, anticipating that both variables will not be causally related. Secondly, it is predicted that perceived group permeability will have implications for perceptions of discrimination and willingness to participate in the larger society. Due to the lack of previous research, no specific predictions were formulated for the relationships tying perceived permeability to perceived discrimination and willingness to participate in the larger society. Structural equation modelling will be performed to compare different models testing the possible causal relationships.

6.1 – Results

The analyses included in this chapter were divided into four separate parts. Firstly and before initiating the test of our predictions, we examined the psychometric strength of all the variables that were included in the questionnaire but were missing in Chapter 5's analyses (e.g. outgroup privilege and negative emotions). Secondly, we examined the extent to which our variables changed from students' first year to their second year of studies. This was followed by a replication of the analyses in Chapter 5, with the difference that in this chapter we adopted a longitudinal perspective by examining together data from students' first and second years. Finally, we used structural equation modelling in order to test more complex models addressing the causal relationship between perceived discrimination and psychological well-being, and also the relationship between perceived group permeability, perceived discrimination, and willingness to participate in the larger society.

6.1.1 – Part I - Preliminary analyses

6.1.1.1 – Reliability analysis

The reliability analysis included all the variables that were part of the questionnaire but were not analysed in previous chapters. Table 48 presents the alpha coefficients for all measures, suggesting that most of them were highly reliable. However, depression (at Time 1) and permeability (at Time 2) had moderate alpha coefficients between .60 and .70. As both alpha values were rather close to the .70 threshold and deleting items did not improve their alpha coefficients, no changes were sought for these variables. A reason for maintaining these two scales related to the fact that both measures were reliable at either Time 1 or Time 2. In contrast, positive affect revealed an unsatisfactory reliability coefficient at both time points (.46 and .43). Reliability could not be improved by deleting any of the scale's items, so it was decided to exclude positive affect from subsequent analyses.

Regarding stability and legitimacy, due to these measures being composed by two items each, correlations were computed instead of alpha coefficients. Overall, the two measures were defined by strong intercorrelations between their items. The two items that were used to measure stability were moderately correlated at Times 1 ($r = .38, p < .001$) and 2 ($r = .46, p < .001$). Items that were used to assess legitimacy were highly correlated at Times 1 ($r = .65, p < .001$) and 2 ($r = .71, p < .001$). Our study also had other variables such as perceived physical differences, perceived cultural differences, and participation in university societies, which were assessed by just one item and therefore were only explored in the next section.

Measure	Time1 α	Time 2 α
1 - Day-to-day discrimination	.91	.89
2 - Outgroup-privilege	.86	.87
3 - Willingness to attribute to prejudice	.84	.83
4 - Positive affect	.46	.43
5 - Negative affect	.82	.77
6 - Anxiety	.79	.78
7 - Depression	.64	.73
8 - Permeability	.74	.65
9 - Perceived English skills	.89	.89

Table 48. Alpha coefficients for the study's remaining variables.

6.1.1.2 – Descriptive statistics

Table 49 present means, standard deviations, skewness, and kurtosis values for the variables added to this chapter's analyses, showing data from the first and second time points. All variables ranged from in scales from 1 to 7, apart from anxiety and depression that ranged from 1 to 4, and willingness to make attributions to prejudice that ranged from 0 to 100. Inspection of the means revealed that students had some experiences of day-to-day discrimination ($M = 2.50$ at both time points), but that discrimination might have not been pervasive. Students also perceived that the host group was fairly privileged ($M = 4.05$ at Time 1 and $M = 4.32$ at Time 2). Willingness to attribute a given event to prejudice was around the midpoint of the scale ($M = 46.17$ at Time 1 and $M = 43.71$ at Time 2), suggesting that the sample did attribute some events to prejudice. Students showed relatively low levels of anxiety and depression ($M = 1.99$ and $M = 1.58$ at Time 1, and $M = 2.01$ and $M = 1.56$ at Time 2). Moreover, stability scores were around the midpoint of the scale ($M = 4.61$ at Time 1 and $M = 4.59$ at Time 2) suggesting that the

Measure	Time 1			Time 2		
	Mean (SD)	Skewness	Kurtosis	Mean (SD)	Skewness	Kurtosis
1 - Day-to-day discrimination	2.50 (1.11)	.682	-.109	2.50 (1.06)	.487	-.683
2 - Outgroup-privilege	4.05 (1.73)	-.199	-1.05	4.32 (1.56)	-.389	-.516
3 - W. to make attrib. to prejudice	46.17 (22.09)	.001	-.625	43.71 (20.46)	-.032	-1.00
4 - Negative affect	3.97 (1.34)	-.195	-1.071	3.84 (1.23)	-.014	-.761
5 - Anxiety	1.99 (0.51)	.573	.614	2.01 (0.50)	.282	.066
6 - Depression	1.58 (0.42)	1.285	3.147	1.56 (0.44)	1.135	1.121
7 - Stability	4.61 (1.32)	-.171	-.579	4.59 (1.27)	-.254	-.137
8 - Legitimacy	2.64 (1.54)	.612	-.640	2.53 (1.62)	.668	-.898
9 - Permeability	4.84 (1.32)	-.515	-.359	4.88 (1.16)	-.457	-.390
10 - Perc. English skills	5.67 (1.12)	-.928	.782	5.93 (0.98)	-.988	1.025
11 - Perc. physical differences	4.10 (1.86)	-.133	-1.207	4.04 (1.79)	.003	-1.094
12 - Perc. cultural differences	3.39 (1.59)	.172	-1.101	3.10 (1.41)	.274	-.957

Table 49. Descriptive statistics for all variables at Times 1 and 2.

sample tended to perceive the relationship between international students and the dominant group as rather stable. Permeability scores were also around the midpoint of the scale ($M = 4.84$ at Time 1 and $M = 4.88$ at Time 2), indicating that the boundaries between international students and the dominant group were perceived to be somewhat opened for group mobility. The relatively low scores in legitimacy ($M = 2.64$ at Time 1 and $M = 2.53$ at Time 2) suggest that international students perceived that it would be unfair for the host group to have a higher status than their group. Perceived English skills scores were above the midpoint of the scale ($M = 5.67$ at Time 1 and $M = 4.88$ at Time 2) indicating that students perceived that their command of English was relatively good. Furthermore, perceived physical and cultural differences were around the midpoint of the scale ($M = 4.10$ and $M = 3.39$ at Time 1, and $M = 4.04$ and $M = 3.10$ at Time 2), suggesting that the sample perceived to be relatively different in cultural and physical

terms from the dominant group. Finally, we also asked international students whether they participated in university societies related to their country or culture. During their first year, thirty-nine students (25%) participated in these events, whilst 114 (75%) did not participate. During their second year, 30 international students (27%) participated in events related to their country or culture, whilst 82 (73%) did not join any of the available societies.

Skewness and kurtosis values show that most measures had a distribution approximate to a normal distribution. According to Tabachnik and Fidel (2001), as a rule of thumb, only when skewness values are above 1 or kurtosis above 2 should transformations be sought. In this case, the only variable that deviates from the normal distribution is depression with a high positive skewness (and also high positive kurtosis at Time 1). In order to address this concern a logarithmic transformation was performed. After the transformation, the new variable was approximate to the normal distribution ($M = 0.18$; $SD = 0.11$; skewness = .412, kurtosis = .084 at Time 1 and $M = 0.18$; $SD = 0.11$; skewness = .526, kurtosis = -.248 at Time 2).

6.1.2 – Part II - Changes from students' first to second year

In our analyses it was examined whether students' responses to the various measures changed over time. In order to test the extent to which some variables might change over time an analysis of variance with repeated measures was performed.

We started by examining the acculturation strategies. The two acculturation dimensions and the interaction between both were tested. The main effects served to track any changes to the acculturation dimensions, whilst the interaction allowed us to assess

any changes to the product of the two dimensions (i.e. the acculturation strategies). Results indicated a significant main effect of willingness to participate in the larger society. International students in their second year were less willing to participate in the larger society ($M = 4.40$) than in their first year ($M = 5.49$), $F(1,108) = 116.47$, $p < .001$. In contrast, students in their first year ($M = 4.95$) did not change their willingness to maintain their own culture after the transition to their second year ($M = 4.93$), $F(1,108) = .20$, $p = .655$. There were also no significant effects of the interaction between the two acculturation dimensions, $F(1,108) = .81$, $p = .372$.

Secondly, all the measures related to perceptions of discrimination (i.e. global discrimination, day-to-day discrimination, outgroup privilege, and willingness to make attributions to prejudice) were tested using the same procedures. Analysis of variance indicated that for global discrimination there were no differences between the two time points, $F(1,110) = 1.40$, $p = .240$. For day-to-day discrimination, there were no differences between the two time points either, $F(1,110) = .03$, $p = .866$. However, analysis with outgroup privilege showed a marginal effect suggesting that individuals in their second year ($M = 4.32$) tend to perceive more outgroup privilege than in their first year ($M = 4.04$), $F(1,112) = 3.92$, $p = .050$. Finally, for willingness to make attributions to prejudice there were no differences between the two time points, $F(1,108) = 2.134$, $p = .147$.

Next, we analysed hostility towards the dominant group. Results showed that students in their second year ($M = 2.03$) tend to feel more hostility towards the dominant group than when they were in their first year ($M = 1.77$), $F(1,112) = 7.72$, $p = .006$.

The psychological well-being variables revealed different results. Students did not change their levels of self-esteem in the period of two years, $F(1,110) = 1.52$, $p = .220$.

Anxiety and depression did not change between the two time points either, $F(1,109) = .07, p = .789$ and $F(1,110) = 1.49, p = .225$. Finally, there was a marginal effect for negative emotions, suggesting that students in their first year ($M = 4.04$) experience more negative emotions than in their second year ($M = 3.84$), $F(1,112) = 3.21, p = .076$.

For academic performance there were no differences between the two years, $F(1,111) = .01, p = .936$. However, a marginal effect of perceptions of English skills suggested that students in their second year ($M = 5.93$) tend to increase their language confidence when compared to their first year ($M = 5.78$), $F(1,112) = 3.03, p = .085$.

Analyses with the sociostructural variables indicated that neither perceptions of stability, legitimacy, nor permeability changed within the two years, $F(1,110) = .24, p = .623$, $F(1,112) = .14, p = .706$, and $F(1,111) = .10, p = .753$.

Different results were found for the social identification measures. For identification with international students, there were no differences for ingroup ties and ingroup affect between the two time points, $F(1,111) = 1.45, p = .232$ and $F(1,111) = .87, p = .354$. For centrality however, there was a marginal effect suggesting that when compared to their first year ($M = 4.31$), students in their second year ($M = 4.04$) tend to decrease the centrality of being an international student, $F(1,111) = 3.80, p = .054$. For identification with own nationality, there were no differences between the two years for ingroup ties, centrality, and ingroup affect, $F(1,108) = 1.62, p = .207$, $F(1,109) = .03, p = .871$, and $F(1,108) = 1.56, p = .214$.

Students' friendship networks and contact with parents and other friends were also analysed. Analysis of variance shows that contact with friends from own country, UK, and other foreign countries did not change within the two years, $F(1,111) = .22, p = .638$, $F(1,110) = .66, p = .419$, and $F(1,111) = .73, p = .394$. However, there was a marginal

effect for contact with their parents, suggesting that students in their second year ($M = 5.49$) tend to have less contact with their parents than in their first year ($M = 5.68$), $F(1,112) = 3.34$, $p = .070$. The same pattern was found for contact with other friends at home, suggesting that students in their second year ($M = 4.48$) tend to have less contact with friends at home than in their first year ($M = 4.75$), $F(1,112) = 3.80$, $p = .054$.

Finally, physical and cultural differences were also analysed. Analysis of variance indicated that in the two years students did not change how they perceived physical and cultural differences, $F(1,112) = .12$, $p = .728$ and $F(1,112) = 2.56$, $p = .112$.

Overall, we did not observe much change in international students' perspectives across the first two years in university. However, it was shown that international students tend to decrease their willingness to participate in the larger society in their second year of studies. Students also tended to increase their levels of hostility towards the dominant group in their second year. Results also indicated a tendency to increase perceptions of outgroup privilege, the frequency of negative emotions, and language confidence. Finally, there was a tendency to decrease both the centrality with the group of international students and the contact with other friends and parents at home.

6.1.3 – Part III - Longitudinal analysis of the rejection-identification-acculturation model

In this section we replicated some of the analyses included in Chapter 5. Namely, we replicated the analyses testing the rejection-identification model and our moderated mediation model. The same variables were examined, but in this section data from Time 1 and Time 2 were analysed together. This type of approach served to test the causal relationships between the study's variables.

6.1.3.1 – The causal relationship between perceptions of discrimination and minority group identification

In Chapter 1 we saw that there is some controversy around the relationship between perceptions of discrimination and minority group identification. As outlined in that chapter, one of the key arguments of the rejection-identification model is based on the notion that perceptions of discrimination lead to increased group identification. However, this argument has been challenged by others (e.g. Crocker & Major, 1989) who assert that the higher individuals identify with their minority groups, the higher they tend to perceive discrimination. In this section we thus started by testing the prediction that discrimination will have a causal effect on minority group identification. For testing this prediction several regression analyses were performed. We began with six regression equations, one for each of the three dimensions of social identification with both identification with international students and own country students. Each dimension assessed at Time 2 was introduced as an outcome variable. Perceptions of global discrimination assessed at Time 1 were introduced as the predictor for all the six equations. Importantly, in each equation we controlled for the respective social identification dimension at Time 1. Subsequently, we tested the reverse causal relationship by introducing perceptions of global discrimination assessed at Time 2 as the outcome variable. All the equations controlled for global discrimination assessed at Time 1. Finally, for the total of six equations we separately introduced each of the dimensions of social identification as a predictor.

For identification with international students, the first regression equation indicated that perceptions of global discrimination (at Time 1) did not predict ingroup ties (at Time 2), $\beta = -.11$, $t(107) = 1.36$, $p = .176$. Perceptions of global discrimination did

not predict centrality either; $\beta = .13$, $t(107) = 1.48$, $p = .141$. However, there was a marginal effect of perceptions of global discrimination on ingroup affect, $\beta = -.14$, $t(107) = 1.75$, $p = .083$. For international students, the higher they perceived global discrimination in their first year, the lower their ingroup affect towards the group of international students in their second year.

For identification with own country a different pattern was observed. Perceptions of global discrimination did not predict ingroup ties or ingroup affect; $\beta = -.05$, $t(104) = .61$, $p = .544$, $\beta = -.10$, $t(104) = 1.22$, $p = .224$. However, perceptions of global discrimination predicted centrality, $\beta = .21$, $t(105) = 2.34$, $p = .021$. The higher international students perceived discrimination in their first year, the higher the centrality with own country in their second year.

In this second part we tested the reversed causal relationship. For identification with international students, perceptions of global discrimination (at Time 2) were neither predicted by centrality (at Time 1) nor ingroup affect (at Time 1); $\beta = .06$, $t(107) = .63$, $p = .528$, $\beta = -.13$, $t(107) = 1.52$, $p = .132$. However, perceptions of discrimination were predicted by ingroup ties, $\beta = -.19$, $t(107) = 2.35$, $p = .021$. The higher the ingroup ties with other international students in students' first year, the lower the extent to which students perceived discrimination in their second year.

For identification with own country a different pattern was revealed. Neither ingroup ties, nor centrality, nor ingroup affect predicted perceptions of discrimination; $\beta = -.05$, $t(104) = .56$, $p = .579$, $\beta = .01$, $t(105) = .09$, $p = .929$, and $\beta = -.02$, $t(104) = .24$, $p = .808$.

On balance, depending on the dimension of social identification, different causal paths were found. Regression analyses demonstrated that perceptions of discrimination at

Time 1 resulted in increasing centrality with own country at Time 2. Moreover, there was a trend for decreasing ingroup affect with the group of international students at Time 2 when discrimination was perceived in students' first year of studies. The reverse causal explanation was only corroborated by ingroup ties. Those who developed strong ties with other international students during their first year, tended to perceive less discrimination in their second year of studies.

6.1.3.2 – Rejection-identification-acculturation model

In this section the model of this thesis was examined longitudinally. To reiterate, in Chapter 2 we predicted that the protective effect of minority group identification would change as a function of individual acculturation strategies. In Chapter 5 we tested this prediction with a cross-sectional analysis of our data. In this analysis we adopted the same strategy of Chapter 5, and tested a moderated mediation model using Muller et al.'s (2005) method. As previously outlined in Chapter 5, this method consists of three regression equations. In sum, in the first equation the outcome variable (self-esteem) should be regressed on the independent (perceived discrimination), the two moderators (the acculturation dimensions), and their interaction terms. In the second regression, the mediator (group identification) should be regressed on the same predictors that were included in the first equation. Finally, in the third equation the outcome variable (self-esteem) should be regressed on all the previous predictors, the mediator, and the interaction terms between the mediator and moderators. We introduced in every equation perceptions of discrimination at Time 1 and subsequently all the other variables at Time 2. Importantly, we controlled for the respective outcome variable assessed at Time 1 for every regression equation. All variables were centred and separate analyses for ingroup

ties¹⁷, centrality, and ingroup affect were performed. Similar to previous analysis, identification with international students and own national group were examined separately.

We began by testing the first regression equation analysing the relationship between perceptions discrimination, acculturation, and their interaction terms (see Table 50). Results indicated a main effect of perceptions of discrimination. The higher international students perceived discrimination in their first year, the lower their self-esteem in their second year. None of the interaction terms predicted self-esteem, indicating that the magnitude of the effect of perceived discrimination on self-esteem did not depend on acculturation. Thus, the first condition for moderated mediation was met.

Predictors	Self-esteem (T2)	
	<i>b</i>	<i>t</i>
PD (T1)	-.18	2.07*
PLS (T2)	.16	1.93
OCM (T2)	-.04	0.53
PD X PLS	.08	0.96
PD X OCM	.08	0.92
PLS X OCM	-.02	0.20
PD X PLS X OCM	-.06	0.70
Gender	.05	0.69
Self-esteem (T1)	.50	5.53***

Note. PD = perceived discrimination; PLS = participation in larger society; OCM = own culture maintenance

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

Table 50. Longitudinal moderated mediation with international students.

¹⁷ In Chapter 5 the moderated mediation analysis focused only on centrality and ingroup affect. Ingroup ties were not tested as this variable did not relate to any of the other variables. However, the longitudinal analysis performed in section 6.1.3.1 showed that ingroup ties can have an impact on perceptions of discrimination. Hence, ingroup ties were included in the moderated mediation analysis.

For the second step we performed regression equations analysing ingroup ties, centrality, and ingroup affect separately (see Table 51). For ingroup ties (left column of Table 51), and centrality with the group of international students (middle column of Table 51), perceptions of discrimination at Time 1 did not predict any of the social identification dimensions at Time 2. The interaction terms also indicated that acculturation strategies did not moderate the relationship between perceptions of discrimination and identification. Taken together, these findings show that there were no mediation effects of ingroup ties and centrality, and that there were no moderation effects of the acculturation strategies. Thus, no further analyses were performed with ingroup ties and centrality.

Predictors	Ingroup ties (T2)		Centrality (T2)		Ingroup affect (T2)	
	<i>b</i>	<i>t</i>	<i>b</i>	<i>t</i>	<i>b</i>	<i>t</i>
PD (T1)	-.10	1.20	.08	0.80	-.19	2.25*
PLS (T2)	.07	0.81	-.12	1.36	-.08	0.88
OCM (T2)	.04	0.53	.07	0.88	.11	1.34
PD X PLS	.01	0.13	.01	0.12	.13	1.52
PD X OCM	.06	0.74	.10	1.13	.20	2.46*
PLS X OCM	-.03	0.29	.11	1.19	.15	1.71
PD X PLS X OCM	-.08	0.85	.01	0.03	.09	0.97
Gender	.04	0.50	-.07	0.91	.05	0.58
Ingroup ties (T1)	.58	7.08***				
Centrality (T1)			.51	5.43***		
Ingroup affect (T1)					.57	6.87***

Note. PD = perceived discrimination; PLS = participation in larger society; OCM = own culture maintenance

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

Table 51. Longitudinal moderated mediation with international students.

In contrast, ingroup affect with the group of international students (right column of Table 51) revealed different results. Results showed a main effect of perceptions of discrimination, indicating that the higher students perceived discrimination in their first

year, the lower they valued their membership as an international student in their second year. Additionally, there was an interaction effect of perceptions of discrimination and willingness to participate in the larger society. In other words, perceived discrimination had a different impact on ingroup affect as a function of participation in larger society (see Figure 19). Simple slope analysis revealed that for those with a low score in participation in the larger society, ingroup affect decreased as perceived discrimination increased, $\beta = -.47$, $t(100) = 3.54$, $p < .001$. However, for students who were interested in participating in the larger society, ingroup affect did not change when perceived discrimination increased, $\beta = -.09$, $t(100) = .66$, $p = .512$. Overall, analyses with ingroup affect confirmed that perceptions of discrimination had an impact on ingroup affect and that the acculturation strategies moderated this relationship. It was thus important to further analyse the relationship between ingroup affect and self-esteem and test whether ingroup affect could mediate the relationship between perceived discrimination and self-esteem.

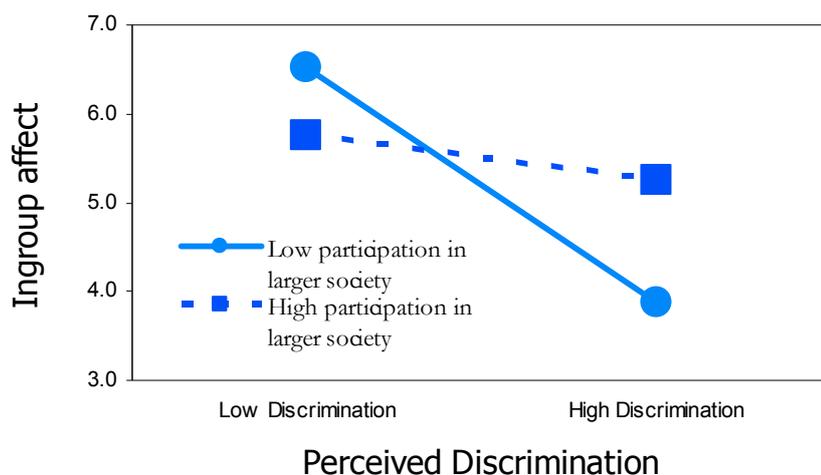


Figure 19. Longitudinal 2-way interaction for ingroup affect with international students.

Table 52 summarises the third step followed for ingroup affect. Regression results indicated that after controlling for ingroup affect the negative effect of perceptions of discrimination (at Time 1) on self-esteem is no longer statistically significant. However, ingroup affect was not associated with self-esteem so it could not possible mediate the relationship between perceived discrimination and self-esteem. In sum, the acculturation strategies moderated the relationship between perceptions of discrimination and ingroup affect. However, ingroup affect was not associated with self-esteem, failing to counteract the negative impact of discrimination on students' self-esteem.

Predictors	Self-esteem (T2)	
	<i>b</i>	<i>t</i>
PD (T1)	-.18	1.97
PLS (T2)	.16	1.83
OCM (T2)	-.05	0.68
PD X PLS	.08	0.83
PD X OCM	.08	0.92
PLS X OCM	-.03	0.40
PD X PLS X OCM	-.08	0.92
Self-esteem (T1)	.49	5.06***
Gender	.04	0.53
IA (T2)	.08	0.96
IA X PLS	.03	0.33
IA X OCM	.09	1.11
IA X PLS X OCM	-.01	0.09

Note. PD = perceived discrimination; PLS = participation in larger society; OCM = own culture maintenance; IA = ingroup affect. * $p < .05$ ** $p < .01$ *** $p < .001$

Table 52. Longitudinal moderated mediation with international students.

For identification with own country the same analysis was performed. The first step for testing moderated mediation concerns the effect of perceptions of discrimination, acculturation, and their interaction on self-esteem, which was already analysed in Table 50 (p. 245). For the second step, we ran a separate regression analysis for ingroup ties,

centrality, and ingroup affect (see Table 53). Ingroup ties (left column of Table 53) were not predicted by perceptions of discrimination (at Time 1). Hence, no mediation effect of ingroup ties could be possible. There was however, a main effect of willingness to maintain own culture on ingroup ties. For international students, the higher the willingness to maintain their own culture, the higher the ingroup ties. The interaction terms also indicated that willingness to maintain own culture moderated the relationship between perceptions of discrimination and ingroup ties. Nevertheless, as ingroup ties could not possibly mediate the relationship between perceptions of discrimination and self-esteem, no further analyses were performed.

Predictors	Ingroup ties (T2)		Centrality (T2)		Ingroup affect (T2)	
	<i>b</i>	<i>t</i>	<i>b</i>	<i>t</i>	<i>b</i>	<i>t</i>
PD (T1)	-.11	1.34	.20	2.04*	-.20	2.35*
PLS (T2)	-.09	1.06	.01	0.11	-.11	1.35
OCM (T2)	.24	2.94**	.11	1.23	.14	1.72
PD X PLS	-.06	0.77	.06	0.58	.01	0.15
PD X OCM	.23	2.94**	-.01	0.05	.07	0.91
PLS X OCM	.09	1.09	.17	1.67	.07	0.86
PD X PLS X OCM	-.12	1.36	.13	1.27	-.23	2.62*
Gender	.03	0.34	-.11	1.21	.01	0.02
Ingroup ties (T1)	.47	5.73***				
Centrality (T1)			.32	3.27**		
Ingroup affect (T1)					.50	5.91***

Note. PD = perceived discrimination; PLS = participation in larger society; OCM = own culture maintenance

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

Table 53. Longitudinal moderated mediation with own national group.

For centrality (middle column of Table 53), results indicated a main effect of perceptions of discrimination (at Time 1) on centrality. Thus, for international students, the higher they perceived discrimination during their first year, the higher the centrality in their second year. However, the interaction terms indicated that there were no moderation

effects of acculturation. Thus, acculturation strategies could not possibly moderate the mediation effect of centrality¹⁸. In contrast, ingroup affect with own country (right column of Table 53) revealed different results. There was a main effect of perceptions of discrimination, indicating that the higher students perceived discrimination in their first year, the lower they valued their own country identity in their second year. Additionally, a 3-way interaction between the two moderators and perceptions of discrimination was revealed. In other words, perceived discrimination had a different impact on ingroup affect as a function of differences in both participation in larger society and own culture maintenance (see Figure 20). Simple slope analysis revealed that for those with a low score for participation in the larger society (upper part of Figure 20), ingroup affect did not change as perceived discrimination increased, when students held a high score in maintenance of own culture (i.e. separation strategy), $\beta = .12$, $t(95) = .72$, $p = .475$. On the other hand, if students held a low score in maintenance of own culture (i.e. marginalisation strategy), ingroup affect decreased as perceived discrimination increased, $\beta = -.45$, $t(95) = 2.31$, $p = .023$. When students had a high score in participation in larger society (lower part of Figure 20), ingroup affect decreased as perceived discrimination increased, when they held a high score in maintenance of own culture (i.e. integration strategy), $\beta = -.30$, $t(95) = 2.03$, $p = .045$. On the other hand, if students held a low score in maintenance of own culture (i.e. assimilation strategy), ingroup affect did not change as perceived discrimination increased, $\beta = .03$, $t(100) = .18$, $p = .858$.

¹⁸ Nevertheless, we still tested the mediation effect of centrality on self-esteem. Results revealed a direct effect of perceptions of global discrimination (at Time 1) on self-esteem (at Time 2), $\beta = -.19$, $t(96) = 2.31$, $p = .023$. However, no mediation effects were found as centrality was not associated with self-esteem, $\beta = -.09$, $t(96) = 1.16$, $p = .248$.

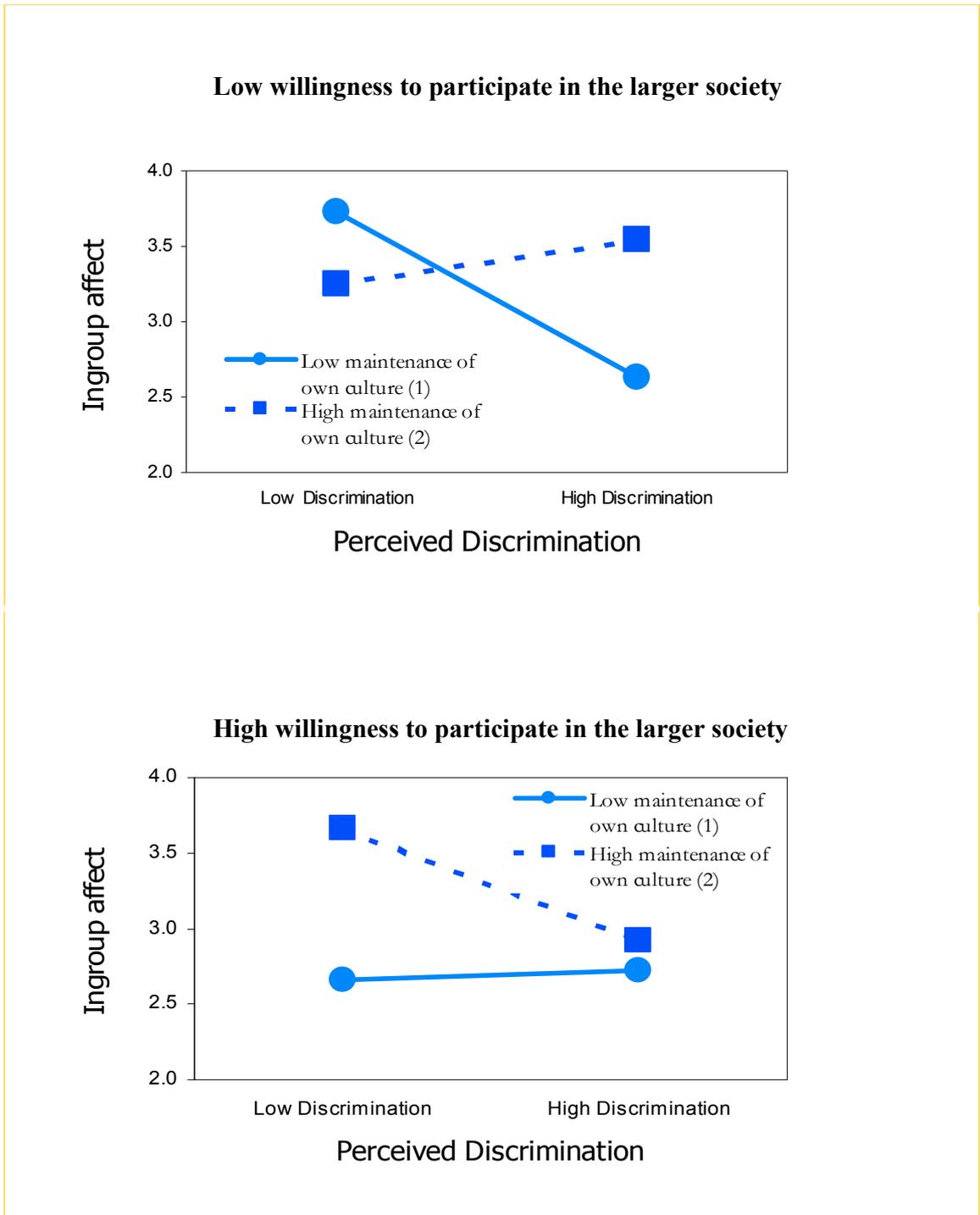


Figure 20. Longitudinal 3-way interaction with ingroup affect.

As perceived discrimination interacted with acculturation strategies to impact on ingroup affect, we proceeded with further analysis examining a moderated mediation effect. In the third regression (see Table 54) results demonstrated that self-esteem was predicted by ingroup affect, showing that the higher international students valued their group, the higher their self-esteem. Importantly, self-esteem was no longer predicted by perceived discrimination once we controlled for ingroup affect. Apart from participation in the larger society, all the other variables and products did not predict self-esteem. In sum, identically to the analysis in Chapter 5, the performed regression equations revealed that once we controlled for ingroup affect, the overall effect of perceived discrimination on self-esteem is reduced. It was also found that the indirect effect via ingroup affect varies in function of the acculturation dimensions (see Table 53, p. 249).

Predictors	Self-esteem (T2)	
	<i>b</i>	<i>t</i>
PD (T1)	-.12	1.41
PLS (T2)	.21	2.48*
OCM (T2)	-.09	1.09
PD X PLS	.07	0.87
PD X OCM	.01	0.20
PLS X OCM	-.13	1.45
PD X PLS X OCM	.05	0.60
Self-esteem (T1)	.50	5.63***
Gender	.05	0.61
IA (T2)	.19	2.18*
IA X PLS	-.01	0.08
IA X OCM	-.01	0.07
IA X PLS X OCM	-.19	1.79

Note. PD = perceived discrimination; PLS = participation in larger society; OCM = own culture maintenance; IA = ingroup affect. * $p < .05$ ** $p < .01$ *** $p < .001$

Table 54. Longitudinal moderated mediation with own national group.

An inspection of the results for the overall model demonstrated that when discrimination is perceived, proponents of integration or marginalisation strategies tend to decrease ingroup affect (Figure 20, p. 251), which in turn had a negative impact on self-esteem. In contrast, those who valued separation and assimilation strategies tend to maintain levels of ingroup affect (Figures 20, p. 251), which served to maintain their self-esteem levels. Thus, the indirect effect of perceived discrimination on self-esteem (via ingroup affect) was negative for those who valued an integration or marginalisation strategy but neutral for proponents of separation and assimilation strategies. In all the analyses above we controlled for gender, but this variable was not a significant covariate.

6.1.3.2 – The reversed causal explanation

The reversed causal relationship hypothesised by other models was also examined within our model. More specifically, it was tested whether the moderated mediation effect would hold with social identification as the independent variable and discrimination as the mediator. In order to examine this hypothesis we followed our previous approach and used the Muller et al.'s (2005) three-step method. We tested a moderated mediation model with the social identification dimensions assessed at Time 1, and subsequently the acculturation dimensions, perceptions of discrimination, and self-esteem assessed at Time 2. In this section we were selective and presented only the results that had implications for our predictions.

For the first step we started by examining identification with international students. We began by examining ingroup ties, centrality, and ingroup affect separately. As we previously analysed in this chapter, ingroup ties (at Time 1) had a negative impact on perceptions of discrimination (at Time 2). Regression analysis showed that there were no

moderation effects of the two acculturation strategies, $\beta = -.05$, $t(100) = .53$, $p = .594$. Furthermore, results indicated that ingroup ties (at Time 1) did not predict self-esteem (at Time 2), $\beta = -.01$, $t(100) = .16$, $p = .874$. Thus, perceptions of discrimination could not possibly mediate the relationship between ingroup ties and self-esteem. When analysing centrality, it was also found that centrality (at Time 1) did not predict self-esteem (at Time 2), $\beta = -.12$, $t(100) = 1.31$, $p = .192$. As already analysed, centrality (at Time 1) did not predict perceptions of discrimination (at Time 2) either, $\beta = .05$, $t(100) = .45$, $p = .654$; and the acculturation strategies did not moderate the relationship between centrality and discrimination, $\beta = .04$, $t(100) = .37$, $p = .714$. No further analyses were performed with centrality. In addition, ingroup affect (at Time 1) did not predict self-esteem (at Time 2), $\beta = .01$, $t(100) = .06$, $p = .951$. Furthermore, as we previously analysed, ingroup affect (at Time 1) did not predict perceptions of discrimination (at Time 2), $\beta = -.09$, $t(100) = 1.10$, $p = .276$. The acculturation strategies did not moderate the relationship between ingroup affect and perceptions of discrimination, $\beta = -.13$, $t(100) = 1.59$, $p = .116$. Discrimination could not possibly mediate a relationship between ingroup ties and self-esteem. As such, no further analyses were performed.

