Does university students' attachment to their social class background promote their expectations of moving up the social class hierarchy?

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Abstract

Does university students' attachment to their social class background promote their expectations of moving up the social class hierarchy?

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Research on social class in higher education indicates that students with a lower social class background are less integrated in the university setting (Rubin, 2012), have poorer academic outcomes (e.g., Walpole, 2003), and lower expectations of social mobility (Jetten et al., 2008). The novelty of the present research is that students' social class background was conceptualized in terms of a collective identity (Ashmore et al., 2004) that may have beneficial consequences. The present research demonstrated that university students' social class background is a meaningful aspect of the self involving attachment (a sense of belonging to one's class background), private regard (feeling good about one's class background), and public regard (perceptions of how much others value one's class background). On the basis of attachment theory (Mikulincer & Shaver, 2007), it was theorized that students' attachment to their social class background is a psychological resource that promotes exploration and success, which would be reflected in their greater integration in the university milieu and their greater expectations of upward class mobility via their studies. As expected, in Study 1(N=959), working and middle class students' greater attachment to their class background was associated with greater belonging in the student community as well as with greater expectations of upward mobility. Attachment to one's class background was distinct from private and

public regard for one's class background, as well as from attachment to parents and friends, and from perceived support from parents. In Studies 2 and 3 (total N=298), the salience of attachment to and private regard for one's class background were manipulated. As expected, students in the attachment condition reported greater expectations of mobility relative to students in the private regard condition. The findings are discussed with regards to prior research on social class, the social identity model of identity change, and the origins of attachment to one's social class background.

Dedication

For my wife, Corinna Elliott. Your support and encouragement during my studies and beyond means the world to me!

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Contributions of Authors

The theoretical framework described in my dissertation was developed in collaboration with my supervisor, Dr. Michael Conway. As well, all the materials which were developed for the research in my dissertation were generated in collaboration with Dr. Michael Conway. As well, Dr. Conway, and I both contributed to the design of all three studies. However, I collected the data for all three studies and analyzed the data.

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CHAPTER 1: Introduction

Attachment is an evolved human tendency which has been studied extensively within the framework of attachment theory (Bowlby, 1969/1982). Secure attachment to a significant other is considered an optimal state for individual functioning, and in particular can provide a basis for exploration and achievement (Feeney, 2007; Feeney & Thrush, 2010). As noted by Shaver and Mikulincer (2007, p. 652), "protection and support in the realm of attachment allows a person to function better in nonattachment domains such as exploration."

Although he was primarily interested in attachment in close relationships, John Bowlby also argued that people may be attached to institutions or groups (Bowlby, 1969/1982, p. 207; also see Mikulincer and Shaver, 2007). Interestingly in this regard, attachment has been identified as one of the affective-evaluative components of collective identity in the comprehensive multidimensional framework proposed by Ashmore, Deaux, and McLaughlin-Volpe (2004). In this framework, attachment was defined as "the emotional involvement with or affiliative orientation toward the group" (p. 83). They noted that with attachment, there is a sense of belonging. The rapprochement of collective identity theory with attachment theory is also in terms of evolutionary base. Caporael (2007) has cogently argued that having a collective identity is a psychological feature that emerged in human evolution. Attachment to groups is seen as having evolutionary roots, as is attachment to significant others in attachment theory. Beyond parallels in theories of evolution, recent research suggests that attachment in collective identity is in essence attachment as defined in attachment theory (Marmarosh & Markin, 2007; Smith, Murphy, & Coats, 1999; for a review, see Mikulincer & Shaver,

2007). It follows that individuals who are more attached to their group will feel supported in their own exploration and achievement.

The present research focused on young adults' collective identity in terms of their social class background, and examined the implications of their secure attachment to their social class background. The focus was on young adults attending university, which is a context in which social class is quite relevant (Kaufmann, 2005; Stephens, Fryberg, Markus, Johnson, & Covarrubias, 2012; Stuber, 2006). The hypothesis was that young adult university students' secure attachment to their class background supports their expectations of upward social mobility. Upward social mobility is often a goal for young adults attending university, especially those of working class background (Bullock & Limbert, 2003; Kaufmann, 2003; Lehmann, 2009). The hypothesized role of attachment to class background is particularly relevant for individuals of working class background, given the many obstacles they face in university (Pascarella Pierson, Wolniak, & Terenzini, 2004; Walpole, 2003). Nevertheless, the hypothesis is one formulated across social class, and is in terms of attachment supporting exploration and achievement, regardless of specific background. Greater ease and success in exploration and achievement was expected to be reflected in greater expectations of upward social mobility.

People likely have collective identities defined by their own social class backgrounds. People seem aware of the general social hierarchy and where they stood and stand in it (Kraus, Piff, & Keltner, 2011). In his classic monograph, Centers (1961/1949) stated that "a man's class is part of his ego, *a feeling on his part of belongingness to something*; an *identification* with something larger than himself" (italics

in original, p. 27). We argue that individuals may have such a collective identity for their social class background, which may be distinct from their current social position. The distinction between class background and current social position is particularly relevant to young adult university students – especially those from a working class background.

Collective identity in terms of class background is at its core an individual's subjective representation that he or she has some characteristic(s) in common with a group of others (Ashmore et al., 2004). This identified commonality is self-categorization, and people self-categorize by demographics other than social class, including gender (Eagly & Chin, 2010), ethnicity (Eagly & Chin, 2010; Phinney,1990), and nationality (David & Bar-Tal, 2009). In the remainder of this paper, we use the acronym *SCD* for a group defined by self-categorization by demographic. For SCD groups, ongoing interaction between group members is not a necessary condition for group definition. Rather, the focus is on the subjective, psychological experience of individuals who see themselves as belonging to a group. This type of group has been of great interest in social psychological research, notably in social identity theory (Tajfel & Turner, 1986).

When people self-categorize in terms of social class background, they will exhibit to varying degree other components of this collective identity, including attachment. Centers (1956) reported that 34% of his sample had very strong feelings of belonging to their social class (also see Jackman, 1979, for an even higher percentage). Individuals may feel attached to their social class background, just as has been proposed or demonstrated for other SCD groups, such as ethnicity (Cokley, 2007; Phinney, 1990), students (e.g., Bollen & Hoyle, 1990), ethno-religious communities (e.g., Tabri &

Conway, 2011), or national groups (Bollen & Medrano, 1998; David & Bar-Tal, 2009). We examined the attachment component of SCD class identity in the context of the other affective-evaluative components of this identity, which are private and public regard. [1] Private regard refers to how positive individuals feel about their own group, and public regard is individuals' perception of how others evaluate the individuals' group; the others might be members of the general public, for example. Attachment is typically moderately positively associated with private regard, but private and public regard are not always positively correlated with each other (Ashmore et al., 2004). In the following three sections, we consider in more depth why SCD class identity can be understood in terms of attachment theory, how secure attachment for an SCD class identity can be defined, and the significance of expectations of social mobility. We then consider in the fourth section how private and public regard may be related to expectations of upward mobility, and possible differences in private and public regard as a function of class background. In the fifth section, we articulate why attachment to one's social class background does not rest on attachment to significant others such as parents and friends. This is not to deny the importance of such interpersonal attachment, and we consider how young adults' attachment to their parents, and their parents' support for higher education, may influence their expectations of upward mobility. In the sixth section, we consider SCD student identity, as it can be argued that the effects of attachment to class background on expected mobility are mediated in part by students adopting the SCD student identity, and in particular by their having a sense of belonging to the student community. Prior research has shown that students who have a greater sense of belonging in the university perform better academically.

SCD identity and attachment theory

Mikulincer and Shaver (2007) proposed that group cohesion may be an ideal starting point from which to investigate connections between attachment theory and group processes. However, the construct of group cohesion has several limitations which render it unsuitable for investigating the relation between attachment and group processes. Hogg (1992,1993) indicated that group cohesion is a reductionist construct in that it is typically defined as an aggregate of interpersonal attraction between group members. As well, the focus in much research on group cohesion involves small face-face groups. As such, a problem arises when one seeks to measure group cohesion in large and diffuse social groups, such as SCD groups, in which all group members do not have interpersonal contact with one another.

A different theoretical approach is necessary for investigating the relation between attachment theory and group processes, especially in SCD groups. Hogg (1993) proposed that self-categorization and social identity theories can be applied to understand group processes in any type of group. A key feature of such theories is the focus on individuals' shared sense of collective identity (Tajfel & Turner, 1986; Turner, 1987). Specifically, individual group members are connected to one another by virtue of their shared collective identity. There need be no interpersonal interactions between group members.

The attachment component of SCD identity can be construed as attachment as defined in attachment theory. SCD identity meets the conditions identified by Mikulincer and Shaver (2007) that are indicative of attachment: secure base, safe haven, proximity seeking, and separation distress. Secure base refers to the attachment object facilitating

the attached person's exploration and growth, and safe haven refers to the attachment object being supportive and easing distress. Proximity seeking is that "People tend to seek and enjoy proximity to their attachment figures in times of need and to actively resist separation from them" (p. 652). The latter type of behaviour is not necessarily the primary attachment strategy in adulthood, however (Shaver & Mikulincer, 2007). Rather, support may often be obtained from internal representations of others. Separation distress refers to the severe upset and anxiety caused by the real or expected disappearance of the attachment object.

The collective identity of SCD groups can be conceptualized as a secure base. Individuals' mere sense of belonging to a laboratory created group can enhance their achievement motivation in performance domains (Walton, Cohen, Cwir, & Spencer, 2012). Correspondingly, in the context of academic achievement, it has been argued that underrepresented students' maintenance of an affective bond with their home communities may provide them with support as well as motivation to persist and succeed in their studies (Guiffrida, 2006; Nora, 2001-2002, Tinto, 2006-2007).

In research on stigmatized ethnic and racial groups, and academic achievement, it has been demonstrated that a greater sense of belonging and attachment to their group is associated with greater academic achievement and success (Altschul, Oyserman, & Bybee, 2006; Harris & Marsh, 2010; Oyserman, Brickman, Bybee, & Celious, 2006). Harris and Marsh demonstrated that African American high school students, who endorsed both feeling attached to their racial group ("I have a strong attachment to other black people") and perceiving their race as an important aspect of their self-concept (Being black is an important reflection of who I am"), but did not endorse dissimilarity

items ("In dealing with other blacks, I consider myself quite different and unique from most of them" and "being black has little to do with how I feel about myself") reported greater cumulative grade-point averages (GPA), educational aspirations, and beliefs that an education will help them achieve upward social mobility compared to African American students who did not endorse any of the four identity items. In Altschul and colleagues' longitudinal study on racial minority students, greater connectedness to their racial group (e.g., "I feel part of the Black community") at initial assessment predicted having a higher GPA over two years. As well, research demonstrates that a sense of belonging in university promotes stigmatized group members' academic achievement (Walton & Cohen, 2007, 2011). Walton and Cohen found that African American students who were led to believe that their sense of belonging on campus would improve over time had greater academic achievement over three academic years compared to African American students who were lead to believe that their socio-political attitudes would become more sophisticated over time.

The collective identity of SCD groups can be a safe haven for their group members. Consider the rejection-identification model of Branscombe, Schmitt, and Harvey (1999). In response to discrimination, low status group members' greater identification with their group is a protective factor, which attenuates the debilitating impact of perceived discrimination on their well-being (for a review, see Schmitt & Branscombe, 2002). Branscombe and colleagues proposed that devalued group members' increased identification in response to discrimination provides individuals with a sense of belonging and attachment to their group, which is important for alleviating the negative effects of discrimination on their well-being. Correlational research with African

Americans (Branscombe et al., 1999), Latino Americans (Cronin, Levin, Branscombe, van Laar, & Tropp, 2012), women (Schmitt, Branscombe, Kobrynowicz, & Owen, 2002), older adults (Garstka, Schmitt, Branscombe, & Hummert, 2004), and international students (Schmitt, Spears, & Branscombe, 2003) supports the rejection-identification model.

Although the majority of prior research on the rejection-identification model employed multidimensional measures of collective identity, few studies distinguished between different components of collective identity. To our knowledge, only two studies have examined the role of specific components of collective identity within the framework of the rejection-identification model (Ramos, Cassidy, Reicher, & Haslam, 2012; Spencer-Rodgers & Collins, 2006). Spencer-Rodgers and Collins' correlational study on Latino Americans as well as Ramos and colleagues' longitudinal study on international students both suggest that perceived discrimination may first increase the importance of group membership in the self-concept which, in turn, fosters greater attachment to the group and private regard for group membership which, in turn, protects well-being.

In other research, it has been shown that Latino students in a predominantly White university who were more involved in their Hispanic culture (i.e., living in a predominantly Hispanic home community, having more Hispanic friends in highschool, and who spoke Spanish at home) prior to entering university reported perceiving less threats to their Latino identity in university compared to students who were less involved in their Hispanic culture (Ethier & Deaux, 1994). Other types of SCD groups can also be a safe haven for their members. In a study on 66 U.S. neighborhoods of varying socio-

economic status, individuals' greater attachment to their neighborhood was associated with having lower fear of neighborhood crime, greater feelings of safety in their neighborhood, and greater cooperative involvement with other people in their neighborhood (Taylor, 1996). The findings of Taylor's study emerged regardless of neighborhood level of education, crime, and visual decay. The measure of attachment in Taylor's study included face valid attachment items (e.g., "How attached do you feel to your neighborhood?"), but the attachment measure was conflated with a private regard item (e.g., "All things considered, how satisfied or dissatisfied are you with this neighborhood as a place to live?").

The collective identity of SCD groups can be a target of proximity seeking for its members in times of need. For example, Tajfel (1982) argued that intergroup conflict can promote cohesion and solidarity among group members. In research on racial groups, it has been shown that African Americans' greater identification with their racial group correlates strongly and positively with seeking support from other African Americans to cope with the discrimination they perceived (Outten, Schmitt, Garcia, & Branscombe, 2009). Like most research on collective identity, Outten and colleagues' measure of racial collective identity included attachment items (e.g., "I feel a strong attachment to my racial group.") which were conflated with other components of racial identity, such as importance (e.g., "My race is an important part of who I am.").