Identification with own country revealed similar effects when we examined the first step of moderated mediation. Ingroup ties (at Time 1) did not predict self-esteem (at Time 2), $\beta = .04$, $t(97) = .48$, $p = .634$. As already examined, ingroup ties (at Time 1) did not predict perceptions of discrimination (at Time 2) either, $\beta = -.08$, $t(97) = .82$, $p = .413$. There were no moderation effects of the acculturation strategies, $\beta = .09$, $t(97) = .91$, $p = .365$. No further analyses were performed for ingroup ties. Additionally, no effects were found for the relationship between centrality (at Time 1) and self-esteem (at Time 2), $\beta = .03$, $t(98) = .35$, $p = .725$. As previously demonstrated, centrality (at Time 1) did not

predict perceptions of discrimination (at Time 2) either, $\beta = -.01$, $t(98) = .16$, $p = .877$. No moderation effects of the acculturation strategies were found, $\beta = .04$, $t(98) = .38$, $p = .704$. Thus, no further analyses were performed for centrality. Finally, ingroup affect (at Time 1) did not predict self-esteem (at Time 2), $\beta = .15$, $t(97) = 1.66$, $p = .101$. As already tested, ingroup affect (at Time 1) did not predict perceptions of discrimination (at Time 2) either, $\beta = -.08$, $t(97) = .76$, $p = .452$. No moderation effects were found with the acculturation strategies, $\beta = -.04$, $t(97) = .35$, $p = .728$. Overall, all the analyses above showed that perceptions of discrimination could not possibly mediate the relationship between minority group identification and self-esteem. Thus, our data did not support the reversed causal relationship. Our longitudinal study with international students provided further evidence for the causal paths defined by the rejection-identification model.

6.1.3.3 – Hostility, well-being, and academic performance

According to our previous analysis, a moderated mediation effect was only found with ingroup affect with own country. In this section we tested the rejection-identification-acculturation model with ingroup affect and other outcomes, i.e. negative emotions, depression, anxiety, hostility, and academic performance. The same three-step procedure that has been followed in our analyses was performed. We initiated by examining well-being measures, followed by hostility and academic performance. Table 55 summarises the results for the regression equations required for the first step, analysing the effects of perceptions of global discrimination, acculturation strategies, and their interactions on negative emotions, depression, and anxiety. Regression results showed that perceived discrimination (at Time 1) did not predict negative emotions, depression, or anxiety (at Time 2). It was also found that willingness to participate in the

larger society interacted with own culture maintenance to impact on anxiety. None of the other interaction terms were statistically significant.

Predictors	Negative emotions (T2)		Depression (T2)		Anxiety (T2)	
	<i>b</i>	<i>t</i>	<i>b</i>	<i>t</i>	<i>b</i>	<i>t</i>
PD (T1)	.03	0.32	.01	0.13	.02	0.15
PLS (T2)	-.16	1.89	-.22	2.30*	-.17	1.83
OCM (T2)	-.04	0.51	.09	1.00	.08	0.96
PD X PLS	-.07	0.83	-.06	0.62	-.08	0.97
PD X OCM	-.06	0.76	-.11	1.27	-.09	1.07
PLS X OCM	-.03	0.30	-.13	1.35	-.11	1.24
PD X PLS X OCM	.04	0.50	.01	0.09	.06	0.64
Gender	.01	0.07	-.02	0.21	.01	0.02
Negative emotions (T1)	.56	6.480***				
Depression (T1)			.41	4.15***		
Anxiety (T1)					.54	6.32***

Note. PD = perceived discrimination; PLS = participation in larger society; OCM = own culture maintenance

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

Table 55. Moderated mediation with own national group (other psychological well-being outcome variables).

Similar effects were found for hostility and academic performance (Table 56). Perceptions of discrimination did not predict hostility or academic performance. Additionally, none of the interaction terms predicted the outcome variables. There was only a main effect of participation in the larger society on hostility, indicating that a higher willingness to participate in the larger society was associated with lower hostility. Gender was a significant covariate in the analysis with hostility, suggesting that men tended to feel more hostile towards the dominant group.

Predictors	Hostility (T2)		Academic performance (T2)	
	<i>b</i>	<i>t</i>	<i>b</i>	<i>t</i>
PD (T1)	-.01	0.06	-.12	1.28
PLS (T2)	-.20	2.24*	.17	1.85
OCM (T2)	.13	1.64	-.03	0.34
PD X PLS	.01	0.04	.01	0.06
PD X OCM	-.10	1.15	.08	0.92
PLS X OCM	.02	0.26	.10	1.05
PD X PLS X OCM	.15	1.68	-.02	0.20
Gender	.17	2.16*	-.02	0.19
Hostility (T1)	.50	5.89***		
Academic performance (T1)			.44	4.92***

Note. PD = perceived discrimination; PLS = participation in larger society; OCM = own culture maintenance; IA = ingroup affect. * $p < .05$ ** $p < .01$ *** $p < .001$

Table 56. Moderated mediation with own national group (hostility and academic performance as outcome variables).

Up to this point we tested a mediation effect according to the four-step method proposed by Baron and Kenny (1986). The first of these steps requires that the independent variable should have an impact on the outcome variable. In this study this requirement is not met as perceptions of global discrimination are not related to negative emotions, depression, anxiety, hostility, or academic performance. However, other research has argued that when the mediator is a suppresser variable (such as minority group identification in our model¹⁹), there can be a mediation effect even if independent and outcome variables are not related (Kenny, Kashy, & Bolger, 1998). Hence, demonstrating that the independent variable is associated with the mediator and that the mediator is associated with the outcome variable are the fundamental requirements for a

¹⁹ In this thesis and following the rejection-identification model, it was predicted that perceived discrimination would have a negative effect on self-esteem. It was further predicted that this negative effect would be attenuated by a positive indirect effect of minority group identification linking perceptions of discrimination to self-esteem. Thus, it was predicted that minority group identification would be a suppresser variable.

mediation effect (Kenny et al., 1998)²⁰. Therefore, we decided to proceed with further analyses.

The second step for testing moderated mediation required to examine the impact of perceptions of global discrimination on ingroup affect and whether this relationship would be moderated by the acculturation strategies. These findings had already been examined (see Table 53, p. 249), showing that perceptions of global discrimination had a negative impact on ingroup affect. In addition, the acculturation strategies moderated the relationship between perceptions of global discrimination and ingroup affect (see Figure 20, p. 251).

Tables 57 and 58 summarise the results of the third step of the moderated mediation model. This third step indicated that ingroup affect was a significant predictor of negative emotions, anxiety, and academic performance. For international students, the higher their ingroup affect, the lower their anxiety and frequency of negative emotions. In contrast, for these students, the higher their ingroup affect, the higher their perceived academic performance. Taken together, these findings suggested that our moderated mediation model also holds for these outcome variables. It was demonstrated however, that depression and hostility are not predicted by ingroup affect, indicating that ingroup affect did not mediate the impact of perceived discrimination on depression and hostility.

²⁰ See Jetten et al. (2001) for a similar argument.

Chapter 6. Longitudinal analysis

Predictors	Negative emotions (T2)		Depression (T2)		Anxiety (T2)	
	<i>b</i>	<i>t</i>	<i>b</i>	<i>t</i>	<i>b</i>	<i>t</i>
PD (T1)	-.05	0.57	-.02	0.16	-.06	0.66
PLS (T2)	-.14	1.62	-.23	2.30*	-.20	2.13*
OCM (T2)	.02	0.23	.09	0.93	.14	1.59
PD X PLS	-.11	1.29	-.09	0.92	-.10	1.05
PD X OCM	-.12	1.29	-.13	1.27	-.06	0.66
PLS X OCM	-.05	0.54	-.08	0.76	-.04	0.37
PD X PLS X OCM	.01	0.12	-.06	0.57	-.01	0.14
Negative emotions (T1)	.57	6.60***				
Depression (T1)			.37	3.72***		
Anxiety (T1)					.54	6.19***
Gender	-.01	0.11	-.11	0.11	-.01	0.06
IA (T2)	-.23	2.48*	-.13	1.19	-.21	2.16*
IA X PLS	-.07	0.65	-.02	0.17	-.06	0.56
IA X OCM	-.17	1.82	-.16	1.56	-.02	0.15
IA X PLS X OCM	-.14	1.29	.06	0.48	.08	0.66

Note. PD = perceived discrimination; PLS = participation in larger society; OCM = own culture maintenance; IA = ingroup affect. * $p < .05$ ** $p < .01$ *** $p < .001$

Table 57. Moderated mediation with own national group (mediation of ingroup affect).

Predictors	Hostility (T2)		Academic performance (T2)	
	<i>b</i>	<i>t</i>	<i>b</i>	<i>t</i>
PD (T1)	-.02	0.17	-.06	0.68
PLS (T2)	-.16	1.70	.24	2.53*
OCM (T2)	.14	1.52	-.08	0.83
PD X PLS	-.01	0.06	.03	0.35
PD X OCM	-.11	1.21	.05	0.49
PLS X OCM	-.05	0.53	-.06	0.55
PD X PLS X OCM	.17	1.71	.09	0.90
Hostility (T1)	.49	5.66***		
Academic performance (T1)			.42	4.83**
Gender	.16	1.99*	-.03	0.36
IA (T2)	-.03	0.26	.20	1.99*
IA X PLS	.07	0.58	.10	0.85
IA X OCM	-.04	0.37	.05	0.53
IA X PLS X OCM	-.17	1.45	-.26	2.22*

Note. PD = perceived discrimination; PLS = participation in larger society; OCM = own culture maintenance; IA = ingroup affect. * $p < .05$ ** $p < .01$ *** $p < .001$

Table 58. Moderated mediation with own national group (mediation of ingroup affect).

6.1.4 - Part IV – Analysis of specific relationships between variables

6.1.4.1 – The causes of problematic academic experiences

Another important focus of our analyses was to understand the relationship between the study's variables. More specifically, we were interested in the causal paths between those variables that were important for the experiences of international students in the UK. We began these analyses by testing whether self-esteem and other psychological well-being variables (anxiety, depression, and negative emotions) would mediate the relationship between perceived discrimination and perceived academic performance. However, we could not test a mediation effect as perceptions of global discrimination during students' first year were not associated with perceived academic performance during their second year, $\beta = -.12$, $t(107) = 1.43$, $p = .156$. In this case, we did not expect psychological well-being to be a suppresser variable. Thus, there were no possible mediation effects and no further analyses were performed.

Subsequently, it was tested whether perceived cultural and physical differences during students' first year would be associated with a problematic academic performance during their second year. Regression results indicated that neither perceived cultural differences nor perceived physical differences (at Time 1) predicted students' perceived academic performance (at Time 2), $\beta = .11$, $t(108) = 1.17$, $p = .246$ and $\beta = -.07$, $t(108) = .73$, $p = .467$.

6.1.4.2 – How international students form their social networks

If we are to understand the impact of international students' social networks on their academic experiences it is important to examine how these networks are formed. In this section it was tested whether acculturation strategies, perceived English skills,

physical and cultural differences would predict students' social networks (i.e. contact with friends from the same country, from the UK, from other countries, and also contact with other friends and parents at home). A regression analysis was performed where the two acculturation dimensions, an interaction term between the two acculturation dimensions, perceived English skills, physical and cultural differences (all at Time 1) were introduced as independent variables. We began by examining contact with friends at home (at Time 2) as the outcome variable while controlling for the same variable assessed at Time 1. Results revealed that willingness to participate in the larger society did not predict contact with friends at home, $\beta = -.10$, $t(101) = 1.08$, $p = .285$. In contrast, contact with friends at home was successfully predicted by willingness to maintain own cultural background. For international students, the higher they sought to maintain their own cultural background in their first year, the higher the contact with other friends at home in their second year, $\beta = .20$, $t(101) = 2.29$, $p = .024$. However, the interaction term between the two acculturation dimensions did not predict contact with friends at home, $\beta = -.06$, $t(101) = .71$, $p = .482$. Perceived English skills, physical differences, and cultural differences did also not predict contact with other friends at home, $\beta = .14$, $t(101) = 1.57$, $p = .119$, $\beta = -.02$, $t(101) = .20$, $p = .844$, $\beta = -.05$, $t(101) = .58$, $p = .562$. Finally, contact with friends at home assessed during students' first year was a successful predictor of the corresponding measure assessed one year after. For international students, the higher they maintained contact with friends at home in their first year, the higher they maintained the same contact in their second year, $\beta = .51$, $t(101) = 6.14$, $p < .001$.

The same analysis was performed with contact with parents and family as the outcome variable. Willingness to participate in the larger society and to maintain own culture did not predict contact with parents in students' second year, $\beta = -.10$, $t(101) =$

1.184, $p = .239$ and $\beta = .11$, $t(101) = 1.35$, $p = .180$. The interaction term between the two acculturation dimensions did not predict contact with parents either, $\beta = .11$, $t(101) = 1.48$, $p = .143$. Perceived English skills and cultural differences did not predict contact with parents in students' second year, $\beta = .08$, $t(101) = 1.02$, $p = .312$ and $\beta = .05$, $t(101) = .57$, $p = .570$. However, there was a marginal effect of perceived physical differences. For international students, the higher the perceived physical similarities with the British in their first year, the lower the contact with parents in their second year, $\beta = -.15$, $t(101) = 1.73$, $p = .087$. Contact with parents in students' first year was a significant predictor of contact in their second year. The higher students were willing to contact their parents in their first year, the higher they contacted parents in their second year, $\beta = .61$, $t(101) = 8.21$, $p < .001$.

The same analysis was performed with percentage of friends from own country as an outcome variable. Regression analysis indicated that willingness to participate in the larger society, willingness to maintain own culture, and the interaction term between the two acculturation dimensions did not predict contact with friends from own country in their second year, $\beta = .09$, $t(100) = 1.08$, $p = .282$, $\beta = .06$, $t(100) = .83$, $p = .407$, and $\beta = .07$, $t(100) = .94$, $p = .350$. Perceived English skills, physical and cultural differences did not predict contact with friends from own country, $\beta = -.11$, $t(100) = 1.38$, $p = .169$, $\beta = -.01$, $t(100) = .09$, $p = .926$, and $\beta = .03$, $t(100) = .35$, $p = .728$. The percentage of co-national friends in students' first year predicted this social network in their second year. The higher the number of friends from the same country in students' first year, the higher the number of these friends in their second year, $\beta = .68$, $t(100) = 8.64$, $p < .001$.

Analysis of the contact with friends from the UK revealed slightly different results. Willingness to participate in the larger society did not predict the percentage of

friends from the UK in students' second year, $\beta = .01$, $t(99) = .01$, $p = .994$. In contrast, willingness to maintain own culture was a significant predictor of contact with friends from the UK. The higher students were willing to maintain their cultural background in their first year, the lower the percentage of friends from the UK in their second year, $\beta = -.17$, $t(100) = 2.11$, $p = .038$. However, the interaction term between the two acculturation dimensions was not a significant predictor, $\beta = -.12$, $t(99) = 1.50$, $p = .136$. Perceived English skills, physical and cultural differences did not predict contact with friends from the UK in students' second year, $\beta = .14$, $t(99) = 1.56$, $p = .123$, $\beta = -.13$, $t(99) = 1.46$, $p = .148$, and $\beta = -.02$, $t(99) = .25$, $p = .803$. Percentage of friends from the UK in students' first year predicted this social network in their second year. The higher the number of friends from the UK in students' first year, the higher the number of these friends in their second year, $\beta = .58$, $t(99) = 6.46$, $p < .001$.

Finally, the same analysis was also performed for contact with friends from other foreign countries. Regression results showed that willingness to participate in the larger society, willingness to maintain own cultural background, and the interaction term between the two acculturation dimensions did not predict contact with friends from other countries in students' second year, $\beta = -.03$, $t(100) = .27$, $p = .786$, $\beta = .12$, $t(100) = 1.33$, $p = .186$, and $\beta = .06$, $t(100) = .75$, $p = .458$. Perceived English skills, physical and cultural differences did not predict this social network either, $\beta = .02$, $t(100) = .25$, $p = .807$, $\beta = .16$, $t(100) = 1.57$, $p = .120$, and $\beta = -.06$, $t(100) = .59$, $p = .556$. The percentage of friends from other countries in students' first year predicted this social network in their second year. The higher the number of friends from other countries in students' first year, the higher the number of these friends in their second year, $\beta = .59$, $t(100) = 6.94$, $p < .001$.

Overall, our results suggested that in students' first year, willingness to maintain own cultural background had implications for contact with friends from the UK and other friends at home. More specifically, it was shown that those who are willing to maintain their cultural background tended to increase contact with other friends at home and decreased the number of UK friends when they progressed to their second year. There was also a trend showing that those who perceived to be physically similar to the British were likely to reduce contact with their parents in second year.

6.1.4.3 – Friendship networks and perceived English skills

This section tested whether international students' different friendship networks would have an impact on their perceived command of English. For this purpose, we performed a regression analysis where the contact with friends from own country, UK, and other countries (at Time 1) were introduced as independent variables. Perceived English skills (at Time 2) were introduced as the outcome variable. We also controlled for perceived English skills assessed during students first year. Regression results showed that the percentage of friends from own country, UK, and other countries in students' first year did not predict perceived English skills in the second year, $\beta = -.23$, $t(107) = 1.59$, $p = .115$, $\beta = .11$, $t(107) = .73$, $p = .470$, and $\beta = -.01$, $t(107) = .09$, $p = .930$.

6.1.4.4 – The impact of social networks on students' experiences in the UK

In this section the principal focus was to understand the impact that different social networks might have on the experiences of international students in the UK. It was predicted that these networks would have an important role in determining the rejection-identification model's main variables (i.e. minority group identification, perceptions of

discrimination, and self-esteem). In order to test this prediction, we started by introducing the different social networks assessed during students' first year, as independent variables and perceived discrimination (at Time 2) as the outcome variable. In this analysis we also controlled for perceived discrimination at Time 1.

Results revealed that contact with friends and parents at home during students' first year did not predict perceptions of discrimination in their second year, $\beta = .05$, $t(103) = .49$, $p = .628$ and $\beta = -.13$, $t(103) = 1.41$, $p = .161$. In contrast, the percentage of friends from own country and UK were significant predictors of perceptions of discrimination. The higher the contact with friends from own country and the UK in students' first year, the higher they perceived discrimination in their second year, $\beta = .34$, $t(103) = 2.26$, $p = .026$ and $\beta = .36$, $t(103) = 2.34$, $p = .021$. Percentage of friends from other foreign countries did not predict perceptions of discrimination, $\beta = .04$, $t(103) = .32$, $p = .751$. Finally, perceptions of discrimination assessed at the first time point predicted the same variable when assessed in students' second year. The higher students perceived discrimination in their first year, the higher they perceived discrimination in their second year, $\beta = .49$, $t(103) = 5.92$, $p < .001$.

The same analysis was performed for self-esteem revealing similar results. Regression results showed that students' contact with other friends and parents at home in their first year did not predict self-esteem assessed in their second year, $\beta = .10$, $t(103) = 1.31$, $p = .194$ and $\beta = .12$, $t(103) = 1.49$, $p = .140$. However, contact with both friends from own country and UK were significant predictors of self-esteem. The higher the percentage of friends from students' own country and the UK in their first year, the lower their self-esteem in their second year, $\beta = -.43$, $t(103) = 3.24$, $p = .002$ and $\beta = -.29$, $t(103) = 2.11$, $p = .038$. The percentage of friends from other foreign countries assessed at

the first time point did not predict self-esteem in students second year, $\beta = -.15$, $t(103) = 1.36$, $p = .175$. Finally, self-esteem assessed at the first time point predicted the self-esteem of the students in their second year. The higher the self-esteem of international students in their first year, the higher the self-esteem in their second year, $\beta = .62$, $t(103) = 8.79$, $p < .001$.

Finally, we examined the relationship between friendship networks and the different dimensions of identification with own country students. Regression results revealed that neither contact with parents nor friends at home (at Time 1) predicted ingroup ties (at Time 2), $\beta = .06$, $t(101) = .68$, $p = .497$ and $\beta = .05$, $t(101) = .54$, $p = .591$. Likewise, neither the percentage of friends from own country, the UK, nor other foreign countries (at Time 1) predicted ingroup ties (at Time 2), $\beta = .07$, $t(101) = .43$, $p = .669$, $\beta = -.15$, $t(101) = .95$, $p = .346$, and $\beta = -.04$, $t(101) = .32$, $p = .748$. For centrality similar results were found. Regression results indicated that neither contact with parents nor friends at home (at Time 1) predicted centrality (at Time 2), $\beta = -.12$, $t(102) = 1.17$, $p = .246$ and $\beta = .10$, $t(102) = 1.00$, $p = .318$. Likewise, neither the percentage of friends from own country, the UK, nor other foreign countries (at Time 1) predicted centrality (at Time 2), $\beta = -.09$, $t(102) = .51$, $p = .614$, $\beta = -.07$, $t(102) = .38$, $p = .704$, and $\beta = -.18$, $t(102) = 1.23$, $p = .221$. Lastly, the same results were found for ingroup affect. Results showed that neither contact with parents nor friends at home (at Time 1) predicted ingroup affect (at Time 2), $\beta = .10$, $t(101) = 1.19$, $p = .237$ and $\beta = .01$, $t(101) = .02$, $p = .986$. Likewise, neither the percentage of friends from own country, the UK, nor other foreign countries (at Time 1) predicted ingroup affect (at Time 2), $\beta = .15$, $t(101) = .94$, $p = .350$, $\beta = .14$, $t(101) = .90$, $p = .368$, and $\beta = .19$, $t(101) = 1.47$, $p = .144$.

It was also predicted that the relationship between students' networks and well-being would vary as a function of the desire for contact with each of the networks. More specifically, it was predicted that having more contact with co-national or host friends would have a positive impact on students' self-esteem when this contact is desired. When this contact is not desired, no effects (or negative effects) were predicted. In order to examine these predictions we conducted a regression analysis testing for moderation. Friends from own country (at Time 1) and willingness to maintain own cultural background (at Time 1 - moderator) were both introduced as predictors. The product of the latter two variables was also introduced as a predictor, whilst self-esteem (at Time 2) was introduced as the outcome variable. We also controlled for self-esteem assessed during students' first year. Regression analysis confirmed the already analysed negative association between percentage of co-national friends and self-esteem, $\beta = -.23$, $t(103) = 3.17$, $p = .002$. It was also revealed that willingness to maintain own cultural background (at Time 1) did not predict self-esteem (at Time 2), $\beta = .10$, $t(103) = 1.32$, $p = .191$. There was however, a marginally significant effect of the interaction term (at Time 1) on self-esteem (at Time 2), $\beta = .13$, $t(103) = 1.77$, $p = .081$. Despite being a marginal effect, further analyses were performed in order to examine the interaction in more detail (see Figure 21). Simple slope analysis indicated that for students who were willing to maintain their own cultural background, contact with co-national friends did not result in different levels of self-esteem, $\beta = -.01$, $t(103) = .11$, $p = .912$. In contrast, for students who were not willing to maintain their cultural background, increasing contact with co-national friends resulted in lower self-esteem, $\beta = -.49$, $t(103) = 3.54$, $p < .001$.

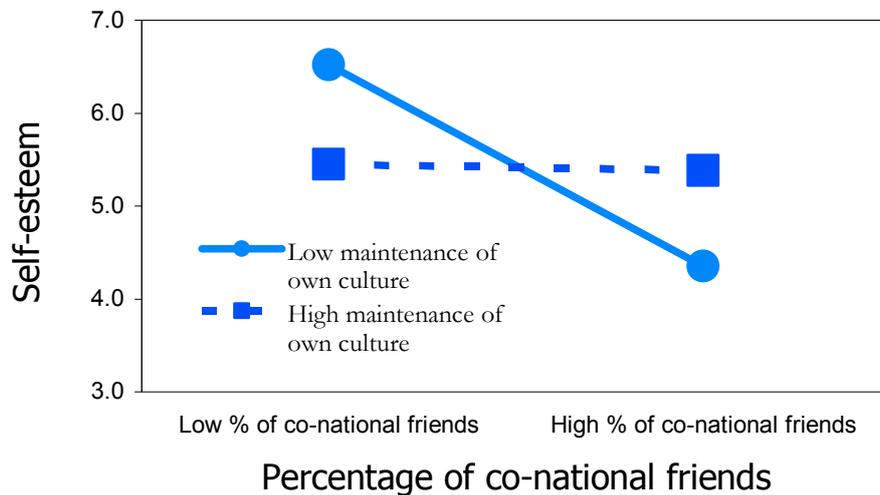


Figure 21. The effect of percentage of co-national friends on self-esteem as a function of willingness to maintain own cultural background.

When testing the same effects with host friends, we introduced percentage of UK friends and willingness to participate in the larger society both as predictors. The product of the latter two variables was also introduced as predictor, whilst self-esteem was the outcome variable. Results confirmed previous analyses by showing that the percentage of UK friends (at Time 1) did not predict self-esteem (at Time 2), $\beta = .04$, $t(102) = .50$, $p = .618$. Willingness to participate in the larger society and the interaction term did not predict self-esteem either, $\beta = -.01$, $t(102) = .33$, $p = .974$ and $\beta = -.02$, $t(102) = .31$, $p = .760$.

For the analysis with friends of other countries, the same procedure was followed. Regression analysis showed that neither the percentage of friends from other countries nor willingness to participate in the larger society predicted self-esteem, $\beta = .09$, $t(102) =$

1.17, $p = .243$ and $\beta = .01$, $t(102) = .16$, $p = .877$. The interaction term did not predict self-esteem either, $\beta = -.06$, $t(102) = .73$, $p = .467$.

Another prediction was that minority group identification would mediate the relationship between friends from own country and self-esteem. As the percentage of friends from own country was not related with any of the identification dimensions, no mediation effect could be possible and no analyses were performed.

On balance, results suggested that contact with friends from own country and UK can have an impact on perceptions of discrimination and self-esteem, but not on minority group identification. It was shown that either when most of students' friends are from their own country or when most of their friends are from the UK, international students tend to report higher levels of perceived discrimination and lower self-esteem in their second year. Contact with friends from other countries was not associated with the examined variables.

6.1.4.5 – Social support and the experiences of international students in the UK

It was further predicted that participation in university activities and clubs during students' first year would result in higher self-esteem and lower anxiety, depression, and negative emotions during their second year. In order to test this prediction we introduced student participation in university activities and clubs (at Time 1) as an independent variable, whilst introducing self-esteem and the other well-being measures (at time 2) as outcome variables separately. We also controlled for the respective outcome variable assessed during first year. Regression results showed that participation in societies did not improve students' self-esteem, $\beta = -.10$, $t(106) = 1.28$, $p = .205$. When anxiety was introduced as the outcome variable, similar results were found. Participation in societies

did not predict anxiety, $\beta = .07$, $t(105) = .88$, $p = .380$. Likewise, participation in societies did not predict depression and negative emotions, $\beta = -.01$, $t(106) = .11$, $p = .916$ and $\beta = .10$, $t(108) = 1.35$, $p = .180$.

6.1.4.6 – The acculturation strategies

Another important focus of this thesis was to understand how international students develop their acculturation strategies. Therefore, we performed regression analyses in order to understand which variables in students' first year may predict their acculturation strategies in their second year. In these regression analyses different predictors were entered in three separate blocks (variables were grouped in blocks according to three main themes). The reason for following this method was motivated by an interest in understanding which of the following three themes would be more important in predicting the acculturation dimensions. The first block included variables pertaining to language skills and perceived differences between own group and the British (i.e. English skills, perceived physical differences, and perceived cultural differences). The second block included contact variables (i.e. percentage of own country friends, British friends, and from other countries; contact with parents at home; and contact with friends in home country). The last block included the sociostructural variables (legitimacy, stability, and permeability). These blocks were included in two regression equations analysing each acculturation dimension separately. Furthermore, the longitudinal data were taken into account in order to understand if these variables had a causal impact on the formation of the acculturation dimensions. All the predictors included in the regression equations were from the first time point of this thesis, whilst the introduced outcome variables (the two acculturation dimensions) were from the

second time point. In each equation we also controlled for the respective acculturation dimension at the first time point.

Firstly, willingness to participate in the larger society was examined. Regression analysis indicates that the first block of predictors produced a significant model, $F(4,102) = 4.42, p = .002$. In this model willingness to participate in the larger society was neither predicted by English skills ($\beta = .09, t(102) = .89, p = .374$), nor physical differences ($\beta = .18, t(102) = 1.64, p = .103$), nor cultural differences ($\beta = -.09, t(102) = .80, p = .428$). Willingness to participate in the larger society at the first time point was a significant predictor of our outcome variable, indicating that the higher students were willing to participate in the larger society during their first year, the higher they were willing to participate during their second year, $\beta = .27, t(102) = 2.73, p = .007$.

When the second block of predictors was added, the fit of the model did not change significantly, $F(9, 97) = 2.33, p = .020$. The F change statistic indicated that fit of the model did not improve by adding the second block of predictors, $F(5,97) = 0.71, p = .618$. Willingness to participate in the larger society was neither predicted by percentage of friends from own country ($\beta = -.04, t(97) = .23, p = .819$), percentage of friends from the UK ($\beta = .09, t(97) = .48, p = .633$), percentage of friends from other foreign countries ($\beta = -.08, t(97) = .52, p = .606$), contact with parents at home ($\beta = .12, t(97) = 1.13, p = .263$), nor contact with friends in home country ($\beta = -.02, t(97) = .18, p = .861$). The third block of predictors improved the fit of the model, $F(12,94) = 2.84, p = .002$. This is corroborated by the F change statistic, $F(3,94) = 3.77, p = .013$. Neither stability nor legitimacy predicted willingness to participate in the larger society; $\beta = .11, t(94) = 1.11, p = .270, \beta = .10, t(94) = 1.02, p = .312$. However, permeability at the first time point was an important predictor, $\beta = .35, t(94) = 2.98, p = .004$. The more

international students perceived that the boundaries between groups were open in their first year, the more they were willing to participate in the larger society during their second year.

For maintenance of own culture the same strategy was followed. The first block of predictors indicated a good fit of the model, $F(4,103) = 15.91, p < .001$. Maintenance of own culture at the first time point was positively associated with the outcome variable, $\beta = .60, t(103) = 7.67, p < .001$. Neither English skills ($\beta = -.05, t(103) = .58, p = .561$), nor physical differences ($\beta = -.05, t(103) = .52, p = .604$), nor cultural differences ($\beta = -.06, t(103) = .63, p = .524$) predicted maintenance of own culture. The second block of predictors provided a similar fit to the model, $F(9,98) = 7.35, p < .001$. The F change statistic did not support a significant change of the model, $F(5,98) = .69, p = .630$. Maintenance of own culture was neither predicted by percentage of friends from own country ($\beta = -.06, t(98) = .37, p = .715$), percentage of friends from the UK ($\beta = -.22, t(98) = 1.41, p = .161$), percentage of friends from other foreign countries ($\beta = -.10, t(98) = .81, p = .419$), contact with parents at home ($\beta = -.02, t(98) = .18, p = .862$), nor contact with friends in home country ($\beta = .05, t(98) = .56, p = .580$). Similar to the previous block, the third block showed a good fit in the model, $F(12,95) = 5.46, p < .001$. However, this fit did not improve the model significantly, $F(3,95) = .28, p = .837$. Results indicated that neither stability ($\beta = -.03, t(95) = .30, p = .767$), nor legitimacy ($\beta = -.07, t(95) = .73, p = .466$), nor permeability ($\beta = -.04, t(95) = .36, p = .717$) predicted the outcome variable. In sum, most of the variables assessed at the first time point of this study did not predict the acculturation dimensions. An exception was perceptions of group permeability, which predicted willingness to participate in the larger society.

6.1.4.7 - Perceptions of discrimination and willingness to make attributions to discrimination

In this thesis we also examined the relationship between perceptions of discrimination and willingness to make attributions to discrimination. Due to the lack of previous research, no specific predictions were made for the relationship between the two variables. Nevertheless, we began with two regression analyses examining the possible causal effects between them. For the first regression equation, perceptions of discrimination (at Time 1) were entered as the outcome variable and willingness to make attributions to discrimination as a predictor (at Time 2). We also controlled for perceptions of discrimination at the first time point. Results indicated that willingness to make attributions to prejudice did not predict perceptions of discrimination, $\beta = .05$, $t(106) = .65$, $p = .519$. Perceptions of discrimination (at time 1) were a significant predictor, $\beta = .55$, $t(106) = 6.63$, $p < .001$. When the reversed causal relationship was tested in a second regression equation, similar results were found. Perceptions of discrimination did not predict willingness to participate in the larger society, $\beta = .09$, $t(104) = 1.05$, $p = .295$; whilst willingness to make attributions to discrimination (at Time 1) was a significant predictor, $\beta = .57$, $t(104) = 6.86$, $p < .001$.

We also tested the impact that perceptions of discrimination and willingness to make attributions to discrimination have on the variables included in the rejection-identification model. Firstly, we analysed the direct relationship between the two indicators of discrimination and self-esteem. Perceptions of discrimination and willingness to make attributions to prejudice (at Time 1) were entered as independent variables. Self-esteem (at Time 2) was entered as the outcome variable, whilst controlling for gender and self-esteem assessed during students' first year. Regression analysis

indicated that self-esteem assessed at the first time point was an important predictor of self-esteem after one year, $\beta = .56$, $t(102) = 6.54$, $p < .001$. Furthermore, confirming previous results, perceptions of discrimination assessed at the first time point predicted students' self-esteem after one year, $\beta = -.17$, $t(102) = 2.04$, $p = .044$. In contrast, willingness to make attributions to prejudice did not predict self-esteem, $\beta = .04$, $t(102) = .47$, $p = .643$. Gender was not a significant covariate, $\beta = .06$, $t(102) = .79$, $p = .431$.

Of particular importance to the rejection-identification model is the relationship between perceptions of discrimination and minority group identification. As it was shown in section 6.1.3, perceptions of global discrimination were a successful predictor of centrality with other students from own country. When both perceptions of global discrimination and willingness to make attributions to prejudice were introduced as independent variables simultaneously, similar results were found. For ingroup ties with international students neither perceptions of global discrimination nor willingness to make attributions to prejudice predicted the outcome variable, $\beta = -.10$, $t(104) = 1.18$, $p = .241$ and $\beta = -.08$, $t(104) = 1.01$, $p = .317$. Ingroup ties assessed during students' first year predicted ingroup ties during the second year, $\beta = .57$, $t(104) = 7.25$, $p < .001$. The same was found when centrality with international students was introduced as the outcome variable, $\beta = .10$, $t(104) = 1.12$, $p = .266$ and $\beta = .11$, $t(104) = 1.36$, $p = .177$. Centrality assessed during students' first year predicted centrality in second year, $\beta = .52$, $t(104) = 5.74$, $p < .001$. However, perceptions of global discrimination were a marginal predictor of ingroup affect with international students, $\beta = -.16$, $t(104) = 1.98$, $p = .050$. The higher students perceived global discrimination in their first year, the lower the ingroup affect with international students in their second year. Willingness to make attributions to prejudice did not predict ingroup affect, $\beta = -.02$, $t(104) = .23$, $p = .819$.

Ingroup affect assessed during students' first year predicted ingroup affect during the second year, $\beta = .59$, $t(104) = 7.46$, $p < .001$.