Furthermore, SCD groups can be a target of proximity when individuals experience unpredictable events in their lives. For example, in research on social class, defined by income differences between people, individuals with lower relative to higher household incomes turn to people they know in their community for support and

assistance when they expect their own future economic well-being to be tumultuous over time (Piff, Stancato, Martinez, Kraus, & Keltner, 2012; see their Study 1). In another study, Piff and colleagues demonstrated that students with lower relative to higher annual family income reported greater connectedness to their community after reading about unpredictable events in their college environment (e.g., classes being cancelled and surprise quizzes). Connectedness to community was measured using the Inclusion of Community in Self Scale (Mashek, Cannanday, & Tangney, 2007), which is a pictorial measure that correlates moderately and positively with the belonging subscale (e.g., "Overall I am very attached to living in my community") of the Psychological Sense of Community Scale (Obst, Smith, & Zinkiewicz, 2002). As well, Obst and colleagues reported that the Inclusion of Community in Self Scale correlates positively with other subscales of the Psychological Sense of Community Scale, such as ties and friendship (e.g., "A feeling of fellowship runs deep between other people in my community and me") and support (e.g., "If there was a serious problem in my community, people who live in it could get together and solve it").

For separation distress, an SCD identity can intensify individuals' experience of separation distress when they believe their group's existence to be in jeopardy. In a program of research conducted by Wohl and colleagues (Wohl & Branscombe, 2008; for a review, see Wohl, Squires, & Caouette, 2012), it has been demonstrated that individuals can feel a sense of anxiety over their group's threatened vitality or existence (i.e., collective angst). For example, in experimental research on Jewish individuals in North America, individuals who were asked to write about the Holocaust reported more collective angst relative to individuals who wrote about their life as a member of the

Jewish community without any mention of the Holocaust (Wohl, Branscombe, & Reysen, 2010). Similar results emerged in other SCD groups. In correlational research on French Canadians, Wohl and colleagues (Wohl, et al., 2010) found that their perceptions of English Canada being a threat to the existence of French Canadian culture were positively associated with collective angst.

In more recent work, Wohl, Giguere, Branscombe, and McVicar, (2011) theorized that individuals who identify strongly with their group and who perceive their group's future existence to be jeopardy will report more collective angst compared to individuals who weakly identify with their group. For example, after reading a news article on how subsequent generations of French and English Canadians may become indistinguishable in the future, French Canadians who identified more strongly with being French Canadian reported more collective angst compared to French Canadians who identified less with being French Canadian. Identical results emerged in the context of Canadian-American intergroup relations (Wohl, et al., 2011). Specifically, after reading a news article which indicated that Canada's national sovereignty might be lost to the U.S., Canadians who identified more strongly with being Canadian reported more collective angst compared to Canadians who weakly identified with being Canadian. The measure of collective identity used in Wohl and colleagues experimental studies (Wohl et al., 2011) combined different components of collective identity, such as attachment (e.g., ''I feel strong ties to other French Canadians'') and private regard components.

In sum, there is good evidence which suggests that the collective identity of SCD groups can be a secure base, safe haven, and target of proximity in times of need, as well as a facilitator of separation distress. However, it is less clear from the prior research as to

which specific components of collective identity are responsible for serving these attachment functions because most the research employed multidimensional measures of collective identity. The collective identity measure in most of the studies included an attachment component which was conflated with other components such as private regard, and importance. The issue of combining different components of collective identity in prior research is not unexpected. The reason is that there is little theoretical advancement on how different components of collective identity may relate to a variety of outcomes (e.g., attitudes, emotions, and behaviours). Nevertheless, we have argued and proposed that it is specifically the attachment component of collective identity which best captures the four functions of attachment in SCD groups. In the present research on social class collective identity, we distinguished between attachment, private regard, and public regard components to clearly examine the role of attachment.

The conceptualization of attachment in SCD collective identity in prior research

As described above, attachment in SCD collective identity has rarely been considered as having distinct effects that warrant measuring the attachment component separately, and examining its effects. There are nevertheless exceptions. Some research on collective identity based on social identity theory has defined attachment in terms of commitment to the group, and has considered it as a distinct construct with particular effects (Cameron, 1999; Jackson, 2002; Ellemers et al., 1999; Leach, van Zomeren, Zebel, Vliek, Pennekamp, Doosje, & Ouwerkerk, 2008).

One recent study on SCD collective identity has assessed attachment as a distinct construct, and has assessed its implications. Leach and colleagues (2008) were interested in Dutch individuals' sense of national collective identity, as well as their identities in

terms of being university students and European (the study was conducted with undergraduates). They assessed attachment with a modified version of a scale developed by Smith et al. (1999) in research on individuals' attachment to face-to-face groups to which they belonged. The groundbreaking research by Smith and colleagues advanced the notion that attachment in face-to-face groups can be conceived in the same manner as attachment of one individual with a specific other, such as a spouse or parent. They demonstrated that attachment to face-to-face groups can be understood in terms of the degree of anxiety and of avoidance that an individual feels toward the group (for more recent research adopting this approach, see Marmarosh & Markin, 2007). Anxiety is regarding the attachment figure's availability and regard, whereas avoidance is the individual not wanting to be too close to the attachment figure. Example items are "I often worry that my group does not really accept me" for anxiety and "I find it relatively easy to get close to my group" (reversed) for avoidance. Assessed in this manner, attachment to group had moderate to strong correlations with multidimensional measures of collective identity in face-to-face groups (Smith et al., 1999; also see Prentice, Miller, & Lightdale, 1994).

In the research by Leach and colleagues (2008), individual differences in anxiety and avoidance were inconsistently and weakly correlated with a measure of attachment in SCD identity as we construe it here (Leach and colleagues referred to attachment in SCD identity as solidarity with the group). The measures of anxiety and avoidance were also inconsistently and weakly correlated with the other key components of SCD identity of private regard and importance. These findings for anxiety and avoidance by Leach et al. are in stark contrast to the strong conceptually coherent findings of Smith et al. for the

same constructs. A resolution of this discrepancy across these sets of findings can be found in the distinction between face-to-face groups and SCD groups. In face-to-face groups, individuals may struggle with concerns about others' acceptance and may find it difficult to get close to other individuals. In contrast, anxiety and avoidance do not seem to operate for SCD identity. In the latter case, individuals can have to varying degree a sense of belonging and emotional engagement with the group, and variations in intensity of belonging are not reflective of anxiety or avoidance. Anderson (1983) conceptualized national and other SCD groups as "imagined communities" in that group members "will never know most of their fellow-members, meet them, or even hear of them, yet in the minds of each lives the image of their communion" (p. 6).

Expectations of social mobility

The hypothesis in the present research is that attachment to one's social class background leads to greater expectations of social mobility. Thus, a university student who is more attached to her working class background will anticipate moving up the social ladder and to belong to the middle class once she graduates. Expectations of social mobility can be conceptualized in terms of dimensions proposed in broad theoretical analyses of the construct of expectancies (Roese & Sherman, 2007). Expectations of social mobility are explicit, promotion focused, and concern a relatively distant future. Expectations of mobility are assumed to be explicit, in that they have been identified in prior research with face valid self-report items. For example, Bullock & Limbert, (2003) used a measure of expected class standing in which students selected the social class category they expect to belong to in the future. Another is example is from Jetten, Iyer, Tsivrikos, and Young, (2008), who measured the degree students expected upward social

mobility using Liket scales. Expected mobility is promotion focused in that it is commonly understood that attending university is a means to better one's life outcomes, and upward mobility is such an outcome (Bullock & Limbert, 2003; Jetten et al., 2008; Kaufman, 2003; Lehmann, 2009). Upward mobility is in the more distant future, as university studies extend over a number of years.

Expectations of social mobility are also quite abstract, and degree of abstraction is another dimension in the Roese and Sherman (2007) framework. Such expectations refer to a subjective sense of belonging to a social group, and such expectations are more general but related to concrete expectations of better employment and income (Jetten et al., 2008). From a social identity perspective, the process of taking on a new group membership involves an adjustment in the self-concept such that individuals reorient themselves to include the new identity as part of their self-definition (Amiot, de la Sablonnière, Terry, Smith, 2007; Iyer, Jetten, & Tsivrikos, 2008). Correspondingly, in our view, which concurs with views expressed by laypeople in prior research (Centers, 1949; Kaufman, 2003; Jackman, 1979), a move in class implies a more general change in lifestyle, with attendant differences in values and social behavior.

Expectations are generally of great psychological importance, as "the most general and basic function of expectancies is to guide effective behavior" (Roese & Sherman, 2007, p. 92; also see Olson, Roese, & Zanna, 1996). Moving to a higher social class can be characterized as a superordinate goal (Roese & Sherman, 2007), and having this goal may support and encourage university students to pursue and persist in their university studies. For example, Harris (2008) has shown that White and Black American

highschool students' beliefs about schooling as improving their life chances and success in the future was moderately associated with having a higher grade-point average (GPA).

In the present research, expectations of social mobility were measured in two different ways. In one approach, individuals were asked about their expectations of class standing. That is, what social class category did they expect to belong to in the future (Bullock & Limbert, 2003)? In the second approach, individuals were asked to rate on a scale the extent to which they expected upward social mobility. The second questionnaire was modelled on Jetten and colleagues' (2008) upward social mobility scale.

Private regard, public regard, and expectations of social mobility

In Ashmore and colleagues' (2004) multidimensional framework, the affective-evaluative components of collective identity are attachment, private regard, and public regard. We expected that attachment and private regard for one's class background will be positively correlated in the present research, as they often are (Ashmore et al., 2004). Indeed, feeling strong bonds towards one's group implies that one feels good about the group.

Private and public regard may influence university students' expectations of upward mobility independent of attachment, particularly for students of working class background. According to the double valuation model (Derks, van Laar, & Ellemers, 2007), individuals who have both private and public regard will have greater motivation to succeed in organizational and academic settings. The double valuation model has been supported in correlational research with ethnic and racial minorities as well as with women (for a review, see Derks et al., 2007). The double valuation model is similarly applicable to students of working class background (cf. Derks et al., 2007), given that

they are a minority group in university which is negatively stereotyped (Croizet & Claire, 1998; Spencer & Castano, 2007).

In addition to the attachment hypothesis, we also considered in the present research the prediction derived from the double valuation model that students of working class background will have higher expectations of upward mobility to the extent they have both high private and public regard. Degree of private and public regard are less relevant for students of middle class background, given that the university is an environment that is generally structured in terms of middle class values and norms (Stephens et al., 2012).

Attachment to and support from parents and expectations of mobility

We expected that young adults' attachment to their social class background is distinct from their attachment to their parents, even as these forms of attachment may be related. Considering these attachments as distinct from each other is in line with the theoretical and empirical work of Marilynn Brewer (2008; also see Brewer & Gardner, 1996, and Brewer & Roccas, 2001). She stated that "individual, relational, and collective self-representations … are… three separate systems with different identity properties, locus of agency, and motivational concerns" (p. 168). Of present relevance, the term *relational* refers to interactions with specific others, such as parents or friends. As well, in research on attachment styles, it has been shown that interpersonal and group attachment styles are related but distinct constructs (Smith et al., 1999).

It can be argued that since attachment to parents and other significant others may support university students' academic achievement (for a review, see Mikulincer & Shaver, 2007), these attachments could support their expectations of upward social

mobility. For example, young adult undergraduate students who were more securely attached to their parents and friends exhibited better academic adjustment and achievement (Fass & Tubman, 2002). Also, young adult undergraduate students who were more securely attached in romantic relationships had higher need for achievement and lower fear of failure (Elliot & Reis, 2003). Moreover, it has been shown that young adults' greater perceived social support from parents was associated with having a higher GPA (Cutrona, Cole, Colangelo, Assouline, & Russell, 1994). In addition, in research on children, having a stronger connection to parents and peers was associated with greater academic performance as well as with greater emotional and behavioral engagement in classroom activities over time (Furrer & Skinner, 2003).

Perceived parental support for university studies, in the same vein as attachment to parents, lead to greater motivation to achieve and greater expectations of upward mobility. Ethnographic research on first-generation university students indicates that their motivation to pursue post-secondary studies was tied to their parents valuing their education (Gofen, 2009). Similarly, in research with a Canadian national sample, young adults whose parents viewed post-secondary education as important were much more likely to enroll in post-secondary institutions (Lambert, Zeman, Allen, & Bussière, 2004).

Belongingness with student community, expectations of mobility, and social class

Attachment to one's social class background for university students is expected to be distinct from but may support students having a sense of belonging to the university student community. The rationale is that attachment to class background supports exploration and achievement in the university milieu, which will be reflected in part in a greater sense of belonging to the university student community. The identity of being a

university student is inherently tied to exploration and achievement, and is relevant to social mobility. In longitudinal research, individuals' greater attachment to the student community promotes their expectations of upward social mobility through their university education (Jetten et al., 2008). In a re-analysis of a correlational study by Cameron (1999), we found that individuals' greater attachment to the student community was associated with their greater beliefs of achieving occupational and life goals, above and beyond the effects of private regard and perceived importance of their student group membership.

It is also relevant to the present research that working relative to middle class students have a lower sense of belonging in academic settings (Ostrove & Long, 2007). As well, a meta-analysis indicates that working relative to middle class students are less socially integrated in their academic settings, but the overall effect size was modest (Rubin, 2012). In this meta-analysis, social class background was defined by the researchers in terms of parental education or parental income.

From the outset, we did not consider that belongingness as a student is the mediator of the effects of attachment to class on expected mobility. Attachment to one's class background may support a sense of belonging to the student community, which in turn may support expected mobility, but we considered this is a secondary and indirect means by which attachment to class background influences expected upward mobility.

The present research

Study 1 was correlational and we assessed individual differences in the extent to which university students identify with their social class background. In particular, we assessed their attachment, private regard, and public regard for identification to their

social class background. We examined how attachment is associated with expectations of social mobility, in the context of the other affective-evaluative components of class background identity. Participants in Study 1 also reported on the attachment they felt toward their parents and toward their friends, the psychological support they received from their parents to study, as well as on the attachment and private regard components of their collective identity in terms of being university students. In addition to reporting on their expectations of social mobility, participants also reported on their expectations of income opportunities after graduation. Not all participants in Study 1 completed all the ancillary measures (regarding attachment to parents and friends, and regarding student identity).

Studies 2 and 3 were experimental, and we manipulated the salience of attachment to examine whether increased salience leads to greater expected mobility. In Studies 2 and 3, the salience of attachment was manipulated, and the effects of this focus on attachment were compared to that observed for rendering private regard salient. The comparison of attachment to private regard was of interest as these two constructs are both affective-evaluative components of collective identity, and that have been shown to be moderately correlated in much prior research. Public regard is an affective-evaluative component, but it is a perception of how others evaluate one's group. In the present context, public regard refers to the extent to which individuals perceive that their class background is valued in the university setting. Study 2 was of a post-test only design, and Study 3 was a conceptual replication of Study 2. The difference in Study 3 is that it was of a pre-post design, in which the effects of attachment and private regard salience could each be more clearly identified.

The present research is novel in the following respects. One is that we are taking a collective identity perspective on social class within the multidimensional framework of Ashmore and colleagues (2004). Prior research has focused on identifying a sense of belonging to one's class, and we are extending this prior research into a more comprehensive and contemporary framework. Second, within this contemporary framework, we articulated the attachment component fully in terms of attachment theory. The link to attachment theory has been made before, but we extended this prior research by adopting a more comprehensive account of how attachment in SCD groups serves the same functions as secure attachment as articulated in (interpersonal) attachment theory. Third, the hypothesis of attachment to one's class background supporting expectations of upward mobility is novel and counter-intuitive. It may seem odd at first blush that attachment to a group supports expectations of moving beyond the group.

CHAPTER 2: STUDY 1

As a first step in the correlational Study 1, we documented that the construct of SCD identity in terms of class background is viable, and that it includes the distinguishable affective-evaluative components of attachment, private regard, and public regard. Participants in Study 1 also reported on their parents' education, and we expected that self-assigned social class is related to the objective marker of class provided by parental education. Such links to parental education and/or occupation have been documented in prior research (Bullock & Limbert, 2003; Centers, 1950; Ekehammar, Sidanius, & Nilsson, 1987). Participants also reported on their ethnicity. Given the Canadian context of the present research (Bélanger & Malenfant, 2005), ethnicity was not expected to be of consequence (nor was it). We also asked participants to report on the social class that was implied by their current activities and living conditions. The latter class assignment was expected to differ from their reported social class background, given that participants were university students.

The main goal in Study 1 was to examine the hypothesis that university students with greater attachment to their class background – be it working or middle – have greater expectations of social mobility. The hypothesis is formulated in terms of expected social mobility, and we considered this to be related to but distinct from expectations of high income opportunities. As such, the latter expectations were also assessed. Private and public regard were also assessed, and we expected a positive association between attachment and private regard. We examined the prediction based on the double valuation model that students of working class background with both high private and public regard would report greater expectations of upward mobility. We also expected that students

with a working class background to have lower public regard compared to students with a middle class background.

For certain waves of data collection in Study 1, we also included the ancillary measures of attachment to parents and parental support for university studies. We expected more secure parental attachment and greater parental support to be related to greater expectations of upward mobility. As well, we assessed SCD student identity, and expected that greater attachment to class background is associated with a greater sense of belonging to the student community. We also expected greater sense of belonging to the student community to be associated with greater expectations of upward mobility. Nevertheless, we did not expect belongingness as a student to be the mediator of the hypothesized effect of attachment to class background on expected mobility.

No mean difference was expected for attachment to one's social class background across working and middle-class individuals. In line with prior research, we expected working relative to middle class students to report lower public regard for their class background, less support from parents, less attachment in their student identity, and lower expectations of mobility.

Method

Participants

Participants were university students (544 women and 415 men) who completed questionnaires at a booth on the Concordia University campus in Montreal, Canada. This recruitment procedure results in samples representative of the university study population (Wood & Conway, 2006) Mean age was 22.86 years (range: 17 – 35). Participants reported their ethnicity according to Census Canada categories. The three highest

frequency categories were White (64.70%), Other (9.40%), and South Asian (5.70%). The frequencies for nine of the remaining other categories (e.g., Arabic, Black, and Chinese) were each less than 5%. All ethnicity categories, except White, were coded below as non-White (Bélanger & Malenfant, 2005).

In the present research, the target population was young adults who are familiar with Canadian society and who belong to majority social class categories of university students (i.e., working and middle classes). As such, the data of 959 participants remained after we excluded the data of 33.03% of the total sample of 1432. Exclusions were for individuals who were living in Canada for less than 5 years (n = 285), or were over the age of 35 (n = 41), or who indicated that their family class background was lower working class (n = 47), upper class (n = 97), or who did not report class background (n = 3). There were few individuals of lower working and upper class and expectations of upward mobility for upper class individuals could not be assessed with the main measure used in the present research.

Materials

All questionnaires were developed for the present research except the revised Inventory of Parent and Peer Attachment (Armsden & Greenberg, 1987; Greenberg & Armsden, 2009). For all items, participants responded on 7 point scales with endpoints *strongly disagree* (1) and *strongly agree* (7), unless otherwise indicated.

Social class self-categorization and parental education. One item assessed participants' self-categorization in terms of their class background ("My family background would lead most people to see my social class as..."). Prior research indicates that individuals as young as 13 to 16 years of age are clearly aware of class differences in

material resources, for example (Regner, Pascal, & Monteil, 2002). Participants were also asked about their social class in terms of where their current lifestyle and interests place them ("My current lifestyle and interests place me in the..."). Participants responded to both items by selecting one of four social class categories: *lower working class*, *working class*, *middle class*, and *upper class*. In the initial demographics section of the questionnaire packet, participants also reported their father's and mother's level of education by selecting one of the following for each: *primary*, *secondary*, *technical degree*, *university undergraduate*, and *university graduate*.

Attachment, private regard, and public regard for social class background. Attachment, private regard, and public regard were each assessed separately. See Table 2 for a list of all items. Attachment to one's class background was assessed with three items that encouraged respondents to focus on their attachment in a manner that was distinct from their own family. Two items assessed private regard and two assessed public regard in the university setting.

Expectations of class mobility. Participants reported on their expectations of class standing. They reported the social class they aimed to belong to, and the social class they would consider themselves part of after completing their education. See the items in Table 2. Participants responded to each item by selecting one of four social class categories: *lower working class*, *working class*, *middle class*, and *upper class*.

In addition to assessing expectations of class standing, we also assessed expected *upward* mobility using a measure that does not involve selecting a class, but rather providing ratings on Likert scales. Participants responded to three items which assessed the degree to which they believed their university education would help them achieve

upward social mobility. The items were "After completing my university degree, I expect to leave my class background behind and become a member of a higher social class," "The university degree I am working towards will not allow me to improve on my social class background" (reverse coded), and "Completing my university education will allow me to move up the social ladder, relative to my social class background." These items were based on the measure of social mobility of Jetten and colleagues (2008).

Expectations of high income opportunities. One item assessed participants' expectations of high income opportunities. The item is in Table 2.

Parents valuing education. Three items assessed the degree to which participants perceived their parents valuing their university studies. The items were "My parents do not see any real value in my university studies" (reverse coded), "My parents believe that my university studies will benefit me in the future," and "My parents place a lot of importance on my obtaining a university degree."

Attachment to and private regard for student identity. Three items assessed participants' attachment and three items assessed their private regard for their SCD student identity. Items for attachment were "I have a strong sense of belongingness with the university student community," "I feel a strong emotional connection to the university student community," and "I do not have a strong sense of solidarity with the university student community" (reverse coded). Items for private regard were "I feel good about being a university student," "University students have a lot to be proud of," and "I would rather not tell most people that I am a university student" (reverse coded).

Revised inventory of parent and peer attachment (IPPA; Armsden & Greenberg, 1987; Greenberg & Armsden, 2009). The IPPA is a self-report questionnaire which

assesses individuals' beliefs about their father, mother, and friends as sources of psychological security. The questionnaire consists of 3 parallel sets of 25 items, one for father, one for mother, and one for friends. Participants respond to each item using a 5 point scale with endpoints *almost never or never true* (1) and *almost always or always true* (5). Even though the IPPA consists of three subscales (i.e., trust, communication, and alienation) for each attachment object, Greenberg and Armsden (2009) discourage the use of subscales and encourage the use of total scores for each of the father, mother, and friends scales. Prior research indicates that the father, mother, and friends scales are distinct but related measures and exhibit good reliability (Greenberg & Armsden, 2009).

Procedure

Data was collected over a period of five calendar years at a booth with a *Psychology Project* sign on the Concordia University campus. They received $2.50 vouchers for a local coffee shop and were entered into a draw to win monetary prizes. The study was conducted over 5 years to ensure that the resultant sample sizes were sufficiently large for both working and middle class students. Measures were administered in one of two counterbalanced orders. Some measures were added to the study only in the last year or two of data collection. In the last two years, we added the Likert scale measure of expectations of upward social mobility and the measures of attachment and private regard for SCD student identity. In the last year, we further added the measures of parent and friends attachment, and the measure of parents valuing education.

Results

Social class self-categorization, demographics, and expected class standing

Table 1.

Social class self-categorization, parental education, age, ethnicity and social class in terms of current lifestyle and interests in Study 1.

		Father's education	Mother's education	Participant age	Participant Ethnicity	Participant class by current lifestyle and interests			
Social class background	*N*	*M*(*SD)*	*M*(*SD)*	*M*(*SD)*	% White	% Lower working	% Working	% Middle	% Upper
Working class	260	3.00(1.61)	3.00(1.07)	23.56(3.79)	55.4	12.8	53.9	31.0	2.3
Middle class	699	3.70(1.15)	3.56(1.10)	22.60(3.29)	68.2	5.3	19.7	69.7	5.3

Note. For father's and mother's level of education, 3 and 4 on the response scale corresponds to *technical degree* and *university undergraduate,* respectively.

Descriptive statistics are in Table 1. Fathers' and mothers' level of education were lower for working (n = 260) relative to middle class participants (n = 699), ts > 7, ps < .001, ds > .51. [2] Working relative to middle class participants were older, t (929) = 3.77, p < .01, d = .27, and were less likely to be White, χ^2 (1) = 13.56, p < .001. [3] Degrees of freedom for the t-tests vary due to missing data. In terms of their current lifestyles and interests, 46.1% of participants of working class background did not see themselves as currently working class, and 30.3% of participants of middle class background did not see themselves as currently middle class. In terms of whether current class matched or did not match class background, the percentages varied significantly across working class and middle class participants, χ^2 (3) = 141.56, p < .001. [4]

Working and middle class participants differed in their expectations of class standing. The majority of working class participants (88.2%) expected to move up to a higher class; few expected to remain in the working class (10.6%). In contrast, many middle class participants (38.2%) expected to move to the upper class, but many also expected to maintain their middle class standing (45.5%). These percentages of remaining and of moving up significantly differed across working and middle class participants, χ^2 (1) = 123.30, p < .001. Few participants expected dropping in social class. [5]

Attachment, private regard, and public regard for class background and expected class standing

A multi-group structural equation model (SEM; Kline 2010) was used to test our hypothesis with groups defined by social class background (working vs. middle). The model is presented in Figure 1. Preliminary analyses were conducted prior to the multi-

Table 2.

Descriptive statistics for working class and middle class participants in the principal analyses in Study 1.

	Working class				Middle class			
	M	*SD*	*α*	Factor loading	*M*	*SD*	*α*	Factor loading
Attachment to social class background	3.82	1.25	.75		3.85	1.33	.78	
Beyond my own family, I am a person who feels strong bonds towards my social class background.	3.95	1.54		.68[nt]	3.83	1.59		.74[nt]
Beyond my own family, I am strongly attached to my social class background.	3.66	1.54		.69*	3.50	1.61		.75*
Beyond my own family, I do not have a strong sense of belongingness to my social class background.	3.86	1.51		.67*	4.20	1.57		.72*
Private regard of social class background	4.79	1.31	.58		5.20	1.09	.44	
I feel good about my social class background.	4.64	1.45		.84[nt]	5.21	1.19		.71[nt]
I would rather not tell most people about my social class background.	4.93	1.67		.51*	5.18	1.52		.39*
Public regard of social class background	4.23	1.40	.80		4.48	1.43	.83	
My social class background, in terms of hobbies or interests, is valued in university.	4.24	1.54		.97[nt]	4.47	1.52		.94[nt]
My social class background, in terms of work and life experiences, is valued in university.	4.22	1.53		.72*	4.48	1.58		.74*
Expectations of high income after graduation			—				—	
After graduation, I will have high income work opportunities.	4.77	1.64		.70[nt]	4.67	1.74		.67[nt]
Expectations of social class standing	2.97	.56	.63		3.16	.52	.60	
My goal is to belong to the....	3.21	.63		.63[nt]	3.37	.57		.68[nt]
After completing my university studies, I will be able to consider myself as a member of the...	2.74	.69		.90*	2.95	.64		.83*

Note. nt = not tested. All items were coded such that higher scores reflect more of the construct. The scale range was 1 – 7. For expectations of social class standing, the response options were coded as lower working class (1), working class (2), middle class (3), and upper class (4). *$p < .01$.

Figure 1. Structural equation multi-group model with attachment, private regard, and public regard for one's class background predicting expectations of class standing and of income in Study 1. *Note.* The path coefficients are standardized. In each pair of coefficients, the coefficient before the slash is for working class participants, and the coefficient after the slash is for middle class participants. A pair of coefficients is boxed when their magnitude is equal across working and middle class participants.

*$p < .01$.

group SEM for working and middle class participants, respectively, to establish that the model in Figure 1 provided a good fit to each group (Yuan & Bentler, 2004).

Descriptive statistics are in Table 2 for working and middle class participants, respectively. Cronbach's alpha for the measures are in these tables, and for some of the scales was low. Somewhat low levels of scale reliability can be tolerated in SEM with latent variables because this method controls for measurement error (Kline, 2010; Little, Lindenberger, & Nesselroade, 1999). SEM with latent variables in Mplus version 4.2 (Muthén & Muthén, 1998-2010) was used to analyze the data. All observed items in the model were included as continuous variables except for the observed items of the social class standing scale which were included as ordinal categorical variables (Muthén, 1984; Finney & Distefano, 2006). All observed items were allowed to load only on their respective latent factors.

There was very few missing data (range: .20% to 2.20% per variable), and the pattern could be assumed as missing completely at random, χ^2 (53) = 58.26, p = .29 (Little, 1988). As such, the full information maximum likelihood method was used to handle the missing data (Enders, 2010). The robust weighted least squares estimator was used to analyze the covariance structure of the data. Model fit was assessed with the mean and variance adjusted chi-square (χ^2), the comparative fit index (CFI), the root mean square error of approximation (RMSEA), and the weighted root mean square residual (WRMR). A good fit is indicated by a nonsignificant χ^2, a CFI above .95, RMSEA less than .05, and WRMR less than 1.