For identification with students from own country, neither perceptions of global discrimination nor willingness to make attributions to prejudice predicted ingroup ties, $\beta = -.05$, $t(101) = .56$, $p = .578$ and $\beta = .08$, $t(101) = 1.01$, $p = .319$. Ingroup ties in students' first year predicted ingroup ties in second year, $\beta = .62$, $t(101) = 7.93$, $p < .001$. Nevertheless, perceptions of global discrimination predicted centrality, $\beta = .21$, $t(102) = 2.26$, $p = .026$. This finding suggests that the higher students perceived global discrimination during their first year, the higher the centrality in their second year. Centrality assessed during students' first year predicted centrality in second year, $\beta = .36$, $t(102) = 3.99$, $p < .001$. Finally, neither perceptions of global discrimination nor willingness to make attributions to prejudice predicted ingroup affect, $\beta = -.10$, $t(101) = 1.19$, $p = .237$ and $\beta = -.04$, $t(101) = .52$, $p = .603$. Ingroup affect measured during students' first year predicted ingroup affect measured during their second year, $\beta = .61$, $t(101) = 7.88$, $p < .001$.

6.1.5 – Part V - Analyses including all variables (structural equation modelling)

In this final section we used structural equation modelling (SEM) techniques to further explore our predictions. Comparing to regression this methodology has a number of advantages that motivated our analyses. Namely, structural equation modelling allowed us to specify latent constructs that were measured by manifest variables. In SEM terminology, a latent variable is a variable that is not observed or measured directly, it is instead formed by manifest variables. Manifest variables are actual measures and observed scores that are used to ground a latent variable with real data (Kaplan, 2000).

Overall, SEM allows several measures to be included in a single variable. In our thesis for example, different measured (manifest) variables such as global discrimination, day-to-day discrimination, outgroup privilege, willingness to make attributions to prejudice, can make part of the broader construct of perceptions of discrimination or disadvantage. Furthermore, SEM models measurement error, which allows an unbiased estimate of the relationships between its latent variables (Kaplan, 2000). These particular characteristics of SEM allowed us to include in our analysis the questionnaire's measures in broader constructs and provide a more complete test of our predictions. For example, the inclusion of the different discrimination or well-being measures in separate latent variables served to test a more complete and robust model.

Despite the advantages of SEM, there were some limitations due to this study's sample size. In the literature there is no consensus about the minimum sample size, but researchers have argued in favour of a number around 150 cases. For example, Kling (1998) and Loehlin (1992) suggest the use of at least 100 cases, arguing that it is preferable to use 200. Schumacker and Lomax (2004) consider that the minimum sample should be around 100 or 150 cases. Nevertheless, these numbers depend upon the complexity of the model and the number of included variables. A rule of thumb recommended by Mitchell (1993) is that we need 10 to 20 times as many cases as manifest variables. Similarly, Stevens (1996) recommended the use of at least 15 cases per manifest variable. SEM would therefore produce unreliable results as our sample size was just above 100 and the proposed model (when including all the measured variables) involved more than 10 different variables. In fact, testing the full moderated mediation model would imply having more parameters to be estimated than cases. It is therefore

impossible to test the full model. SEM techniques however, can still be useful to test more parsimonious models, testing only some of the particular relationships of our model.

In this section we tested different models in order to understand in more detail the causal relationships between the study's variables. All the models were tested using Mplus for Windows (Version 5). For each of the following models we reported the fit indices provided by Mplus, i.e. the chi-square goodness of fit test, CFI, TLI, and RMSEA values. The chi-square goodness of fit test indicates the extent to which the proposed model can reproduce the data (i.e. the variance-covariance matrices). A chi-square value proximate to zero indicates a good fit, whilst a higher and statistically significant chi-square suggests worse fit. The Comparative Fit Index (CFI) compares the proposed model with a null model (i.e. a model in which all the covariances and correlations are zero), penalising for each added parameter. Thus, the index score depends on the average size of the correlations between variables. When the correlations are high, this index is expected to reach a maximum value of 1. When the correlations are very low, it is approximate to the null model and the index value may reach a minimum of zero. The Tucker Lewis Index (TLI) is similar to the CFI with the difference that it also takes into account the ratio of the model's chi-square to its degrees of freedom. For both CFI and TLI, values between .90 and .95 indicate acceptable fit, whilst values higher than .95 indicate a good fit of the model (Bentler, 1990). Finally, statistical tests based on the chi-square value are very sensitive to sample size variations. Thus, the Root Mean Square Error Approximation (RMSEA) is a measure of fit that takes into account both the sample size and the degrees of freedom of the model. Models with a good fit have an RMSEA value of .06 or less, whilst a value above .06 indicates poor fit (Hu & Bentler, 1999).

6.1.5.1 – The relationship between group-based discrimination and minority group identification

According to Tabachnik and Fidell (2001), there are two crucial steps that should be undertaken when using SEM. Firstly, it is important to examine the measurement model. The measurement model is the part of a SEM model that includes the latent variables and their manifest variables. For this step (which resembles confirmatory factor analysis), the purpose is to test whether the manifest variables are measuring the corresponding latent variables accurately. Only after validating the measurement model one can proceed to the next step – the structural model. The structural model is our proposed model, i.e. the group of different latent and manifest variables accompanied by its paths and relationships between them.

For the measurement model we tested a latent variable named ‘perceptions of discrimination’ which was measured by the different discrimination related measures of the questionnaire (i.e. perceptions of global discrimination, day-to-day discrimination, outgroup privilege, and willingness to make attributions to prejudice). Two latent variables were created, one for each time point (see Figure 22). As we can see in Figure 22, we allowed the error variances of each manifest variable assessed during the first year to correlate with the error of the respective variable assessed during the second year. Furthermore, we also allowed the error of the two latent variables to correlate. Finally, in SEM all latent variables must be assigned a measurement range. It is common practice to constrain one of the paths linking the latent variable to the manifest variables to 1.0. This constraint allows establishing a measurement range and provides an anchor for the meaning of the latent variable. Typically, the manifest variable that is selected is a reference variable. That is, it should be the variable that will have a higher loading on the

latent variable (Tabachnik & Fidel, 2001). In our model, we selected perceptions of global discrimination as the anchor for the meaning of the latent variable. This variable was chosen due to its relation with perceptions of pervasive discrimination, which is more in line with the rejection-identification model's studies. Hence, the path between perceptions of discrimination and global discrimination was constrained to 1.0.

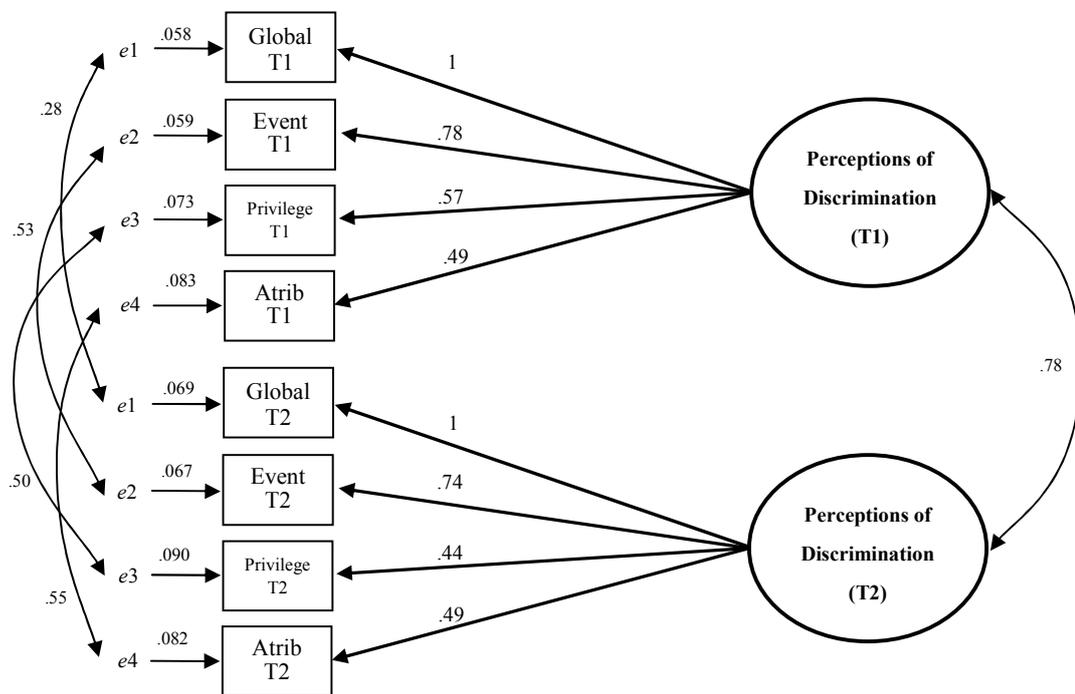


Figure 22. The measurement model (perceptions of discrimination as a latent variable).

Figure 22 also shows the results of the SEM analysis, where Lambda values represent the paths between latent and manifest variables and e represents the error associated with each variable. SEM results suggested that the model fit the data extremely well, as indicated by a non significant chi-square, $\chi^2(19) = 16.98, p = .591$. This was also supported by high values of CFI and TLI (both with a maximum value of

1). RMSEA also provided support for the model indicating an estimate of .001. For both time points, the different discrimination variables loaded high on the latent variables. Perceptions of discrimination (at Time 1) were defined by perceptions of global discrimination (λ constrained to 1), day-to-day discrimination ($\lambda = .78, p < .001$), outgroup privilege ($\lambda = .57, p < .001$), and willingness to make attributions to prejudice ($\lambda = .49, p < .001$). Perceptions of discrimination (at Time 2) were defined by perceptions of global discrimination (λ constrained to 1), day-to-day discrimination ($\lambda = .74, p < .001$), outgroup privilege ($\lambda = .44, p < .001$), and willingness to make attributions to prejudice ($\lambda = .49, p < .001$). Overall, results allowed us to validate the measurement model so we proceeded with the analysis of the structural model.

In order to test the relationship between perceptions of discrimination and minority group identification a cross-lagged model was tested (Figure 23). In this model it was expected that perceptions of discrimination assessed during students' first year would predict perceptions of discrimination during their second year. The same relationship was expected for social identification assessed during the two time points. The causal relationship between perceptions of discrimination and social identification was examined by including a path between perceptions of discrimination (at Time 1) and social identification (at Time 2); and by including the reversed causal explanation, i.e. the path between social identification (at Time 1) and perceptions of discrimination (at Time 2). It was expected that perceptions of discrimination would have an impact on social identification and not the opposite.

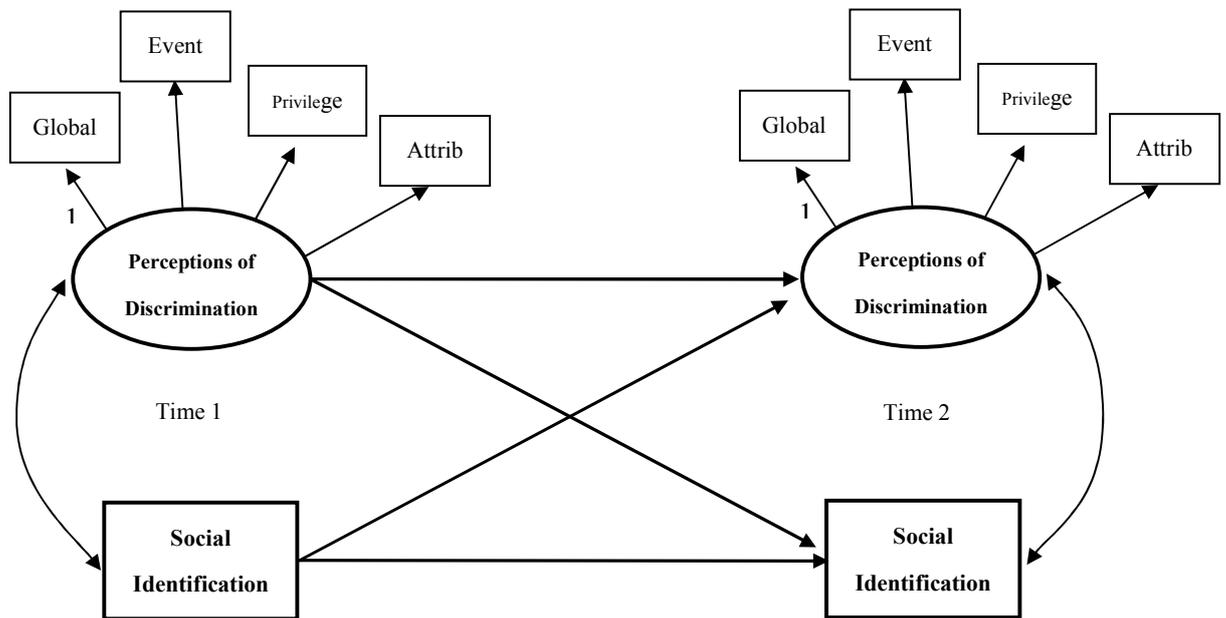


Figure 23. Structural model (cross-lagged model with PD and social identification).

In a similar vein to previous analyses, we started by testing the dimensions of identification with international students and subsequently identification with own country. For identification with international students, the analysis with ingroup ties showed that the model fit the data well, as indicated by a non significant chi-square value $\chi^2(33) = 45.20, p = .077$, and high values of CFI and TLI (.97 and .96). RMSEA had a satisfactory value of .06. The estimated paths indicate that perceptions of discrimination (at Time 1) predicted perceptions of discrimination (at Time 2), $\beta = .66, p < .001$, and that ingroup ties (at Time 1) predicted ingroup ties (at Time 2), $\beta = .61, p < .001$. However, discrimination (at Time 1) did not predict ingroup ties (at Time 2), $\beta = -.21, p = .170$. In addition, ingroup ties (at Time 1) did not predict discrimination (at Time 2) either, $\beta = .02, p = .686$. When centrality was examined, SEM analysis revealed that the model also fit the data well, $\chi^2(32) = 40.55, p = .143$. CFI and TLI values were above the .95 threshold

(.98 and .97). The RMSEA had a satisfactory value of .05. Both perceptions of discrimination and centrality assessed at the second time point were predicted by their respective assessments at the first time point, $\beta = .74, p < .001, \beta = .39, p < .001$. Perceptions of discrimination (at Time 1) marginally predicted centrality (at Time 2), $\beta = .19, p = .072$. The higher international students perceived discrimination during their first year, the higher the centrality with international students during their second year. Centrality (at Time 1) did not predict perceptions of discrimination (at Time 2), $\beta = .07, p = .435$. For ingroup affect, SEM analysis indicated that the model fit the data well, $\chi^2(33) = 45.19, p = .077$. CFI and TLI indices also provided satisfactory values (.97 and .96). The RMSEA value was .06. Both perceptions of discrimination and ingroup affect assessed at the second time point were predicted by their respective assessments at Time 1, $\beta = .78, p < .001, \beta = .42, p < .001$. Moreover, perceptions of discrimination (at Time 1) predicted ingroup affect (at Time 2), $\beta = -.22, p = .018$. The higher international students perceived discrimination in their first year, the lower the ingroup affect with the group of international students during their second year. Ingroup affect (at Time 1) did not predict perceptions of discrimination (at Time 2), $\beta = .01, p = .981$.

Identification with own country was also examined. Results for ingroup ties revealed that the model fit the data. This was supported by a non-significant chi-square test of model fit, $\chi^2(32) = 41.36, p = .124$. It was further supported by high values of CFI and TLI, .97 and .96. RMSEA had a satisfactory value of .05. Both perceptions of discrimination and ingroup ties (at Time 2) were predicted by their respective variables at their first assessment, $\beta = .80, p < .001, \beta = .51, p < .001$. However, perceived discrimination (at Time 1) did not predict ingroup ties (at Time 2), $\beta = .01, p = .947$. Ingroup ties (at Time 1) did also not predict perceived discrimination (at Time 2), $\beta = .01,$

$p = .892$. For centrality results were somewhat different. The model also fit the data well, $\chi^2(32) = 36.43, p = .270$, which was further supported by high values of CFI and TLI, .99 and .98. RMSEA had a satisfactory value .04. Both perceptions of discrimination and centrality (at Time 2) were predicted by the respective assessments at the first time point, $\beta = .85, p < .001$ and $\beta = .24, p = .008$. Perceived discrimination (at Time 1) predicted centrality (at Time 2), $\beta = .27, p = .010$. The higher international students perceived discrimination during their first year, the higher the centrality with own country during their second year. However, centrality (at Time 1) did not predict perceptions of discrimination (at Time 2), $\beta = -.12, p = .140$. Finally, results for ingroup affect showed that the model fit the data well. This was indicated by a non-significant chi-square, $\chi^2(32) = 40.99, p = .133$, and high values of CFI and TLI, .98 and .97. RMSEA had a satisfactory value of .05. Perceived discrimination and ingroup affect (at Time 2) were predicted by the respective variables assessed at the first time point, $\beta = .80, p < .001, \beta = .48, p < .001$. Perceptions of discrimination (at Time 1) did not predict ingroup affect (at time 2), $\beta = -.08, p = .416$. In addition, ingroup affect (at Time 1) did not predict perceptions of discrimination (at Time 2), $\beta = .01, p = .925$.

Summarising, SEM analysis suggested that perceptions of discrimination tend to impact on minority group identification. The opposite causal direction was not supported by our data. More specifically, perceptions of discrimination had an impact on ingroup affect with international students and centrality with own country. There was also a marginal impact on centrality with international students. In contrast, minority group identification did not have an impact on perceptions of discrimination.

6.1.5.2 – The relationship between perceptions of group-based discrimination and psychological well-being

In this section the relationship between perceptions of discrimination and well-being was examined. We tested a measurement model where the latent variable *perceptions of discrimination* and its indicators were maintained. In this measurement model we also included another latent variable named *psychological well-being* which was measured by self-esteem, anxiety, and negative emotions. Again, the latent variables were introduced at both time points. As in the previous analysis, we selected perceptions of global discrimination as the anchor for the meaning of the latent variable. We also chose self-esteem as the anchor of psychological well-being. We chose self-esteem in order to establish a parallel with most of the rejection-identification model studies, which have been using this variable as an indicator of psychological well-being. Hence, the path between self-esteem and psychological well-being was constrained to 1.0. We also allowed the error variances of each manifest variable to correlate with the error variance of the respective variable at the second time point. Finally, we also allowed the latent variables to have their error variances correlated (see Figure 24).

SEM results indicated that the model fit the data particularly well, $\chi^2(71) = 68.27$, $p = .570$. This is also supported by high CFI and TLI values (both had a maximum value of 1), and a low RMSEA value (.001). Psychological well-being (at Time 1) was composed by self-esteem (λ was constrained to 1), anxiety ($\lambda = .82$, $p < .001$), and negative emotions ($\lambda = .66$, $p < .001$). Perceptions of discrimination (at Time 1) included perceptions of global discrimination (λ was constrained to 1), day-to-day discrimination ($\lambda = .81$, $p < .001$), outgroup privilege ($\lambda = .57$, $p < .001$), and willingness to make attributions to prejudice ($\lambda = .47$, $p < .001$). An inspection of the latent variables at the

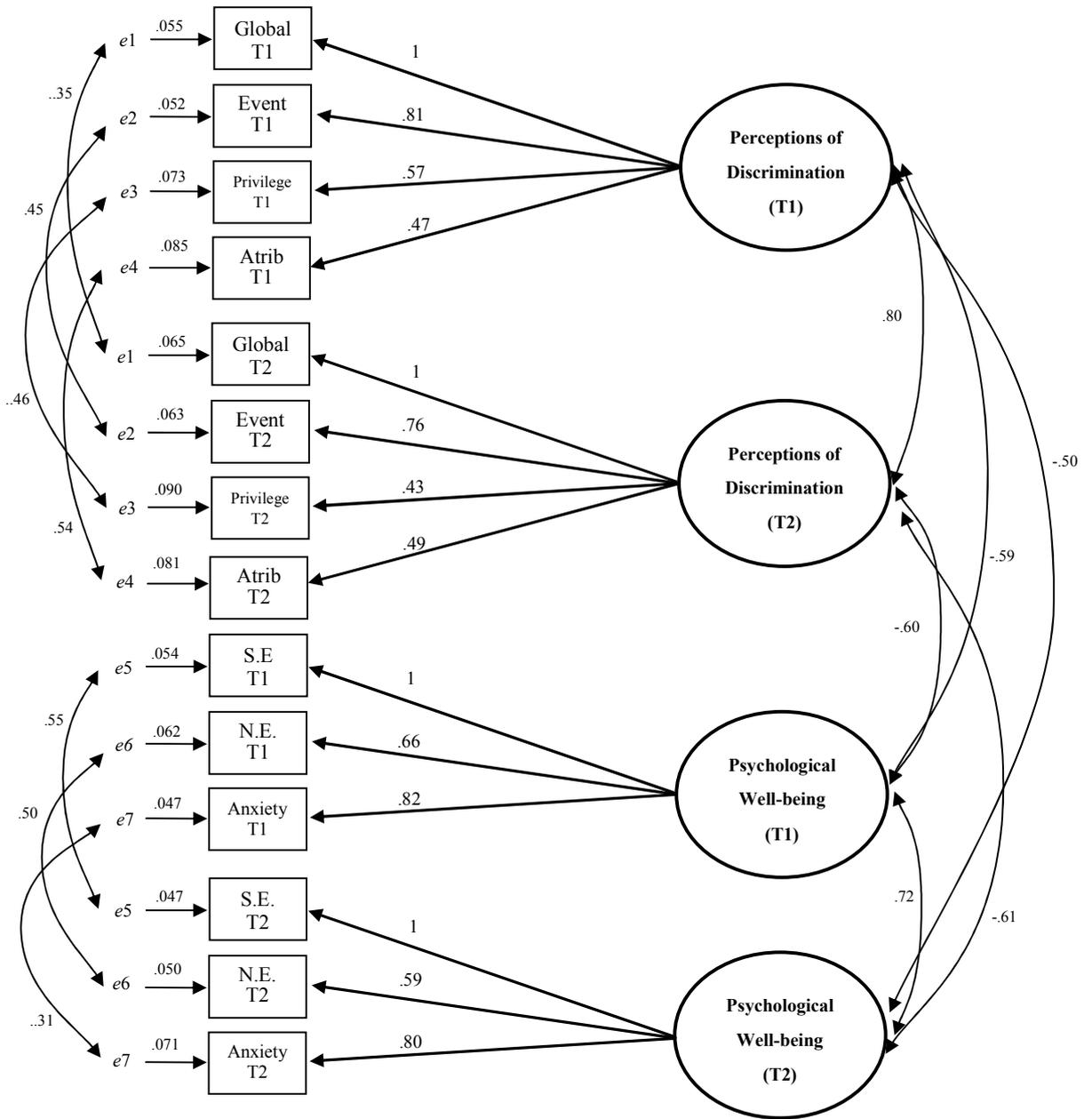


Figure 24. The measurement model (perceptions of discrimination and psychological well-being).

second time point revealed similar results. Psychological well-being (at Time 2) was composed by self-esteem (λ constrained to 1), anxiety ($\lambda = .80, p < .001$), and negative emotions ($\lambda = .59, p < .001$). Perceptions of discrimination (at Time 2) was composed by global discrimination (λ constrained to 1), day-to-day discrimination ($\lambda = .76, p < .001$), outgroup privilege ($\lambda = .43, p < .001$), and willingness to make attributions to prejudice ($\lambda = .49, p < .001$). Taken together, SEM results indicated a good fit of all indicators and validated the measurement model. We thus proceeded with the analysis of the structural model.

In order to test the relationship between perceptions of discrimination and well-being we tested a cross-lagged model (Figure 25). In this model it was expected that perceptions of discrimination assessed during students' first year would predict perceptions of discrimination during their second year. The same relationship was expected for psychological well-being assessed during the two time points. The causal relationship between perceptions of discrimination and psychological well-being was examined by including a path between perceptions of discrimination (at Time 1) and psychological well-being (at Time 2); and by including the reversed causal explanation, i.e. the path between psychological well-being (at Time 1) and perceptions of discrimination (at Time 2). It was expected that perceptions of discrimination would have an impact on psychological well-being and not the opposite.

SEM results suggest that the model fit the data extremely well, which is indicated by a non-significant chi-square test of model fit, $\chi^2(78) = 68.27, p = .570$. This was further supported by high values of CFI and TLI (both had a maximum value of 1).

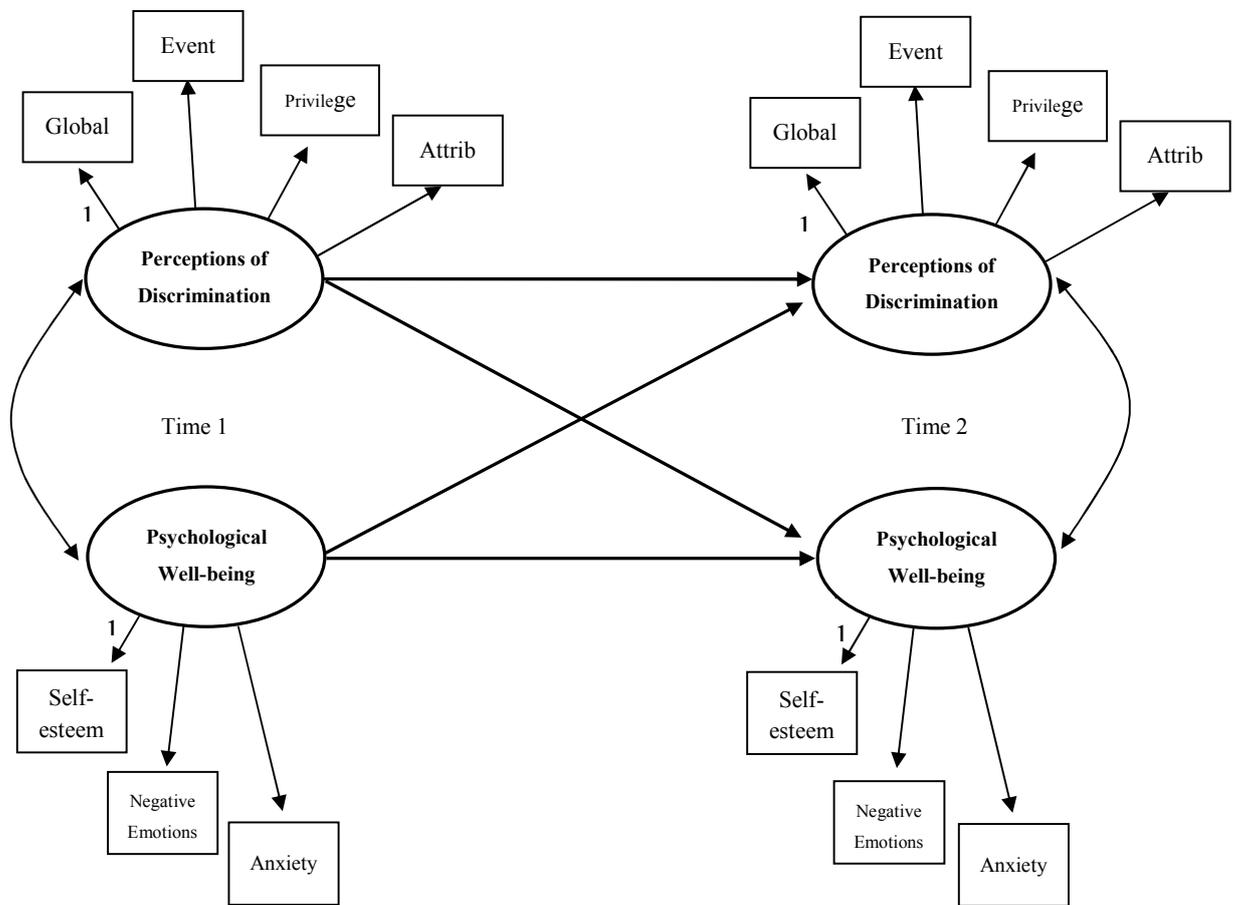


Figure 25. The structural model (cross-lagged model with perceived discrimination and psychological well-being).

RMSEA had a satisfactory value of .001. Both perceptions of discrimination and psychological well-being (at time 2) were predicted by the respective variables assessed at the first time point, $\beta = .69, p < .001$ and $\beta = .65, p < .001$. However, perceived discrimination (at Time 1) did not predict psychological well-being (at Time 2), $\beta = -.11, p = .385$. Psychological well-being (at Time 1) did not predict perceptions of discrimination (at Time 2) either, $\beta = -.19, p = .122$.

6.1.5.3 – The relationship between perceptions of group-based discrimination, acculturation, and permeability

In this last section we examined in further detail the relationship between perceptions of global discrimination, acculturation, and permeability. As shown by our previous analysis, perceived permeability predicted students' willingness to participate in the larger society but did not predict willingness to maintain own cultural heritage. Hence, in this analysis only willingness to participate in the larger society was included.

In previous analyses we examined, for example, the relationship between perceived permeability and acculturation or the relationship between perceptions of global discrimination and acculturation; but never examined the relationship between all the three variables simultaneously. In this section, SEM techniques served to further explore the relationship between these variables. One of the advantages of SEM over regression is that it permits to examine more than one dependent variable at once and to compare different hypothesised models. In order to analyse the relationship between permeability, willingness to participate in the larger society, and perceptions of discrimination, five different models were tested. As these models were non-nested (they all have the same number of parameters), they had to be compared with a specific criterion. It is common practice to compare non-nested models (and with the same variables) with indices such as the Akaike Information Criterion (AIC). The AIC allows identifying the model that will best cross-validate in another sample of the same size. A lower value of AIC corresponds to a better predictive validity of the model. Importantly, as AIC is a decision criterion, it does not provide a test to examine whether a certain model is significantly better than any other alternative. Therefore, the AIC is used to compare and rank the different models (Akaike, 1987).

In order to test the different causal possibilities we examined five different models. Model A (Figure 26) predicts that perceptions of permeability have an impact on both willingness to participate in the larger society and perceptions of global discrimination. Model B (Figure 27) predicts that perceptions of global discrimination have an impact on both willingness to participate in the larger society and perceptions of permeability. On the other hand, Model C (Figure 28) tests whether participation in the larger society would have an impact on perceived permeability and perceptions of global discrimination. Finally, Model D (Figure 29) tests whether willingness to participate in the larger society and perceptions of global discrimination would predict perceptions of permeability. Importantly, in this section the principal aim was to test and compare models and not specific coefficients individually. The focus was thus on the measures of fit that allow comparisons between models. We also gave some attention to the causal paths linking the variables that were assessed during first year with those that were assessed one year afterwards.

Tests of model fit for Model A revealed a non-significant chi-square, $\chi^2(4) = 2.03$, $p = .730$, indicating an excellent fit. CFI and TLI indices also suggested an excellent fit (both had a maximum value of 1). RMSEA corroborated the previous indices indicating a value of .001. The AIC value for this model was 1743.309. An inspection of the model's paths indicated that participation in the larger society assessed during students first year did not predict the same measure when assessed during second year, $\beta = -.07$, $p = .763$. Perceptions of permeability assessed at the first time point similarly did not predict the same measure assessed at the second time point, $\beta = -.20$, $p = .185$. The same was found for perceptions of global discrimination which did not predict the same measure when assessed during students' second year, $\beta = -.21$, $p = .136$. However, perceptions of

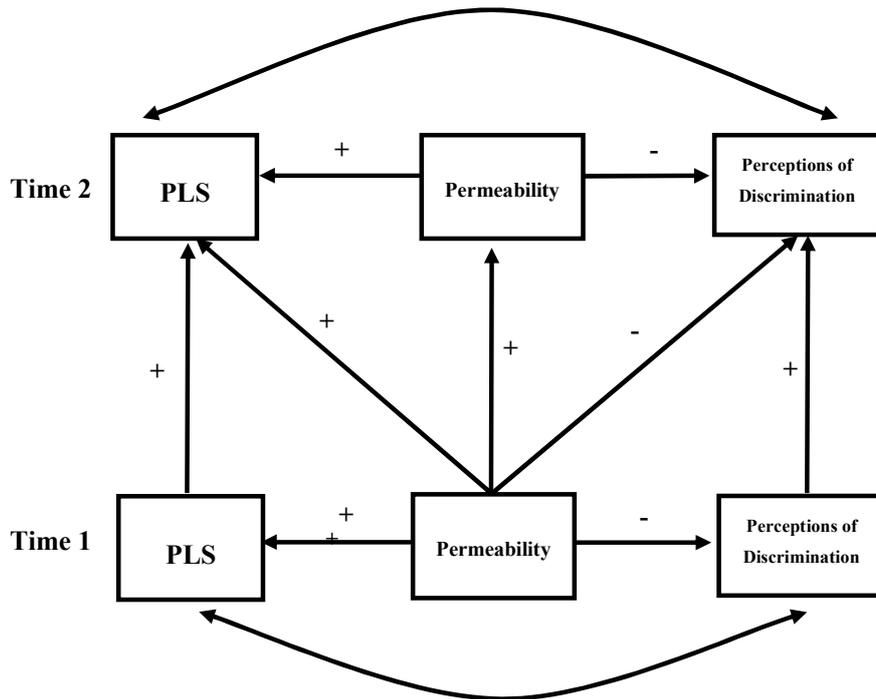


Figure 26. Model A - Permeability as a predictor of participation in the larger society (PLS) and perceptions of global discrimination.

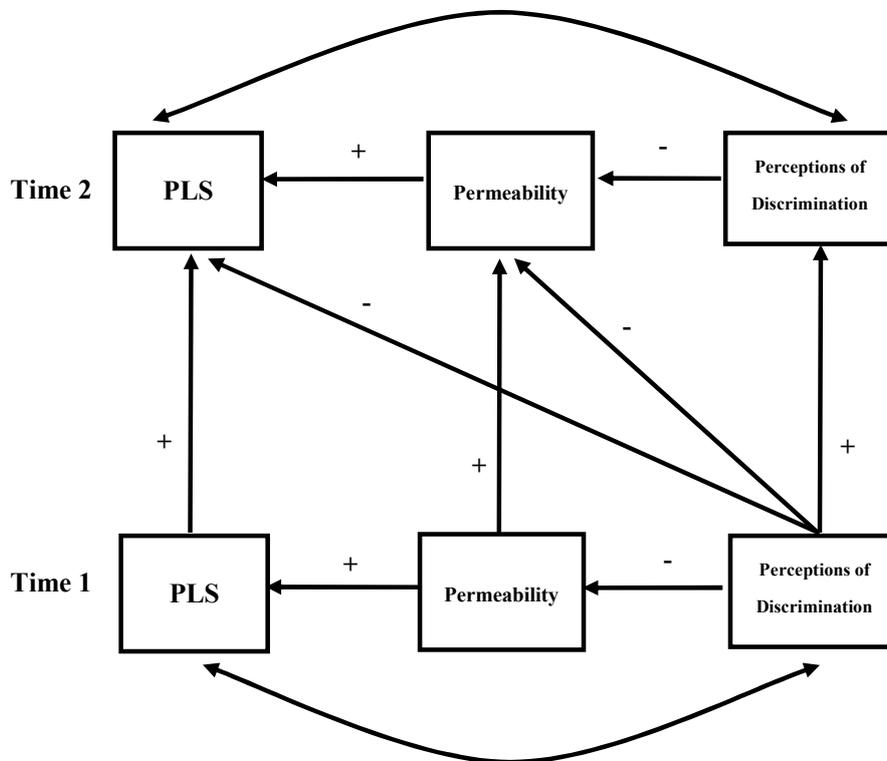


Figure 27. Model B – Perceptions of global discrimination as a predictor of participation in the larger society (PLS) and permeability.