The model in Figure 1 is one in which attachment, private regard, and public regard are each distinguished from each other, and in which expectations of class

standing and of high income opportunities were also distinguished. The model in Figure 1 was estimated for working and middle class participants separately to validate the model in each group prior to the multi-group analysis. For working class participants, the model provided an excellent fit to the data, χ^2 (15) = 18.42, p = .24, CFI = .98, RMSEA = .03, and WRMR = .48. For middle class participants, the model in Figure 1 did not provide a good fit, χ^2 (17) = 34.89, p = .01, CFI = .97, RMSEA = .04, and WRMR = .58. Results indicated that the inclusion of a correlation (r = -.10, z = -3.22, p < .01) between the error variance of one attachment item with the error variance of one private regard item would significantly improve model fit. We repeated the analysis after including the above residual correlation and the model provided a good fit, χ^2 (17) = 26.67, p = .06, CFI = .98, RMSEA = .03, and WRMR = .49. The distinctions between the latent constructs in Figure 1 were validated in 3 alternative models. [6]

The multi-group model in Figure 1 was first estimated without equality constraints to establish the fit of the baseline model. In three sequential steps, we then estimated the model after constraining all factor loadings, factor intercorrelations, and path coefficients to be equal across groups. We used the chi-square difference test ($\Delta\chi^2$) to examine the tenability of the equality constraints. The baseline model did not provide a good fit to the data, χ^2 (32) = 60.36, p = .002, CFI = .96, RMSEA = .04, WRMR = .83. Constraining all factor loadings to equality across groups did not worsen model fit relative to the baseline model, $\Delta\chi^2$ (4) = 6.28, p = .18. Constraining all factor loadings as well as all factor intercorrelations to equality across groups did not worsen model fit relative to the baseline model, $\Delta\chi^2$ (5) = 6.02, p = .30. However, constraining all path coefficients as well as all factor loadings and factor intercorrelations to equality across

groups significantly worsened model fit relative to baseline model, $\Delta\chi^2$ (8) = 17.45, p = .03.

Modification indices indicated that the path from private regard to expectations of standing and the path from public regard to expectations of standing were different for working and middle class participants. The model was estimated again after releasing the equality constraints on both paths while maintaining all other constraints. The fit of the model was not different from the fit of the baseline model, $\Delta\chi^2$ (7) = 11.54, p = .12. The model is presented in Figure 1 with standardized path coefficients. Standardized factor loadings for working and middle class participants are in Table 2. In line with the hypothesis, working and middle class participants' greater attachment to their class background was moderately associated with their expectations of higher class standing. The magnitude of the path coefficient did not vary as a function of participants' social class background. Similarly, greater attachment to class background was associated with greater expectations of high income to a similar extent across working and middle class participants.

The relation of private regard to expectations of class standing varied as a function of class background. Working class participants' greater private regard for their class background was moderately associated with their expecting lower class standing. For middle class participants, their private regard for their class background was not associated with their expectations of class standing. Working and middle class participants' private regard for their class background was unrelated to their expectations of high income.

Public regard for social class background was related to expectations of class standing and to expectations of high income, albeit partly as a function of participants' class background. Working class participants' public regard was associated with their expecting higher class standing. For middle class participants, their public regard was unrelated to their expectations of class standing. Consistently across working and middle class participants, public regard was associated with expecting high income. [7, 8]

Attachment to and private regard for student identity

A subset of participants (n = 532) reported on their attachment to and private regard for their student identity. For this subset, attachments for class and student identities were positively correlated for working and middle class participants, respectively, as were private regard for class and student identities. See Table 3. Expectations of class standing and of upward mobility were moderately and positively correlated for working and middle class participants, respectively.

A SEM analysis was conducted to examine whether the effect of attachment to class background on expectations of class standing and of upward mobility is mediated by attachment to the student community. Due to the smaller sample size, all variables were included in the model as observed variables, except for the two items measuring expected class standing, which were modeled as ordered categorical outcomes using a latent variable (see main SEM analyses above). In the model, expectations of class standing and of upward mobility were included as the dependent variables. Attachment and private regard for student identity were included in the model as mediators. Attachment, private regard, and public regard for class background were the independent variables. In the model, there were paths from each independent variable to each

Table 3.

Descriptive statistics and correlations for all measures for participants who also reported on their student identity and on parent and peer attachment and parental support in Study 1

		1	2	3	4	5	6	7	8	9	10	11	12
1. Attachment to social class background		—	.47**	.40**	.22*	.10	.07	.17*	.25**	-.26	-.03	-.06	-.04
2. Private regard for social class background		.43**	—	.26**	.03	.20*	-.09	.02	-.01	-.04	.26	.21	-.11
3. Public regard for social class background		.21**	.07	—	.41**	.34**	.22*	.20*	.24*	-.01	.22	-.16	.06
4. Attachment to student identity		.29**	.20**	.20**	—	.39**	.25*	.35**	.23**	-.01	.29	.01	.03
5. Private regard for student identity		.16**	.33**	.16**	.36**	—	.31**	.41**	.36**	.35*	.10	.08	-.05
6. Expectations of class standing		.30**	.20**	.08	.19**	.15**	—	.52**	.58**	.23	-.01	-.19	-.02
7. Expectations of upward mobility		.26**	.14*	.11*	.27**	.21**	.50**	—	.58**	.04	.06	-.19	.23
8. Expectations of high income opportunities		.30**	.23**	.15**	.33**	.26**	.46**	.55**	—	.20	-.07	-.24	-.05
9. Parents valuing education		.02	-.12	.09	.15	.18	.24*	.18	.27*	—	.26	.34*	-.01
10. Attachment to father		.06	.11	.20*	.07	.17	.04	.11	.07	-.02	—	.49*	.04
11. Attachment to mother		.09	.01	.33**	.05	.24*	-.18	-.05	-.05	.05	.31**	—	.11
12. Attachment to friends		.09	.13	.23*	.26*	.24*	.06	.23*	.11	.20	.21*	.25*	—
Middle class	*M*	4.01	5.25	4.52	4.25	5.94	3.20	4.29	4.97	6.40	3.48	3.76	4.13
	SD	1.33	1.07	1.44	1.32	.87	.49	1.32	1.64	.74	.83	.72	.52
Working class	*M*	3.82	4.67	4.19	3.96	5.90	2.97	4.65	4.96	5.91	2.84	3.54	3.98
	SD	1.30	1.34	1.48	1.47	.92	.60	1.37	1.64	1.33	.90	.87	.53
Overall	α	.75	.50	.82	.81	.62	.61	.70	—	.74	.95	.95	.93

Note. Correlations below the diagonal are for middle class participants and correlations above the diagonal are for working class participants. For student identity, sample sizes for working and middle class students were 139 and 392, respectively. For parental and peer attachment, and perceptions of parents valuing education, sample sizes for working and middle class students were 95 and 34, respectively. The latter are subsets of the sample for student identity. *$p < .05$; **$p < .01$.

mediator, and to each dependent variable. There were paths from each mediator to each dependent variable. In the model, all variables were regressed on a dummy coded variable indexing participants' class background (working vs. middle) to control for differences between working and middle class participants.

The model provided an excellent fit, χ^2 (5) = 2.46, p = .78, CFI = 1, RMSEA < .01, WRMR = .18. Participants' attachment to their class background remained directly associated with expectations of higher class standing, β = .27, z = 4.55, p < .01, and with expectations of upward mobility, β = .21, z = 4.78, p < .01 as well as with attachment to student identity, β = .22, z = 5.13, p < .01. In turn, attachment to student identity was directly associated with expectations of higher class standing, β = .11, z = 1.96, p = .05, and with expectations of upward mobility, β = .16, z = 4.05, p < .01. For indirect effects, attachment to class background was associated with expectations of higher class standing via greater attachment to student identity, β = .04, z = 3.14 p < .01. However, attachment to class was not indirectly related to expectations of upward mobility via student attachment, β = .03, z = 1.83, p = .07. There were other significant paths in the model, but these are not relevant to examining how the effects of attachment to class on expectations of mobility may be mediated by student identity. In sum, the robust findings were that attachment to class was directly and positively associated with both measures of expected mobility after taking into account participants' attachment to the student community.

Attachment to parents and friends, parental support, and expected mobility

A subset of participants (n = 129) reported on their attachment to parents and friends, as well as their perceptions of their parents valuing their education. For this

subset, attachment to class background was not significantly associated with attachment to father, mother, or friends, and nor was it associated with parents valuing education, for working and middle class participants separately. See Table 3.

Mean differences between working and middle class students

Descriptive statistics for the measures used in the principal analyses related to the hypothesis are reported in Tables 3 and 4 for working and middle class participants, respectively. Some mean differences emerged across class background. Working and middle class participants did not differ in attachment to class background, $t < 1$, but working relative to middle class participants reported lower private and public regard, t (957) = -4.87, $p < .01$, $d = .34$, and t (957) = -2.40, $p < .05$, $d = .18$, respectively. Working and middle class participants had similar expectations of high income opportunities, $t < 1$.

The descriptive statistics for measures of student identity, attachment to parents, parents' valuing education, attachment to peers, and expectations of upward mobility are in Table 3. These measures were administered to subsets of participants. Working relative to middle class participants reported greater expectations of upward mobility, t (530) = 2.71, $p = .01$, $d = .27$, which is consistent with the difference for expected class standing reported above. Also, in line with expectations, working relative to middle class participants were less attached to the student community, t (530) = -2.18, $p = .04$, $d = .21$, but had similar private regard, $t < 1$. Working relative to middle class participants perceived their parents as valuing education less, t (127) = -2.61, $p < .01$, $d = .45$, were less attached to their father, t (127) = -3.69, $p < .001$, $d = .72$, but equally attached to mother and friends, ts < 1.57.

Discussion

Participants in Study 1 reported on their collective identity in terms of their social class background. This identity was assessed in terms of the affective-evaluative (Ashmore et al., 2004) components of attachment, private regard, and public regard. The results of Study 1 are consistent with the hypothesis that young adult university students' greater attachment to their class background supports expectations of upward social mobility. In addition, it was shown that attachment and private regard were moderately positively correlated, as in much prior research on collective identity for various groups (Ashmore et al., 2004). Even though attachment and private regard were positively correlated, working class participants who had greater private regard for their class background reported *lower* expectations of class standing. The contrast in the findings for attachment and private regard for working class participants is striking. The pattern of findings for working class participants suggests internal contradiction and conflict in their feelings about social class mobility. In contrast, middle class participants' private regard seemed inconsequential, in that it was not related to their expectations of class mobility.

Both attachment and private regard were positively correlated with public regard. Just as for private regard, the significance of public regard varied as a function of participants' class background. Working class participants with greater public regard for their class background also expected higher class standing. In contrast, public regard for middle class participants was inconsequential in this regard, as it was unrelated to expectations of class standing. The findings for public regard again highlight the complexities in class identity for working class individuals. Even though public and

private regard were positively correlated for working class participants, each type of regard had opposite effects on expected class standing.

Just as attachment was associated with expectations of class standing, it was also associated with expectations of high income opportunities after graduation. This was the case for both working and middle class participants. These results emerged in the model of Figure 1, in which expectations of high income are distinct, but closely related to, expectations of class standing (this distinction is necessary; see Footnote 6 for tests of alternative models). In addition to attachment, public regard was positively associated with expectations of high income for both working and middle class participants.

Attachment to class background seemed beneficial in other respects, in that it was positively associated with their sense of attachment to the university student community. This association was small for working class participants and moderate for middle class participants. The link of attachment to class background to student identity is important in Study 1, in that greater attachment and private regard for student identity were associated with expectations of higher class standing and with expectations of upward mobility. Expected class standing is represented in Figure 1 for all the data of Study 1, and expectations of upward mobility were assessed with a subset of participants, and the items referred explicitly to moving up the social ladder. These findings are consistent with those of Jetten and colleagues (2008). They found in their university student sample a moderate positive association between attachment to student identity and expectations of upward mobility. The importance of student identity is further underscored in prior research which indicates that a greater sense of belonging in the university seems to

support students' persistence and success in their studies (Berger & Milum, 1999; Lehman, 2007; Tinto, 1988, 1993).

The positive association in Study 1 between attachment to class and attachment to the student community suggests that these two identities are not in conflict with each other for either working or middle class participants. At the same time, we observed that working relative to middle class participants reported, on average, lower attachment for their student identity. Other research also speaks to the degree to which working class students embrace a student identity. Jetten and colleagues (2008) found that working relative to middle class students felt that their class background was less compatible with being a university student. In turn, this perceived incompatibility was associated with lower attachment to the student community. The present findings for working class participants' attachment to their class background indicate that such attachment may compensate in part for other factors that lead working class students to feel that they don't belong in university and that their class background is not highly valued in university.

Attachment to class background was not related to attachment to parents or friends. A subset of participants in Study 1 also completed measures of the degree of security they felt in their relations with their mothers, fathers, and friends, separately. This lack of association is consistent with Brewer and her colleagues (2008; also Brewer & Gardner, 1996). They argued that there are clear distinctions between attachment at the collective level of the self, and attachment at the relational level of the self (i.e., attachment in interpersonal or face-to-face relationships with significant others). There may nevertheless be associations between attachment at the relational level and

expectations of class standing and upward mobility. Attachment to father was unrelated to expectations of class standing and upward mobility in Study 1. Attachment to friends, just like attachment to one's class background, was positively associated with expected upward mobility for middle class participants. For working class participants, those who reported more attachment to mother also reported greater parental support for university studies

The findings of Study 1 support the attachment hypothesis for correlational data, and the next two studies were aimed at experimentally manipulating the salience of attachment to class background and examining its impact on expectations of class standing in Study 2 and on expectations of upward mobility in Study 3. Not all expectations were assessed in one study, given practical and methodological concerns. The focus in Study 3 on expectations of upward mobility allowed us to address one concern that can be raised regarding Study 1. Most middle class participants did not expect upward social mobility. Indeed, only 38.2% indicated that they expected to move up to the upper class after graduating from university. Yet the hypothesis in Study 1 is that attachment to one's class background supports *upward* social mobility. We can respond to this concern in the following manner. First, the results of Study 1 for middle class participants indicate that greater attachment to their class background is positively correlated with expecting a favorable class outcome upon graduation, which may be to maintain one's middle class standing. As indicated in footnote 5, survey data collected with students at the same university indicates that individuals view being middle class in favorable terms. Kaufmann (2005) also found that middle class students may want to improve or maintain their class standing. It is also informative that middle class students

who indicated that they expected to maintain their class standing also reported that they expected some upward mobility ($M = 4.34$, $SD = 1.31$). Their mean rating was significantly above the mid-point of 4 on the scale, $t\ (445) = 5.44$, $p < .01$ (recall that only a subset of participants completed the upward mobility measure in Study 1). Perceiving some upward mobility implies a favorable view of staying in the middle class. In the next two studies, we continue to examine how attachment to class background is related to expectations of class standing (Study 2) and of upward mobility (Study 3).

CHAPTER 3: STUDY 2

In Study 2, participants were randomly assigned to either attachment salience or private regard salience conditions, and the impact of salience on expectations of social standing was assessed. The expectation in Study 2 was that participants in the attachment relative to the private regard condition will report greater expectations of higher class standing. The salience manipulation was by autobiographical recall. Participants in the attachment condition recalled an event that made them feel strong bonds and a sense of belonging, whereas participants in the private regard condition recalled an event that made them feel positive and want to tell others about their social class background.