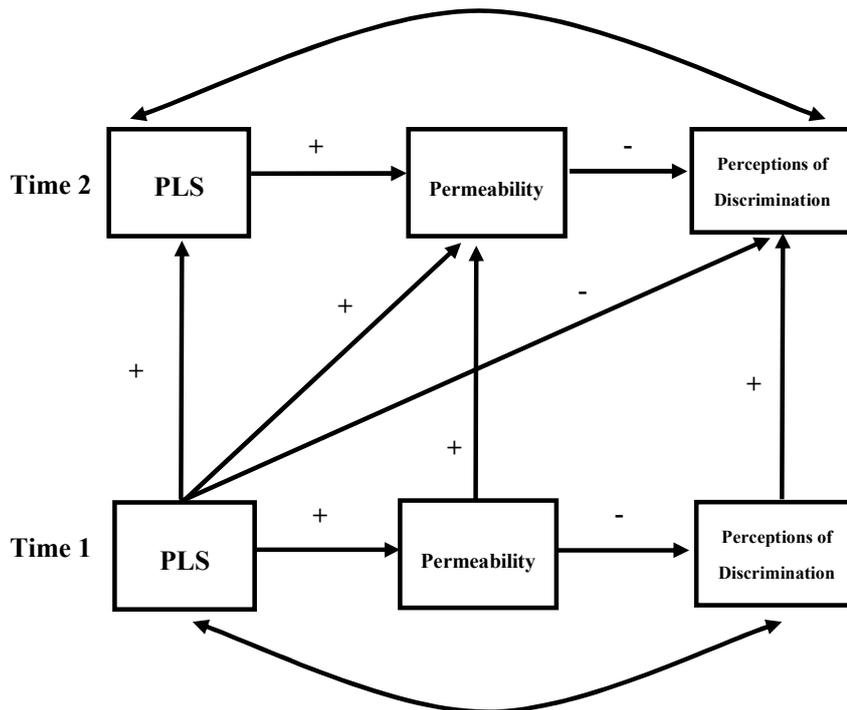


Figure 28. Model C – Participation in the larger society (PLS) as a predictor of permeability and perceptions of global discrimination.

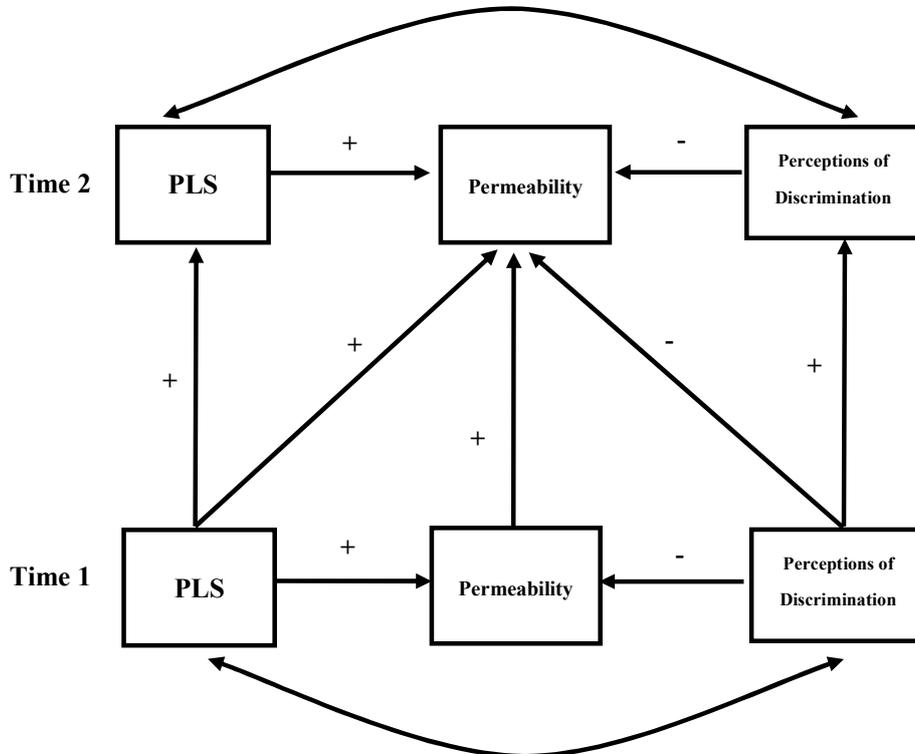


Figure 29. Model D – Participation in the larger society (PLS) and perceptions of global discrimination as predictors of permeability.

permeability (at Time 1) predicted both willingness to participate in the larger society and perceptions of global discrimination (at Time 2), $\beta = .28, p = .032$ and $\beta = -.30, p = .015$. These findings suggested that for international students, the higher the perceived permeability between their group and the dominant group during first year, the higher their willingness to participate in the larger society in their second year. For perceptions of discrimination it had the opposite effect. For these students, the higher the perceived group permeability during first year, the lower the perceived discrimination during second year.

Subsequently, Model B was tested. Model B also revealed a non-significant chi-square, $\chi^2(4) = 5.78, p = .216$. CFI, TLI, and RMSEA fit indices suggested a good fit (.99, .96, and .065). The AIC value for Model B was 1747.060. An examination of the model's paths indicated that willingness to participate in the larger society assessed during first year predicted the same variable assessed during second year, $\beta = .61, p = .004$. However, no significant results were found for the paths linking perceptions of permeability between both time points and for perceptions of global discrimination between both time points, $\beta = -.20, p = .127$ and $\beta = -.18, p = .162$. Moreover, perceptions of discrimination (at Time 1) did not predict either perceptions of permeability (at Time 2) or willingness to participate in the larger society, $\beta = -.21, p = .127$ and $\beta = .16, p = .163$.

Model C provided a poor fit to the data indicated by a significant chi-square, $\chi^2(4) = 17.60, p = .002$. CFI and TLI values were .92 and .68. RMSEA had a non satisfactory value of .178. The AIC value for this model was 1758.878. An inspection of the causal paths indicated that neither willingness to participate in the larger society, perceptions of permeability, nor perceptions of global discrimination predicted their corresponding variable assessed during second year, $\beta = .18, p = .465$, $\beta = -.28, p = .121$, and $\beta = .02, p$

= .947. However, willingness to participate in the larger society (at Time 1) predicted perceptions of permeability (at Time 2), $\beta = .30, p = .016$. This finding suggested that amongst international students, the higher the willingness to participate in the larger society, the higher the perceived permeability between group boundaries during their second year. Finally, willingness to participate in the larger society (at Time 1) did not predict perceptions of global discrimination (at Time 2), $\beta = -.02, p = .903$.

Finally, Model D also revealed a significant chi-square indicating a poor fit of the data, $\chi^2(4) = 15.66, p = .004$. CFI and TLI values also indicated a poor fit (.92 and .72). The RMSEA value was non-satisfactory (.165) and the AIC value for Model D was 1756.935. An inspection of the model's paths indicated that willingness to participate in the larger society assessed during students first year marginally predicted the same variable measured during their second year, $\beta = .42, p = .096$. However, perceptions of global discrimination did not predict the same variable when assessed at the second time point, $\beta = -.08, p = .525$. Perceptions of permeability assessed during first year marginally predicted the same measure when assessed during second year, $\beta = -.32, p = .091$. The higher students perceived permeability during their first year, the lower they perceived group boundaries to be permeable during their second year. There was also a marginal effect of willingness to participate in the larger society (Time 1) on permeability (at Time 2), $\beta = .22, p = .060$. This finding suggested that the more students were willing to participate in the larger society during their first year, the higher the perceived permeability during their second year. Finally, perceptions of global discrimination did not predict perceptions of permeability (at Time 2), $\beta = -.16, p = .215$.

Table 59 provides a comparison between the four different models. As suggested by our analysis, Model A and B provided an adequate fit to the data, whilst Model C and

D did not fit the data well. Despite Model B being also an adequate model, AIC served to rank Model A as the best model. Model A provided better predictive validity than the other alternatives.

Model	χ^2	df	AIC
A	2.03	4	1743.309
B	5.78	4	1747.060
C	17.60	4	1758.878
D	15.66	4	1756.935

Table 59. Comparison between the four models.

After inspecting our best model (Model A), we noticed that the paths connecting each variable between both time points were not statistically significant. This finding is against all our previous analyses that have consistently been showing a strong link between the two time points of each measure. Moreover, inspection of the residualised covariance matrix and modification indices suggested that model fit could be improved by considering other paths. Model A was thus re-specified.

As the paths linking each measure's time points were not statistically significant and perceptions of permeability were strongly associated with the other variables at both time points, we tested a model predicting that the effect of each variable between both time points would be mediated by perceptions of permeability. Furthermore, an inspection of Mplus' model modification indices (in other software packages named Lagrange Multiplier Test) suggested that correlating the errors of all variables assessed

during second year would provide better fit to the model (rather than estimating causal paths between them). Figure 30 shows the analysed structural model (Model E)²¹.

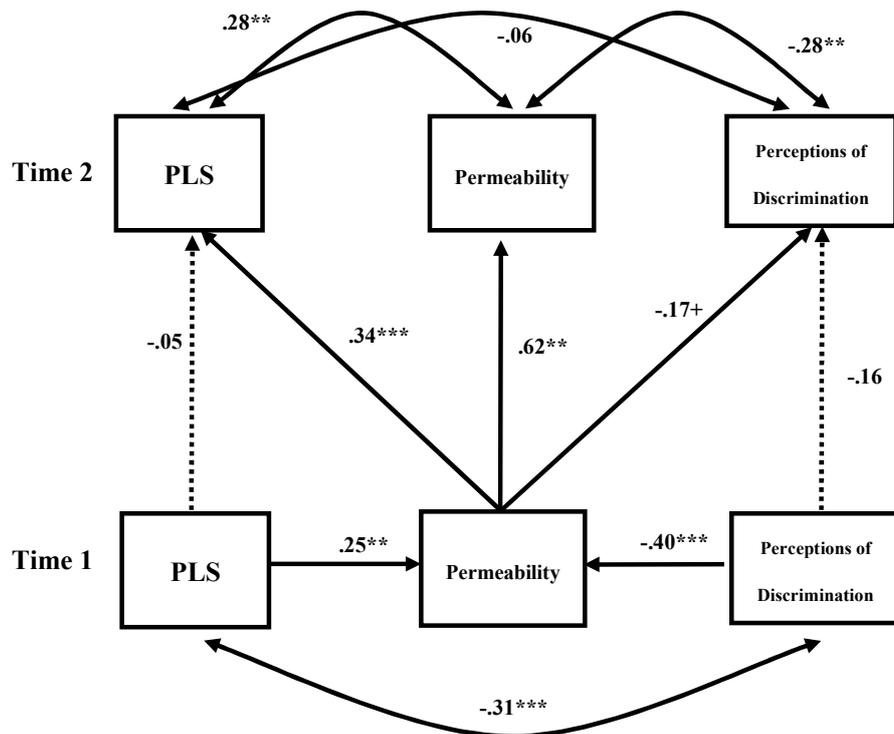


Figure 30. Model E - Permeability as a mediator between T1 and T2 of participation in the larger society (PLS) and perceptions of discrimination.

Results for the model without the direct paths indicated that the model fit the data extremely well, $\chi^2(6) = 4.30, p = .637$. CFI and TLI had both a maximum value of 1. RMSEA had a satisfactory value of .001 and AIC had a value of 1741.576. Adding the

²¹ Within SEM it is common practice to test two models when testing a mediation effect. The first model includes all paths of the hypothesised mediation model apart from the direct paths (the dotted lines in Figure 30). In the second model, the direct paths are included. In order to compare the fit between both models, a chi-square difference test between the two models is calculated. If this difference is statistically non-significant, it tells the researcher that adding the direct paths does not improve the fit of the model. In these cases there is full mediation.

direct paths to the model revealed similar results. It also fit the data well, $\chi^2(4) = 2.76$, $p = .598$. CFI and TLI had both a maximum value of 1. RMSEA had a satisfactory value of .001 and AIC had a value of 1744.042. However, introducing the direct paths did not change the fit of the model significantly, $\chi^2_{\text{DIF}}(2) = 1.54$, $p = .463$. When comparing the fit of this model with the best fitting Model A, AIC indicated a value of 1741.576 for Model E, whereas Model A had a value of 1743.309. Model E was the model which provided a better fit for the data.

An inspection of the direct and indirect effects indicated that the direct path between the two time points of perceptions of global discrimination was non-significant, $r = -.16$, $p = .200$. However, the indirect effect (perceptions of global discrimination at Time 1 \rightarrow perceptions of permeability at Time 1 \rightarrow perceptions of global discrimination at Time 2) was marginally significant, $r = .07$, $p = .084$. International students' perceptions of discrimination tend to impact negatively on their perceptions of permeability during their first year, which in turn increases their perceptions of discrimination during second year. On the other hand, the direct path between the two time points of willingness to participate in the larger society was non-significant, $r = -.05$, $p = .834$. Nevertheless, the indirect effect (willingness to participate in the larger society at Time 1 \rightarrow perceptions of permeability at Time 1 \rightarrow willingness to participate in the larger society at Time 2) was statistically significant, $r = .08$, $p = .026$. The higher international students are willing to participate in the larger society tended to impact positively on perceived permeability, which in turn resulted in increased willingness to participate in the larger society in second year.

6.2 – Discussion

The present results demonstrated the importance of following a longitudinal perspective when examining international students' experiences at university. Longitudinal analyses served to test the causal relationships of our model and provided information that could not be accessed with other methodologies. More specifically, longitudinal data supported Chapter 5's findings by suggesting that the buffering effect of minority group identification depended upon individual acculturation strategies. Indeed, only ingroup affect with own country students mediated the relationship between perceptions of discrimination and self-esteem. The mediation effect showed that ingroup affect alleviated the negative consequences of group-based discrimination. However, only proponents of separation and assimilation were able to protect self-esteem by maintaining ingroup affect, whilst those who endorsed integration and marginalisation decreased ingroup affect in the face of discrimination, which in turn had negative consequences for their self-esteem.

Moreover, we further extended the scope of the rejection-identification model by demonstrating that ingroup affect served to alleviate the negative consequences of group-based discrimination on academic performance, anxiety, and negative emotions. The buffering characteristics of ingroup affect on these outcomes also varied as a function of international students' acculturation strategies.

6.2.1 – Changes from students' first to second year

We found that perspectives of international students almost did not change from their first to second year at university. According to previous research (e.g. Ward & Kennedy, 1996) we expected that international students would improve their

psychological adaptation with time. However, no differences were found for self-esteem, depression, and anxiety during the period of one year. In fact, there was a tendency to increase the frequency of negative emotions with time.

One possible explanation for this divergence might be due to the fact that previous research has assessed international students' experiences at different time points. For example, Westermeyer, Neider, and Callies (1989) tested international students at their arrival and 4 and 6 months after. The authors found that psychological well-being improved until 4 months and afterwards it was somewhat variable over time. Ward et al.'s (1998) study with Japanese students in New Zealand revealed similar results. These students were tested upon arrival and again 4, 6, and 12 months after. It was found that levels of depression were at the highest during the entry stage. Depression dropped significantly in the subsequent time point and stabilised after the 4 month period.

In this study we could not support previous research as students were not tested upon arrival. As suggested by Ward et al. (2001) however, it can be speculated that after the initial period up to 4 or 6 months, international students become more effective cultural learners and fluctuations in psychological well-being may be due to non-cultural issues (e.g. exams, relationships with their peers, and academic difficulties). From our data this could not be concluded, but it is a probable explanation for why we did not observe any differences in students' psychological well-being.

Although there were no differences for psychological well-being, there was an important decrease in students' willingness to participate in the larger society during their second year. This research finding contradicts unidimensional models (e.g. Olmeda, 1979) which argue that acculturating individuals tend to fall into an irreversible process of assimilation. In fact, the opposite was found. Individuals decreased their willingness to

participate in the larger society and maintained their own cultural heritage. Furthermore, for unidimensional models, host and own cultures are opposite poles of a continuum. Thus, for a unidimensional perspective it would be expected that a decrease in individuals' willingness to participate in the host culture, would be accompanied by an increase in maintenance of own culture. Once again, this was not supported by our findings as the two dimensions seemed to vary independently of one another, supporting a bidimensional perspective. Finally, a reason for international students to decrease willingness to participate in the larger society might be related to the benefits of supporting a separation strategy. That is, in the previous chapter we found that during first year a separation strategy served to protect international students from the harmful effects of discrimination, whereas an integration strategy left these students vulnerable to group-based discrimination. Hence, students may maintain their own cultural background while decreasing their willingness to participate in the larger society (falling into a separation strategy) in order to protect their psychological well-being. Decreasing their investment in participating in the larger society can be perhaps a strategy that can work for the betterment of psychological adaptation.

Finally, we also found an important increase in students' levels of hostility towards the dominant group. As we found in the previous chapter, willingness to participate in the larger society was associated with lower levels of hostility at both time points. Thus, it is plausible that retreating from the larger society might be associated with derogation of the dominant group. This is in line with research showing that a lack of willingness to participate in the larger society (i.e. having a separation or marginalisation strategy) goes often hand in hand with problematic relationships between dominant and minority groups (Bourhis et al., 1997).

6.2.2 - Longitudinal analysis of the rejection-identification-acculturation model

The analysis of our model suggested that perceiving discrimination in first year resulted in an increasing awareness of own national group membership (centrality with own country students) during second year. This finding supported not only the cross-sectional findings reported in Chapter 5 but also previous literature. Indeed, Tajfel and Turner (1979) argued that perceiving discrimination makes intergroup boundaries salient and this is one of the reasons why group identification increases in the face of group-based discrimination. In self-categorisation theory terms (Turner, Hogg, Oakes, Reicher, & Wetherell, 1987), perceiving discrimination facilitates enhanced perceptions of meta-contrast (accentuating within group similarities and intergroup differences) following group-based discrimination. In turn, this enhances perceptions of common fate and strengthens group identification (Haslam, 2004; Turner et al., 1987). Although it has been shown only with cross-sectional data, other research has demonstrated that perceiving discrimination was associated with increased centrality (Gurin & Markus, 1989; Eccleston & Major, 2006; Spencer-Rodgers & Collins, 2006).

Our analysis also revealed a trend for decreasing ingroup affect with the group of international students when discrimination was perceived during first year. Although this was a weak effect, it supported previous research showing that perceived discrimination enhances the sense of belonging to a devalued group, with negative consequences for ingroup affect (Eccleston & Major, 2006).

Furthermore, our data did not support other approaches (e.g. Crocker & Major, 1989; Crocker et al., 1998), which suggested the reverse causal relationship that minority group identification has a causal impact on perceptions of discrimination. In fact, our data mirrored previous research providing experimental support for this relationship. Such

research (Jetten et al., 2001) found that leading a group of people with body piercing to believe that their group was discriminated by the majority resulted in strengthened ingroup identification. Although causal relations could not be tested explicitly, other studies used structural equation modelling to find some evidence for this causal direction (e.g. Branscombe et al., 1999; Schmitt et al., 2002).

An exception was the case of ingroup ties which revealed the reversed causal relationship. Our data suggested that those who developed strong ties with other international students tended to perceive less discrimination during their second year. This finding supports our cross-sectional analysis of students' experiences at Time 2, showing a negative relationship between ingroup ties with international students and perceptions of discrimination. Although this finding provided evidence for the rejection-identification model's reversed causal explanation it still does not support the relationship argued by Crocker and Major (1989). To recapitulate, Crocker and Major (1989) hypothesised that increased minority group identification would encourage perceptions of discrimination. In our study however, this argument could not be supported as ingroup ties tended to discourage perceptions discrimination. The lack of research about this relationship does not allow us to have a complete understanding of this finding. It can be speculated however, that strong ties with other international students perhaps alienate students from contact with the dominant group and thus result in less experiences of discrimination.

Importantly, it was found that international students' experiences of discrimination in first year resulted in feelings of lower self-worth during their second year. This finding provided more cogent support for other cross-sectional research showing that perceiving that one's group is devalued by the majority can have negative

implications for self-esteem (e.g. Bornman, 1999; Landrine & Klonoff, 1996). From the two group identities and their dimensions, only ingroup affect with students from own country was able to counteract the harmful effects that group-based discrimination had on psychological well-being²². In fact, ingroup affect is a key component of group or collective self-esteem. Ingroup affect has been found to relate positively to personal self-esteem (Crocker, Luhtanen, Blaine & Broadnax, 1994; Luhtanen & Crocker, 1992). In line with Chapter 5's analysis, the longitudinal analysis showed that the buffering effect of ingroup affect varied as a function of individual acculturation strategies. Proponents of integration and marginalisation were vulnerable to the harmful effects of discrimination, whilst those who endorsed separation and marginalisation were able to protect their self-esteem²³. In sum, further support was found for our model by showing that the protective effect of ingroup affect could improve students' experiences during their second year.

6.2.3 – Hostility, well-being, and academic performance

It was also found that ingroup affect can counteract the negative effects of perceptions of discrimination on anxiety and frequency of negative emotions. Although Branscombe et al.'s (1999) and Schmitt et al.'s (2002) studies had examined the link between perceptions of discrimination, negative emotions and anxiety, our study

²² As already discussed, when we inspected the effects of perceptions of discrimination on ingroup affect, only a marginal effect was revealed. However, for the analysis of the overall model this relationship was stronger. Specifically, once acculturation strategies were taken into account, there was a stronger effect between perceptions of discrimination during students' first year and ingroup affect assessed during their second year. This finding strengthens the importance of the role of acculturation on the understanding of the relationship between rejection and identification.

²³ Because these findings are identical to those discussed in the previous chapter, we would like to refer the reader to Chapter 5's discussion for a more detailed consideration of this moderated mediation effect.

provided further support by isolating ingroup affect as a particular aspect of minority group identification. Another particular aspect of our study was that the effects on anxiety and negative emotions were tested separately. Branscombe et al. (1999) and Schmitt et al. (2002) had used structural equation modelling techniques to factor together several variables as indicators of well-being.

Another distinct aspect of our study was that we examined outcomes other than those related to psychological well-being. This was an important extension to the rejection-identification model as most studies had focused on only one outcome when examining the impact of discrimination on minority groups. This becomes particularly important if we keep in mind that coping or resilience strategies may exert a positive effect on psychological well-being but be counter-productive for other important outcomes (Major & O'Brien, 2005).

Although no effects were found for hostility, ingroup affect counteracted the negative impact of perceived discrimination on students' academic performance. As we saw in Chapter 5, our data supported other research showing that a positive self-image can be positively associated with successful academic performance (e.g. Lane, Lane, & Kyprianou, 2004). Thus, it can be expected that positive feelings about one's group may be related to a better academic performance.

6.2.4 – The specific relationships between the study's variables

An analysis of the possible causes of problematic academic experiences revealed that the effects of group-based discrimination on academic performance were not mediated by students' self-esteem. This is an important aspect as it can show that the previously discussed buffering effects of ingroup affect were directly related to academic

performance and not further mediated by psychological well-being. This finding strengthens the importance of ingroup affect and the understanding of international students' identification with their own national groups, when examining the mechanisms that are available for protecting their academic performance.

Contradicting previous research (e.g. Cortazzi & Jin, 1997), we found that perceived cultural and physical distance did not predict a problematic academic performance. Firstly, a possible reason for this inconsistency may be that in this thesis we measured students' perceptions of academic performance, instead of actual academic performance. The reason for choosing this method relates to the fact that different international students have different academic goals; so, for example, a mark in the middle of the scale might be satisfactory for some but not for other students. Thus, we believe that it would be more important to assess students' perspectives about their own performance. Due to this aspect, it was expected that perceived academic performance would relate more closely to psychological well-being and experiences of discrimination. By choosing this method however, our findings may be different from those in previous research that assessed actual academic performance. Furthermore, it might be expected that cultural differences have a higher impact during students' first year and subsequently academic performance would improve as a consequence of cultural adaptation. However, perceived academic performance did not improve between students' first and second year. Similarly to our discussion about the effects of cultural adaptation on students' well-being, it can be argued that cultural differences may be crucial only in an initial period up to 4 or 6 months. After this period international students perhaps become more effective cultural learners and differences in perceived academic performance might be due to non-cultural issues.

6.2.4.1 – International students' social networks

Additionally, we analysed students' social networks. Longitudinal data supported the idea that international students' preferences for a given friendship network were not as straightforward as hypothesised. Only students' willingness to maintain own cultural background was useful to predict contact with other friends at home. This would be expected as sojourners/immigrants who want to maintain their cultural background tend to engage or keep contact with other compatriots (Berry, 2001). However, maintenance of own cultural background resulted in less contact with friends from the UK. According to the theoretical conceptualisation of acculturation dimensions, contact with friends from the UK would be predicted by willingness to participate in the larger society instead. This divergence however, might be explained by the way friendship networks were measured. We asked students to think about their friends and to answer what was the percentage of friends from their own country, the UK, and other countries, which made these variables interdependent. Thus, a high percentage of co-national friends would imply a low percentage of friends from the UK or other countries.

When we examined the importance of English skills, no conclusive results were found as students' English proficiency was not associated with their friendship networks. In fact, previous research has provided ambiguous findings about the consequences of language skills. For example, whilst some studies have linked language proficiency to psychological adjustment (e.g. Gullahorn & Gullahorn, 1966; Sewell & Davidsen, 1961), other authors have failed to find a relationship between these two variables (e.g. Ward & Kennedy, 1993). Moreover, research with foreign students in Japan has shown that increased proficiency in Japanese was associated with lower life satisfaction (Takai, 1989). An explanation for this finding was that these foreign students had higher

expectations for contact with Japanese hosts which had not been met by the Japanese students. Thus, there is evidence for a complex set of possible relationships between English skills and other variables that might not be explained by single variables. In this study, due to the nature of our design and measures, it was impossible to disentangle positive from negative effects. Indeed, a possible reason for our results might have been that both positive and negative consequences of language skills cancelled each other out. For last, some international students might not have the opportunity to have friends from their own country as some countries were highly underrepresented. Thus, a poor command of English might not be reflected in a choice for having friends from the same country and speaking the native language as this option is not available.

Interesting results were found when the effects of the different friendship networks were examined. As already discussed, previous research has argued that co-national and host national friendships are important sources of support (e.g. Searle & Ward, 1990). However, the literature also provides evidence for the fact that these social networks might have the opposite effect at other times (e.g. Ward & Kennedy, 1992). Indeed, our results indicated that having more co-national or host friends in the beginning of their studies was associated with increased perceived discrimination and lower self-esteem in second year. A possible explanation may be provided by other research showing that increased intergroup contact makes group members aware of group-based discrimination that would not be noticed without contact (Crocker & Major, 1989; Hegelson & Mickelson, 1995). On the other hand, research has also pointed out the importance of intergroup contact as a means of reducing intergroup prejudice (Pettigrew, 1998). Thus, students who only have friends from their own country might be too isolated from other groups and have the tendency to perceive more discrimination. Taking

together the fact that having a high percentage of co-national or host friends has negative implications for perceptions of intergroup relations, although not being explicitly demonstrated, it might be perhaps that students benefit more from a balanced combination of the different social networks.

For self-esteem there is another explanation. Increasing the percentage of co-national friends was related to feelings of low self-worth but only for students who were not willing to maintain their own culture. This finding parallels previous research showing that discrepancies between actual and desired contact were associated with difficulties in adaptation (Zheng & Berry, 1991). Thus, despite their preferences, these students might face barriers to make host friends or friends from other nationalities, which have a negative impact on their self-esteem. On the other hand, acculturation research has shown that having co-national friends is necessary in order to maintain a strong cultural identity (Ward & Kennedy, 1993), which in turn positively relates to students' psychological well-being (Searl & Ward, 1990). Hence, when most of international students' friends are from the UK, these students do not have the chance to share their cultural experiences and background, which negatively affects their self-esteem. Furthermore, having British friends might be important for social adaptation and have a positive impact on intergroup relations. The impact on psychological adaptation however, appears to be more complex. The effect of these relationships on psychological well-being and adaptation might depend on the perceived nature of these relationships, how satisfied students are with these relationships, and other individual factors. Our data provides some support for this idea by showing that the impact of friendship networks on well-being can depend on their preferences for contact. Finally, it appeared that contact with other nationalities did not have an impact on any of the study's principal variables.

The lack of research examining this social network does not permit to reach any conclusions. It can be speculated nevertheless that this network would provide a more neutral group for international students, i.e. it is characterised by involvement with other foreign groups, but at the same time it is similar to a co-national network as students share a common identity. International students share the same set of experiences (being an international student) which results in a shared identity (Schmitt et al., 2003).

6.2.4.2. – The two acculturation dimensions

During our analyses particular attention was given to the relationship between the two dimensions of acculturation and their possible predictors. Perceptions of group permeability were the only variable that successfully predicted willingness to participate in the larger society. In fact, the perception that one is accepted in British groups elicited more interest in participating in the host community. The relationship between perceptions of permeability and willingness to participate in the larger society to a certain extent mirrored other findings of acculturation research. For example, Bourhis et al. (1997) emphasised the importance of host acculturation strategies in determining the strategies of acculturating individuals. Often, the strategies of host communities impose certain constraints and determine whether intergroup boundaries are permeable or impermeable (Berry, 1974), which may also impact on the strategies of acculturating individuals. Additionally, Zagefka and Brown (2002) showed that perceiving that the host culture holds an integration strategy results in perceiving better intergroup relations from the perspective of acculturating individuals. In a similar way, perceiving that group boundaries are open may result in better intergroup relations, eliciting further contact from acculturating individuals.

6.2.4.3 - Perceptions of discrimination and willingness to make attributions to prejudice

In this thesis, another important issue was the predicting value of perceptions of discrimination and willingness to make attributions to discrimination. Overall, our data suggested that perceptions of discrimination were more effective in predicting students' well-being and group identification. Research examining causal attributions has demonstrated that individuals can protect their self-esteem by attributing a negative outcome to a less central aspect of their self (Rhodewalt et al., 1991). Although one might engage in this type of strategy in order to protect self-esteem, systematically attributing negative outcomes to prejudice might not be effective in the long term (Branscombe et al., 1999). In fact, although an attribution to prejudice might appear to be a purely external attribution, internal factors are affected as it involves attributing a negative outcome to one's own group (see Branscombe et al., 1999 for an identical argument). That is, attributing negative outcomes to prejudice in the long term may imply that the dominant group has a stable and derogative view of one's group, which in turn will not protect one's self-esteem. According to this argument, it is important to distinguish between attributing a single outcome to prejudice from consistently attributing negative outcomes to prejudice. With our longitudinal analysis, international students' willingness to make attributions to prejudice was measured during one year. In contrast, studies arguing that willingness to make attributions to prejudice have a positive impact on self-esteem have assessed this relationship under different settings. In effect, the latter research has been conducted under experimental designs in a laboratory, which involved making single attributions to prejudice (e.g. Crocker et al., 1999). This perhaps explains why previous research has found that making attributions to prejudice can protect one's self-esteem and

in our study making attributions to prejudice did not protect students' self-esteem. Our data also showed that previous experiences of discrimination were a better predictor of the psychological well-being of international students.

Furthermore, Crocker and Major (1989) hypothesised that minority group identification would impact on individuals' willingness to make attributions to prejudice. In contrast, our study showed no causal effects between willingness to make attributions to prejudice and minority group identification.

6.2.4.4 – Structural equation modelling analysis

SEM analysis provided further support for the causal relationship between perceived discrimination and minority group identification. This technique permitted to support both previous cross-sectional data (e.g. Branscombe et al., 1999, Schmitt et al., 2002; Schmitt et al., 2003), and this study's longitudinal results previously analysed with multiple regression. However, our findings differed from those of Schmitt et al.'s (2003) in one aspect. In the latter study, international students' perceptions of discrimination were associated only with identification with the group of international students. In this thesis, for international students perceiving discrimination resulted in increased identification with both international and own country students. Despite contextual differences between a study conducted in the UK and another in the United States, Schmitt et al.'s (2003) study measured discrimination against international students, whilst we measured discrimination against both international students and foreigners in general (i.e. being discriminated because of one's foreign status). Schmitt and colleagues argued that perceptions of discrimination were not related to identification with students' own national group as these perceptions were not relevant to the discrimination

experienced by international students. Thus, it is possible that divergence between studies can be due to the different ways in which international students experience discrimination in both countries. Although it cannot be ascertained from our study, it can also be speculated that asking international students about a certain type of discrimination had made them cognitively aware of it, and hence resulting in more identification with the category corresponding to that type of discrimination (i.e. thinking about discrimination against foreign nationalities elicited increased identification with own nationality).

Although SEM analysis did not support a link between perceptions of discrimination and psychological well-being, it did not necessarily contradict the rejection-identification model's predictions. Theoretically, it was expected that perceiving discrimination would have a negative impact on psychological well-being. However, it was also predicted that this effect would be countered by minority group identification. As we have shown for the analysis with negative emotions and anxiety, the direct effect of perceived discrimination on students' well-being is suppressed by ingroup affect. Hence, in our data ingroup affect cancels out the expected negative effect of rejection on one's well-being.

Finally, SEM analysis served to examine the relationship between willingness to participate in the larger society, perceptions of global discrimination, and perceived group permeability. Although support was found for our model hypothesising that perceptions of permeability would have a causal impact on both perceptions of discrimination and willingness to participate in the larger society, it was another model that provided better fit to our data. This latter model indicated that change of perceived discrimination and willingness to participate in the larger society within two years was mediated by perceptions of permeability. More specifically, during first year, international students

who reported experiences of discrimination (for example) tended to perceive group boundaries to be impermeable, which in turn were reflected in more experiences of discrimination in second year. Indeed, when one's group is discriminated against by the majority, the separateness of groups and impermeability of boundaries becomes particularly salient (Tajfel, 1978). Of particular importance to our moderated mediation model was the relationship between perceptions of discrimination and acculturation strategies. Two models testing the possible relationships between these two variables did not provide support for a causal relationship. This finding supports previous results showing that perceptions of discrimination were not associated with acculturation strategies (Zagefka & Brown, 2002). It is indeed important to emphasise this last finding as a possible causal effect of acculturation strategies on perceived discrimination would compromise the moderation effect found in our model. In sum, perceptions of permeability during international students first year were an important mechanism in understanding how they develop their perceptions of discrimination and willingness to participate in the larger society. Acculturation strategies did not have an impact on perceptions of discrimination, relationship which supported the moderated mediation hypothesis of our model.

6.2.5 – Limitations

Although this chapter permitted to tackle some of the limitations of previous research, there are however some important limitations that warrant discussion. The first limitation relates to the size of our sample. The relative small size of the sample prevented us from taking all the advantages provided by structural equation modelling techniques. SEM would have been useful to test our overall model and other more

complex models that could not be tested due to the limited size of our sample. Another limitation of our data is the number of assessed time points. Having another time point would have allowed to model other types of relationships between variables (e.g. cubic) that could not be identified with the current data.

Another important limitation relates to the generalisation of some of the SEM results. More specifically, the model showing the mediation effect of perceptions of permeability was derived from our data and not from theory. Although this model made theoretical sense, some reservations have to be made as it was derived from data. In fact, SEM is usually used as a confirmatory instead of an exploratory technique. Models developed from data can incur in the danger of not being replicated by other samples. The only possible way to tackle this issue would be testing these effects with another sample or testing the same model with random subsamples of our data (due to the limited size of our sample, it is impossible to follow this approach).

Finally, although our model appears robust and supported by different techniques another limitation derives from our sample (see a detailed description of this limitation in the same section of Chapter 5). Thus, it is important to investigate and re-test our predictions with other populations in order to further generalise our findings to minority groups.

6.2.6 - Conclusion

This study sheds light on how minority group identification counteracts the negative effects of group-based discrimination on different outcomes. It expanded the rejection-identification model by having a detailed focus on the model's causal relationships. SEM techniques also permitted to confirm our findings under a different

technique. Overall, our results emphasised the importance of ingroup affect as the principal component of identification in buffering the harmful effects of rejection. In turn, the protective effect of minority group identification depended upon individual preferences relating to participation in the larger society and maintenance of own culture. A separation and assimilation strategy served to protect international students' self-concept, while integration and marginalisation strategies left these students vulnerable to the actions of the dominant group. Importantly, longitudinal data demonstrated that the long-term effects of experiences of discrimination cannot be alleviated by making attributions to prejudice. Instead, our data supported the causal relations and perspective of the rejection-identification model by indicating that perceiving discrimination tends to impact on minority group identification, which in turn had a further impact on students' well-being.