Method

Participants, procedure, and materials

The first author (NT) was the experimenter and visited classrooms for 18 undergraduate courses of various business and social science disciplines (excluding psychology). Classrooms were visited with the permission of professors, with the condition that the study, including debriefing, required under 10 min. The experimenter introduced himself as a graduate student conducting research on "social class and university students." He indicated that participants were being asked "to remember an event from their lives and to write a short description of the event." Participants were not paid and did not receive course credit. Approximately 90% of students agreed to participate. Participants were 253 (78 men and 167 women; 8 did not report gender) undergraduate students. Mean age was 22.65 years (range: 17 – 34).

After the general introduction, all instructions were then provided on questionnaires. In each classroom, approximately half of participants received the

attachment questionnaire, and the others received the private regard questionnaire. Assignment was random, and the experimenter was blind to condition. All participants received the same initial written instructions: "Your social class can affect many aspects of your life. Your life has been affected by your family's social class background. Your family's class background relates to your parents' level of education, their occupations, and their income. For example, your class background has likely influenced the neighborhood you grew up in and the schools you attended. Please think of an event from your life which made you feel…"

In the attachment condition, instructions continued with "strong bonds to your social class background. It should be an event that made you feel strongly attached to your class background and that made you feel a strong sense of belongingness to your social class background." In the private regard condition, the instructions continued with "very good about your social class background. It should be an event that made you want to tell people about your social class background." Wording was based on the attachment and private regard items of Study 1 (see Table 2). The questionnaire had 12 lines for writing the event.

Participants then wrote their events. The experimenter interrupted participants after 2-3 minutes, when most seemed to have written at least a few lines of text. The experimenter asked participants to pause and to answer a few questions. Three questions with the response scale were projected one at a time on the classroom screen. The first two were the class standing items of Study 1, and the third was the class self-categorization item of Study 1. Participants responded to each question as soon as it was presented, and were then debriefed.

Results

Participant characteristics and their expectations of class standing

There were 118 and 135 participants in the attachment and positive private regard conditions, respectively. The numbers of working (total $n = 65$) and middle (total $n = 188$) class participants in each condition were similar, as were proportions of women and men, χ^2 s < 1. There was no age difference across conditions, $t < 1$.

The two items measuring participants expected class standing were averaged to create the measure of expected class standing. Working and middle class participants differed in terms of their expectations of class standing. Almost all working class participants expected to move up to a higher class (95.4%), and few expected to remain in the working class (4.6%). Similarly, most middle class participants (42.5%) expected to move to the upper class, but many also expected to maintain their middle class standing (34.6%). These percentages significantly differed across working and middle class participants, χ^2 (1) = 33.15, $p < .001$. Approximately one quarter (22.9%) of middle class participants expected dropping in social class.

Manipulation check and event recall coding

Word count of participants' descriptions were similar across conditions, $t < 1$, with an overall mean of 54.64 words ($SD = 23.89$). A coder blind to condition coded each event recall as focused on attachment or private regard, and this coding generally corresponded to participants' condition assignment, Cohen's kappa (κ) =.62, $p < .01$The coder correctly matched 81.4% of participants to their respective conditions. Coding was reliable, with a good agreement rate with a second coder, $\kappa = .68$, $p < .01$.

The events recalled by participants were coded to verify that attachment relative to private regard salience was not confounded with some other possibly important factors. The two coders, blind to condition, also coded each recalled event in terms of the absence or presence of references to a) achievement by self, b) own effort and challenge, c) effort and challenge of close others (e.g., family members), and d) financial resources and benefits. As well, event recall was coded for e) valence (positive vs. negative); if attachment salience was confounded with positive valence, one could argue that the attachment effect was due to valence alone The two coders also coded each event in terms of whether the recalled events f) involved members of participants' stable social network (e.g.., friends, family, classmates, and neighbours) or not (e.g., strangers), or both, and whether the recalled event g) occurred in a familiar social place (e.g., one's home, neighborhood, or community, the university where one studied, one's workplace, and one's recreational club), an unfamiliar place (e.g., a different country), or both. Across coding dimensions, the average κ for the two coders was .75 (range: .65 – .84), *p*s < .01, indicating moderate to high reliability.

Analyses indicated significant differences across experimental condition only for references to the effort and challenge of close others, χ^2 (1) = 4.40, p = 04, and overall affective quality, χ^2 (1) = 5.31, p = 02. The differences were such that there was no confound of attachment salience either with more effort and challenge, or with positivity – the opposite was true. Across conditions, 87.7% of the recalled events made no reference to others' effort and challenge. Of the few events which did reference the effort and challenge of close others, 29% were in the attachment condition and 71% were in the private regard condition. With regard to valence, 87.4% of the events recalled across

conditions were positive. Of the few negative events, 65.6% were in the attachment condition and 34.4% were in the private regard condition. The frequencies for the remaining five coding dimensions did not vary as function of experimental condition: 90.9% of the events did not refer to participants' own achievements, 90.9% did not reference participants' own effort and challenge, 57.3% did not reference financial resources and other benefits. Finally, 71.5% of events referred to people in the participants' stable social network. As to place, 46.6%, 45.1%, and 8.3% of events referenced an unfamiliar place, a familiar place, or both, respectively.

Expected class standing

For expected class standing, participants responded to two items. Each response was a social class category, and the available options were lower class (1), working class (2), middle class (3), and upper class (4). The numbers in parentheses are our coding for these categories. Given that a participant might respond differently to each class standing item, there were 7 possible values for each participant's mean, ranging from 1 to 4, in increments of .5. The cumulative percentage plot of participants' ratings in the attachment and private regard conditions are in Figure 2. We expected that the frequencies for these 7 categories would significantly differ across attachment and private regard conditions, with higher frequencies in the higher class categories for attachment relative to private regard. To analyze these ordinal category frequencies, an ordinal logistic regression analysis was conducted using PSAW version 18 (Norušis, 2011).

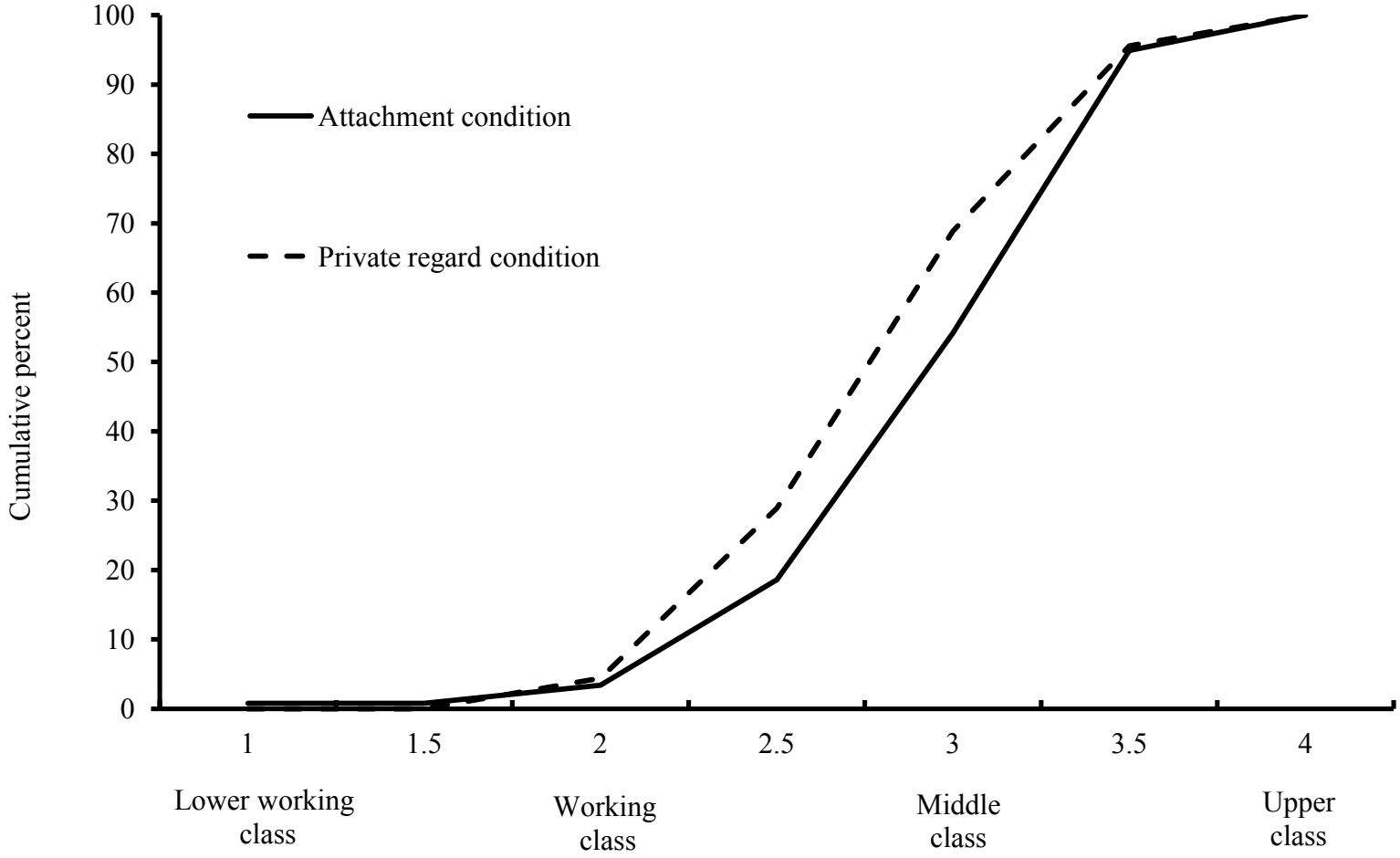

Figure 2. Cumulative probability plot of participants' expectations of class standing as a function of the attachment and private regard salience manipulations in Study 2.

In the ordinal regression analysis, the dependent variable was expected class standing, and the independent variables were experimental condition and participants' social class background. We included participants' class background because working and middle class participants differed in their expectations of class standing – relative to their current standing. The results of the ordinal regression analysis indicated that the inclusion of experimental condition and participants' social class background in the model significantly improved model fit relative to an intercept-only model, $\Delta\chi^2(2) = 10.05$, $p = .01$. This significant effect indicates that experimental condition and participants' class background are significantly related to participants' expected class standing. Good model fit was also confirmed by nonsignificant values for the Pearson and Deviance tests, $\chi^2(13) = 11.29$, $p = .59$ and $\chi^2(13) = 10.89$, $p = .62$, respectively. Both examine whether the observed and expected cell counts are similar, and a good fit between observed and expected is reflected in nonsignificant χ^2 values.

As expected, participants in the attachment condition were more likely to report greater expectations of higher class standing relative to participants in the private regard condition, logit B = .57, Wald $\chi^2(1) = 5.69$, $p = .02$, and 95% CI = .10 – 1.03. The positive B value indicates that participants in the attachment condition (coded as 1) have higher frequencies in higher class categories relative to participants in the private regard condition (coded as 0). The expected finding emerged regardless of whether participants were of working or middle class background. The proportional odds ratio is exp (.57), and is equal to 1.77. This indicates that participants in the attachment condition were 1.77 more likely to expect being in a higher category (relative to all lower categories) as compared to participants in the private regard condition. For example, the odds of

participants expecting to be upper class versus the combined remaining lower categories (middle class, working class, lower working class, and intervening categories) are 1.77 greater in the attachment condition than in the private regard condition. This consistent proportional odds ratio of 1.77 is identified, given that the test of parallel lines confirmed that the magnitude of the proportional odds ratio was identical across each pair of outcome comparisons of the expected class standing scale, $\chi^2(8) = 7.56$, $p = .48$. Outcome comparisons refer here to frequencies for one category relative to all lower categories. The cumulative percentages in Figure 2 show how the solid line for the attachment condition is offset to the right relative to the dashed line for the private regard condition, indicating greater cumulative frequencies for higher class standing.

Even though participants' social class background was included in the main analyses, the effect of attachment vs. private regard was not conditional on participants' class background. In fact, participants' class background in the above analyses was a separate predictor of expectations of class standing. Specifically, middle class participants were more likely to report greater expectations of higher class standing compared to working class participants, logit B = .52, Wald $\chi^2(1) = 3.89$, $p = .05$, and 95% CI = 1.04 – .01, regardless of experimental condition. Excluding participants' class background from the analyses leaves the results for experimental condition virtually unchanged, logit B =.57, Wald $\chi^2(1) = 5.95$, $p = .02$, and 95% CI = .11 – 1.03. In addition, ancillary analyses indicated that participants' class background did not moderate the influence of experimental condition on their expectations of class standing, logit B =.07, Wald $\chi^2(1) = .02$, $p = .90$, and 95% CI = -.97 – 1.10.

Finally, analyses indicated that the experimental effect observed for attachment relative to private regard was not a function of the type of events participants recalled. The coding variables were entered as predictors in the ordinal logistic regression, and none were significant.

Discussion

Participants in Study 2 were randomly assigned to either an attachment salience condition or to a private regard salience condition. The manipulation was by autobiographical recall, and participants in their respective conditions recalled events that made them feel attached or feel good about their class background. Even though the study was unexpected for students who had showed up for their classes, the coding of events indicated that participants did collaborate by recalling events that corresponded to the instructions they received. Furthermore, the event coding indicated that there were no confounds with experimental condition that rendered an observed effect of attachment salience open to alternative interpretation in terms of relevant features of the recalled events (e.g., the valence of recalled events).

After the salience manipulation, participants in Study 2 reported on their expected class standing, and finally reported on their class background. As in Study 1, most participants of working class background expected upward mobility, as did 42.5% of middle class participants. In line with the hypothesis, and regardless of their social class background (working vs. middle), participants expected higher class standing in the attachment relative to the private regard condition.

The experimental results in Study 2 are consistent with the positive association between attachment to class background and expected mobility observed in Study 1.

What does differ across Studies 2 and 1 is the apparent impact of private regard on expected mobility for working class participants. In Study 2, there was no condition by class background interaction, which indicated that private regard salience had similar effects for working and middle class participants. In contrast, there were clear differences in Study 1 in how private regard was related to expectations of class standing as a function of participants' class background – it was moderate and negative for working class participants, and absent for middle class participants (see Figure 1). Given that private regard was associated with lower expectations of class standing in Study 1 for students with a working class background, one might have expected that the difference for expected class standing between attachment and private regard conditions would have been greater in Study 2 for working relative to middle class participants. The discrepancy across Studies 1 and 2 can be understood in terms of the features of the respective studies. The SEM analyses in Study 1 controlled for the substantial shared variance between attachment and private regard. In contrast, each of the manipulations of attachment and private regard in Study 2 is likely to influence both the salience of attachment and private regard, although the salience was presumably greater for the corresponding construct (i.e., attachment in the attachment condition). As such, the clear distinctions in the SEM analyses of Study 1 cannot be maintained in experimental manipulations of the related constructs of attachment and of private regard.