Chapter 7. STUDY WITH POLISH IMMIGRANTS

Overview

In this chapter we presented a study testing our rejection-identification-acculturation model with a sample of Polish immigrants. We examined whether individual acculturation strategies would moderate the buffering effect of minority group identification against the harmful consequences of group-based discrimination. In order to test our model we conducted a study with a sample of Polish immigrants ($N = 66$), where the degree of group-based discrimination was manipulated. Results indicated that the different dimensions of group identification were not related to any of the psychological well-being variables. Therefore, we were not able to test the mediating effect of group identification on the relationship between discrimination and well-being. It was found however, that the effect of perceived discrimination on group identification depended on participants' acculturation strategies. More specifically, it was revealed that a separation strategy was crucial for increasing ingroup affect in the face of discrimination, which in turn would potentially be reflected in positive well-being outcomes. This effect was more diluted or even negative for those who endorsed assimilation, marginalisation, and integration. A secondary aim of this study was to also test the relationship between friendship networks and psychological well-being. Results revealed that having co-national and British friends is an important resource for Polish immigrants. However, when contact with these networks is not sought, having more Polish or British friends had negative implications for the well-being of these immigrants. Discussion focused on the importance of acculturation strategies in preparing a collective response against discrimination.

This chapter set out to address the research questions in Chapter 2 by means of an experimental study. These questions were already tested with international students and are related to the core assumptions of our model. In the present chapter we aimed at testing our previous findings with a sample of immigrants, whilst testing our model under a different approach. We thus followed an experimental design in which causal relationships can be inferred, whilst providing a different test to our hypothesis. For the purpose of facilitating the reader's task, we started by providing a brief overview of the questions and predictions that we addressed in this chapter. Recapitulating the questions and predictions set in Chapter 2, we aimed at addressing the following:

(i) *Will immigrant groups be affected by perceptions of discrimination in the same way as international students?*

Prediction 1 – It is expected that results with an immigrant sample will support our previous findings with international students. Thus, it is anticipated that perceptions of discrimination will exert a negative impact on well-being (path A, Figure 31).

P2 - Perceptions of discrimination will be associated with higher centrality (path B). In contrast, perceptions of discrimination will be associated with lower ingroup ties and ingroup affect (path C).

P3 - Centrality will be negatively associated with psychological well-being (path D). Ingroup ties and affect will be positively related to psychological well-being (path E).

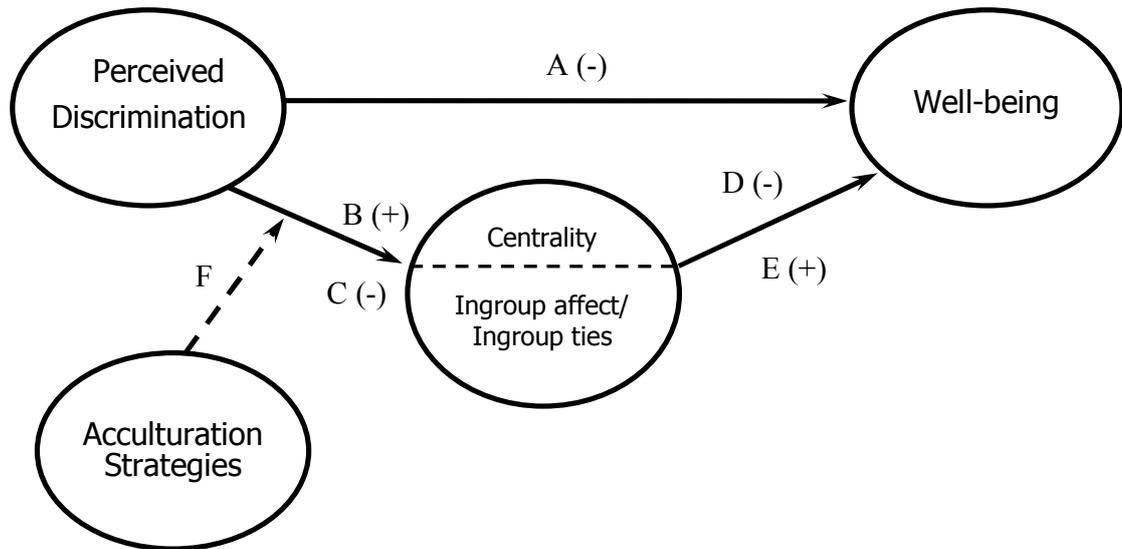


Figure 31. The rejection-identification-acculturation model.

(ii) *Will acculturation strategies from immigrant groups also interact with perceptions of discrimination to impact on ingroup identification? Will immigrant group protect their well-being in the same way as international students?*

P4 – For proponents of a separation strategy, perceived discrimination will be associated with lower (or the same) levels of centrality. For the other acculturation strategies, perceived discrimination will be associated with higher centrality (path F).

P5 – Those who endorse a separation strategy will increase (or maintain) ingroup affect in the face of group-based discrimination. For those who endorse the other acculturation strategies, it is expected that ingroup affect will decrease when discrimination is perceived (path F).

P6 – Ingroup ties will increase in the face of perceived discrimination for those who endorse a separation strategy. In contrast, when discrimination is perceived, ingroup ties will decrease for those who endorse the other acculturation strategies (path F).

P7 – The protective effects of minority group identification will vary as a function of acculturation strategies. Thus, proponents of separation by enhancing or maintaining ingroup affect/ties are able to protect themselves from group-based discrimination. Proponents of integration, assimilation, and marginalisation are unable to use ingroup identification to counteract the negative effects of rejection. In a similar vein, proponents of a separation strategy by decreasing or maintaining their centrality with the ingroup are able to protect their psychological well-being from the harmful effects of rejection. In contrast, for those who endorse the other acculturation strategies, increased centrality with the ingroup as a response to discrimination will be reflected in poor psychological well-being.

(iii) Does perceived discrimination invariably result in hostility towards the dominant group? In which ways can this relationship be related to the various acculturation strategies?

P8 – A separation strategy will serve to protect individuals' well-being, but it will enhance levels of hostility towards the host culture. For those who endorse integration, assimilation, and marginalisation, no changes on hostility are expected.

(iv) How might immigrants' social networks impact on their life experiences?

P9 – It is predicted that willingness to participate in the larger society will be positively associated with the amount of British friends. In contrast, it is expected that willingness to maintain own cultural background will be related to contact with co-national friends, and contact with parents and other friends at home. It is also expected that English skills will be positively associated with British friends.

P10 – It is predicted that the different social networks will have an impact on psychological well-being. Because of the discrepant results found in the literature, in this thesis we test the relationship between social networks state self-esteem, positive affect, and negative affect, but without making any specific predictions for these relationships.

P11 – It is anticipated that the positive effect of the amount of friends from a particular network on well-being will vary as a function of people's desire for contact with that network. Thus, it is expected a great amount of friends from one of the social networks will have a positive effect on well-being only when this contact was desired by immigrant groups.

In order to test the aforementioned predictions we conducted an experimental study with a sample of Polish immigrants. The reason for choosing this sample was twofold. Firstly, the immigration of Polish people to Scotland has a recent history. In fact, the majority of these Poles have only immigrated to Scotland after Poland has joined the European Union in 2004. Because of this characteristic, the majority of Polish immigrants were raised and educated in Poland. Due to this aspect, Poles contrast with other immigrant groups that are settled in the UK for longer and might have been born in the UK already. As a consequence, Polish immigrants had the advantage of composing a more homogenous group. Secondly, Polish immigrants compose one of the largest immigrant groups in Scotland and could be of easier access to our research.

The predictions formulated in the present study aimed at testing the rejection-identification-acculturation model. It was our priority to examine not only the nature of the relationships between the model's variables, but also their causal paths. With this main goal as a priority, we designed a study where perceptions of discrimination were

manipulated. By manipulating this variable we could examine the causal effects of perceived discrimination on our outcome variables. This was a questionnaire study where the extent to which Polish immigrants perceived discrimination was manipulated by providing initial mock information concerning the relationship between Polish and Scottish people (more detail will be provided in the Method section).

There were however, a few modifications to our well-being measures due to this study's experimental nature. More specifically, previous research has shown that people's self-concept is stable and persistent. It has also argued that individuals tend to seek information that confirms their self-concept and tend to reject other information that might threaten their view of self (Greenwald, 1980; Swann, 1985, 1987; Wylie, 1979). Hence, a manipulation of perceptions of discrimination might not have an impact on participants' self-esteem. This argument is consistent with previous research that has manipulated perceptions of discrimination among a group of people with body piercings but did not observe any differences in self-esteem (Jetten et al., 2001). In order to address this concern, we measured short term changes in self-esteem. Heatherton and Polivy (1991) designed a measure named State Self-esteem Scale, which is sensitive to manipulations and momentary fluctuations of self-esteem. Recently, this scale has been used successfully in a number of different studies (e.g. Baumeister, DeWall, Ciarocco, & Twenge, 2005; Duval & Silvia, 2002; Swim, Hyers, Cohen, & Ferguson, 2001). Therefore, in the present study we included state self-esteem instead of self-esteem, depression, and anxiety. All the other measures (i.e. group identification, positive and negative affect, hostility, and acculturation strategies) remained the same.

7.1 – Method

7.1.1 - Participants and Procedure

Sixty-six Polish immigrants who had been living in Scotland between 1 month and 6 years ($M = 8$ months, $SD = 13.05$) were approached at different gathering places for Poles²⁴. The researcher identified himself as an international student working for a Scottish university. Participants were asked if they would be interested in taking part of a study investigating the relationship between Scottish and Polish people. A questionnaire booklet written in Polish (translated and back translated to English by two native Poles) was given to all volunteers. The sample comprised 34 females and 32 males, and their age ranged from 16 to 60 years ($M = 28$). All participants were randomly assigned to one of two experimental conditions (low discrimination and high discrimination).

7.1.2 - Measures

The questionnaire assessed participants' acculturation strategies, perceptions of discrimination, group identification with Polish immigrants, hostility, state self-esteem, and positive and negative emotions. Unless indicated otherwise, all responses were made on 7-point scales with endpoints ranging from 1 “*strongly disagree*” to 7 “*strongly agree*”.

7.1.2.1 – Demographic information

We started by asking Polish immigrants for how long they were living in Scotland, what was their perceived level of English, gender, age, their percentage of

²⁴ These places included a number of restaurants in St. Andrews, and the local churches in Dundee and Edinburgh.

Polish and British friends, and how often they kept contact with family and friends at home. Our initial aim was to keep the same structure of the longitudinal questionnaire where these questions were presented in the end. In this study however, we planned to present our manipulation in the beginning of the questionnaire by providing information about a mock study examining the relationship between Scottish and Polish people. It was crucial for the study that participants would read attentively this initial information. We therefore decided to include the demographic questions in the beginning, in order to engage participants in the questionnaire before they could read the text with our manipulation.

7.1.2.2 - Manipulation of perceptions of discrimination

Participants were asked to read a brief text about the relationship between Poles in Scotland and the Scottish. In the *discrimination* condition, participants received information about the possible negative consequences of the increasing numbers of Polish immigrants in Scotland. In addition, we presented information from a bogus survey showing that Scottish attitudes to immigration were not very favourable. Participants read: ‘Since the mid-1990s, discrimination has become a growing issue in Scotland. With more Polish immigrants arriving in the country and competing for job positions, an increase of discrimination against Polish immigrants is predicted along with an increase in the number of Scottish people opposed to immigration’, and ‘Studies are already showing that a large proportion of Scottish people do not agree with the current immigration policy and that they would prefer if the country did not have so many immigrants. Furthermore, a recent survey of Polish people revealed that 85% of those surveyed had experienced at least one episode where they felt they were discriminated

against because of their foreign nationality'. After reading the overview, we asked participants to write about a situation where they had been treated negatively by the Scottish because of their nationality. In the *low discrimination* condition, participants were informed that despite the increasing numbers of Polish immigrants arriving into Scotland, immigrants were never treated negatively by the Scottish. We also provided information showing that Polish people are rarely targets of discrimination in Scotland: 'Scotland is a multicultural country that receives immigrants from all over the world. This cultural diversity can sometimes create problems, but these seldom affect immigrants from other European countries. Studies have shown, for example, that Scottish people agree with the current immigration policy and are largely in favour of continued immigration from Poland and other European countries. Furthermore, a recent survey of Polish people revealed that 85% of those surveyed are quite happy living in Scotland and reported that they are only very rarely targets of discrimination. In general, the majority of participants stated that they felt welcome in Scotland and felt that they are treated with respect'. After reading this information, we asked participants to write a situation where they felt they had been treated positively by the Scottish because of their nationality. For both experimental conditions it was specified that if participants did not experience a positive (or negative) situation, they could write 'none'.

7.1.2.3 – Acculturation strategies

Both acculturation dimensions (willingness to participate in the host community and maintenance of own culture) were assessed. The two dimensions were assessed by adapting the same measure developed for international students. For example, willingness to participate in the host community was composed by items such as 'I feel at ease with

Scottish people'. Maintenance of own culture was composed by items such as 'I enjoy going to gatherings or parties held by Polish people'.

7.1.2.4 - Manipulation checks

The perceived discrimination manipulation was checked with six items. We adapted the items from our previous general discrimination scale (e.g. 'Polish people as a group face discrimination in Scotland').

7.1.2.5 – Group identification with Polish immigrants

In this study the twelve items of the full Cameron (2004) scale were used in order to assess participants' identification with the Polish. For example, ingroup ties comprised 'I have a lot in common with Polish people'. Centrality included items such as 'Overall, being from Poland has very little to do with how I feel about myself'. Ingroup affect comprised items such as 'In general, I'm glad to be from Poland'.

7.1.2.6 – Hostility towards the Scottish

Hostility towards the Scottish was assessed by adapting the 6 items from the study with international students. An example of an item from this measure is 'For me it is inevitable to have some bitter feelings for Scottish people'.

7.1.2.7 – State self-esteem

In order to measure state self-esteem we used 14 items from the State Self-Esteem Scale (SSES, Heatherton & Polivy, 1991). Originally, the SSES has 20 items tapping into three different areas: performance, social, and appearance. In this study however, due to

space constrains we did not include the items relating to appearance as we expected that these items would be less related to perceptions of discrimination than the other items. Hence, for the performance area we used the items ‘I feel confident about my abilities’; ‘I feel frustrated or rattled about my performance’; ‘I feel that I’m having trouble understanding things that I read’; ‘I feel as intelligent as others’; ‘I feel confident that I understand things’; ‘I feel that I have less intellectual ability right now than others’; and ‘I feel like I’m not doing well’. For the social area the following items were used: ‘I’m worried about whether I’m regarded as a success or a failure’; ‘I feel self-conscious’; ‘I feel displeased with myself’; ‘I’m worried about what other people think of me’; ‘I feel inferior to others at this moment’; ‘I feel concerned about the impression I’m making’; and ‘I’m worried about looking foolish’. Responses were made on a 7-point scale with endpoints ranging from 1 ‘*not at all*’ to 7 ‘*extremely*’.

7.1.2.8 – Positive and negative emotions

Positive and negative emotions were measured by averaging 6 items from the Positive and Negative Affect Schedule (PANAS, Watson et al., 1988). The original PANAS has 20 items. However, in an attempt to keep the questionnaire as short as possible we included only three items for positive affect and another three for negative affect (this is also similar to how we measured both constructs with international students). For positive affect we asked participants to describe the extent to which they felt ‘good natured’, ‘upbeat’, and ‘enthusiastic’. For negative affect we asked participants to describe the extent to which they felt ‘pessimistic’, ‘unhappy’, and ‘unsatisfied’. Responses were made on a 7-point scale with endpoints ranging from 1 ‘*not at all*’ to 7 ‘*extremely*’.

7.2 - Results

Before initiating a test of the predictions that were put forward in the beginning of this chapter, it is crucial to begin this section by testing the psychometric strength of the study's measures. As most measures had been developed from a sample of international students and had been translated to Polish, it is particularly important to test their psychometric qualities in this study. This testing will follow the same strategy outlined during our previous empirical chapters.

Our analyses will be divided in two distinct parts. The first part will examine the rejection-identification-acculturation model recurring to the experimental data gathered in the questionnaire. Due to the nature of our data, we will be able to analyse some of the causal relationships in the model. The second part of our analyses will focus only on correlational data and will aim at examining the specific role of English skills and friendship networks. In these last analyses cause and effect cannot be analysed.

Furthermore, from the original 66 participants, only 60 were maintained. Two participants who were in the low discrimination condition wrote in the open question that despite the information given in the questionnaire, Poles were highly discriminated in Scotland. Due to these participants' strong past experiences we could not manipulate their perceptions of discrimination. As a consequence, these two participants were important outliers in our data and therefore not included in future analysis. The other 4 participants did not reply to the open-ended question. As we could not be sure if they had read our manipulation, they were also excluded from the study.

7.2.1 – Preliminary analysis

7.2.1.1 – Reliability analysis

Table 60 indicates the alpha coefficients for all the study's measures. Although most measures were reliable, the alpha coefficients suggested that some measures were problematic. The scales with a non-satisfactory reliability coefficient were the measures assessing centrality, ingroup affect, state self-esteem (social), and negative affect. In the analysis described below, we deleted some items in order to improve the reliability of these problematic measures (new improved alphas are shown on the right column of Table 60).

For centrality, it was found that deleting the item 'Overall, being Polish has very little to do with how I feel about myself' improved the reliability of the measure. After deleting this item, centrality had an alpha coefficient of .68. Similarly, it was found that deleting the item 'I often regret that I'm Polish' would improve the reliability of ingroup affect ($\alpha = .78$). It was also found that deleting the items 'I feel like I'm not doing well' and 'I feel confident that I understand things' would improve the reliability of state self-esteem (performance). After deleting these two items, the alpha coefficient was .76. For state self-esteem (social), deleting the items 'I feel inferior to others at this moment', 'I feel displeased with myself', and 'I feel self-conscious' was the best solution for improving this measure's reliability. The final alpha coefficient was .61. Finally, the problematic reliability of negative affect could also be improved by deleting the item 'unsatisfied', resulting in a satisfactory alpha coefficient of .74. Although own culture maintenance did not show the worse reliability, it was found that deleting the items 'I have no wish to go back to Poland' and 'The Polish culture is not interesting'

significantly improved the reliability of this measure. After deleting these two items, the final measure had an alpha coefficient of .78.

Measure	α	New α
1 - Acculturation (participation in larger society)	.75	-
2 - Acculturation (culture maintenance)	.68	.78
3 - Perceptions of general discrimination	.93	-
4 - Ingroup ties	.83	-
5 - Centrality	.58	.68
6 - Ingroup affect	.59	.78
7 - Hostility	.80	-
8 - State self-esteem (performance)	.67	.76
9 - State self-esteem (social)	.41	.61
10 - Positive affect	.82	-
11 - Negative affect	.55	.74

Table 60. Alpha coefficients for the study's measures.

7.2.1.2 – Factor analysis

A factor analysis was performed for all the measures that were taken from a broader scale; i.e. ingroup ties, centrality, and ingroup affect; the performance and social areas of state self-esteem; and positive and negative affect.

Firstly, a factor analysis for group identification was performed. Because high intercorrelations were expected between the different dimensions, we performed a principal component analysis with an oblimin rotation. Results of this analysis yielded the factor structure presented in Table 61. Factor analysis revealed 3 factors, which explained 68.79% of the variance. Factor 1 included the items from ingroup ties and explained 39.19% of the variance. Factor 2 included the items from ingroup affect and explained 17.82% of the variance. For last, factor 3 included the items from centrality and explained

11.79% of the variance. From this analysis it was concluded that all items loaded onto the factors that they represented and thus further analysis with this measure could be performed without reservations.

Items	1	2	3
1 - I have a lot in common with other Polish people	.891	-.130	.121
2 - I feel strong ties to other Polish people	.662	.157	.203
3 - I find it difficult to form a bond with other Polish *	.739	.241	-.290
4 - I don't feel a sense of being "connected" with other Polish people *	.849	-.095	.155
5 - I often think about the fact that I am Polish	.369	-.135	.738
6 - In general, being Polish is an important part of my self-image	.057	.043	.735
7 - The fact that I am Polish rarely enters my mind *	-.096	.305	.645
8 - In general, I'm glad to be Polish	.214	.832	.010
9 - I don't feel good about being Polish *	-.030	.864	-.061
10 - Generally, I feel good when I think about myself as a Polish person	-.052	.646	.306

* reverse scored

Table 61. Factor loadings for identification with the Polish after an oblimin rotation.

Secondly, we performed a factor analysis with state self-esteem. The factor analysis yielded 2 factors, which explained 53.49% of the total variance (Table 62). Factor 1 included the performance area of state self-esteem. This factor accounted for 37.08% of the variance. Factor 2 was composed by items tapping into the social area of state self-esteem. It accounted for 16.41% of the variance. Following from this analysis we deleted the items 'I feel self-conscious', 'I feel displeased with myself', and 'I feel inferior to others at this moment'. These items were deleted because they were initially

developed to assess the area of social state self-esteem but had a high loading in the area of performance²⁵.

Items	1	2
1 - I feel confident about my abilities (performance)	.424	.083
2 - I feel frustrated or rattled about my performance (performance)	.793	.057
3 - I feel that I am having trouble understanding things that I read	.277	.397
4 - I feel as clever as others	.891	-.047
5 - I feel that I have less intellectual ability right now than others	.912	-.035
6 - I am worried about whether I am regarded as a success or a failure	-.111	.582
7 - I feel self-conscious	.637	-.198
8 - I feel displeased with myself	.807	.009
9 - I am worried about what other people think about me	-.131	.674
10 - I feel inferior to others at this moment	.828	-.151
11 - I feel concerned about the impression I am making	-.046	.750
12 - I am worried about looking foolish	.004	.703

Table 62. Factor loadings state self-esteem after an oblimin rotation.

Lastly, we performed a factor analysis for the measures assessing positive and negative affect. These two variables were expected to be independent; therefore we performed a varimax rotation. Factor analysis yielded only one factor (Table 63). The resulting factor explained 62.54% of the total variance. Although only one factor emerged from our analysis, positive and negative affect items were clearly divided. Positive factor loadings included the positive affect items, whilst the negative factor loadings included the negative affect items.

²⁵ Only the items in bold in Table 62 were included in the state self-esteem measures that were used from now onwards in this chapter. Because several items were deleted from the initial measure we performed another reliability analysis, which revealed the satisfactory alpha coefficients of .81 and .61, for the performance and social areas of state self-esteem respectively.

Items	1
1 - Good natured	.923
2 - Enthusiastic	.826
3 - Upbeat	.642
4 - Pessimistic	-.700
5 - Unhappy	-.832

Table 63. Factor loadings for positive and negative affect.

7.2.1.3 – Descriptive analysis

Table 64 presents means, standard deviations, skewness, and kurtosis for all variables. Inspection of the means reveals that scores on the willingness to participate in the host community measure and maintenance of own culture were slightly above the midpoint of the scale ($M = 4.91$ and $M = 4.77$). Perceptions of discrimination were below the midpoint of the scale ($M = 2.84$) suggesting that the sample might have had some experience with discrimination, but that discrimination may not have been pervasive. Participants' identification scores showed that individuals were highly identified with other Polish immigrants regarding ingroup ties ($M = 4.92$), centrality ($M = 5.56$), and ingroup affect ($M = 6.42$). Hostility revealed a low score ($M = 1.86$) suggesting that Polish immigrants did not feel hostility towards the Scottish. These immigrants scored slightly below the midpoint of the scale for both the performance area of state self-esteem ($M = 3.28$) and the social area of state self-esteem ($M = 3.89$). Positive and negative affect revealed a similar trend by showing scores just below the midpoint of the scale ($M = 2.95$) and ($M = 2.65$) respectively. Regarding their friendship networks, in average

Polish friends composed 55% of their social groups, whilst British friends composed 22% of their total friends. Also, participants maintained relatively frequent contact with their parents and friends at home ($M = 4.38$).

Measure	Mean (SD)	Skewness	Kurtosis
1 - Acculturation (participation in larger society)	4.91 (1.12)	-.073	-.372
2 - Acculturation (culture maintenance)	4.77 (1.24)	.022	-.990
3 - Perceptions of general discrimination	2.84 (1.85)	1.008	.003
4 - Ingroup ties	5.51 (1.36)	-.781	-.089
5 - Centrality	5.56 (1.34)	-.801	.014
6 - Ingroup affect	6.42 (0.87)	-1.816	3.081
7 - Hostility	1.86 (1.07)	1.818	3.798
8 - State self-esteem (performance)	3.28 (1.22)	-.020	-1.341
9 - State self-esteem (social)	3.89 (0.73)	-.701	-.083
10 - Positive affect	2.95 (1.21)	.031	-1.274
11 - Negative affect	2.65 (1.07)	.053	-1.114
12 - Perceived English skills	3.97 (1.97)	.119	-1.220
13 - Percentage of friends from own country	55.54 (26.49)	-.172	-1.291
14 - Percentage of friends from the UK	21.61 (18.66)	1.341	1.159
15 - Contact with parents/friends at home	4.38 (2.18)	.097	-1.661

Table 64. Key descriptive statistics for the study's variables.

An inspection of the skewness and kurtosis values suggests that some measures were not approximate to a normal distribution. Following the method of Tabachnik and Fidel (2001) for recognising departures from the normal distribution, we identified problems with perceptions of general discrimination, ingroup affect, hostility, and percentage of friends from the UK. In order to solve this concern, transformations were sought for these variables. Due to the problematic positive skewness of perceptions of general discrimination, we performed a logarithmic transformation. After the transformation, perceptions of general discrimination were approximate to the normal

distribution ($M = 0.37$; $SD = 0.28$; skewness = 0.19, kurtosis = -1.150). Likewise, ingroup affect revealed a problematic negative skew and positive kurtosis. In order to address this concern an exponential transformation was sought. After the transformation, ingroup affect was approximate to the normal distribution ($M = 778.28$; $SD = 379.71$; skewness = -0.661, kurtosis = -1.140). Another variable that had to be transformed was hostility due to its extreme positive skew and kurtosis. A logarithmic transformation successfully solved this concern and hostility was approximate to a normal distribution ($M = 0.22$; $SD = 0.21$; skewness = 0.84, kurtosis = -0.188). Finally, the percentage of British friends revealed a problematic positive skewness. In this case however, no transformations were performed as methods to address positive skewness (e.g. square root or logarithmic transformation) cannot successfully deal with the values of zero that were registered by this measure.

Table 65 shows the correlations between the key measured variables. From all the correlations observed in the table, we will flag only the most relevant for this thesis' predictions. For Polish immigrants, perceived discrimination was not related to any of the group identification measures. However, correlations were according to the expected pattern by showing a negative relationship between perceived discrimination and ingroup affect ($r = -.08$, $p = .588$) and a positive relationship between perceived discrimination and centrality ($r = .25$, $p = .094$). Regarding the outcome variables, perceived discrimination was only significantly related to hostility ($r = .46$, $p = .001$). For Polish immigrants, the higher they perceived discrimination, the higher the hostility towards the Scottish. The different dimensions of group identification were also associated with other variables in the study. Ingroup ties, for example, were the only variable associated with one of the well-being measures. For participants, the higher the ingroup ties with other Polish immigrants, the lower the levels of negative affect ($r = -.28$, $p = .049$). Ingroup ties were

also associated with less contact with family and friends in Poland ($r = -.29, p = .038$). In addition, centrality was associated with a higher percentage of Polish friends ($r = .29, p = .043$). Furthermore, ingroup affect was negatively associated with perceived English skills ($r = -.33, p = .015$). The higher the ingroup affect of Polish immigrants, the lower their level of perceived English proficiency. Regarding students' friendship networks, having more British friends was associated with lower culture maintenance ($r = -.29, p = .031$) and higher willingness to participate in the larger society ($r = .41, p = .002$). Similarly, contact with family and friends in Poland was associated with lower culture maintenance ($r = -.41, p = .001$) and higher willingness to participate in the larger society ($r = .43, p = .001$). In contrast, the higher the amount of Polish friends, the lower participants were willing to participate in the larger society ($r = -.32, p = .017$). Finally, contact with family and other friends in Poland were negatively correlated with psychological well-being. Having more contact with family and friends in Poland was associated with lower state self-esteem (with performance area, $r = -.59, p < .001$), lower levels of positive affect ($r = -.73, p < .001$), and higher levels of negative affect ($r = .64, p < .001$).

Measures	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1 - Acculturation (participation in larger society)	-														
2 - Acculturation (culture maintenance)	-.51**	-													
3 - Perceptions of general discrimination	-.16	.03	-												
4 - Ingroup ties	-.29*	.65**	.09	-											
5 - Centrality	-.32*	.59**	.25	.45**	-										
6 - Ingroup affect	-.05	.25	-.08	.30*	.51**	-									
7 - Hostility	-.23	-.05	.46**	.12	.26	.03	-								
8 - State self-esteem (performance)	-.34*	.44**	-.01	.23	.16	-.11	.11	-							
9 - State self-esteem (social)	.17	-.33*	.02	-.08	-.07	.11	-.04	-.21	-						
10 - Positive affect	-.33*	.24	.06	.18	.12	-.06	.15	.70**	-.20	-					
11 - Negative affect	.30*	-.38**	.10	-.28*	-.16	.09	.02	-.66**	.19	-.62**	-				
12 - Perceived English skills	.39**	-.27*	.16	-.05	-.26	-.33*	-.07	-.23	.34*	-.34*	.28*	-			
13 - Friends from own country (%)	-.32*	.25	.01	.24	.29*	.09	.13	.13	.15	.15	-.08	-.03	-		
14 - Friends from the UK (%)	.41**	-.29*	.20	-.17	-.23	-.09	-.09	-.03	.14	-.14	.27	.26	-.37**	-	
15 - Contact with parents/friends at home	.43**	-.41**	.20	-.29*	-.04	.02	-.13	-.59**	.20	-.73**	.64**	.49**	.01	.21	-

Table 65. Intercorrelations for the key variables.

7.2.1.4 – Analysis of the demographic variables

It is also fundamental to examine if there are any differences concerning the background of the Polish immigrants that participated in this study. As such, several ANOVAs and correlation coefficients were calculated between the different outcome variables (hostility, the two areas of state self-esteem, and positive and negative affect) and demographic information.

Correlation analysis revealed that time spent in the UK was beneficial for the psychological well-being of Polish immigrants. That is, the longer Polish immigrant stayed in the UK, the higher participants' performance state self-esteem ($r = .52, p < .001$), the higher the positive affect ($r = .33, p = .019$), and the lower the levels of negative affect ($r = -.36, p = .009$). Time spent in the UK was also associated with higher levels of hostility towards the Scottish ($r = .29, p = .046$). All further analyses were controlled for time spent in the UK.

Analysis of variance suggested that, apart from hostility, there were no gender differences among the outcome variables. Men reported higher hostility towards the Scottish ($M = .162$) than women ($M = .281$), $F(1,47) = 4.34, p = .043$. In all subsequent analyses involving hostility towards the Scottish we also controlled for gender.

7.2.2 – *The moderated mediation model – analysis of the experimental data*

In order to test our model we began by performing manipulation checks. We then tested our moderated mediation model following the same three equation structure as in Chapters 5 and 6.

7.2.2.1 – Manipulation checks

The manipulation of perceived discrimination was successful. Perceived discrimination was higher in the discrimination condition ($M = .45$, $SD = .048$) than in the low discrimination condition ($M = .26$, $SD = .053$), $F(1,53) = 6.78$, $p = .012$. Inspection of the open-ended responses revealed that participants followed the instructions and reported instances of discrimination in the high discrimination condition but not in the low discrimination condition. Importantly, the manipulation did not result in differences in any of the other measures.

7.2.2.2 – The rejection-identification-acculturation model

In this section we analysed a moderated mediation model. Specifically, we tested whether the possible mediation effect of group identification (between perceived discrimination and the outcome variables) would change as a function of individual acculturation strategies. For a moderated mediation analysis we followed the method proposed by Muller et al. (2005), by performing three different regression equations. All variables were centred and then separate analyses for ingroup ties, centrality, and ingroup affect were performed.

We started by analysing the first step of Muller et al.'s (2005) method, which include testing the effects of the discrimination condition, the acculturation dimensions, and their interactions on our outcome variables separately (i.e. performance and social areas of state self-esteem, positive and negative affect, and hostility).

Firstly, we analysed the two state self-esteem areas (Table 66). Results indicated no main or interaction effects for the performance area. In contrast, time spent in the UK was a significant covariate. The longer participants stayed in the UK, the higher their

performance state self-esteem. Results were different when social state self-esteem was introduced as the outcome variable. The regression indicated a significant main effect of own culture maintenance. For Polish immigrants, the higher their willingness to maintain own cultural heritage, the lower their social state self-esteem. There were no interaction effects.

Predictors	Performance (SSE)		Social (SSE)	
	<i>b</i>	<i>t</i>	<i>b</i>	<i>t</i>
PD	.04	0.26	.16	0.87
PLS	-.16	0.89	-.31	1.39
OCM	.24	1.51	-.54	2.57*
PD x PLS	-.18	0.94	-.32	1.40
PD x OCM	-.16	0.95	-.27	1.26
PLS x OCM	-.06	0.42	.16	0.89
PD x PLS x OCM	.04	0.24	.21	0.97
Time spent in the UK	.49	3.38**	.11	0.62
Gender	.05	0.38	.07	0.50

Note. PD = perceived discrimination; PLS = participation in larger society; OCM = own culture maintenance

* $p < .05$ ** $p < .01$

Table 66. Moderated mediation first regression equation with state self-esteem.

For the remaining outcome variables (Table 67) no main or interaction effects were found. Overall, none of the interaction terms predicted our outcome variables, indicating that the magnitude of the effect of perceived discrimination on self-esteem did not depend on the two acculturation dimensions. Thus, the first condition for moderated mediation was met for all the outcome variables.

Predictors	Positive affect		Negative Affect		Hostility	
	<i>b</i>	<i>t</i>	<i>b</i>	<i>t</i>	<i>b</i>	<i>t</i>
PD	-.13	0.70	.12	0.69	.03	0.16
PLS	-.18	0.88	.08	0.39	-.39	1.89
OCM	.08	0.43	-.32	1.77	-.30	1.59
PD x PLS	.14	0.67	-.02	0.08	-.16	0.73
PD x OCM	-.02	0.12	-.05	0.25	.14	0.72
PLS x OCM	-.10	0.58	-.01	0.01	.03	0.17
PD x PLS x OCM	-.18	0.85	-.01	0.04	.12	0.57
Time spent in the UK	.22	1.26	-.32	1.94	.26	1.52
Gender	.01	0.07	.03	0.22	.21	1.48

Note. PD = perceived discrimination; PLS = participation in larger society; OCM = own culture maintenance

* $p < .05$ ** $p < .01$

Table 67. Moderated mediation first regression equation with positive/negative affect and hostility.

For the second step, we examined the effects of the discrimination condition, the acculturation dimensions, and the interaction terms between them, on the three dimensions of group identification separately. For ingroup ties (left column of Table 68) there was a main effect of own culture maintenance. The more Polish immigrants were willing to maintain their cultural background, the higher their ingroup ties with other Polish. There were no interaction effects.

Predictors	Ingroup ties		Centrality		Ingroup affect	
	<i>b</i>	<i>t</i>	<i>b</i>	<i>t</i>	<i>b</i>	<i>t</i>
PD	-.13	0.91	.22	1.50	.21	1.26
PLS	.20	1.16	-.22	1.35	-.18	0.89
OCM	.78	5.20***	.52	3.52**	.15	0.83
PD x PLS	.04	0.20	-.36	2.07*	-.58	2.73**
PD x OCM	.09	0.57	.03	0.20	-.04	0.23
PLS x OCM	-.08	0.53	.13	0.96	.16	0.94
PD x PLS x OCM	.01	0.04	.34	2.06*	.42	2.14*
Time spent in the UK	-.02	0.17	-.06	0.38	.14	0.88
Gender	.16	1.39	.21	1.84	.02	0.11

Note. PD = perceived discrimination; PLS = participation in larger society; OCM = own culture maintenance

* $p < .05$ ** $p < .01$

Table 68. Moderated mediation second regression equation with ingroup ties, centrality, and ingroup affect.

However, the analysis with centrality (middle column of Table 68) revealed different results. A main effect of own culture maintenance was found. The more participants were willing to maintain their cultural heritage, the higher the centrality of their Polish identity. Importantly, there were two interaction effects. The first was an effect of the interaction between the discrimination condition and participation in the larger society. The second was a 3-way interaction with the discrimination condition and the two acculturation dimensions. In other words, the 3-way interaction indicated that the effect of the discrimination condition on centrality varied as a function of both participation in the larger society and own culture maintenance (see Figure 32)²⁶. Simple slope analysis revealed that for those with a low score for participation in the larger society (upper part of Figure 32), centrality did not change across the two discrimination conditions, when participants held a high score in maintenance of own culture (i.e. separation strategy), $\beta = .23$, $t(39) = 1.25$, $p = .220$. On the other hand, if participants held a low score in maintenance of own culture (i.e. marginalisation strategy), there was a marginal effect showing that centrality increased when discrimination was high compared to low, $\beta = .69$, $t(39) = 1.85$, $p = .072$. When Polish immigrants had a high score in participation in larger society (lower part of Figure 32), centrality did not change across the two discrimination conditions, when they held a high score in maintenance of own culture (i.e. integration strategy), $\beta = .19$, $t(39) = .55$, $p = .583$. On the other hand, when Polish immigrants held a low score in maintenance of own culture (i.e. assimilation

²⁶ In our analysis when both a 2-way interaction and a 3-way interaction were found, we presented only the simple slope analysis of the 3-way interaction. The reason for adopting this strategy is twofold: (1) the 3-way interaction includes the effects of the 2-way interaction; and also (2) only the 3-way interaction permits examining the combination between the two acculturation dimensions (i.e. the acculturation strategies).

strategy), centrality decreased as discrimination was high compared to low, $\beta = -.58$, $t(39) = 2.98$, $p = .005$.

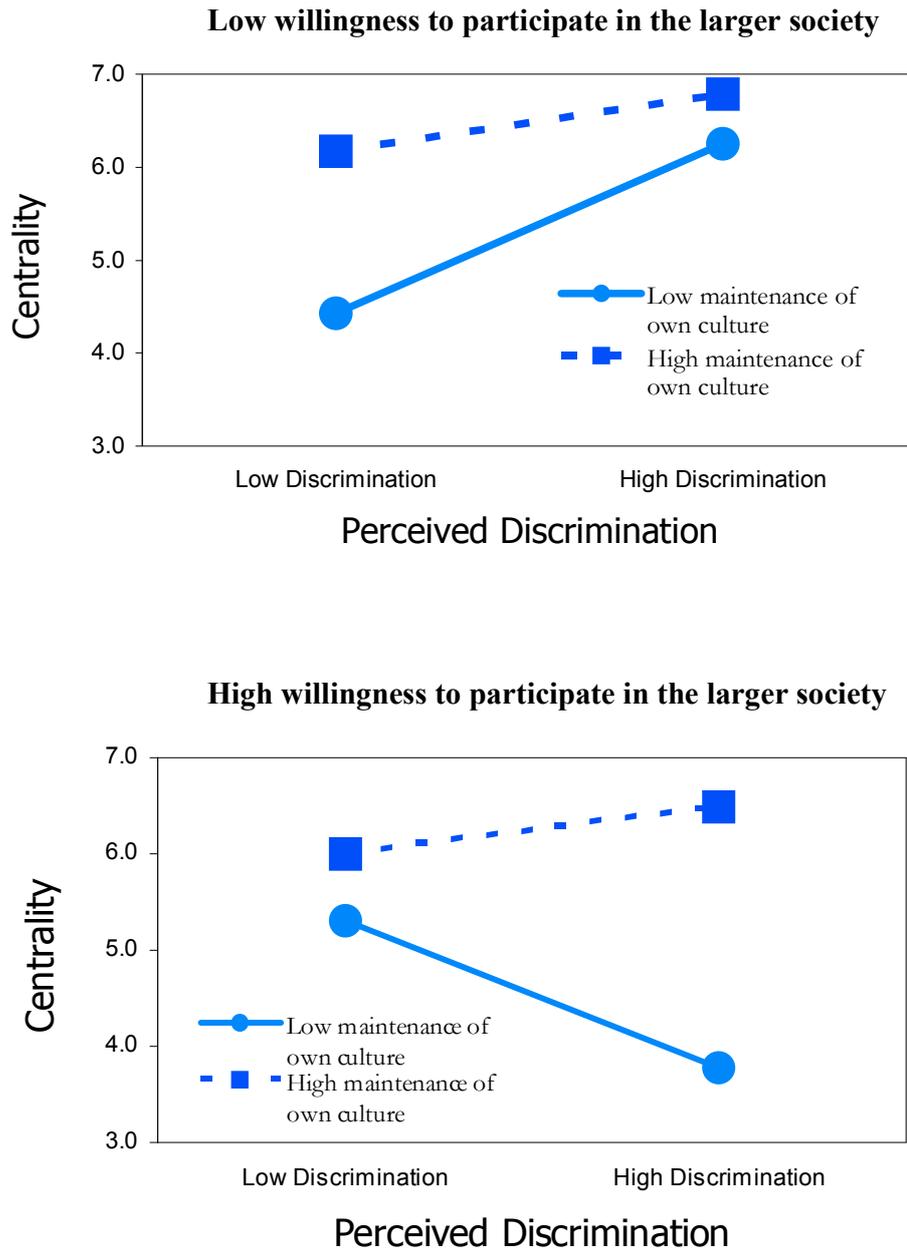


Figure 32. 3-way interaction for centrality.

An inspection of the results concerning ingroup affect revealed similar effects (right column Table 68, p. 339). When ingroup affect was the outcome variable, no main effects were found. However, there was a significant effect of a 2-way interaction, between the discrimination condition and participation in the larger society; and also a 3-way interaction between the discrimination condition and the two acculturation dimensions. More specifically, perceived discrimination had a different impact on ingroup affect as a function of differences in both participation in the larger society and maintenance of own cultural background (see Figure 33). Simple slope analysis revealed that for those with a low score for participation in the larger society (upper part of Figure 33), there was a marginal effect showing that ingroup affect increased when discrimination was high compared to low, when Polish immigrants held a high score in maintenance of own culture (i.e. separation strategy), $\beta = .38$, $t(45) = 2.01$, $p = .051$. Likewise, if Polish immigrants held a low score in maintenance of own culture (i.e. marginalisation strategy), ingroup affect increased when discrimination was high compared to low, $\beta = .45$, $t(45) = 2.03$, $p = .048$. When participants had a high score in participation in larger society (lower part of Figure 33), ingroup affect did not change across the two discrimination conditions, when they held a high score in maintenance of own culture (i.e. integration strategy), $\beta = .01$, $t(45) = .02$, $p = .983$. On the other hand, if participants held a low score in maintenance of own culture (i.e. assimilation strategy), ingroup affect decreased when discrimination was high compared to low, $\beta = -.70$, $t(45) = 3.28$, $p = .002$.

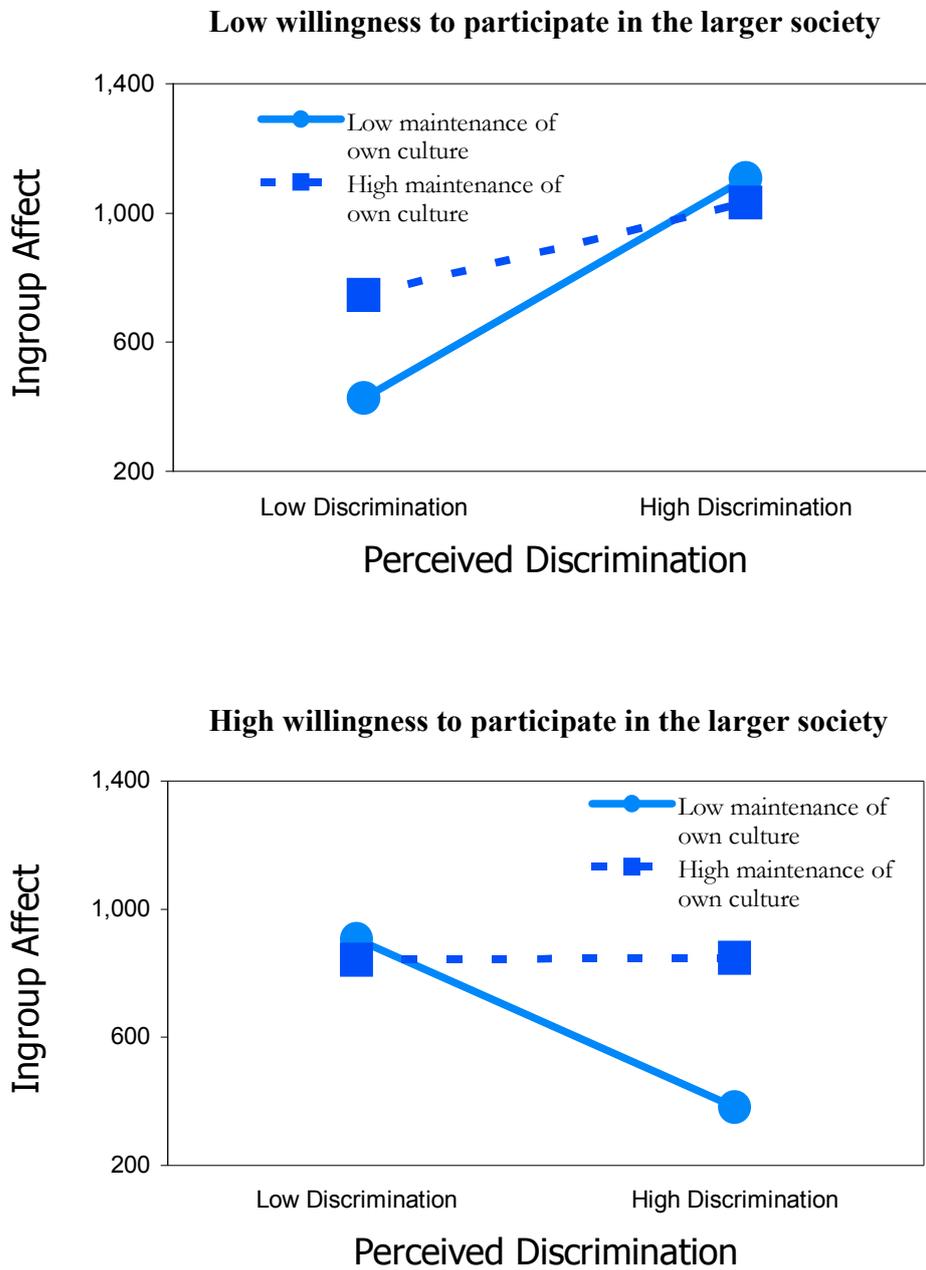


Figure 33. 3-way interaction for ingroup affect.

7.2.3 – Friendship networks – analysis of the correlational data

7.2.3.1 – The development of friendship networks

In order to understand the impact of the friendship networks developed by Polish immigrants during their stay in the UK, it is important to start by examining how these networks are formed. In this section we tested whether acculturation strategies and perceived English skills would predict two types of social networks (Polish and British friends) and also contact with parents and other friends in Poland. We performed a regression analysis where the two acculturation dimensions, an interaction term between these two dimensions²⁷, and perceived English skills were introduced as predictors. The first outcome variable we examined was percentage of Polish friends. For all analysis we controlled for gender and time spent in the UK. Results revealed that willingness to participate in the larger society marginally predicted contact with Polish friends, $\beta = -.28$, $t(54) = 1.81$, $p = .077$. The higher participants were willing to participate in the larger society, the lower their contact with co-national friends. In contrast, willingness to maintain own cultural background did not predict contact with Polish friends, $\beta = .17$, $t(54) = 1.11$, $p = .272$. Likewise, the interaction term between the two acculturation dimensions did not predict contact with other Poles, $\beta = -.07$, $t(54) = 0.50$, $p = .617$. Finally, contact with other co-national friends was not predicted by perceived English skills, $\beta = .15$, $t(54) = 1.05$, $p = .299$. Both time spent in the UK and gender were not significant covariates.

The same analysis was performed with contact with British friends as the outcome variable. Results indicated that willingness to participate in the larger society predicted contact with British friends, $\beta = .32$, $t(53) = 2.18$, $p = .034$. The higher Polish immigrants

²⁷ The interaction between the two acculturation dimensions serves to test the four acculturation strategies.

were willing to participate in the larger society, the higher their percentage of British friends. Willingness to maintain own cultural background and the interaction term between both acculturation dimensions did not predict the amount of British friends, $\beta = -.21$, $t(53) = 1.41$, $p = .164$ and $\beta = -.13$, $t(53) = 0.95$, $p = .345$. Likewise, perceived English skills did not predict the amount of British friends, $\beta = .12$, $t(53) = 0.89$, $p = .378$. Time spent in the UK was a significant covariate in this analysis, $\beta = .28$, $t(53) = 2.10$, $p = .041$. The longer Polish immigrants stayed in the UK, the higher the percentage of British friends. Gender was not a significant covariate.

Analysis with contact with parents and other friends in Poland revealed somewhat different results. Neither willingness to participate in the larger society, willingness to maintain own cultural background, nor the interaction between the two acculturation dimensions predicted contact with family and friends at home, $\beta = .15$, $t(57) = 1.15$, $p = .256$; $\beta = -.17$, $t(57) = 1.29$, $p = .202$; and $\beta = .01$, $t(57) = 0.04$, $p = .967$. In contrast, contact with family and friends in Poland were predicted by perceived English skills, $\beta = .38$, $t(57) = 3.24$, $p = .002$. For Polish immigrants, the higher they perceived their English proficiency, the higher their contact with family and friends at home. Time spent in the UK was a significant covariate in this regression equation, $\beta = -.29$, $t(57) = 2.50$, $p = .016$. The longer Polish immigrants stayed in the UK, the lower the contact with family and friends in Poland. Gender was not a significant covariate.

Overall, our results suggested that that willingness to participate in the larger society is associated with contact with British friends. More specifically, it was shown that those who were willing to participate in the larger society tend to increase contact with British friends. Finally, there was an important relationship between perceived English skills and contact with family and other friends at home. Polish immigrants who

had better English skills were those who were more willing to maintain contact with family and friends at home.

7.2.3.2 – The impact of social networks on the experiences of Polish immigrants in the UK

In this section the principal aim was to understand the impact that different social networks might have on the experiences of Polish immigrants in the UK. It was predicted that these social networks would have a crucial impact on psychological well-being. In order to test this prediction, we performed a regression analysis where contact with Polish and British friends were introduced simultaneously as independent variables. This analysis was initiated by introducing the performance area of state self-esteem as the outcome variable. Subsequent analysis included the same regression equation but with social state self-esteem, positive affect, and negative affect as outcome variables separately. All regression equations were controlled for time spent in the UK and gender.

Results for the first regression equation indicated that neither the percentage of Polish friends nor British friends predicted performance state self-esteem, $\beta = .18$, $t(48) = 1.55$, $p = .128$ and $\beta = .05$, $t(48) = 0.41$, $p = .684$. In contrast, there was a strong effect of contact with family and friends in Poland, $\beta = -.49$, $t(48) = 4.05$, $p < .001$. For Polish immigrants, the higher the contact with family and friends in Poland, the lower their performance state self-esteem. Time spent in the UK was a significant covariate, $\beta = .36$, $t(48) = 2.90$, $p = .006$. The longer the time spent in the UK, the higher their performance state self-esteem. Gender was not a significant covariate.

Similar results were found when the social area of state self-esteem was introduced as an outcome variable. Regression results indicated that neither the

percentage of Polish friends nor British friends predicted social state self-esteem, $\beta = .19$, $t(45) = 1.14$, $p = .260$ and $\beta = .21$, $t(45) = 1.17$, $p = .250$. Likewise, contact with family and friends in Poland did not predict social state self-esteem, $\beta = .10$, $t(45) = 0.56$, $p = .580$. Both time spent in the UK and gender were non-significant covariates.

Likewise, results with positive affect indicated that the percentage of Polish friends predicted this outcome, $\beta = .23$, $t(45) = 2.09$, $p = .043$, suggesting that the higher the percentage of friends from Poland, the higher the positive affect of Polish immigrants. The percentage of British friends did not predict positive affect, $\beta = .11$, $t(45) = 0.96$, $p = .342$. Contact with family and other friends in Poland predicted positive affect among our participants, $\beta = -.77$, $t(45) = 7.12$, $p < .001$. More specifically, the higher the contact with family and friends in Poland, the lower the positive affect of Polish participants. Both time spent in the UK and gender were non-significant covariates.

Finally, we analysed negative affect as the outcome variable. Results indicated that neither the percentage of Polish friends nor British friends predicted negative affect, $\beta = -.04$, $t(47) = 0.35$, $p = .726$ and $\beta = .20$, $t(47) = 1.55$, $p = .129$. In contrast, contact with family and friends in Poland predicted this outcome, $\beta = .55$, $t(47) = 4.48$, $p < .001$. The higher the contact participants had with their families and friends in Poland, the higher their negative affect. Time spent in the UK was a marginally significant covariate, suggesting that longer the time spent in the UK, the lower the negative affect of Polish immigrants in the UK, $\beta = -.24$, $t(47) = 1.87$, $p = .069$. Gender was not a significant covariate.

7.2.3.3 – Possible moderators of the relationship between social networks and psychological well-being

It was also predicted that the relationship between social networks and psychological well-being would vary as a function of intentions to have contact with the different social networks. More specifically, it was predicted that contact with Polish or British friends would be positively associated with psychological well-being only when this contact is desired. In contrast, when this contact is not desired, we expected no effects (or negative effects) on psychological well-being. In order to examine this prediction we performed a regression analysis testing for moderation. The percentage of Polish friends and willingness to maintain own cultural background (moderator) were both introduced as predictors. The product of the latter variables was also introduced as a predictor, whilst each of the psychological well-being variables was introduced separately as an outcome variable. All regression equations controlled for time spent in the UK and gender.

We began by testing performance state self-esteem. Results suggested that neither the percentage of Polish friends, nor the interaction predicted performance state self-esteem, $\beta = .04$, $t(49) = 0.33$, $p = .742$ and $\beta = .17$, $t(49) = 1.51$, $p = .139$. In contrast, willingness to maintain own cultural background predicted performance self-esteem, $\beta = .36$, $t(49) = 2.94$, $p = .005$. For participants, the higher their willingness to maintain their cultural heritage, the higher their performance state self-esteem. As we already demonstrated in previous regression equations, time spent in the UK was a significant covariate of performance state self-esteem. Gender was not a significant covariate.

Results with social state self-esteem were very similar. Neither the percentage of Polish friends, nor the interaction term predicted this outcome, $\beta = .28$, $t(46) = 1.70$, $p =$

.097 and $\beta = .09$, $t(46) = 0.60$, $p = .550$. However, the effect of the percentage of Polish friends was marginally significant, suggesting that the higher the percentage of Polish friends, the higher the social state self-esteem. Willingness to maintain own cultural background was a significant predictor, $\beta = -.41$, $t(46) = 2.56$, $p = .014$. Specifically, the higher Polish immigrants were willing to maintain their cultural background, the lower their social state self-esteem. Both time spent in the UK and gender were not significant covariates.

Likewise, results with negative affect showed identical findings. Neither the percentage of Polish friends, nor the interaction term predicted this outcome variable, $\beta = .01$, $t(47) = 0.01$, $p = .998$ and $\beta = -.21$, $t(47) = 1.61$, $p = .116$. Participants' willingness to maintain their cultural background were a significant predictor, $\beta = -.34$, $t(47) = 2.41$, $p = .020$. More specifically, the higher Polish immigrants were willing to maintain their cultural background, the lower their negative affect. As we already demonstrated in previous regression analysis, time spent in the UK is a significant covariate of negative affect, whilst gender is not a significant covariate.

Results for positive affect were rather different. Neither the percentage of Polish friends, nor the willingness to maintain own cultural background predicted participants' positive affect. However, the interaction term had a significant effect on positive affect, $\beta = .32$, $t(46) = 2.32$, $p = .025$. Simple slope analysis (see Figure 34) indicated that for those who are willing to maintain their own cultural heritage, the amount of Polish friends was associated with positive affect, $\beta = .32$, $t(46) = 2.35$, $p = .023$. In contrast, for those who were not willing to maintain their own cultural heritage, the amount of Polish friends was associated with lower positive affect, $\beta = -.10$, $t(46) = 1.13$, $p = .265$. As

already shown in previous regression analysis, time spent in the UK is a significant covariate of positive affect, whereas gender was not.

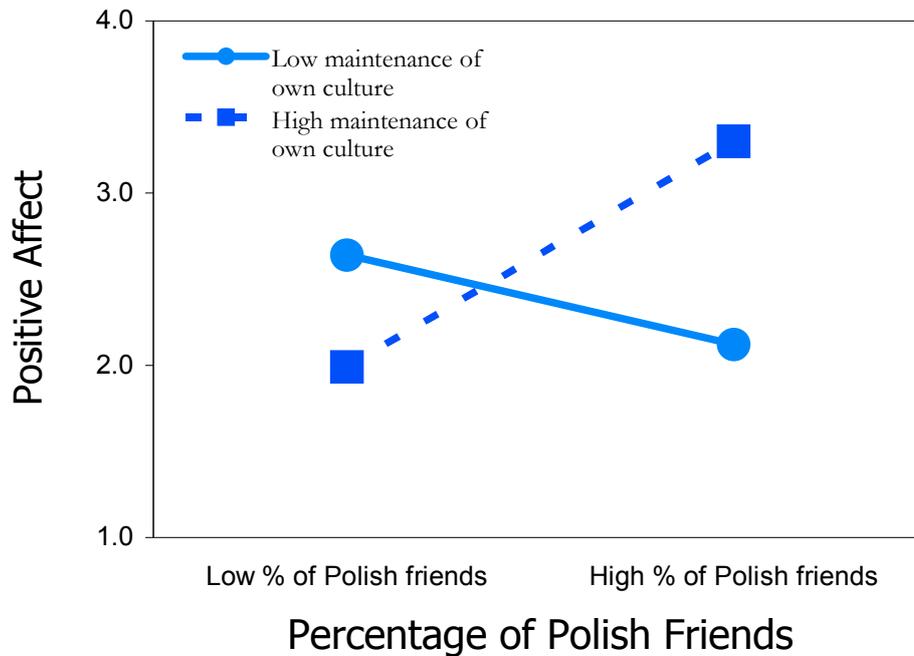


Figure 34. The moderating effect of own culture maintenance on the relationship between percentage of Polish friends and positive affect.

Subsequently, we analysed the same moderation effect but with the percentage of British friends. Thus, the percentage of British friends, willingness to participate in the larger society, and the interaction term between the last two variables were introduced as predictors in a regression analysis. The performance and social areas of state self-esteem, positive affect and negative affect were introduced as outcome variables separately.

We started this sequence of regression analyses by examining the effects of performance state self-esteem. Results demonstrated that neither willingness to participate in the larger society, nor percentage of British friends predicted performance

state self-esteem, $\beta = -.22$, $t(48) = 1.67$, $p = .102$ and $\beta = -.20$, $t(48) = 1.33$, $p = .191$. However, the interaction term predicted performance state self-esteem, $\beta = .28$, $t(48) = 2.17$, $p = .036$. Simple slope analysis (Figure 35) indicated that for those that were willing to participate in the larger society, performance state self-esteem did not change across different amounts of British friends, $\beta = .01$, $t(48) = .39$, $p = .702$. In contrast, for those who were less willing to participate in the larger society, a high percentage of British friends was associated with lower performance state self-esteem, $\beta = -.31$, $t(48) = 2.43$, $p = .019$. As we demonstrated in previous analysis, time spent in the UK was a significant covariate. Gender was not a significant covariate.

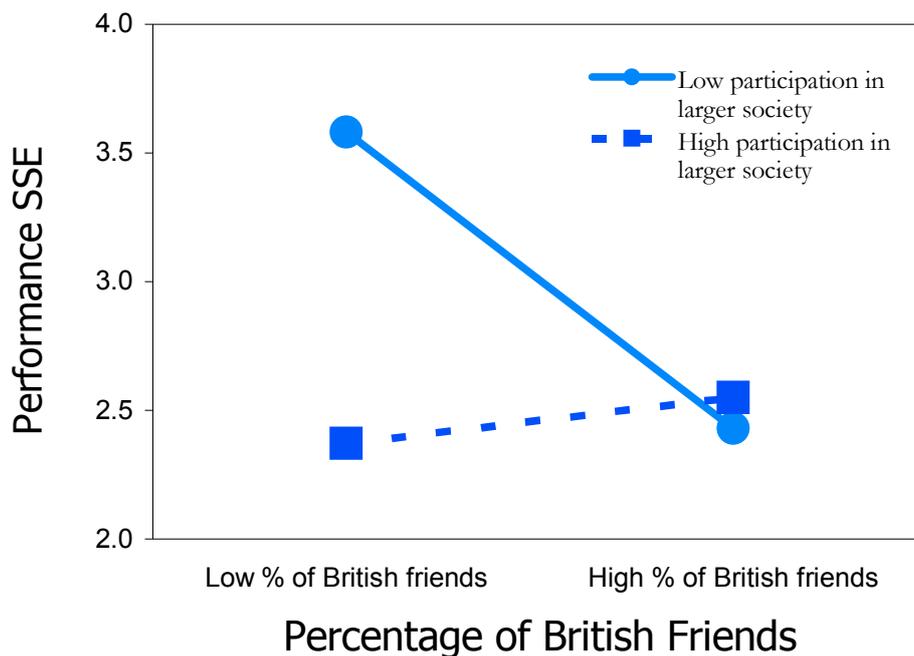


Figure 35. The moderation effect of participation in the larger society on the relationship between percentage of British friends and performance state self-esteem.

For the analysis with the social area of state self-esteem no main or interaction effects were found. Participants' willingness to participate in the larger society, the percentage of British friends, and the interaction term did not predict social state self-esteem, $\beta = .04$, $t(46) = 0.25$, $p = .806$; $\beta = .23$, $t(46) = 1.31$, $p = .199$, and $\beta = -.25$, $t(46) = 1.58$, $p = .121$. Both time spent in the UK and gender were non-significant covariates.

Similarly, there were no main or interaction effects for positive affect. Polish immigrants' willingness to participate in the larger society, percentage of British friends, and the interaction term did not predict positive affect, $\beta = -.29$, $t(46) = 1.93$, $p = .061$; $\beta = -.22$, $t(46) = 1.32$, $p = .193$; and $\beta = .24$, $t(46) = 1.57$, $p = .123$. Importantly, the effect of willingness to participate in the larger society was marginally significant, suggesting that the higher participants were willing to participate in the larger society, the lower their positive affect. As we already demonstrated in previous analysis time spent in the UK is a significant covariate of positive affect. Gender was not a significant covariate.

Finally, results for negative affect indicated that neither the willingness to participate in the larger society, nor the interaction term predicted our outcome variable, $\beta = .12$, $t(48) = 0.82$, $p = .418$ and $\beta = -.16$, $t(48) = 1.09$, $p = .283$. The percentage of British friends was a significant predictor of negative affect, $\beta = .41$, $t(48) = 2.49$, $p = .017$. Specifically, the higher the percentage of British friends, the higher the negative affect. As already suggested by previous analysis, time spent in the UK was a significant predictor of negative affect. Gender was not a significant covariate.

On balance, results indicated that the relationship between social networks and psychological well-being can vary as a function of people's willingness to have contact with those networks. Willingness to maintain own cultural background was an important

moderator when interacting with contact with Polish friends, whereas willingness to participate in the larger society moderated the relationship between contact with British friends and psychological well-being.

7.3 – Discussion

The results of the present study provided support for some of our predictions and previous findings obtained with international students. Although in this study a mediation effect of minority group identification could not be supported, our results replicated the moderation effect of acculturation strategies. Specifically, in this study psychological well-being variables were not related to perceptions of discrimination or any of the dimensions of group identification. Nonetheless, we found that the relationship between rejection and identification depended upon the acculturation strategies of Polish immigrants. It was further demonstrated that when perceptions of discrimination interact with individual acculturation strategies it has an impact on two dimensions of Polish identity, i.e. centrality and ingroup affect. No effects were found for hostility towards the Scottish.

7.3.1 – The rejection-identification-acculturation model – analysis of the experimental data

In this study we could not replicate our moderated mediation model involving rejection, identification, and acculturation. The principal reason was that in this study the three dimensions of minority group identification were not related to any of the psychological well-being variables. Nonetheless, this study served to provide further support for the finding that acculturation strategies moderate responses to group-based

discrimination. With a sample of Polish immigrants it was found that the relationship between rejection and identification can vary as a function of the acculturation strategies held by acculturating individuals. More specifically, when centrality was examined, it was found that those who endorsed a marginalisation strategy had a tendency to increase awareness and importance of their Polish identity (centrality) when discrimination was high compared to low. Accordingly, a marginalisation strategy is defined by a lack of commitment to both larger society and own cultural background. It appears however, that group-based discrimination alerts these individuals to the fact that their minority group identity might be critical for this particular context. Being discriminated against because of one's nationality increased the awareness of an identity that otherwise might not have been important for those who were not willing to maintain their cultural background. In contrast, for proponents of an assimilation strategy, centrality decreased when perceived discrimination was high compared to low. Proponents of assimilation often avoid interacting with other members of their cultural group or even attempt to hide their cultural background (Berry, 2005). Our data showed that perceiving discrimination against their national group reinforces these behaviours. Being discriminated against because of one's nationality suggests that one's national group will not be allowed to participate in the larger society. Hence, proponents of assimilation to a certain extent realise that if they want to participate in the larger society, they have to camouflage their national identity. The higher the discrimination against their national group, the less they would be willing to keep their national identity. For both separation and integration strategies, centrality did not change across low and high perceived discrimination. Indeed, both strategies are defined by a high willingness in maintaining own cultural background. Therefore, individuals were also highly identified with the Polish identity which was not affected by

perceptions of discrimination.

Further analysis examining ingroup affect showed a similar moderation effect. Polish immigrants who endorsed a marginalisation strategy increased their ingroup affect when perceived discrimination was high compared to low. Similarly, proponents of a separation strategy demonstrated a tendency to increase ingroup affect when perceived discrimination was high compared to low. For both acculturation strategies, because contact with the dominant group is not valued, perceiving discrimination from the dominant group did not impact on how they feel about their own group. The focus of those who endorse marginalisation and separation is on their minority group. Hence, perceiving that contact with their group is not valued by other outgroups may involve turning into their minority group by enhancing a shared collective positive evaluation. For those who valued an assimilation strategy however, ingroup affect decreased when discrimination was high compared to low. Accordingly, the aim of these individuals is to participate in the larger society and forego their cultural background. Perceiving discrimination reinforces the idea that their cultural background may prevent them from participating in the larger society, which in turn results in lower feelings towards their own group. Finally, for proponents of integration, we expected that these individuals would associate discrimination against their national group with a pressure to assimilate, which in turn would have a negative impact on their ingroup affect. However, this was not the case as there were no changes in ingroup affect across the two discrimination conditions. Although this finding with integration diverged from our predictions, it still provided support for our general prediction that a separation strategy is important to prepare a collective response to discrimination, whilst the other acculturation strategies (integration included) did not result in increased ingroup affect.

As already discussed in previous chapters, research with other minority groups has associated centrality with low self-esteem (Gurin & Markus, 1989; Eccleston & Major, 2006; McCoy & Major, 2003). Additionally, ingroup affect has been positively related to self-esteem (Luhtanen & Crocker, 1992). Therefore, although it could not be demonstrated in this study, it is plausible that a marginalisation strategy leading to centrality would in turn result in lower self-esteem. In a similar vein, when perceptions of discrimination interact with separation and marginalisation strategies they tend to elicit ingroup affect, which in turn would result in higher self-esteem. In contrast, an assimilation strategy leading to lower ingroup affect would result in lower self-esteem. Due to the lack of effects for proponents of integration, no differences in well-being would be observed. On balance, the present results provide some support for the fact that endorsing a separation strategy can be an important step for mitigating the negative effects of group-based discrimination. In contrast, for those who endorse assimilation, integration, and marginalisation strategies, minority group identification does not seem to be able to protect their self-concept from rejection.

Furthermore, in the present study perceptions of discrimination interacted with acculturation strategies to impact on centrality and ingroup affect. No moderation effects were found for ingroup ties. This finding was in line with our previous results with international students. In fact, previous research has emphasised the importance of ingroup ties to psychological well-being (Frable, Platt, & Hoey, 1998; McKenna & Bargh, 1998). However, studies have failed to show an association between perceptions of discrimination and ingroup ties (e.g. Spencer-Rogers & Collins, 2006). Results with Polish immigrants also indicated no association between perceptions of discrimination and ingroup ties, even when we accounted for the different acculturation strategies.

When the same moderation effect was analysed with hostility towards the Scottish no effects were found. These results diverged from our previous findings with international students. The lack of a moderation effect of the acculturation strategies could have been related to different aspects that cannot be disentangled by this study. One of these aspects might relate to the expectations of Polish immigrants. Often these immigrants come from a lower socio-cultural background (especially when compared to international students) and might have already experienced similar negative treatment at home, or might have been expecting that some individuals in the UK would be against immigration. These aspects taken together for example, might have prepared Polish immigrants for eventual experiences of discrimination, which to a certain extent might prevent them from increasing hostility towards the Scottish.

7.3.2 – English skills, friendship networks, and psychological well-being – analysis of correlational data

Although the principal aim of this study was to test the rejection-identification-acculturation model, we had the secondary goal of testing some of the results found with international students concerning English skills and friendship networks. Due to the correlational nature of these data, cause and effect were carefully addressed below.

Our analysis focusing on the implications of language skills suggested that perceived English skills had opposing effects on psychological well-being. On the one hand, perceived English skills were associated with higher negative affect and lower positive affect. On the other hand, English skills were associated with higher social state self-esteem. Indeed, these findings reflect the ambivalent perspectives provided by previous research.

Some authors demonstrated that language proficiency is linked to better psychological adjustment (e.g. Gullahorn & Gullahorn, 1966; Sewell & Davidsen, 1961), whilst others showed that language proficiency can be linked to higher expectations for contact with host nationals, which may result in less life satisfaction when these expectations are not met (Takai, 1989). Although we cannot ascertain from our data, it is plausible that language proficiency had a positive effect on the adjustment of Polish immigrants. This is supported by results showing that perceived English skills were positively associated with social state self-esteem. In contrast, higher expectations for contact from those who perceived to have better English skills may have not been met, which in turn had an impact on life satisfaction variables such as positive and negative affect.