Study 2 provided initial experimental support for the hypothesis that greater attachment to one's social class background leads to greater expectations of higher class standing. One limitation of Study 2 is that given the post-test only design, it is unclear whether the observed difference in expected mobility was due to the effect of the

attachment salience manipulation, the private regard salience manipulation, or both. Another limitation in Study 2 was the gross coding of event recall – which was all that was feasible, given the nature of the data. Perhaps more fine-grained measures of event content and of event-related affect might give a better indication of how event recall is related to expected mobility. The next study was a conceptual replication in which we implemented a pre-post experimental design and added more fine-grained measures of event content by having participants rate their recall themselves. As well, participants rated the affect elicited by recalling their events. In these ways, Study 3 addresses limitations of Study 2.

CHAPTER 4: STUDY 3

In the pre and post-test design of Study 3, participants reported on their expectations of upward mobility both before any experimental manipulations, as well as after the manipulations. We focused on expectations of upward mobility – as opposed to expectations of class standing – to make clear that attachment to one's class background fosters expectations of *upward* mobility for both working and middle class participants. The pre-test of Study 3 was obtained as part of data collection in Study 1. The design of Study 3 was essentially the same as that of Study 2: salience of attachment or of private regard, followed by assessment of expected mobility.

Although the delay between pre- and post-test was 2-3 weeks, we had concerns that participants might recall that they had completed the same items at the booth a few weeks earlier. To deal with this, we made explicit to participants that they had completed the items earlier, and the post-test assessment was presented as a recall task. Participants were asked to recall their earlier responses to the expected mobility items (as well as to recall other items administered at the booth in Study 1). This was subterfuge on our part, as prior research indicates that such recall is brought in line with current views, unless there is clear reason to distinguish the past from the present (Conway & Ross, 1984; Ross & Conway, 1986; Ross, 1989). In Study 3, participants first completed the salience task, following which they recalled their earlier answers to the upward mobility items.

To disguise the purpose of the study, participants in Study 3 were informed that they were participating in a study on memory for different kinds of material across different time periods. The first memory task was in fact the salience manipulation, and it involved each participant recalling an event from his or her past. The second memory

task was in fact the post-test assessment of expected mobility, and it involved participants recording their recall of the responses they had provided a few weeks earlier.

After completing these supposed recall measures, participants reported on the affect evoked by the event. We also had participants then code their own event recall. Coding was in terms of effort and challenge for oneself and for close others. We also asked participants in Study 3 to rate their recall on how much it involved their own hardship and struggles, or those of close others. In addition, we coded the events for valence, as in Study 2.

The expectation in Study 3 was that in the attachment condition, the increase from pre-test to post-test in expected upward mobility will be greater than that observed in the private regard condition. We did not expect to observe higher attachment and higher private regard in the attachment and private regard salience conditions, respectively. Indeed, the degree of identification with one's group (individual differences in attachment and private regard) cannot be equated with the situational salience of a group identity in the self-concept (Turner, 1999; also see McGarty, 2001). According to self-categorization theory, degree of group identification is conceptualized in terms of an individual's readiness to use a particular group membership for self-definition in different contexts (Turner, 1987, 1999). In contrast, the salience manipulations in Studies 2 and 3 serve to render their corresponding psychological constructs more accessible in participants' working self-concept (Markus & Wurf, 1987), and not to change participants' orientations toward their social class background.

Method

Participants

Forty-six participants (23 men and 23 women) from Study 1 were recruited for Study 3. They had indicated when they completed the packet of questionnaires at the booth (see Method of Study 1) that they were interested in future paid research. For Study 3, individuals were contacted and invited to participate in a study on memory. There was no mention of social class and there was no link made to the measures taken in Study 1. Mean age was 22.22 (range: 18 – 31) years. Participants were randomly assigned to condition. Participants were evenly distributed in each experimental condition in terms of gender, age, ethnicity (White vs. non-White) and social class background. They were paid $10 CAD.

Materials and procedure

The pre-measures were a subset of the measures taken in Study 1, and included attachment and private regard for social class background, and expectations of upward mobility. The attachment and private regard items are in Table 2, and the items for expectations of upward mobility are in the Method section of Study 1. At each experimental session scheduled 2-3 weeks after the pre-measures, there were one to four participants. The experimenter indicated that the study concerned the recall of various autobiographical events, including recent and distant events, as well as routine and unique events. There was no mention of social class. Participants were told that it will be determined on a random basis which type of event they will each remember. The experimenter remained blind to condition, and gave participants their questionnaires. Participants were randomly assigned to recall an event which made them feel more attached or have greater private regard for their class background. Recall instructions

were identical to those of Study 2. There was no time limit provided, and most participants completed the recall in less than 10 min.

Once participants completed the salience manipulation, they were given the post-measure of expected upward mobility, as well as post-measures of attachment to and private regard for their class background. The post-measures were presented as a recall task. Instructions were to recall the responses to the same items that they had provided a few weeks earlier at the booth (of Study 1). The instructions were that "We are also interested in your memory for specific information. On the following pages are some of the questions you were asked when you came by the booth … Please try and remember as accurately as possible the answers you provided at the booth … questions on the next pages have to do with how you feel about your social class background. You are being asked to remember your answers to these questions, because they are on the same topic as the event you just remembered." To mask the focus on class, participants were also presented other items that they had completed earlier (at the pre-test), and were asked to recall these as best they could. These were filler items that did not concern social class. The questionnaires for the recall of responses were presented in one of two counterbalanced orders, with the attachment and private regard post-measures always coming last.

After the main measures, participants completed measures of the affect they felt when recalling the events, as well as of event content, and these were completed in counterbalanced order. Participants completed an abridged PANAS (Watson, Clark, & Tellegen, 1988). The PANAS was abridged to the first 10 items, plus *determined* and *ashamed*), for a total of 6 positive and 6 negative items. Each term was followed by a 5-

point scale with endpoints *not at all* (1) and *very much* (5). Affect terms were presented in a fixed random order.

For event content, participants indicated how much their recalled event had to do with their own effort, struggles, and facing challenge, as well as with the effort, struggles, and challenge of close others. For self, the statement "How much did the event have to do with…" was followed by "…your own work and effort?," "…you facing challenge?," "…hardship you faced and your struggles?." For close others, the same leading stem was used, followed by "…the work and effort of others close to you?," "…challenges faced by others close to you?," and "…hardship and struggles of others close to you?." There were four fillers with the same leading stem. Items were each followed by a 6-point scale with endpoints *not at all* (1) and *extremely* (6), and presented in a fixed random order. Participants were then debriefed and paid.

Results

Manipulation check and experimenter event recall coding

A coder blind to condition coded each event recall as focused on attachment or private regard. The kappa coefficient with regard to experimental condition was .65, $p < .01$, indicating that the coder correctly matched 82.6% of participants to their respective conditions. Coding was shown to be reliable, with agreement rate with a second coder being good, $\kappa = .70$, $p < .01$. Participants in the attachment and private regard conditions used a similar number of words to describe their events, $t < 1$, with an overall mean of 85.07 ($SD = 28.33$) words.

The two coders, blind to condition, also coded each event in terms of the seven dimensions used in Study 2. There was good reliability between coders across coding

dimensions, the average κ for the two coders was .79 (range: .64 – 1), *p*s < .01. The coding for each dimension did not vary as function of experimental condition, except for the presence or absence of references to financial resources and benefits, χ^2 (1) = 4.29, *p* = .04. In the attachment condition, only 30.4% of events referred to having access to resources, whereas 69.6% did not. In contrast, in the private regard condition, 69.9% of events referred to resources, whereas 39.1% did not. As such, the attachment manipulation was not a cue for resources.

Overall, across conditions, 73.9% did not involve participants' achievements, 93.5% did not involve participants own effort and challenge, 93.5% did not involve the effort and challenge of close others, and 87.7% of the events were positively valenced. In addition, 78% involved people from the participants' stable social network. Also, across conditions, 54% of the recalled events referenced a familiar place, 15.2% referenced an unfamiliar place, and 30.4% referenced both.

Self-ratings of affect, effort, challenge, and hardship for event recall

A principal components analysis with oblimin rotation indicated that participants' ratings of effort, hardship, and challenge for self had high loadings (> .63) on one factor, and ratings for close others had high loadings (> .82) on another factor; these factors were weakly correlated (*r* = .17). As such, the self items were averaged, as were the items for others. Descriptive statistics and correlations are in Table 4. There were no differences across attachment and private regard salience conditions for participants' ratings of how much their recalled events involved their own effort, challenge, and hardship, and the effort, challenge, and hardship of close others, *t*s < 1. In general, ratings indicated little reference to effort, challenge, and hardship – mean ratings fell between *a little bit* and

Table 4.

Descriptive statistics and correlations in each experimental condition for variables in Study 3.

Variable		1	2	3	4	5	6	7	8	9	10	*M*	*SD*
1. Attachment to class – pre-measure.		—	.47*	.33	.47*	.04	.50*	.18	.66*	.06	-.11	3.88	1.18
2. Private regard for class – pre-measure.		.51*	—	.28	.53*	.73**	.32	-.22	.34	.26	-.40†	4.96	1.18
3. Expectations of upward mobility – pre-measure.		.11	.05	—	-.02	-.03	.73**	.43*	.23	.32	-.02	4.30	1.39
4. Attachment to class – post-measure.		.84**	.55**	.18	—	.44*	.12	-.06	.04	.32	-.04	3.86	1.42
5. Private regard for class – post measure.		.52*	.73**	.19	.52*	—	-.01	-.41†	-.01	.14	-.27	5.07	1.19
6. Expectations of upward mobility – post-measure.		-.06	-.17	.80**	-.10	.09	—	.62**	.47*	.31	-.21	4.97	1.31
7. Own effort, hardship, and challenge.		.32	.21	-.26	.13	-.03	-.35	—	.32	.47*	-.17	2.64	1.43
8. Others' effort, hardship, and challenge.		.34	.28	.31	.24	.50*	.36	.11	—	.17	-.33	3.13	1.62
9. Positive affect.		.64**	.39	.32	.65**	.64**	.11	.01	.53*	—	-.22	3.10	.99
10. Negative affect.		.29	.04	.04	.17	-.15	-.01	.23	.09	.14	—	1.31	.63
	M	4.04	5.37	4.17	3.86	5.37	4.17	2.72	3.42	3.15	1.21		
	SD	1.38	.92	1.26	1.22	.91	1.20	1.34	1.29	.95	.27		
	α	.77	.25	.69	.82	.52	.73	.73	.81	.84	.83		

Note. Descriptive statistics and correlations above the diagonal are for participants in the attachment condition and descriptive statistics and correlations below the diagonal are for participants in the private regard condition.

†$p = .06$; *$p < .05$; **$p < .01$.

N = 46.

somewhat. There was no difference across salience conditions in affect ratings, *t*s < 1. Positive affect was moderate, and negative affect was low.

Expectations of upward mobility

Descriptive statistics and correlations are in Table 4. We expected attachment salience to lead participants to have greater expectations of upward mobility relative to what they reported at the pre-test. No such difference or a lesser difference was expected as a consequence of private regard salience. A repeated-measures ANOVA was conducted with expectations of mobility (pre- and post-measures) as the within subject factor and condition (attachment vs. private regard) as the between subject factor. The expected interaction effect was significant, F (1, 44) = 6.41, p = .02, η^2 = .15. The interaction effect qualified a main effect for expectations of upward mobility, F (1, 44) = 6.41, p = .02, η^2 = .15 (the F values for the interaction and main effect are identical because the pre and post means for mobility were virtually identical in the private regard condition). The main effect of experimental condition was nonsignificant, F (1, 44) = 1.68, p = .20.

The interaction is depicted in Figure 3. As expected, in the attachment condition, participants reported greater expectations of upward mobility after relative to before the attachment salience manipulation, t (22) = 3.21, p = .004, d = .67. After the attachment salience manipulation, participants on average indicated that they somewhat agreed with the statement that they were to be upwardly mobile. In contrast, there was no difference in participants' expectations of upward mobility after relative to before the private regard salience manipulation, t < 1.

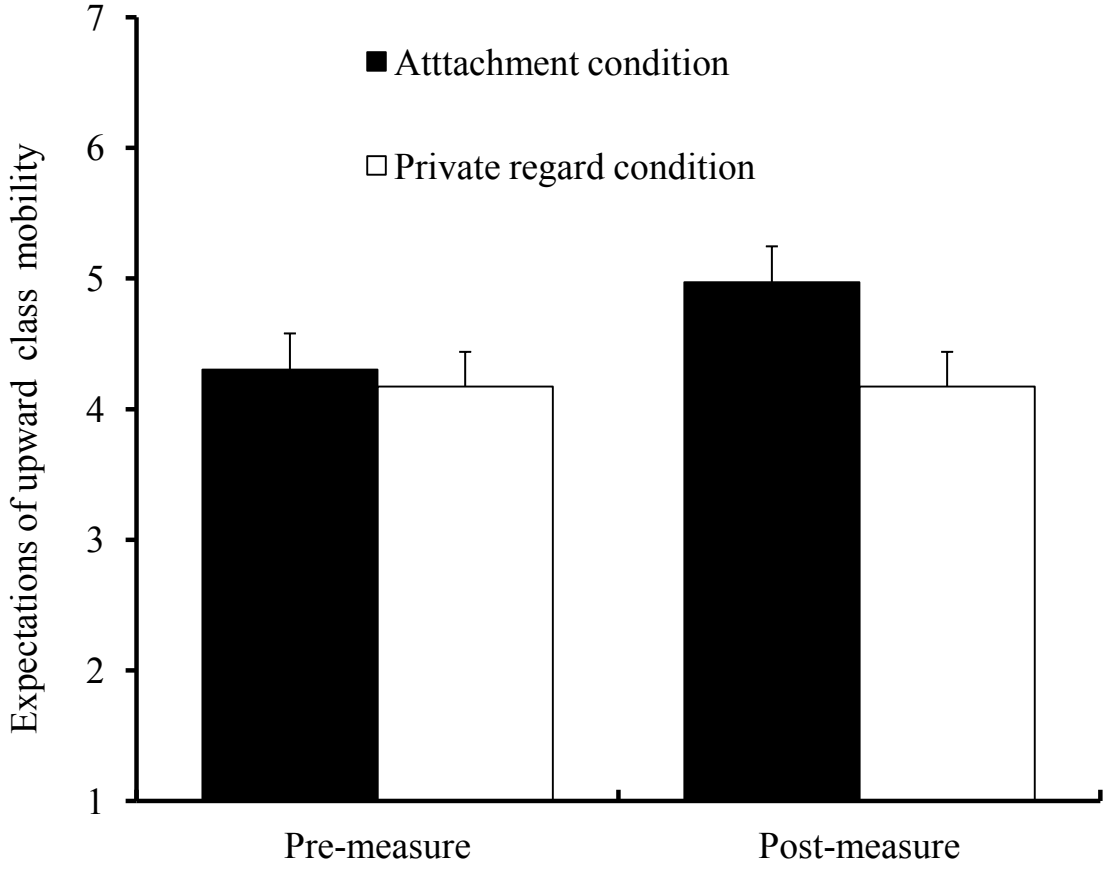

Figure 3. Bar graph of participants' expectations of upward mobility before and after the salience manipulations of attachment and private regard in Study 3. *Note*. Each error bar is the standard error of the mean.