Analysis focusing on friendship networks provided other interesting findings. Results indicated that willingness to participate in the larger society was associated with contact with British friends. Indeed, the behaviour of immigrants who want to participate in the larger society is orientated at increasing contact opportunities with people from the host society (Berry, 2001). Moreover, as already discussed in previous chapters, co-national and host national friendships are crucial sources of social support (Searle & Ward, 1990). Nonetheless, there is also evidence for the fact that these social networks might often have opposing outcomes (Ward & Kennedy, 1992; Pruitt, 1978). This aspect was demonstrated by our data by showing that friendship networks could have both positive and negative effects on the different psychological well-being variables. On the one hand, a greater amount of Polish friends was associated with positive affect. Indeed, previous studies in New Zealand and Singapore have argued that interaction with co-national friends is associated with psychological well-being (Ward & Kennedy, 1993; Ward & Searl, 1991). On the other hand, contact with family and friends in Poland were related to lower

performance state self-esteem, lower positive affect, and higher negative affect. A possible explanation for this finding might be related to the fact that Polish immigrants who have more contact with friends and family at home could be more isolated from the larger society or even less adapted to life in the UK. As previous research argued, psychological and social adaptation are often related to low satisfaction and low self-esteem (Berry et al., 2006).

Additionally, the relationship between friendship networks and psychological well-being became more interesting when we examined immigrants' preferences for contact with each network. It was found that the relationship between friendship networks and psychological well-being can be moderated by willingness to have contact with those networks. Although we did not explicitly measure willingness to have contact with Polish and British friends, we used the two acculturation dimensions as indicators. Indeed, acculturation strategies are important for preferences for contact with different networks (Berry, 2001). More specifically, when Polish immigrants were willing to maintain their own cultural background, the amount of Polish friends was associated with positive affect. Thus, when individuals desired to have contact with other co-national friends, having more Polish friends was associated with positive affect. In contrast, when Polish immigrants were less willing to maintain their cultural background, having Polish friends was associated with lower positive affect. This finding supports previous research arguing that discrepancies between actual and desired contact were associated with poor outcomes in adaptation (Zheng & Berry, 1991). This finding provides support for the argument that the link between friendship networks and psychological well-being might be more complex than initially hypothesised by previous research. This argument was further supported when we analysed the correlates of having British friends. That is, the amount of British

friends was associated with higher performance state self-esteem only for those who were willing to participate in the larger society. For those who were less willing to participate in the larger society, no relationship was found between the amount of British friends and performance state self-esteem.

7.3.3 – Limitations

The first limitation that needs to be addressed concerns the lack of a mediation effect of group identification on the relationship between perceived discrimination and well-being. The lack of this mediation effect limited the scope of our results. In Jetten et al.'s (2001) study, for example, perceptions of discrimination were also manipulated and no relationships were found between perceived discrimination and self-esteem. However, self-esteem was strongly associated with group identification, which allowed testing the rejection-identification model. In this study group identification was not related to well-being, so we could not test the rejection-identification hypothesis and hence our moderated mediation model. A plausible reason concerns the measures we used. Our questionnaire was translated to Polish and immediately tested with participants. Due to time constraints we could not test a pilot version of the questionnaire and examine possible flaws of the translated measures. Accordingly, our initial factor analysis indicated that particularly the state self-esteem measures were problematic and needed to have several items deleted before we could begin with our analysis. Despite reliability and validity issues, we found some results revealing expected relationships between the well-being variables and friendship networks. It could have been perhaps that in this study our measures were not assessing state self-esteem but instead more stable characteristics of self-esteem and well-

being. Finally, a lack of an effect between perceived discrimination and state self-esteem might be also due to differences between a short-term and a long-term impact of discrimination. In Chapter 6 we saw that group-based discrimination has an important impact for well-being outcomes, but this effect was assessed over a period of one year. A manipulation suggesting that one's group is discriminated by the majority perhaps does not lead to the perception that discrimination is pervasive and, therefore, does not have implications for individuals' psychological well-being. This is consistent with the Jetten et al. (2001) findings which did not show an effect between their manipulation of discrimination and self-esteem.

Another important limitation relates to this study's sample size. Keeping in mind that our model involves testing a three-way moderation effect, whilst examining a possible mediation of group identification, a larger sample would be needed in order to provide satisfactory statistical power for our analyses. It is perhaps because of this reason that some results only approached statistical significance. Although a larger sample would have provided more statistical power, we can argue that even the marginally significant effects reported in this study were quite strong. Otherwise, a small sample size would not have been enough to identify these effects. This is particularly true for the case of results found in regression analysis with several predictors (the two 3-way moderation effects).

Furthermore, a better research design would test the relationship between English skills, friendship networks, and psychological well-being in another study where perceived discrimination had not been manipulated. However, despite this limitation we decided to proceed with the analysis. The reason for doing so was related to the fact that English skills and friendship networks were assessed before the manipulation. The variables that were

assessed afterwards (i.e. the psychological well-being measures) were actually not affected by the manipulation as our initial analysis demonstrated. Furthermore, the results found for the analysis pertaining English skills and friendship networks were in line with our previous results, showing that these findings were rather robust and not affected by the manipulation. Another important aspect was that causal relationships could not be assumed. In this chapter however, there were no reasons to expect a different causal sequence from that found with international students. As such, we used the information provided by analyses of causality in Chapter 6 to guide our discussion of the correlational findings with English skills and friendship networks.

7.3.4 - Conclusion

Although our results did not permit to test our full model, the present study shed light on the important role of acculturation strategies when examining the ways in which minority members respond to group-based discrimination. When discrimination was perceived, a marginalisation strategy led to higher centrality, whilst an assimilation strategy led to lower centrality. In a similar vein, both marginalisation and separation strategies resulted in increasing ingroup affect in the face of group-based discrimination. Overall, by increasing ingroup affect, separation was the only strategy that would serve to counteract the negative effects of rejection. For assimilation and marginalisation, decreasing ingroup affect or increasing centrality would result in poor psychological well-being outcomes. Such a collective response is more diluted when individuals favour an integration strategy, as this strategy does not facilitate increasing ingroup affect or decreasing centrality with their Polish identity. It was also found that friendship networks

are an important resource for support when individuals seek contact with these networks. When this kind of contact is not sought, the opposite effects can be found and having contact with co-national friends can have negative consequences for the psychological well-being of Polish immigrants.

Chapter 8. GENERAL CONCLUSION

Overview

In this chapter the research findings of our studies are discussed. We began by providing a summary of this thesis' approach, followed by a summary of our main findings. The results gathered with both international students and Polish immigrants are discussed together. Although the main focus of our discussion was on the rejection-identification-acculturation model proposed in this thesis, attention was also given to the significance of social networks. In the end of the chapter, we discussed how our findings may serve to improve the academic experiences of international students. More specifically, we used the theoretical aspects of this thesis in order to suggest a number of measures aiming to improve intervention practices with international students. Finally, we addressed the limitations of this work and possible avenues for further research.

We initiated this thesis arguing that perceiving discrimination has harmful consequences for the well-being of disadvantaged group members. Nonetheless, discrepant findings contributed to an ambiguous understanding of the ways in which perceived discrimination impacts on psychological well-being. We subsequently argued that a framework such as SIT/SCT would be useful to understand not only intergroup discrimination but to also understand how perceptions of discrimination impact on psychological well-being. We also saw that previous research introducing the rejection-identification model had demonstrated that minority group identification can be an important mechanism in counteracting the negative effects that group-based rejection exerts on psychological well-being. Although the rejection-identification model has been tested in a number of studies with different groups, in the literature there are several inconsistencies that contribute to a rather incomplete understanding of all the involved processes.

In order to address these inconsistencies we aimed at extending the rejection-identification model in two important ways. Firstly, we aimed at testing the rejection-identification model within a multidimensional perspective of group identification (the concepts of ingroup ties, centrality, ingroup affect were introduced). Secondly, we aimed at taking into account individual acculturation strategies as a possible moderator of the rejection-identification relationship. Including acculturation strategies had the advantage of including a framework that has focused essentially on minority groups. It also had the advantage of allowing us to understand individual attitudes, behaviours, and strategies towards minority and dominant groups.

We developed a model that, being an extension of the rejection-identification model, predicted that the protective nature of different components of minority group

identification depended upon individual preferences towards participation in the larger society and maintenance of one's own culture (acculturation strategies). Overall, we argued that the extent to which group-based discrimination elicits group identification depends on the acculturation strategies held by minority group members. It was predicted that endorsement of a separation strategy would be important to prepare a collective response to group-based discrimination (i.e. to increase minority group identification). In contrast, we predicted that for proponents of assimilation, marginalisation, and integration, perceiving discrimination would not result in increased minority group identification. Therefore, proponents of a separation strategy would be able to protect their well-being by increasing identification with their group. However, those who endorse the other acculturation strategies would not increase minority group identification which in turn would make them vulnerable to the harmful effects of discrimination.

In Chapter 3 we introduced the target population of this thesis – the international students. We saw that despite the importance of this group for UK institutions and economy, there has been a surprising lack of research examining their experiences. The protective effects of two significant identities for international students were examined, i.e. identification with other international students and identification with own national group. Parallel to these identities, we also aimed to test whether social support and different friendship networks would serve to counteract the negative impact of group-based discrimination on psychological well-being. Lastly, in Chapter 7 we tested whether it would be possible to generalise the results found with international students to minority groups in general. For this purpose, we introduced a study where the principal predictions of our model were tested among a sample of Polish immigrants.

In the present chapter this thesis' research findings were discussed and the different studies were compared. We started by discussing how our results can be useful for understanding the ways in which minority groups cope with group-based discrimination. Throughout our discussion we gave special attention to the case of international students and the potential of our research to improve their experiences in the UK.

8.1 – The rejection-identification model

When we analysed the rejection-identification model within a multidimensional approach of group identification, our results showed that minority group identification could not counteract the harmful effects of discrimination on psychological well-being. For example, data from the longitudinal study supported previous research demonstrating that perceiving discrimination can be associated with increased centrality (Gurin & Markus, 1989; Eccleston & Major, 2006; Spencer-Rodgers & Collins, 2006). However, it was also found that increasing centrality would have a negative impact on psychological well-being. For ingroup affect similar effects were revealed. There was a trend supporting previous research demonstrating that perceived discrimination enhances the sense of belonging to a devalued group, which has negative consequences for ingroup affect (Eccleston & Major, 2006). In turn, it was found that reducing ingroup affect had a negative impact on psychological well-being. Moreover, perceptions of discrimination were not associated with ingroup ties. In all these cases, identification with international students or their own national group did not counteract the negative impact that discrimination had on the psychological well-being of these students. Adding to these results, our study with Polish immigrants showed that the extent to which participants perceived discrimination did not impact on centrality, ingroup ties, or ingroup affect. Taken together, the longitudinal study

and the study with Polish immigrants suggested that minority group identification could not counteract the negative implications that perceptions of discrimination have on individuals' psychological well-being. These initial results supported our argument that more complex modelling is needed in order to understand the protective characteristics of minority group identification against group-based discrimination.

8.2 - The rejection-identification-acculturation model

When we added acculturation strategies as a moderator of the rejection-identification relationship, a clearer picture of the protective effects of minority group identification was presented. In effect, our data demonstrated that minority group identification could only protect individuals' well-being under specific conditions. More specifically, our research suggested that the extent to which group-based discrimination elicits group identification depends on minorities preferred acculturation strategies — integration, separation, assimilation, and marginalisation. In Chapter 5, 6, and 7 it was demonstrated that endorsement of a separation strategy resulted in increased (or unaffected) ingroup affect following from perceptions of group-based discrimination. This effect, in turn, served to protect the psychological well-being of minority group members. In contrast, for those who preferred the other acculturation strategies, perceiving discrimination had a negative impact on ingroup affect, which was reflected in poor psychological well-being outcomes. These effects were found amongst international students (Chapter 5 and 6) and, to a certain extent, replicated among Polish immigrants in the UK (Chapter 7).

Our results provided evidence for the fact that only a strategy of keeping distance and separatism from the host community allows minority group members to use group

identification as a mechanism to counteract the negative effects of group-based rejection. For proponents of a separation strategy, because contact with the dominant group is not valued, perceiving discrimination did not interfere with how they feel about their own group. The focus of these individuals is on their minority group, thus perceiving that their contact is not valued involved strengthening ingroup cohesion by sharing a collective positive evaluation of their group. In effect, from the three dimensions of ingroup identification, only ingroup affect with students from own country (Chapter 5 and 6) and ingroup effect with Polish immigrants (Chapter 7) were able to counteract the harmful effects that group-based discrimination had on psychological well-being. In fact, ingroup affect is a key component of group or collective self-esteem that has been found to relate positively to personal self-esteem (Crocker, Luhtanen, Blaine & Broadnax, 1994; Luhtanen & Crocker, 1992). On balance, by increasing ingroup affect as a response to discrimination, minority group members were able to protect their psychological well-being.

On the other hand, proponents of an integration, marginalisation, or assimilation strategy could not provide a collective response to group-based discrimination. As we saw with international students in Chapter 6, when proponents of marginalisation and integration perceived discrimination, ingroup affect towards own country students decreased. An identical effect was found among the Polish immigrants who endorsed an assimilation strategy (Chapter 7). Because one's self-concept is defined by membership in different groups, decreasing ingroup affect had negative implications for the psychological well-being of minority group members. These findings suggested that perceiving group-based discrimination leaves those who endorse a strategy of integration, assimilation, or marginalisation more vulnerable to the power of the dominant group as it cuts off a strong mechanism to counteract the threat of discrimination — the own minority group. These

effects were demonstrated longitudinally with international students, where our results indicated that the moderating effect of acculturation strategies on ingroup affect can have a further impact on self-esteem, anxiety, and negative affect.

The cross-sectional analysis of the longitudinal study (Chapter 5) showed that acculturation strategies can also interact with perceptions of discrimination to impact on centrality. The same effect was found in the study with Polish immigrants. However, our studies with international students suggested that for both the included group identities (i.e. international students and own country students) centrality was negatively associated with psychological well-being. Due to the negative impact that centrality had on well-being, increasing centrality with the ingroup could not possibly counteract the negative effects of group-based discrimination. Therefore, acculturation strategies that elicited centrality as a response to discrimination would, in turn, result in poor psychological well-being outcomes. In Chapter 5 we saw that international students who endorsed assimilation and integration tended to increase centrality in the face of discrimination. The same effect was found in Chapter 7 for Polish immigrants who endorsed assimilation and marginalisation. Separation was thus the only strategy that served to maintain psychological well-being in the face of discrimination.

Furthermore, in line with previous research (e.g. Frable, Platt, & Hoey, 1998; McKenna & Bargh, 1998) ingroup ties were associated with psychological well-being in the longitudinal study. Hence, increasing ingroup ties in the face of group-based discrimination would serve to alleviate the negative effects of discrimination. However, in both the longitudinal study and the study with Polish immigrants, perceptions of discrimination were not associated with ingroup ties. What is more, the acculturation

strategies did not interact with perceptions of discrimination to impact on ingroup ties.

Overall, only a separation strategy allowed individuals to use minority group identification as a coping mechanism. From the different dimensions of group identification, only ingroup affect protected individuals from the harmful effects of group-based discrimination. Of particular importance to this thesis is the fact that the protective effects of ingroup affect only held for a chronic identity such as identification with own country or identification with the Polish. When we analysed a new identity such as identification with other international students, no relevant effects were found. As we argued before, new identities perhaps require more time to allow identification tying with psychological well-being. Also, students know that the identity of ‘international student’ is temporary and thus might lose its strength when compared to chronic identities. More importantly however, it showed that only some identities can counteract the negative effects of group-based discrimination. In this context it becomes important to identify and examine the identities that are relevant for psychological well-being.

8.3 – Hostility, well-being, and academic performance

When we analysed hostility as an outcome, our data with international students suggested that centrality with own country students mediates the relationship between perceived discrimination and hostility. That is, for international students, perceived discrimination was associated with an increasing awareness of own national group membership, which in turn elicited hostility toward the British. This mediation effect was found in the cross-sectional analysis (Chapter 5) of international students’ first year. In this cross-sectional analysis a moderation effect was also found. This effect indicated that

students who endorse a marginalisation strategy tend to respond to discrimination with hostility towards the British. Perceiving discrimination did not result in hostility for proponents of the other acculturation strategies. In contrast, in both the analysis of the longitudinal data of international students and the analysis of Polish immigrants no effects with hostility were found. As we argued in Chapter 7, international students are quite often of a higher status than the average immigrant and thus perceiving discrimination might be a greater shock for the students. The data from students' first year supports our argument by showing that perceiving discrimination was associated with increased centrality with own national group. The distinction between international and British students ('us' versus 'them') is enhanced and results in hostility towards the host community. However, this effect was only found during students' first year, suggesting that it might be an initial reaction to expectations of an equal treatment that were not met. This was just an initial reaction as the longitudinal analysis did not show that the effects on hostility would be maintained over time.

With international students we also examined academic performance as a possible outcome. Both the cross-sectional and longitudinal results demonstrated that perceiving discrimination had negative implications for students' academic performance. During students first year it was shown that self-esteem tended to mediate the relationship between perceived discrimination and academic performance. That is, perceiving discrimination lowered the self-esteem of international students, which in turn had negative consequences for their academic performance. However, the longitudinal analysis demonstrated that ingroup affect could counteract the negative effects of group-based discrimination on academic performance. Thus, our moderated mediation model can also hold for other outcome variables such as the academic performance of international students. The

protective effects of ingroup affect were identical to those mentioned when we analysed self-esteem as an outcome. Specifically, in the face of group-based discrimination proponents of separation and assimilation were able to increase ingroup affect with their own national group, which in turn counteracted the negative consequences that perceiving discrimination had on academic performance. Overall, these results emphasise that group-based discrimination can be a significant source of a poor academic performance, whilst showing which mechanisms can successfully counteract its harmful effects. This is an important finding as it provides compelling empirical support for the mechanisms argued in our model by showing the same effects with another essential outcome for international students.

8.4 – The causal relationships of the model

The nature of our data served to examine more closely the causal relationships of our model. Causality was tested using two different statistical techniques – multiple regression and structural equation modelling. Both techniques indicated that for international students, perceiving discrimination has a negative causal impact on centrality with own country students. There was also a marginal causal effect suggesting that perceptions of discrimination have impact on ingroup affect. However, this causal effect became clearer when acculturation strategies were introduced as moderator of the relationship between perceived discrimination and ingroup affect. It was demonstrated that for proponents of marginalisation and integration, perceived discrimination resulted in lower ingroup affect. A similar effect was found with Polish immigrants. Although there were no significant effects between perceived discrimination and ingroup affect, after

introducing the acculturation strategies as a moderator it was shown that for proponents of separation, perceiving discrimination resulted in higher ingroup affect.

The research findings with international students and Polish immigrants provided support for the causal relationships hypothesised by the rejection-identification model, whilst supporting previous research testing this causal relationship (i.e. Jetten et al., 2001). The reversed causal relationship hypothesised by other authors such as Crocker and Major (1989), and Crocker et al. (1998) was not supported. Nonetheless, our data suggested that the relationship between perceived discrimination and ingroup affect is not straightforward as previously hypothesised by the rejection-identification model. This aspect is demonstrated in particular in the study with Polish immigrants, where the causal impact of perceptions of discrimination on Polish identification could only be shown after introducing acculturation strategies as a moderator. A similar effect was found in the longitudinal study with international students. The impact that perceived discrimination had on identification with own country students was statistically more robust when acculturation strategies were introduced as a moderator. Taken together, these findings supported not only our model but also our main argument that the acculturation strategies are a crucial factor for the understanding of the relationship between rejection and identification.

In our data however, ingroup ties revealed opposite results. It was found that for international students, ingroup ties had a causal impact on perceived discrimination and not the opposite. Work by Crocker and Major (1989) hypothesised that increased group identification would encourage perceptions of discrimination. Our data did not support this argument as ingroup ties discouraged perceptions of discrimination. Furthermore, although the causal relationship with ingroup ties was contrary to that expected by the rejection-

identification model, it did not contradict the causal relationships of our model as ingroup ties were neither associated with minority group identification nor psychological well-being. In effect, the relationship between ingroup ties and discrimination supports our argument that it is crucial to disentangle different dimensions of group identification. A unidimensional approach to group identification would not serve to differentiate the opposing effects and causal relationships found in this thesis and previous research.

Another important aspect of our model is the relationship between the independent variable and the moderator (i.e. perceptions of discrimination and acculturation strategies). When developing our model we drew on previous research showing that acculturation strategies varied regardless of perceptions of discrimination (Zagefka & Brown, 2002). This was supported by our data with international students which showed no causal effects between the two variables. The lack of a relationship between the independent variable and moderator was supported by both regression and structural equation modelling analyses. The study with Polish immigrants also supported these findings by indicating that a manipulation of the extent to which participants' perceived discrimination did not impact on their acculturation strategies. The lack of a causal relationship between both variables was further supported by our interviews in Chapter 4 where students showed different levels of perceived discrimination but still had integration as their preferred acculturation strategy.

8.5 – Social networks

Analysis of our data showed that international students' social networks could not counteract the negative effects of group-based rejection on psychological well-being. However, interesting results were found when we examined the direct effect tying social

networks to perceptions of discrimination and psychological well-being. Previous research has shown that co-national and host national friendships are significant sources of social support (Searle & Ward, 1990). Other research, in contrast, provided evidence for the fact that these social networks can often have opposing outcomes (Ward & Kennedy, 1992; Pruit, 1978). These discrepant findings were supported by our research. For example, in the longitudinal study results indicated that having more co-national or host friends in the beginning of their studies was associated with increased perceived discrimination and lower self-esteem in second year. Moreover, with Polish immigrants it was found that having contact with co-national friends was associated with positive affect, whilst contact with family and friends in Poland were related with lower performance state self-esteem, lower positive affect, and higher negative affect. These findings taken together, demonstrate that the link between social networks and the experiences of acculturating individuals is not as straightforward as initially hypothesised in previous research.

In order to tackle these inconsistencies, we followed the steps of Minde (1985, cited in Chataway & Berry, 1989) who argued that in order to explain the effects of social networks on psychological well-being it is crucial to examine discrepancies between actual and desired contact. Accordingly, Minde (1985, cited in Chataway & Berry, 1989) and Zhen and Berry (1991) demonstrated that discrepancies between actual and desired contact with different social networks can be associated with increased stress and difficulties in adaptation among immigrants. Therefore, we examined whether the effect of the actual contact with different social networks on the psychological well-being of acculturating individuals would vary as a function of their preferences for contact with those social networks. Indeed, Minde's argument was supported by our research. For example, in the longitudinal study it was found that increasing contact with co-national

friends was related to feelings of low self-worth when students were not willing to maintain their own cultural background. Similar results were found with Polish immigrants. When Polish immigrants were willing to maintain their own cultural background, contact with co-national friends was associated with positive affect. In contrast, when Polish immigrants were less willing to maintain their cultural background, contact with Polish friends was related to lower positive affect. When contact with British friends was analysed it was found that this social network was associated with higher performance state self-esteem only for the Polish immigrants who were willing to participate in the larger society. For those who were less willing to participate in the larger society, no relationship was found between the amount of British friends and performance state self-esteem.

The above findings to a certain extent parallel our initial results testing the rejection-identification-acculturation model. In both cases we saw that a simple analysis of the involved variables would produce discrepant results. What is more, in both cases it was demonstrated that it is crucial to examine how individual preferences towards own and host culture may feedback into the involved processes. By taking into account these individual preferences (i.e. desire for contact) we were able to explain previous inconsistencies in the literature.

8.6 – Other important results with international students

There were a few findings from our research that, although were only tested with international students, were important for this thesis and thus deserve a comment in this chapter. For example, our longitudinal analysis demonstrated that perceived group permeability had an important causal impact on both perceptions of discrimination and

willingness to participate in the larger society. More specifically, structural equation modelling analysis indicated that the development of perceptions of discrimination and willingness to participate in the larger society during students' initial two years in university was mediated by perceptions of permeability. These results suggest that perceptions of permeability are fundamental if we are to explore the development of perceptions of discrimination and acculturation strategies. As such, the understanding of how international students perceive group boundaries is particularly significant for prevention. Our rejection-identification-acculturation model addresses how individuals may cope with problematic experiences with discrimination. In turn, perceived permeability can be helpful to prevent students from increasing perceptions of discrimination. Due to this characteristic, perceived group permeability will be further explored below, when intervention with international students will be discussed.

Moreover, perceptions of permeability had a significant impact on willingness to participate in the larger society but no effects were found with maintenance of own cultural background. We also saw that the two dimensions were associated with different variables at the two time points of the longitudinal study. In this way, our data indicates that the two dimensions can be caused and related to different variables. This finding provides further evidence for the significance of distinguishing two dimensions when measuring acculturation. This is particularly important in an area where there is still much debate about how researchers should use unidimensional or bidimensional models.

Finally, we explored in more detail the concepts of willingness to make attributions to discrimination and perceptions of discrimination. It was found that perceptions of discrimination were more effective in predicting students' well-being and group

identification. Furthermore, research has argued that prior exposure to discrimination and likelihood of making an attribution to discrimination are conceptually and methodological distinct (see Major et al., 2002 for a discussion on this issue). However, research has used these two concepts interchangeably, making it difficult to compare research findings. In this research we assessed both concepts, showing that prior exposure to discrimination was a better predictor of minority group identification and psychological well-being. We anticipate that these research findings will raise new questions in this field, and will also have a methodological and theoretical implication for future research focusing upon perceived discrimination and individual responses to these experiences.

8.7 – How can our research help international students?

It is important to begin this section by pointing out that most universities have their own support services for international students. The aim is to aid international students with their problems (see Chapter 3 for an overview), which may range from cultural and language concerns to bureaucratic issues such as visas for example. Student support services provide an invaluable help to international students, but tend to use knowledge that is derived from their own experiences with students and little help is sought or offered from disciplines like psychology. In this section we aim at gathering theoretical and practical aspects in order to improve the academic experiences of international students.

As we saw in Chapter 3, there is currently a lack of evidence-based practice or integrated policy on international students in the UK. We feel that this thesis' research can contribute to the current limited knowledge based on international students by showing (1) the role of structural and social factors in determining adaptation to their new environment;

(2) which strategies are most effective in responding to experiences of discrimination; and also (3) which variables affect students' academic achievement. Our findings should be of particular interest to universities who are keen to attract international students to the UK and ensure that their sojourn is a positive and productive one.

A successful intervention plan would be able to anticipate international students' problematic experiences. As demonstrated by our research, perceptions of group permeability were negatively associated with the extent to which students perceive discrimination. Furthermore, our results indicated that perceptions of discrimination had negative consequences for students' psychological well-being. In this context it is thus crucial to guarantee that international students perceive that group boundaries are open. This could be achieved for example by inviting international students to British activities or parties, by avoiding segregating international students in specific student halls of residence, or by hosting programmes where international students are paired with British students in order to organise social and sports events. In addition, our research indicated that students can have significant episodes with discrimination outside of the university context. Hence, it is crucial to involve international students in the broader communities in which universities are included. This could be achieved, for example, by having universities facilitating the insertion of international students in local charities or volunteering work.

It was also shown by our research that group identification can be fundamental for international students. Indeed, in Chapter 5 and 6 our results demonstrated that group identification was the only variable capable of alleviating students' negative experiences with group-based discrimination. Overall, our results indicated that students' identities were a strong and consistent predictor of psychological well-being. Furthermore, it was

found that these identities can have an important role in improving students' academic performance, especially when academic performance is affected by experiences with discrimination. As we outlined in Chapter 3 however, previous research examining the experiences of international students focused on friendship networks and social support as important factors in helping their psychological adaptation. Apart from the Schmitt et al.'s (2003) study, there are no accounts of research examining (or applying) international students' identities with the goal of improving their academic experiences. As such, we feel that group identification has been rather neglected and needs to be introduced in intervention plans aiming to aid these sojourners.

If we are to understand the ways in which group identification may aid international students, we need to examine our results in detail. In this thesis it was found that liking and being proud of one's national group (ingroup affect) alleviated the negative effects that perceiving discrimination had on self-esteem, negative affect, and anxiety. In contrast, increasing the awareness and salience of international students' own national group (centrality) as a response to group-based discrimination had negative implications for their psychological well-being. As our data also demonstrated, these relationships depend on the acculturation strategies held by international students. A separation strategy was the only strategy that served to protect international students' psychological well-being in the face of group-based discrimination. The problem with this finding is that what seems better for students' psychological adjustment, might be counterproductive for their social adjustment. In fact, it was shown that endorsing a separation strategy often results on a problematic relationship between acculturating and host individuals (Bourhis et al., 1997). Therefore, a successful strategy to cope with discrimination might separate groups and have problematic consequences for intergroup relations in the long term. This aspect is

supported by our analysis with hostility showing that a lack of willingness to participate in the larger society is followed by hostility towards the British during students' first year. In order to improve the experiences of international students the solution might not include stimulating a separation strategy but either simulating the beneficial aspects of such strategy. That is, a successful intervention plan could focus on fostering students' ingroup affect towards their own national group, whilst promoting a strategy of inclusion and group permeability. This could be attained for example by supporting events where students would have the opportunity to show to the university their own cultural background and activities related to their own country. Due to the negative relationship between increased centrality with own national group and psychological well-being, it would be important to guarantee that these events would not increase students' centrality with own country. Therefore, simultaneously to the measures proposed above, it would be necessary to avoid an 'us' versus 'them' distinction. More specifically, creating the identity of 'student of St. Andrews' for example, would serve to attenuate the distinction between international and host students. Such an identity could be construed by contrasting being a 'student of St. Andrews' with being a student in other universities in Scotland. This could be achieved by extensive advertising of the particular characteristics and qualities of being a 'student in St. Andrews' and by organising events with other universities in Scotland, where host and international students would represent together their own university.

Finally, our results indicated that contact with different social networks is fundamental for international students. More specifically, it was found that contact with co-national and British peers can be beneficial as long as there is a match between actual and desired levels of contact. Keeping in mind that both co-national and British friendships can be beneficial for international students at different levels, it is strategically significant

to alert students for the importance of these networks. In addition, it is equally fundamental to guarantee that their efforts in establishing contact with the different social networks are corresponded. This last point relates again to openness and perceived group permeability which were discussed in the beginning of this section.

Lastly, it is important to acknowledge that we provided above some suggestions, but for a detailed intervention plan, work between researchers and student support services would be needed.

8.8 – Limitations and future research

Apart from a number of limitations that were specific to each study and were addressed in their respective chapters, there were some concerns that relate more generally to our approach and warrant some discussion. An important limitation relates to the fact that in this research we did not assess the acculturation strategies of the host community towards the different groups included in this thesis. As we already discussed, the acculturation strategies hold by the host community have an impact and might even constrain some of the options of acculturation individuals. Likewise, research has shown that the acculturation strategies of host groups as perceived by minority groups have a crucial effect on the decisions of acculturating individuals (Zagefka & Brown, 2002). Additionally, the preferred acculturation strategies towards international students might be different from those held for Polish immigrants. Measuring these issues would have been important not only for a better comparison of the different groups in this thesis, but also to understand the involved processes.

One possible path for further research is to examine the interaction between group and individual processes in other contexts. In the beginning of this thesis we started by

arguing that social factors are fundamental to explain how individuals perceive and respond to group-based discrimination. For this purpose we followed a social identity approach. We argued that SIT was necessary but then showed that this theory on its own could not be able to fully explain minority group members' responses to discrimination. Thus, we developed a model where group and individual processes interact dynamically. Following from this thesis' results, we feel that it would be possible to address inconsistencies in other theoretical contexts with this type of approach. For example, in relative deprivation theory (RDT; Crosby, 1976, 1982; Folger, 1986; Gurr, 1970; Runciman, 1966), relative deprivation has been associated with increased identification in some, but not all studies. It would be interesting to test whether our approach could serve to better understand the conditions in which group identification emerges, following from relative deprivation.

In this thesis we focused only on the relatively immediate effects of acculturation strategies. However, interesting effects could be found if we examined the long-term interaction between acculturation strategies and perceptions of discrimination. In fact, we propose that this interaction can shape the intergroup context. For example, when proponents of a marginalisation strategy respond collectively to discrimination (by increasing centrality with their national group) they might pave the way for social change and resistance to the dominant group. Research within the acculturation framework has shown some evidence for this process. It has been found that a marginalisation strategy from the minority is often problematic and intergroup conflict can be predicted to occur (Bourhis, Moise, Perrault, & Senecal, 1997). Proponents of an integration strategy, in contrast, might reevaluate and readjust their preferred way to interact with the dominant group in order to make their strategy congruent with perceived intergroup relations. This is

perhaps why integration attitudes typically contribute to better intergroup relations and a better acculturative outcome (Berry, 1997).

Finally, our results with international students emphasised the importance of examining responses to group-based discrimination longitudinally. In future research it would be interesting to analyse these effects with immigrants during their stay abroad. It would be interesting to have more time points in a longitudinal study in order to map other than linear relationships between variables. In this thesis we also outlined that when modelling individuals' responses to discrimination, it is important to include multiple outcome variables. Thus, it would also be interesting to include other outcome variables such as perceived work performance for example.

8.9 – Conclusion

Our research showed that assessing individual acculturation strategies is vital for understanding the ways in which individuals cope with group-based discrimination. More specifically, it was shown that a separation strategy is an important factor for protecting acculturating individuals from rejection. This acculturation strategy served to counteract the negative effects that perceived discrimination had on a number of psychological well-being variables, and also academic performance amongst international students. Although a separation strategy contributed to improve the psychological adaptation of those who perceived discrimination, previous research has demonstrated that this strategy has negative consequences for one's social adaptation. Our research provided some support for this finding by showing that the endorsement of a separation strategy was associated with increased hostility towards the host community. This aspect emphasises the complexity of the consequences underpinning the mechanisms to cope with group-based discrimination.

Chapter 8. Conclusion

A successful intervention plan would have the complex task of balancing the short-term beneficial effects of a separation strategy with the long-term negative consequences for intergroup relations.

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Appendix A

University of St. Andrews

PLEASE READ THROUGH THESE NOTES BEFORE COMPLETING THE
QUESTIONNAIRE

Dear Student,

This questionnaire is part of ongoing research investigating international students' perceptions of British culture and how they feel about studying in St. Andrews. Group identities are an important part of the self, so this research aims to look at these identities considering the importance of intercultural contact in order to understand group identity formation and further implications for well-being. We also ask questions about your experience with discrimination in the UK and strategies to cope with it. By studying these matters we aim to improve our understanding of how different groups and different nationalities relate within the University context.

We would be very grateful if you could complete this questionnaire – it will only take 15 minutes of your time. There are no “right” or “wrong” answers, we are interested in your views. All your answers will be anonymous and will be treated confidentially.

Questions of concern about the study can be addressed to the researcher Miguel Ramos (mrrdstr@st-andrews.ac.uk), School of Psychology, University of St. Andrews.

When you will feel ready to begin, please turn the page and start the questionnaire. Thank you very much!

4 - Your own feelings, emotions and perceptions

Below is a list of statements dealing with your general feelings about yourself. Please indicate how well you agree or disagree with each statement.

	Strongly Disagree	Disagree	Somewhat disagree	Neither agree or disagree	Somewhat agree	Agree	Strongly Agree
4.1.1 - I feel that I'm a person of worth, at least on an equal plane with others.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4.1.2 - I feel that I have a number of good qualities.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4.1.3 - All in all, I am inclined to feel that I am a failure.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4.1.4 - I am able to do things as well as most other people.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4.1.5 - I feel I do not have much to be proud of.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4.1.6 - I take a positive attitude toward myself.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4.1.7 - On the whole, I am satisfied with myself.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4.1.8 - I wish I could have more respect for myself.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4.1.9 - I certainly feel useless at times.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4.1.10 - At times I think I am no good at all.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

From the list below please indicate how often you experience the following positive emotions.

	Never true of me	Rarely true to me	Not quite true to me	Neither one or another	Sometimes true to me	Often true to me	Always true to me
4.2.1 - Pessimistic	<input type="checkbox"/>						
4.2.2 - Enthusiastic	<input type="checkbox"/>						
4.2.3 - Good natured	<input type="checkbox"/>						
4.2.4 - Unhappy	<input type="checkbox"/>						
4.2.5 - Unsatisfied	<input type="checkbox"/>						
4.2.6 - Upbeat	<input type="checkbox"/>						

Finally, we would like to know a bit more about your feelings. Please read each item and place a tick in the box which comes closest to how you have been feeling since you are in St. Andrews. Please don't take too long over your replies: your immediate reaction to each item will probably be more accurate than a long thought out response.

4.3.1 - I feel tense or 'wound up'.

Most of the time	A lot of the time	Time to time, occasionally	Not at all
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

4.3.2 - I still enjoy the things I used to enjoy.

Definitely as much	Not quite so much	Only a little	Not at all
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

4.3.3 - I get a sort of frightened feeling like something awful is about to happen.

Very definitely and quite badly	Yes, but not too badly	A little, but it doesn't worry me	Not at all
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

4.3.4 - I can laugh and see the funny side of things.

As much as I always could	Not quite so much now	Definitely not so much now	Not at all
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

4.3.5 - Worrying thoughts go through my mind.

A great deal of the time	A lot of the time	From time to time but not too often	Only occasionally
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

4.3.6 - I feel cheerful.

Not at all	Not often	Sometimes	Most of the time
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

5.2.5 - Your level of English when writing essays for your course is:

Very incompetent	<input type="checkbox"/>	Very competent						
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5.2.6 - Your level of English when writing letters or emails to friends is:

Very incompetent	<input type="checkbox"/>	Very competent						
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5.2.7 - Your understanding of English when reading an academic book is:

Very incompetent	<input type="checkbox"/>	Very competent						
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5.2.8 - Your understanding of English when reading a novel is:

Very incompetent	<input type="checkbox"/>	Very competent						
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5.2.9 - Your understanding of English when reading a newspaper is:

Very incompetent	<input type="checkbox"/>	Very competent						
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5.2.10 - Your spoken English with friends is:

Very incompetent	<input type="checkbox"/>	Very competent						
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5.2.11 - Your spoken English in a class is:

Very incompetent	<input type="checkbox"/>	Very competent						
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5.2.12 - Your spoken English in a public space is:

Very incompetent	<input type="checkbox"/>	Very competent						
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Now some final questions about the relationship between foreign students and the host culture:

5.3.1 - Discrimination between the British and foreign students will not change easily.

I strongly disagree	<input type="checkbox"/>	I strongly agree						
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5.3.2 - I think that the relationship between foreign students and the British will remain the same for the next years.

I strongly disagree	<input type="checkbox"/>	I strongly agree						
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5.3.3 - The British are entitled to be better than foreign students.

I strongly disagree	<input type="checkbox"/>	I strongly agree						
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5.3.4 - It is justified that the British have a superior status when comparing to foreign students.

I strongly disagree	<input type="checkbox"/>	I strongly agree						
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5.3.5 - It is very easy for a foreign student to be accepted into the British society

I strongly disagree	<input type="checkbox"/>	I strongly agree						
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5.3.6 - For a foreign student it is nearly impossible to be regarded as British.

I strongly disagree	<input type="checkbox"/>	I strongly agree						
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5.4 - What is your nationality? _____

5.5 - What is your first language? _____

5.6 - What is your parents' nationality? (If they have different nationalities please specify)

5.7 - For how long are you living in the UK? _____ months.

5.8 - Which religion do you follow? _____

5.9 - Do you practice it regularly? Yes / No

5.10 - Regarding you ethnicity, you are:

Asian	Black	White	Other
<input type="checkbox"/> Central Asian	<input type="checkbox"/> Caribbean	<input type="checkbox"/> European	<input type="checkbox"/> Any other mixed background
<input type="checkbox"/> Middle Eastern	<input type="checkbox"/> African	<input type="checkbox"/> North American	
<input type="checkbox"/> East Asian	<input type="checkbox"/> White and Black Caribbean	<input type="checkbox"/> Any other white background	
<input type="checkbox"/> White and Asian	<input type="checkbox"/> White and Black African		
<input type="checkbox"/> Any other Asian background	<input type="checkbox"/> Any other black background		

5.11 - Regarding the course that you are taking now in St. Andrews, it is:

Undergraduate Undergraduate (Erasmus) Masters PhD.

5.12 - In which academic year are you studying?

1st 2nd 3rd 4th

5.13 - What is your subject of study?

5.14 - Are you female or male? female male

5.15 - What is your age? _____ years.

This is the end of the questionnaire. We would like to thank you very much for taking the time to complete it. If you would like to know more about the project or receive any feedback about the research we will be very glad to provide such information.

THANK YOU VERY MUCH!

Appendix B

Interview Schedule

Preamble (topics): During this interview I will ask questions about your opinions and experiences, so there are no right or wrong answers. The interview will be recorded but all data is anonymous and confidential. If you feel uncomfortable to answer you can drop the interview at any time without giving a justification. Consent form.

1 - Why did you decide to come to St. Andrews?

- Which course? Was St. Andrews your first choice?
- Expectations: the beginning of studies here, about living in St. Andrews (social life), possible impact of living in another place
- Had previous contact with countries in the UK? (What kind of contact? Source of expectations and assumptions)
- Are you enjoying St. Andrews (academic and social aspects)? Hospitality and meaning of host culture (Scotland vs. England - who is involved?)
- What are the negative aspects of St. Andrews?

2 – As an international student have you ever been treated differently than the students from the UK?

- Have you ever had similar experiences in your country before?
- In St. Andrews: which places and situations?
- Major events vs. everyday types of discrimination
- Ever vs. recently
- Targets of discrimination (interviewees only or also members of their group)
- Ethnicity? Religion? Race?

3 – Sometimes international students feel a bit isolated. Regarding this aspect, what kind of activities would improve this situation?

- Measures taken by the university
- Accommodation
- Student integration
- Impositions from the people at St. Andrews (expectations to adapt to the UK lifestyle).
- Public (shops, restaurants) vs. private context

4 – Have you ever thought about what you are going to do after the course?

- Which opportunities are available? (Can stay, want to stay, and why?)

Appendix C

Research with International Students

PLEASE READ THROUGH THESE NOTES BEFORE COMPLETING THE QUESTIONNAIRE

Dear Student,

This questionnaire is part of ongoing research investigating international students' perceptions of British culture and how they feel about studying in Scotland. The relationship between international students and the host community is important not only for the academic success of international students but also for an egalitarian environment within the University. We also ask questions about your experiences of discrimination in the UK. By asking these questions we aim to improve our understanding of how different groups and different nationalities relate within the University context.

Participating in this study involves completing two questionnaires (one now and the other in the next academic year). However, you are free to withdraw at anytime, thus completing this questionnaire does not commit you to a second one.

In the end we ask for your contact details so we can contact you again next year and give the second questionnaire. We ask for them in the last page so they can be removed and disassociated from your responses. Also, the questionnaire and contact details are completely confidential, only the researchers and their supervisor will have access to these data, which will be destroyed upon completion of the project.

This questionnaire will take 20 minutes of your time and you will be paid £4. Please bear in mind that there are no "right" or "wrong" answers, we are interested in your views. Also, we would like to ask you to stick with the order the questions are presented.

Questions of concern about the study can be addressed to the researchers Miguel Ramos (mrrdstr@st-andrews.ac.uk) and Dr. Clare Cassidy (cc73@st-andrews.ac.uk), School of Psychology, University of St. Andrews.

When you will feel ready to begin, please turn the page and start the questionnaire. Thank you very much!

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1 - Your views about life in the UK

The first questions relate to your views about British people. Please tick the box that best represents your views.

1.1.1 - I feel at ease with British people.								
I strongly disagree	<input type="checkbox"/>	I strongly agree						
1.1.2 - I like British culture and I will do my best to be part of it.								
I strongly disagree	<input type="checkbox"/>	I strongly agree						
1.1.3 - I feel uncomfortable being with people from the UK.								
I strongly disagree	<input type="checkbox"/>	I strongly agree						
1.1.4 - I would like to live in an area where there are British people.								
I strongly disagree	<input type="checkbox"/>	I strongly agree						
1.1.5 - I make an effort to improve my English.								
I strongly disagree	<input type="checkbox"/>	I strongly agree						
1.1.6 - I don't feel comfortable to speak English with friends.								
I strongly disagree	<input type="checkbox"/>	I strongly agree						
1.1.7 - I want to speak with British people and know more about them.								
I strongly disagree	<input type="checkbox"/>	I strongly agree						
1.1.8 - I don't want to learn more things about the British culture.								
I strongly disagree	<input type="checkbox"/>	I strongly agree						

Now please consider your views about people of your own nationality.

1.2.1 - I want to 'hang out' with people from my country.								
I strongly disagree	<input type="checkbox"/>	I strongly agree						
1.2.2 - I would like to have more friends from my own nationality.								
I strongly disagree	<input type="checkbox"/>	I strongly agree						
1.2.3 - I have no wish to go back to my own country.								
I strongly disagree	<input type="checkbox"/>	I strongly agree						
1.2.4 - It is important to me to preserve my own cultural heritage.								
I strongly disagree	<input type="checkbox"/>	I strongly agree						
1.2.5 - I would like to live in an area where there are only people from my nationality.								
I strongly disagree	<input type="checkbox"/>	I strongly agree						
1.2.6 - The culture from my own country is something that I value.								
I strongly disagree	<input type="checkbox"/>	I strongly agree						
1.2.7 - If I could I would only use my own national language in my daily life.								
I strongly disagree	<input type="checkbox"/>	I strongly agree						
1.2.8 - I enjoy going to gatherings or parties held by people of my own nationality.								
I strongly disagree	<input type="checkbox"/>	I strongly agree						
1.2.9 - The culture of my own country is not interesting.								
I strongly disagree	<input type="checkbox"/>	I strongly agree						

2 - Your experiences

The next questions are about your experiences with British people. Please tick the box that best represents your experience.

2.1.1 - I feel British people look down on me because I'm from a foreign country.

I strongly disagree	<input type="checkbox"/>	I strongly agree						
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2.1.2 - British people have discriminated against me because I am not from the U.K.

I strongly disagree	<input type="checkbox"/>	I strongly agree						
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2.1.3 - I have personally been a victim of discrimination in the UK because I'm from a foreign country.

I strongly disagree	<input type="checkbox"/>	I strongly agree						
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2.1.4 - On average, people in the UK society treat British and foreigners equally.

I strongly disagree	<input type="checkbox"/>	I strongly agree						
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2.1.5 - It is easy to understand why foreign groups in the UK are still concerned about societal limitations of their opportunities.

I strongly disagree	<input type="checkbox"/>	I strongly agree						
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2.1.6 - In the UK there aren't any prejudices against foreign people.

I strongly disagree	<input type="checkbox"/>	I strongly agree						
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Looking at the following events please state how often you experienced them in the UK because you are from a foreign country.

2.2.1 – When working with classmates, other students have acted as if they are better than you.

Never	<input type="checkbox"/>	A lot						
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2.2.2 – During tutorials other students have acted if you are not intelligent.

Never	<input type="checkbox"/>	A lot						
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2.2.3 – While having a discussion during tutorials other students didn't take you seriously.

Never	<input type="checkbox"/>	A lot						
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2.2.4 – People weren't interested in your opinion about an academic topic.

Never	<input type="checkbox"/>	A lot						
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2.2.5 – During tutorials you felt that you have less opportunities to talk.

Never	<input type="checkbox"/>	A lot						
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2.2.6 – In town you have received worse service (e.g. in a restaurant or shop).

Never	<input type="checkbox"/>	A lot						
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2.2.7 – In town people have called you names or insulted you.

Never	<input type="checkbox"/>	A lot						
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2.2.8 – In a public place people have treated you with less courtesy.

Never	<input type="checkbox"/>	A lot						
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2.2.9 – At the University other students have treated you with less respect.

Never	<input type="checkbox"/>	A lot						
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2.2.10 - Within a group of students you felt excluded from some conversations.

Never	<input type="checkbox"/>	A lot						
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2.2.11 - You felt that others didn't invite you to go out.

Never	<input type="checkbox"/>	A lot						
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2.2.12 - You felt it was difficult to get close to another group of students.

Never	<input type="checkbox"/>	A lot						
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2.2.13 - You felt that other students weren't interested in including you in their group of friends.

Never	<input type="checkbox"/>	A lot						
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Now, please indicate the extent to which you agree or disagree with the following statements.

2.5.1 - When I see a British person, I can't help but think bad things about them

I strongly disagree	<input type="checkbox"/>	I strongly agree						
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2.5.2 - I have used some bad terms to refer to British people

I strongly disagree	<input type="checkbox"/>	I strongly agree						
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2.5.3 - I feel annoyed when British people are close to me

I strongly disagree	<input type="checkbox"/>	I strongly agree						
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2.5.4 - If a British person is hostile to me, I easily become aggressive

I strongly disagree	<input type="checkbox"/>	I strongly agree						
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2.5.5 - I tend to feel angry quite easily when I'm with British people

I strongly disagree	<input type="checkbox"/>	I strongly agree						
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2.5.6 - For me it is inevitable to have some bitter feelings for British people

I strongly disagree	<input type="checkbox"/>	I strongly agree						
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3 - Group identification

In this part we are interested in knowing what kind of groups are important to you. For the two groups listed below, please indicate the extent to which you identify with that group.

International students at your University

3.1.1 - I have a lot in common with other international students

I strongly disagree	<input type="checkbox"/>	I strongly agree						
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3.1.2 - Overall, being an international student has very little to do with how I feel about myself

I strongly disagree	<input type="checkbox"/>	I strongly agree						
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3.1.3 - In general, I'm glad to be an international student

I strongly disagree	<input type="checkbox"/>	I strongly agree						
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3.1.4 - I don't feel a sense of being "connected" with other international students

I strongly disagree	<input type="checkbox"/>	I strongly agree						
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3.1.5 - The fact that I am an international student rarely enters my mind

I strongly disagree	<input type="checkbox"/>	I strongly agree						
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3.1.6 - Generally, I feel good when I think about myself as an international student

I strongly disagree	<input type="checkbox"/>	I strongly agree						
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Students from your own nationality

3.2.1 - I have a lot in common with students from my country

I strongly disagree	<input type="checkbox"/>	I strongly agree						
---------------------	--------------------------	--------------------------	--------------------------	--------------------------	--------------------------	--------------------------	--------------------------	------------------

3.2.2 - Overall, being a student from my country has very little to do with how I feel about myself

I strongly disagree	<input type="checkbox"/>	I strongly agree						
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3.2.3 - In general, I'm glad to be a student from my country

I strongly disagree	<input type="checkbox"/>	I strongly agree						
---------------------	--------------------------	--------------------------	--------------------------	--------------------------	--------------------------	--------------------------	--------------------------	------------------

3.2.4 - I don't feel a sense of being "connected" with other students from my country

I strongly disagree	<input type="checkbox"/>	I strongly agree						
---------------------	--------------------------	--------------------------	--------------------------	--------------------------	--------------------------	--------------------------	--------------------------	------------------

3.2.5 - The fact that I am a student from my country rarely enters my mind

I strongly disagree	<input type="checkbox"/>	I strongly agree						
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3.2.6 - Generally, I feel good when I think about myself as a student from my country

I strongly disagree	<input type="checkbox"/>	I strongly agree						
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4 - Your own feelings, emotions and perceptions

Below is a list of statements dealing with your general feelings about yourself. Please indicate how well you agree or disagree with each statement.

	Strongly Disagree	Disagree	Somewhat disagree	Neither agree or disagree	Somewhat agree	Agree	Strongly Agree
4.1.1 - I feel that I'm a person of worth, at least on an equal plane with others.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4.1.2 - I feel that I have a number of good qualities.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4.1.3 - All in all, I am inclined to feel that I am a failure.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4.1.4 - I am able to do things as well as most other people.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4.1.5 - I feel I do not have much to be proud of.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4.1.6 - I take a positive attitude toward myself.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4.1.7 - On the whole, I am satisfied with myself.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4.1.8 - I wish I could have more respect for myself.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4.1.9 - I certainly feel useless at times.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4.1.10 - At times I think I am no good at all.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

From the list below please indicate how often you experience the following emotions.

	Never true of me	Rarely true to me	Not quite true to me	Neither one or another	Sometimes true to me	Often true to me	Always true to me
4.2.1 - Pessimistic	<input type="checkbox"/>						
4.2.2 - Enthusiastic	<input type="checkbox"/>						
4.2.3 - Good natured	<input type="checkbox"/>						
4.2.4 - Unhappy	<input type="checkbox"/>						
4.2.5 - Unsatisfied	<input type="checkbox"/>						
4.2.6 - Upbeat	<input type="checkbox"/>						

Finally, we would like to know a bit more about your feelings. Please read each item and place a tick in the box which comes closest to how you have been feeling since coming to university. Please don't take too long over your replies: your immediate reaction to each item will probably be more accurate than a long thought out response.

4.3.1 - I feel tense or 'wound up'.

Most of the time	A lot of the time	Time to time, occasionally	Not at all
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

4.3.2 - I still enjoy the things I used to enjoy.

Definitely as much	Not quite so much	Only a little	Not at all
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

4.3.3 - I get a sort of frightened feeling like something awful is about to happen.

Very definitely and quite badly	Yes, but not too badly	A little, but it doesn't worry me	Not at all
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

4.3.4 - I can laugh and see the funny side of things.

As much as I always could	Not quite so much now	Definitely not so much now	Not at all
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

4.3.5 - Worrying thoughts go through my mind.

A great deal of the time	A lot of the time	From time to time but not too often	Only occasionally
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

4.3.6 - I feel cheerful.

Not at all	Not often	Sometimes	Most of the time
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

4.3.7 - I can sit at ease and feel relaxed.

Definitely	Usually	Not often	Not at all
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

4.3.8 - I feel as if I am slowed down.

Nearly all the time	Very often	Sometimes	Not at all
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

4.3.9 - I get sort of frightened feeling like 'butterflies in the stomach'.

Not at all	Occasionally	Quite often	Very often
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

4.3.10 - I have lost interest in my appearance.

Definitely	I don't take as much care as I should	I may not take quite as much care	I take just as much care as ever
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

4.3.11 - I feel restless as if I have to be on the move.

Very much indeed	Quite a lot	Not very much	Not at all
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

4.3.12 - I look forward with enjoyment to things.

As much as I ever did	Rather less than I used to	Definitely less than I used to	Hardly at all
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

4.3.13 - I get sudden feelings of panic.

Very often indeed	Quite often	Not very often	Not at all
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

4.3.14 - I can enjoy a book, or radio or TV programme.

Often	Sometimes	Not often	Very seldom
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

5 - A few things about yourself

In the final part of the questionnaire, we would like to ask you a few more things about yourself.

5.1 - Think about your friends in at your university, please estimate (in percentages) how many of your friends are from your own country, from the UK and from other foreign countries

Percentage of friends from your own country	0%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Percentage of friends from the UK	0%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Percentage of friends from other foreign countries	0%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Regarding your course at your university:

5.2.1 - How competent do you feel in your subject of study?

Very incompetent	<input type="checkbox"/>	Very competent						
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5.2.2 - To what extent are you satisfied with your performance on your course?

Very dissatisfied	<input type="checkbox"/>	Very satisfied						
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5.2.3 - How satisfied are you with your course?

Very dissatisfied	<input type="checkbox"/>	Very satisfied						
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5.2.4 - Overall, how well do you think you adjusted to the University?

Not adjusted at all	<input type="checkbox"/>	Completely adjusted						
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5.2.5 - Overall, how do you rate your academic performance so far?

Very bad	<input type="checkbox"/>	Excellent						
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Regarding your level of English language, how competent do you feel in these areas?

5.3.1 – You feel that your understanding of spoken English is:

Very bad	<input type="checkbox"/>	Very good						
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5.3.2 – You feel that when writing in English your level is:

Very bad	<input type="checkbox"/>	Very good						
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5.3.3 – You feel that when reading in English your understanding of the text is:

Very bad	<input type="checkbox"/>	Very good						
----------	--------------------------	--------------------------	--------------------------	--------------------------	--------------------------	--------------------------	--------------------------	-----------

5.3.4 – You feel that your level of spoken English is:

Very bad	<input type="checkbox"/>	Very good						
----------	--------------------------	--------------------------	--------------------------	--------------------------	--------------------------	--------------------------	--------------------------	-----------

Regarding your physical appearance and cultural background how do you compare yourself to the British?

5.4.1 – Comparing your physical appearance with that of British you are:

Completely dissimilar	<input type="checkbox"/>	Completely similar						
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5.4.2 – Comparing your own culture with the British culture you think that they are:

Completely different	<input type="checkbox"/>	Exactly the same						
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About the contact with your relatives, friends in your country, and friends at your university:

5.5.1 - How often do you keep in contact with your parents at home?

Never	<input type="checkbox"/>	A lot						
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5.5.2 - How often do you keep in contact with your friends in your home country?

Never	<input type="checkbox"/>	A lot						
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5.5.3 - Do you participate in any societies related to your country or culture? Yes No

If you answered “Yes”,
in which societies do you participate? _____

Across these societies how often do you participate in their events?

Never	<input type="checkbox"/>	A lot						
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Finally, some questions about the relationship between foreign students and the host culture:

5.6.1 - Discrimination between British people and foreign students will not change easily.

I strongly disagree	<input type="checkbox"/>	I strongly agree						
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5.6.2 - I think that the relationship between foreign students and British people will remain the same for the next years.

I strongly disagree	<input type="checkbox"/>	I strongly agree						
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5.6.3 - British people are entitled to have a better treatment than foreign students.

I strongly disagree	<input type="checkbox"/>	I strongly agree						
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5.6.4 - It is justified that British people have a superior status when compared to foreign students.

I strongly disagree	<input type="checkbox"/>	I strongly agree						
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5.6.5 – It is very easy for a foreign student to be accepted into British society

I strongly disagree	<input type="checkbox"/>	I strongly agree						
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5.6.6 - For a foreign student it is nearly impossible to be included in British groups.

I strongly disagree	<input type="checkbox"/>	I strongly agree						
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5.6.7 - If you wanted to, it would be easy for you to become involved in social activities with British students.

I strongly disagree	<input type="checkbox"/>	I strongly agree						
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5.7 - What is your nationality? _____

5.8 - What is your first language? _____

5.9 - What is your parents' nationality? (If they have different nationalities please specify)

5.10 - For how long are you living in the UK? _____ months.

5.11 - Which religion do you follow? _____

5.12 - Do you practice it regularly? Yes No

5.13 - Regarding you ethnicity, you are:

Asian	Black	White	Other
<input type="checkbox"/> Central Asian	<input type="checkbox"/> Caribbean	<input type="checkbox"/> European	<input type="checkbox"/> Any other mixed background
<input type="checkbox"/> Middle Eastern	<input type="checkbox"/> African	<input type="checkbox"/> North American	
<input type="checkbox"/> East Asian	<input type="checkbox"/> White and Black Caribbean	<input type="checkbox"/> Any other white background	
<input type="checkbox"/> White and Asian	<input type="checkbox"/> White and Black African		
<input type="checkbox"/> Any other Asian background	<input type="checkbox"/> Any other black background		

5.14 - In which academic year are you studying?

1st 2nd 3rd 4th

5.15 - What is your subject of study?

5.16 - Are you female or male? female male

5.17 - What is your age? _____ years old.

To finish the questionnaire please turn the page. In the meanwhile we would like to thank you very much for taking the time to complete it. If you would like to know more about the project or receive any feedback about the research we will be very glad to provide such information.

THANK YOU VERY MUCH!

PLEASE BEAR IN MIND THAT ONCE YOU RETURN THE QUESTIONNAIRE THIS SHEET IS GOING TO BE
DETACHED FROM YOUR ANSWERS AND WILL BE STORED SEPARATELY. WE JUST KEEP THIS
INFORMATION WITH THE PURPOSE OF CONTACTING YOU FOR THE OTHER QUESTIONNAIRE NEXT
YEAR

YOUR NAME: _____

Email address: _____

Phone number: _____

For our use only					
CODE NUMBER					

Appendix D

Examining the experiences of Polish people in Scotland.

In this study we are interested in knowing more about the experiences of Polish people living in Scotland. Your opinion is very important to help us to understand how Polish people can be better supported in Scotland. We would like to ask for your help, which requires answering the attached questionnaire.

All the information you provide is anonymous and confidential.

Thank you very much!

Initial information

Firstly, we would like to ask you a few background questions.

1 - For how long have you lived in Scotland? _____ years

2 - What is your level of English as a language?

Very bad	<input type="checkbox"/>	Very good						
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3 - Are you female or male? female male

4 - What is your age? _____ years old.

5 - Think about your friends in Scotland, please estimate (in percentages) how many of your friends are from your own country, from Scotland and from other foreign countries

Percentage of friends from your own country	0%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%
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Percentage of friends from Scotland	0%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%
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About the contact with your relatives and friends in your country:

6. - How often do you keep in contact with your family/friends in Poland?

Never	<input type="checkbox"/>	A lot						
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Now please turn the page and read the following text before answering the other questions

The relationship between Scottish and Polish people:

Following Poland's entry into the European Union in May 2004, Poles gained the right to work in other EU countries. While France and Germany put in place controls to Eastern European migration, the United Kingdom (along with Sweden and the Republic of Ireland) did not impose restrictions.

The British Home Office originally anticipated an influx of 5,000 to 13,000 people a year, but by the end of 2005, according to Home Office statistics, 204,895 Poles had registered to work in the UK and pay tax. Scotland alone has attracted 40,000 Polish immigrants, mainly located in Edinburgh and Glasgow.

However, since the mid-1990s, discrimination has become a growing issue in Scotland. With more Polish immigrants arriving the country and competing for job positions, an increase of discrimination against Polish immigrants is predicted along

with an increase in the number of Scottish people opposed to immigration.

Studies are already showing that a large proportion of Scottish people do not agree with the current immigration policy and that they would prefer if the country did not have so many immigrants. Furthermore, a recent survey of Polish people revealed that 85% of those surveyed had experienced at least one episode where they felt they were discriminated against because of their foreign nationality.

Since we are interested in learning more about experiences of Polish people in Scotland, please briefly describe below a situation where you were treated negatively by Scottish people because of your nationality. If you have not experienced such a situation, please write 'none'.

Answer:

1 - Your views about life in Scotland

The first questions relate to your views about Scottish people. Please tick the box that best represents your views.

1.1.1 - I feel at ease with British people.

I strongly disagree	<input type="checkbox"/>	I strongly agree						
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1.1.2 - I like British culture and I will do my best to be part of it.

I strongly disagree	<input type="checkbox"/>	I strongly agree						
---------------------	--------------------------	--------------------------	--------------------------	--------------------------	--------------------------	--------------------------	--------------------------	------------------

1.1.3 - I feel uncomfortable being with people from the UK.

I strongly disagree	<input type="checkbox"/>	I strongly agree						
---------------------	--------------------------	--------------------------	--------------------------	--------------------------	--------------------------	--------------------------	--------------------------	------------------

1.1.4 - I would like to live in an area where there are British people.

I strongly disagree	<input type="checkbox"/>	I strongly agree						
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1.1.5 - I make an effort to improve my English.

I strongly disagree	<input type="checkbox"/>	I strongly agree						
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1.1.6 - I don't feel comfortable to speak English with friends.

I strongly disagree	<input type="checkbox"/>	I strongly agree						
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1.1.7 - I want to speak with British people and know more about them.

I strongly disagree	<input type="checkbox"/>	I strongly agree						
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1.1.8 - I don't want to learn more things about the British culture.

I strongly disagree	<input type="checkbox"/>	I strongly agree						
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Now please consider your views about Polish people.

1.2.1 - I want to 'hang out' with Polish people.

I strongly disagree	<input type="checkbox"/>	I strongly agree						
---------------------	--------------------------	--------------------------	--------------------------	--------------------------	--------------------------	--------------------------	--------------------------	------------------

1.2.2 - I would like to have more Polish friends.

I strongly disagree	<input type="checkbox"/>	I strongly agree						
---------------------	--------------------------	--------------------------	--------------------------	--------------------------	--------------------------	--------------------------	--------------------------	------------------

1.2.3 - I have no wish to go back to Poland.

I strongly disagree	<input type="checkbox"/>	I strongly agree						
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1.2.4 - It is important to me to preserve my Polish cultural heritage.

I strongly disagree	<input type="checkbox"/>	I strongly agree						
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1.2.5 - I would like to live in an area where there are only Polish people.

I strongly disagree	<input type="checkbox"/>	I strongly agree						
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1.2.6 - The Polish culture is something that I value.

I strongly disagree	<input type="checkbox"/>	I strongly agree						
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1.2.7 - If I could I would only use Polish language in my daily life.

I strongly disagree	<input type="checkbox"/>	I strongly agree						
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1.2.8 - I enjoy going to gatherings or parties held by Polish people.

I strongly disagree	<input type="checkbox"/>	I strongly agree						
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1.2.9 - The Polish culture is not interesting.

I strongly disagree	<input type="checkbox"/>	I strongly agree						
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2 - Your experiences

The next questions are about your experiences with Scottish people. Please tick the box that best represents your experience.

2.1.1 - I feel Scottish people look down on me because I'm Polish.

I strongly disagree	<input type="checkbox"/>	I strongly agree						
---------------------	--------------------------	--------------------------	--------------------------	--------------------------	--------------------------	--------------------------	--------------------------	------------------

2.1.2 - Scottish people have discriminated against me because I am not Scottish.

I strongly disagree	<input type="checkbox"/>	I strongly agree						
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2.1.3 - Polish people as a group face discrimination in Scotland.

I strongly disagree	<input type="checkbox"/>	I strongly agree						
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2.1.4 - In Scotland there is some prejudice against Polish people.

I strongly disagree	<input type="checkbox"/>	I strongly agree						
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3 - Group identification

In this part we are interested in knowing what kind of groups are important to you. The following questions are concerned with how you feel about Polish people.

3.1.1 – I have a lot in common with other Polish people.

I strongly disagree	<input type="checkbox"/>	I strongly agree						
---------------------	--------------------------	--------------------------	--------------------------	--------------------------	--------------------------	--------------------------	--------------------------	------------------

3.1.2 - I often think about the fact that I am Polish.

I strongly disagree	<input type="checkbox"/>	I strongly agree						
---------------------	--------------------------	--------------------------	--------------------------	--------------------------	--------------------------	--------------------------	--------------------------	------------------

3.1.3 - In general, I'm glad to be Polish

I strongly disagree	<input type="checkbox"/>	I strongly agree						
---------------------	--------------------------	--------------------------	--------------------------	--------------------------	--------------------------	--------------------------	--------------------------	------------------

3.1.4 - I feel strong ties to other Polish people

I strongly disagree	<input type="checkbox"/>	I strongly agree						
---------------------	--------------------------	--------------------------	--------------------------	--------------------------	--------------------------	--------------------------	--------------------------	------------------

3.1.5 - Overall, being Polish has very little to do with how I feel about myself.

I strongly disagree	<input type="checkbox"/>	I strongly agree						
---------------------	--------------------------	--------------------------	--------------------------	--------------------------	--------------------------	--------------------------	--------------------------	------------------

3.1.6 - I often regret that I am Polish.

I strongly disagree	<input type="checkbox"/>	I strongly agree						
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3.1.7 - I find it difficult to form a bond with other Polish

I strongly disagree	<input type="checkbox"/>	I strongly agree						
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3.1.8 - In general, being Polish is an important part of my self-image.

I strongly disagree	<input type="checkbox"/>	I strongly agree						
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3.1.9 - I don't feel good about being Polish.

I strongly disagree	<input type="checkbox"/>	I strongly agree						
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3.1.10 - I don't feel a sense of being "connected" with other Polish people.

I strongly disagree	<input type="checkbox"/>	I strongly agree						
---------------------	--------------------------	--------------------------	--------------------------	--------------------------	--------------------------	--------------------------	--------------------------	------------------

3.1.11 - The fact that I am Polish rarely enters my mind.

I strongly disagree	<input type="checkbox"/>	I strongly agree						
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3.1.12 - Generally, I feel good when I think about myself as a Polish person.

I strongly disagree	<input type="checkbox"/>	I strongly agree						
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4 – Relationship with Scottish people

Now, please indicate the extent to which you agree or disagree with the following statements.

4.1 - When I see a Scottish person, I can't help but think bad things about them

I strongly disagree	<input type="checkbox"/>	I strongly agree						
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4.2 - I have used some bad terms to refer to Scottish people

I strongly disagree	<input type="checkbox"/>	I strongly agree						
---------------------	--------------------------	--------------------------	--------------------------	--------------------------	--------------------------	--------------------------	--------------------------	------------------

4.3 - I feel annoyed when Scottish people are close to me

I strongly disagree	<input type="checkbox"/>	I strongly agree						
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4.4 - If a Scottish person is hostile to me, I easily become aggressive

I strongly disagree	<input type="checkbox"/>	I strongly agree						
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4.5 – I tend to feel angry quite easily when I'm with Scottish people

I strongly disagree	<input type="checkbox"/>	I strongly agree						
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4.6 – For me it is inevitable to have some bitter feelings for Scottish people

I strongly disagree	<input type="checkbox"/>	I strongly agree						
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5 - Your own feelings

Below is a list of statements dealing with what you are thinking at this moment.

Please answer these questions as they are true for you RIGHT NOW.

5.1 - I feel confident about my abilities

Not at all	A little bit	Somewhat	Very much	Extremely
<input type="checkbox"/>				

5.2 - I am worried about whether I am regarded as a success or a failure

Not at all	A little bit	Somewhat	Very much	Extremely
<input type="checkbox"/>				

5.3 - I feel frustrated or rattled about my performance

Not at all	A little bit	Somewhat	Very much	Extremely
<input type="checkbox"/>				

5.4 - I feel that I am having trouble understanding things that I read

Not at all	A little bit	Somewhat	Very much	Extremely
<input type="checkbox"/>				

5.5 - I feel self-conscious

Not at all	A little bit	Somewhat	Very much	Extremely
<input type="checkbox"/>				

5.6 - I feel as intelligent as others

Not at all	A little bit	Somewhat	Very much	Extremely
<input type="checkbox"/>				

5.7 - I feel displeased with myself

Not at all	A little bit	Somewhat	Very much	Extremely
<input type="checkbox"/>				

5.8 - I am worried about what other people think about me

Not at all	A little bit	Somewhat	Very much	Extremely
<input type="checkbox"/>				

5.9 - I feel confident that I understand things

Not at all	A little bit	Somewhat	Very much	Extremely
<input type="checkbox"/>				

5.10 - I feel inferior to others at this moment

Not at all	A little bit	Somewhat	Very much	Extremely
<input type="checkbox"/>				

5.11 - I feel concerned about the impression I am making

Not at all	A little bit	Somewhat	Very much	Extremely
<input type="checkbox"/>				

5.12 - I feel that I have less intellectual ability right now than others

Not at all	A little bit	Somewhat	Very much	Extremely
<input type="checkbox"/>				

5.13 - I feel like I'm not doing well

Not at all	A little bit	Somewhat	Very much	Extremely
<input type="checkbox"/>				

5.14 - I am worried about looking foolish

Not at all	A little bit	Somewhat	Very much	Extremely
<input type="checkbox"/>				

Now, this scale consists of a number of words that describe different feelings and emotions. Indicate to what extent you feel this way RIGHT NOW, that is, at the present moment.

	Very slightly or not at all	A little	Moderately	Quite a bit	Extremely
5.1 - Interested	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5.2 - Distressed	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5.3 - Excited	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5.4 - Upset	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5.5 - Enthusiastic	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5.6 - Ashamed	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

END OF QUESTIONNAIRE - THANK YOU VERY MUCH!