Just as in Study 2, we included as covariates the experimenter coding of the events participants recalled. Valence was related to mobility (with negative recall being associated with more mobility), but the experimental effect was not qualified by valence. In Study 3, we also obtained self-ratings of recall content, and we conducted correlational analyses of these self-ratings with the magnitude of the experimental effect. In the attachment condition, the more participants' recalled content involving their own effort, hardship, and challenge, the greater were their subsequent expectations of upward mobility, $r = .62$, $p = .002$. In the private regard condition, the corresponding correlation was negative, but not significant, $r = -.35$, $p = .11$, and the two correlations significantly differed, $z = 3.45$, $p < .001$. The other indication of the importance of one's own effort and challenge in the attachment condition was that participants' reported effort and challenge for self was moderately associated with their feeling positive affect, $r = .47$, $p = .02$. The corresponding correlation in the private regard condition was near zero, $r = .01$, $p = .99$, and the two correlations tended to differ, $z = 1.61$, $p = .11$. Finally, participants' affect ratings were not significantly related to their expectations of upward mobility across and within in each experimental condition. See Table 4.

Self-reports of attachment and private regard

As expected, both across and within experimental condition, participants' mean levels of attachment and private regard did not change relative to their pre-measures, ts < 1.18. See Table 4 for descriptive statistics. Note that Cronbach's alpha was low for the pre- and post-measures of private regard, which is not a cause for concern. The reason is that we know from Study 1 that the items measuring private regard load onto their own latent factor, which is distinct from attachment.

Discussion

The findings of Study 3 replicate those of Study 2. Participants in Study 3 reported higher expectations of upward mobility after the attachment salience manipulation relative to their pre-test scores of 2-3 weeks earlier. In contrast, participants' expectations of upward mobility were unchanged after the private regard manipulation relative to their pre-test scores. The attachment salience manipulation influenced expected upward mobility, even as participants' attachment to and private regard for class background remained unchanged. The observed stability in Study 3 for mean-levels of attachment and private regard for one's class background is consistent with research demonstrating the temporal stability of other SCD identities, including identities in terms of being a university student or of belonging to a certain ethnic group (Ethier & Deaux, 1994; Jetten et al., 2008; Tsai & Fuligni, 2012).

The pre-post design in Study 3 allowed for a clearer identification of the impact of attachment to class background on participants' expectations of upward mobility. In contrast, the post-test only design of Study 2 left questions as to whether the observed difference for expected class standing were due to effects of both the attachment and private regard salience manipulations. Furthermore, attachment salience in Study 3 was shown to influence expectations of upward mobility, whereas the focus in Study 2 was on expected class standing. The findings in Study 3 extend those of Study 2, and highlight that attachment to class background supports moving up the social ladder for both working and middle class university students.

Attachment and private regard salience were manipulated by having participants recall events from their own pasts, and distinctions we identified in Study 3 in the content

of participants' recall, such as valence, did not qualify the observed effect of attachment salience on expected upward mobility. Analyses in Study 2 also led to the same conclusion. The more fine-grained idiographic coding participants provided for their own recall was useful in identifying features of recall that were related to the experimental attachment effect. In the attachment salience condition, participants' greater ratings of their recalled events having to do with their own effort, hardship, and challenge were positively associated with their expectations of upward mobility. This observed correlation was significantly different from the corresponding one in the private regard condition. This significant association is consistent with the view that upward social mobility involves one's own individual effort (Tajfel & Turner, 1986). In general, university students are individuals who have opted to engage in university studies at least in part as a means to achieve individual upward mobility (Bullock & Limbert, 2003; Lehmann, 2009). Participants in Study 3 seemed to construe their own efforts in positive ways in the attachment condition, as there was a positive association between their ratings of own effort and of positive affect. The latter reflects an energetic and engaged affective state. It nevertheless remains the case that there were no mean differences in either positive or negative affect across the attachment and private regard salience conditions.

CHAPTER 5: General Discussion

One important contribution of the present research is that it documents that young adults do hold a collective identity in terms of their social class background. The young adult participants in Study 1 reported on the attachment, private regard, and public regard they felt and perceived for their class background, and mean ratings indicated moderately strong feelings and perceptions. These affective-evaluative aspects of their collective identity were important for their expectations of mobility. Study 1 was correlational, and attachment to class background was associated with expectations of higher class standing and upward mobility. Attachment salience was manipulated in Studies 2 and 3, and greater salience led to expectations of higher class standing (Study 2) and of upward mobility (Study 3). As well, based on the design of Study 3, it was clear that the attachment salience – not the private regard salience – increased participants' expectations of upward mobility. Attachment to one's class background may have other possible benefits, as suggested by some of the present findings. It was found in Study 1 that individuals who were more attached to their social class background also were more attached to the student community. Having this greater sense of belonging as a student has been linked to having greater expectations of upward mobility (Jetten et al., 2008) as well as with better adjustment and higher achievement in the university milieu, such as having a richer social engagement in the milieu (Pitman and Richmond, 2008).

Expectations of mobility

The key outcome variables of interest in the present research were participants' expectations of class standing (Studies 1 and 2) and expectations of upward mobility (Studies 1 and 3). Expecting upward social mobility with graduation from university

would seem beneficial, as it likely encourages university students to dedicate themselves to their studies (e.g., Harris, 2008).

Perhaps the most intriguing question that remains regarding expectations of upward mobility is whether individuals with such expectations feel that they will leave their social class background behind as they move to a higher social class. That is, can an individual hold one SCD class background identity, even as the individual holds an identity in terms of currently belonging to another social class? The present research suggests so. Many participants in Study 1 distinguished between their class background and the class affiliation that was implied by their current activities and interests. In particular, many students of working class background perceived that their current activities and interests placed them in the middle class.

The findings of the present research have implications for the social identity model of identity change (SIMIC; Iyer et al., 2008; Iyer, Jetten, Tsivrikos, Postmes, & Haslam, 2009; Jetten & Pachana, 2012). According to the model, individuals take on new group memberships during life transitions, such as working and middle class students entering university and adopting an identity of being students (Iyer et al., 2009; Jetten et al., 2008). In SIMIC, the groups individuals belong to before the life transition are a basis of social support to cope with adversities during the life transition, and that belonging to more groups increases the number of social supports one has. Of particular relevance for the present research is that in SIMIC individuals' pre-transition group memberships are theorized to be a platform from which they can adopt new group memberships in times of transition as long as the pre- and post-transition group memberships are perceived to be compatible.

In the context of university, SIMIC researchers have argued that individuals' social class background is a socio-structural factor which determines the number of groups they belong to before transitioning to university and their perceptions of compatibility between pre- and post-transition identities (Iyer et al., 2009; Jetten et al., 2008). According to Iyer and colleagues, individuals with a higher relative to lower social class background have more opportunities, contacts, and material resources to develop membership in more groups before entering university. As well, they argued that individuals with a higher relative to lower class background will perceive greater compatibility between their class background and being a university student because attending university for higher class individuals is commonplace. The present focus on collective identity adds another perspective to understanding the complex processes involved in social mobility. In the present research, social class was conceptualized as a collective identity involving a sense of attachment, private regard, and public regard. We found that individuals can relate to their social class background in terms of attachment, private regard, and public regard, which were important for understanding their expectations of taking on a new social class identity. For example, based on our Study 1, it seems that working class students' attachment and private regard for their class background may have opposing influences on their expectations of belonging to a higher social class (see Figure 1). Attachment was associated with expecting higher class standing whereas private regard was associated with expecting lower class standing.

The multidimensional collective identity approach adopted in the present research is informative because one can differentiate between the influence of attachment and private regard on the process of identity change and integration as specified in SIMIC.

For example, we theorized and found that working and middle class students' attachment to their class background supports their expectations of class standing (Studies 1 and 2) and of upward mobility (Studies 1 and 3). Also, consistent with the SIMIC perspective on social class background, we found in Study 1 that working relative to middle class students had lower public regard for their class background, in that they see their background as being less valued in the university milieu.

The results of Study 1 also speak to SIMIC in terms of the relation between attachment and private regard for social class background on the one hand and attachment and private regard for student identity on the other hand. In prior research using the SIMIC framework, it has been shown that individuals with a lower class background perceive greater incompatibility with being a student (Iyer et al., 2009; Jetten, et al., 2008). In our Study 1, we found that working and middle class students' attachment and private regard for their class background was positively associated with attachment and private regard for their student identity, which suggests compatibility. Taken together, these findings demonstrate that how university students' relate to their class background has important consequences for the process of identity change as specified in SIMIC.

The distinctiveness and relevance of attachment to class background

Is attachment to one's social class background reflective of a more global attachment to groups in general? In the present research, we found that attachment to class background was only moderately correlated with attachment to the student community for participants of working and middle class backgrounds (see Study 1). These findings suggest that individuals have distinct attachments to groups. As well, the

idea that individuals can have distinct attachments to groups is consistent with social identity theory in that individuals can identify with multiple groups and that these multiple identities are distinct.

Furthermore, the idea that individuals can have distinct attachments to multiple groups is consistent with research on interpersonal attachment. Indeed, prior research on interpersonal relationships indicates that individuals can have distinct attachment patterns to different people (Caron, Lafontaine, Bureau, Levesque, & Johnson, 2012; Pierce & Lydon, 2001; Ross & Spinner, 2001). For example, individuals can feel securely attached to their mother and feel insecurely attached to their father at the same time. Consistent with this prior research, in our Study 1, we found that attachment to mother, father, and friends were weakly to moderately correlated, which suggests that individuals can feel attached to different individuals and that these attachments are distinct.

Would working and middle class participants' attachment to another SCD group (e.g., Canadian) have similar beneficial consequences for their expectations of mobility? We argue that students' attachment to their class background would have distinct effects on their expectations of mobility because social class is a salient group membership in academic settings. Indeed, ethnographic research suggests that working and middle class university students are aware of social class differences in university (Kaufmann, 2005; Stuber, 2006). Other SCD group identities, such as national identity, seem less relevant in academic settings and would not produce similar effects that were observed for attachment to class background. However, in other countries, like the United States, race and ethnicity may be more important in academic settings. For example, it has been shown in prior research that African American students' greater attachment to their racial

group was associated with having a higher GPA (e.g., Altschul et al., 2006). In our Study 1, ethnicity was found to be inconsequential (see footnote 3).

The role of social class collective identity in comparative research on social class

A large body of prior research on social class in academic settings has adopted a comparative approach to address the influence of social class in university. The focus has been on examining differences between individuals as a function of objective (e.g., parental education) or subjective indicators (i.e., self-rated social class) on a range of various outcomes. For example, using objective and subjective measures of social class, prior research indicates that students with a working class background do not succeed as well as their middle class counterparts (Pascerella et al, 2004; Walpole, 2003). Working class students have lower GPAs, spend more time working for pay, are less involved in extracurricular activities (e.g., student clubs and activities), complete fewer credit hours in terms of coursework, and have fewer interactions with other students outside their courses compared to their middle and upper class counterparts. Furthermore, it has been shown that working class students feel less integrated in the university milieu compared to their middle class counterparts using both objective and subjective measures of social class (Ostrove & Long, 2007; Rubin, 2012).

The present research goes beyond prior research on social class in academic settings by conceptualizing social class as a collective identity. The findings indicate that individuals can hold a psychologically meaningful collective identity in terms of their social class background, and that students' feelings about their social class background may have beneficial consequences. In particular, students' attachment to their class background – be it working or middle class – was positively correlated with attachment

and private regard for student identity (Study 1), and supports their expectations of higher class standing (Study 2) and of upward mobility (Study 3). These novel findings emerged with other findings which are consistent with prior research on social class in academic settings. Specifically, we found in Study 1 that participants with a working relative to middle class background felt less attached to the student community, less private regard for their student identity, and had lower expectations of class standing and of upward mobility. The findings for attachment to one's class may be beneficial for working class students who do not succeed as well as their middle class counterparts.

In more recent research, it has been argued that working class students do not succeed as well as their middle class counterparts because they experience a cultural mismatch between their working class interdependent norms and the university setting's independent norms, which are aligned with middle class norms (Stephens et al.., 2012). Stephens and colleagues focused on students whose parents did not attend university (i.e., first generation) and students' whose parents have university degrees (i.e., continuing generation). Their findings indicate that first relative to continuing generation students have more interdependent motives (e.g., "Help my family out after I'm done with college," and "Give back to my community," p. 1188) and less independent motives (e.g., "Explore my potential in many domains" and "Expand my knowledge of the world") for attending university. In turn, these motives influenced students' GPAs during the first two years at university. Specifically, first relative to continuing generation students' reported higher interdependent and lower independent motives for entering university were associated with having a lower GPA one and two years later.

Participants' interdependent motives for attending university in Stephens and colleagues' (2012; see their Table 3 for a list) Study 2 concern interpersonal relations with family members and people in the community, which is distinct from how individuals feel about their social class background. In our view, the degree working and middle class students' feel attached to their class background is not contingent on interpersonal and role relationships with significant others or with other people with the same social class background. Indeed, in our Study 1, we found no relationship between attachment to class background on the one hand and attachment to parents and friends on the other hand for working and middle class students. See Table 3.

In other recent research on social class, individuals place themselves on a 10 rung ladder defined by quality of education, occupation, and income (Adler, Epel, Castellazzo, & Ickovics, 2000; Kraus et al., 2011), and researchers are debating the extent to which this subjective social status is linked to various psychosocial and health outcomes (Alfonsi, Conway, & Pushkar, 2011), above and beyond the contribution of objective status differences. In more recent theorizing, individuals' ratings on the ladder scale are conceptualized as a measure of subjective social class rank that determines attitudes, feelings, health and behaviours (Kraus, Piff, Mendoza-Denton, Rheinschmidt, & Keltner, 2012). Although participants' ratings on the ladder scale are moderately related to objective markers such as their education, occupation, and income, research based on the ladder scale does not allow for a clear identification of the particular class (e.g., working or middle) to which individuals identify. Correspondingly, research employing the ladder scale does not take into account how individuals feel about their social class and their views of how others perceive their social class. This is important because individuals'

scores on the ladder scale may be influenced by their degree of private regard and public regard for their class background. Specifically, individuals who view their own class background favorably and who view that others value their class background may rate themselves higher on the ladder scale, regardless of the social class they identify with. For example, it has been shown in ethnographic research on working class individuals in the community that they view their social class background as being on top of the social hierarchy because of their high regard for working class values, such as having a strong work ethic (Lucas, 2011).

In sum, examining the role of social lass from the perspective of collective identity adds a novel approach to understanding how social class can influence a broad range of outcomes. The added value is that social class is examined from the perspective of the individual. This approach would complement research that has focused on group differences based on objective (e.g., parental education) and subjective (e.g., ladder scale) measures of social class. Indeed, how individuals feel about their social class background is important to consider which adds another dimension of complexity to understanding how social class can shape important outcomes, such as academic achievement.

The origins of attachment to class

Given the distinction between attachment and private regard for one's social class background, it is useful to consider in more depth what the basis of such attachment might be. Attachment to class background likely rests in part on attachment to a neighbourhood, community, and landscape (including home: Hummon, 1992; Lewicka, 2011; Riley, 1992), which provide individuals with a sense of grounding and meaning. As well, people's attachment to place has been shown to be distinct from their evaluation

of place, and rests in part on social bonds and contacts (Lewicka, 2011). Of course, for adults who are being or have been upwardly socially mobile, many community social links of their class background may not exist anymore.

Attachment to one's social class background may be important, but many questions remain regarding such attachment. First and foremost, it is unclear why there are individual differences in degree of secure attachment to one's social class background. Indeed, a similar question can be raised regarding individual differences in secure attachment to one's ethnic identity, or to one's nationality. In contrast, there is a substantial body of theoretical and empirical work that identifies the determinants of adults' attachment styles in close dyadic relationships (Shaver & Mikulincer, 2007).

Although we do not favor this view, a position can be formulated to suggest that young adults' attachment to their parents effectively is the basis for their attachment to their social class background. This position rests on the following points. First, children as young as 7 years seem to identify with their socio-economic (SES) background, in that those of lower SES suffer the effects of stereotype threat on their intellectual performance, even as they themselves endorse the stereotype that lower SES children are less intelligent (Desert, Preaux, & Jund, 2009; also see Regner & Monteil, 2007; Regner, Huguet, & Monteil, 2002). Second, for children of such young age, parents – and particularly mothers – are likely the major attachment figures. Third, parents remain important as a secure base for children even as they mature into young adults (Mikulincer & Shaver, 2007). Given these points, one can argue that attachment to social class background is based closely on attachment to parents, and that effects of the former are due to the latter. The strong counterargument is found in the work of Brewer and her

colleagues (Brewer, 2008; Brewer & Gardner, 1996; Brewer & Roccas, 2001) who argued for clear distinctions between attachment at the collective level of the self, and attachment at the relational level of the self (i.e., attachment in interpersonal or face-to-face relationships with significant others). In our Study 1, attachment to class background was not related to attachment to parents or friends, which is consistent with Brewer and colleagues. In the present research, attachment to class background supported expected mobility. In contrast, for "first generation" working class students, their parents may not understand, may not be able to help, or may criticize and even undermine efforts to succeed in their university studies (Ochberg & Comeau, 2001).

As well, it is also unclear how stable is an individual's attachment to his or her class background over time. Prior research suggests that such attachment may be relatively stable. Other SCD identities, including identities in terms of being a university student or of belonging to a certain ethnic group seem relatively stable over time (Ethier & Deaux, 1994; Jetten et al., 2008; Tsai & Fuligni, 2011). In our Study 3, we assessed individual differences in working and middle class participants' degree of attachment and private regard for their class background twice over a period of 2-3 weeks. The findings indicated that participants reported moderate levels of attachment and private regard which were relatively stable over time, as in much prior research on other SCD groups.

Limitations

It can be argued that a limitation of the present research was that not all components of collective identity in terms of social class background were assessed. In line with Ashmore and colleagues (2004), from the outset, we specified the components of collective identity which were important for addressing our research question. Our

interests concerned the role of attachment and we considered the role of all other affective-evaluative components of collective identity as well as importance, which was found to be inconsequential (see footnote 6). In particular, one can ask about the collective identity component of interdependence/mutual fate, which is a sense of "the commonalities in the way group members are treated in society" (Ashmore et al., 2004, p. 83). This sense of interdependence may be particularly relevant to working class students. Compared to middle class students, working class students' motives for attending university are more oriented toward supporting their family members and their home communities, and these interdependent motives seem to have negative consequences for their academic achievement (Stephens et al., 2012). As such, it is difficult to argue that the observed attachment findings are due to interdependence/mutual fate. The present research focused on individuals engaged in individual social mobility, and it is difficult to argue that a sense of interdependence encourages individual mobility. Instead, interdependence may support collective action to improve the situation of the group as a whole. Findings in Study 3 also undermine the argument that the attachment effect is due to interdependence. In the attachment condition of Study 3, there was a moderate positive correlation between recalling one's own effort, hardship, and challenge and expectations of upward mobility.

One can also argue that engaging in autobiographical recall produced the experimental effects in Study 2 and 3. This is not plausible because participants in both conditions engaged in autobiographical recall. Indeed, the salience manipulation of attachment and private regard involved participants having to recall and write about an

event from their lives. As such, engaging in autobiographical recall is not an extraneous factor or confound that may account for the experimental effects in Study 2 and 3.

A third limitation of the research is that we remain unclear on the distinctions between memories linked to attachment and those linked to private regard. There were few differences that emerged in our coding of the recalled events, and there were also few differences in participants' own ratings of their recall. One question that can be raised is whether the recalled events in the attachment and private regard salience conditions in Studies 2 and 3 are different in nature, or whether they reflect different perspectives that can be brought to bear on the same past event. In an integrative theory of autobiographical recall, Conway and Pleydell-Pearce (2000) have stated that recall is subject to current goals and the working self-concept. As such, it is possible that an individual could recall one and the same event as a basis for attachment or as a basis of private regard for class background. What remains clear is that coders blind to experimental condition reliably differentiated between individuals in the attachment and private regard conditions on the basis of their recalled events.

A fourth limitation concerns the outcome variables in the present research, which were expectations of class standing and upward mobility. First, such expectations are not as concrete an outcome variable as are GPA, graduation rate, or quality of jobs obtained after graduation. Second, the assumption was made in the present research that expectations of class standing and of upward mobility were important, and are likely to motivate and guide behavior (Roese & Sherman, 2007). Even though this assumption is in line with much prior research, the assumption remained untested. There were also indications in the present research that such expectations are linked to factors that have

been identified as important for student achievement in prior research. In particular, a sense of belonging in the student community was associated with expectations of class standing and of upward mobility. As well, individuals who felt more supported by their parents for their studies had expectations of higher class standing. Third, it remains unclear whether individuals who expect upward mobility see themselves as making a clear break with their class background, or as being able to hold two identities regarding class: where you were and where you are.

Closing comments

Class matters. There has been a surge in research on class in recent years in social psychology (Kraus et al., 2012; Stephens et al., 2012; Jetten et al., 2008). Research since the classic work of Centers, and contemporary approaches to class, highlight the importance of social class in people's lives. In 1949, Centers demonstrated that people have a sense of belonging to their class. The present research extends this prior work into the realm of collective identity. A collective identity perspective on class adds to our understanding of the role of social class in people's lives as specified in more contemporary research.

Endnotes

[1]On an exploratory basis, we also included importance of class background identity in the present research. Importance has often been a focus in prior theoretical and empirical research on collective identity (cf. Ashmore et al., 2004). Importance is distinct from attachment, private regard, and public regard. No hypothesis was formulated for importance.

[2]For ease of presentation, we use the description *working class student* or *working class participant* to refer to individuals who report having a working class background. The description *middle class student* or *middle class participant* refers to individuals who report having a middle class background.

[3]Participants' ethnicity was included as a covariate in the principal analyses. Specifically, participants' ethnicity (White vs. non-White) was included in the multi-group SEM model (see Figure 1) as a predictor of attachment, private regard, public regard, expectations of high income opportunities, and expectations of class standing. For working class participants, ethnicity was not related to model variables. For middle class participants, ethnicity was related to attachment, expectations of high income, and expectations of class standing. The results for the model reported in Figure 1 remained unchanged after including ethnicity in the model.

[4]There were no differences across students of working and middle class background on other demographic variables. Working ($M = 2.30$, $SD = 1.16$) and middle class ($M = 2.22$, $SD = 1.20$) participants did not differ in what year of study they were in, $t < 1$. There were approximately equal proportions of working and middle class students in each Faculty (Arts and Science, Business, Engineering and Computer Science, and

Fine Arts) at Concordia University, χ^2 (3) = 3.13, p = .37. In addition, there were approximately equal proportions of working and middle class participants who had and had not lived in Canada their whole lives, $\chi^2 < 1$. For those who had not lived in Canada their whole lives, there was no difference across working and middle class participants in number of years they had been living in Canada, $t < 1$.

[5]We confirmed in a survey that individuals drawn from the same population as participants in the present research perceive clear class differences in life conditions and employment, and perceive the middle class in favorable terms. Participants in the survey (N = 159) perceived differences between the working class and the middle class. Specifically, compared to the working class, participants viewed most middle class people as a) having jobs with good benefits, b) being less vulnerable in terms of job security in poor economic times, c) feeling less concerned with making ends meet, and d) being able to afford all necessities in life while having extra money for savings and holidays. The middle class was seen in favorable terms as participants' mean ratings for the middle class indicated agreement that the above characteristics applied to the middle class.

[6]We considered three alternative models which were estimated for working and middle class participants separately. The first alternative model examined whether attachment in SCD class identity is distinct from private and public regard in SCD class identity. The tested model was identical to the model in Figure 1 except that the indicators of attachment to one's class background as well as private and public regard of one's class background now loaded onto one latent factor. The results indicated that the model did not provide a good fit to the data of working, χ^2 (14) = 84.71, $p < .001$, CFI =

.63, RMSEA = .14, and WRMR = 1.33, or middle, χ^2 (19) = 184.54, $p < .001$, CFI = .67, RMSEA = .11, and WRMR = 1.61, class participants. As such, the first alternative model was rejected.

In the second alternative model, we examined whether private and public regard of one's class background can be distinguished. The tested model was identical to the model in Figure 1 except that the indicators of private and public regard loaded onto one latent factor. Results indicated that the model did not provide a good fit to the data for working, χ^2 (15) = 82.99, $p < .001$, CFI = .65, RMSEA = .13, and WRMR = 1.17, or middle, χ^2 (17) = 169.77, $p < .001$, CFI = .70, RMSEA = .11, and WRMR = 1.52, class participants. As such, the second alternative model was rejected.

The third alternative model examined whether working and middle class participants' expectations of class standing were distinct from their expectations of high income opportunities after graduation. The tested model was identical to the model in Figure 1 except that the indicators of expectations of class standing and of high income opportunities loaded onto one latent factor. Results indicated that the model did not provide a good fit to the data for working, χ^2 (16) = 38.87, $p = .001$, CFI = .88, RMSEA = .07, and WRMR = .73, or middle, χ^2 (18) = 55.55, $p < .001$, CFI = .93, RMSEA = .06, and WRMR = .77, class participants. As such, the third alternative model was rejected.

[7]In Study 1, we also measured working and middle class students' perceived explicit importance of their social class background with the item "My social class background is not important to my sense of what kind of a person I am" (reversed). As noted in Footnote 1, this measure was included on an exploratory basis. The importance item was coded such that greater numbers mean greater importance. Working (M = 3.47,

SD = 1.98) and middle (*M* = 3.27, *SD* = 1.88) class students reported similar degrees of importance, t (956) = 1.50, p = .13.

We examined the role of explicit importance in the model in Figure 1 for working and middle class students separately. For working class students, the model in Figure 1 was analyzed after including the importance item as a separate latent factor in the model (i.e., importance was allowed to correlate with the attachment, private regard, and public regard, and was a predictor of expectations of class standing and of high income opportunities). The model provided a good fit, χ^2 (18) = 21.66, p = .25, CFI = .98, RMSEA = .03, and WRMR = .47. Importance was strongly associated with attachment, r = .66, p <.001, but was not significantly associated with private regard and public regard, and zs < 1. As such, the model was re-analyzed after allowing the importance item to load onto the attachment factor only. The model provided a good fit, χ^2 (19) = 25.78, p = .14, CFI = .97, RMSEA = .04, and WRMR = .57. The standardized factor loading for the importance item was small, β = .26, z = 3.53, p < .001. Overall, the results for the associations between attachment, private regard, and public regard on the one hand and expectations of class standing and of high income opportunities on the other hand were virtually identical to the results reported in Figure 1 for working class students.

For middle class students, the model in Figure 1 was estimated after including the importance item as a separate latent factor and the model could not converge to a solution. As such, the model in Figure 1 was estimated again, but the importance item was only allowed to load on the attachment factor. The model did not provide a good fit, χ^2 (21) = 56.49, p < .001, CFI = .93, RMSEA = .05, and WRMR = .75. Modification indices indicated that allowing the importance item to also load on the private regard

factor would enhance model fit. The analysis was repeated after allowing the importance item to load on both the attachment and private regard latent factors. The model provided a good fit, χ^2 (22) = 32.60, p = .07, CFI = .98, RMSEA = .03, and WRMR = .53. The importance item loaded positively on the attachment factor, β = .60, z = 6.70, p < .001, and negatively on the private regard factor, β = -.41, z = -3.99, p < .001. The results for the associations between attachment, private regard, and public regard on the one hand and expectations of class standing and of high income opportunities on the other hand were virtually identical to the results reported in Figure 1 for middle class students.

[8]The implication of the double valuation model for working class students is that their high private and public regard for their class background supports their expectations of upward mobility. A regression analysis was conducted to examine this prediction. Specifically, we examined whether participants who reported greater private and public regard for their class background also reported expectations of higher class standing. An ordinal regression was used given the ordered categorical nature of the expected class standing measure. Attachment, private regard, and public regard were standardized and included as independent variables. As well, a two-way interaction was computed between public and private regard and was entered into the analysis. Results for the main effects for attachment, private regard, and public regard were virtually identical to the results reported for the main analysis in Figure 1. However, the two-way interaction between private regard and public regard was nonsignificant, χ^2 < 1. As such, there was no support for the double valuation model for working class participants in Study 1.

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