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Should Students Have a Gap Year? Motivation and Performance Factors Relevant to Time Out After Completing School

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Increasingly, school leavers are taking time out from study or formal work after completing high school—often referred to as a "gap year" (involving structured activities such as "volunteer tourism" and unstructured activities such as leisure). Although much opinion exists about the merits—or otherwise—of taking time out after completing school, relatively little research has sought to understand the gap year from a psychoeducational perspective. Harnessing the theories of planned behavior and reasoned action and using structural equation modeling, the author examines the academic factors that predict gap year intentions among 2,502 high school students (Study 1) and the academic profile in respect to gap year participation of 338 students in university or college (Study 2). Findings in Study 1 show that postschool uncertainty and lower levels of academic motivation predict gap year intentions, that lower motivation and lower performance predict postschool uncertainty, and that these effects are significant over and above the effects of demographic (gender, age, ethnicity) covariates. Findings in Study 2 show that gap year participation positively predicts academic motivation and that this effect is significant over and above the effects of demographic covariates. The present investigation centrally positions psychoeducational theorizing in relation to the potential yields of a gap year in resolving problematic motivation and performance profiles that may have precipitated students' postschool uncertainty and interest in taking a year out after completing school.

Keywords: gap year, motivation, academic performance, structural equation modeling

A *gap year* is defined as a period of time "which an individual takes 'out' of formal education, training, or the workforce where that time sits in the context of a longer term career trajectory" (Jones, 2004, p. 1; see also Hillman, 2005; Krause, Hartley, James, & McInnis, 2005; Lamb, 2001). A gap year can involve structured activities, such as part-time work and volunteering (sometimes referred to as "volunteer tourism"; Brown, 2005; Wearing, 2001), or unstructured activities such as leisure. Most gap year participants undertake both at different points during their time out (Jones, 2004; Martin, 2005b). Although once the domain of more affluent and advantaged young people (Heath, 2007), a gap year is increasingly the pursuit of students from diverse backgrounds (Simpson, 2005). Recent estimates have indicated that between 15% and 20% of students are preparing to take a gap year or are currently taking or concluding a gap year. In Australia, for example (the site of the present study), the growth in the number of 1-year university deferments (where students enter university 1 year after completing school) has grown from 4% in 1974 to 11% in 2004 (Birch & Miller, 2007; Krause et al., 2005), with a forecast of even greater growth over the next few years (Martin, 2005b). It is, then, a salient transition option for substantial numbers of school leavers.

Gap year participants report that a major reason for taking time out from formal education or work relates to a need to have a break from education or work. The purported effects of gap year participation tend to be positive. According to proponents, a gap year better prepares young adults for the self-directedness and maturity needed to make the most of further education or work. Following a gap year, young people are reported to reflect higher performance outcomes, career choice formation, improved employability, and a variety of life skills (Jones, 2004). Indeed, by drawing on research around experiential education, the gap year can be seen as an educational process in which skills and critical reflection contribute to an individual's development (e.g., Adams, 1997; Simpson, 2005). However, in contrast to these contended yields, some have suggested that a gap year distracts young people from a linear transition between school and further education or work and that the year off negatively affects academic and workforce outcomes down the road (Berkner, He, Forrest-Cataldi, & Knepper, 2003; Horn & Carroll, 1998; Lamb, 2001).

Although much opinion exists about the merits—or otherwise—of taking time out after school, relatively little research has formally assessed the issue among students who intend to take a gap year and students who have taken a gap year. Indeed, it has been pointed out by numerous commentators that there is a need for rigorous and large-scale research on the factors that predict gap year intentions and participation and the effects of participation in a gap year (Heath, 2007; Martin, 2005b; Simpson, 2005). The present investigation comprises two studies that seek to directly address this identified research need with particular focus on the academic motivation and performance factors relevant to time off after completing school. Findings derived from assessment of these issues have the potential to assist pedagogy and guidance in the high school years on postschool intentions and postschool

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decision making. In relation to university students, findings have the potential to shed clearer light on the claimed academic yields of gap year participation.

Through its consideration of academic motivation and performance, the investigation also has the potential to position the gap year issue in more mainstream psychoeducational literature. Motivation plays a significant part in students' interest in and enjoyment of school and study. It also predicts student performance (Martin, Marsh, & Debus, 2001a, 2001b, 2003; Pintrich, 2003a, 2003b; Schunk, 1990). In turn, academic performance predicts future academic performance and is also connected to subsequent academic self-concept, engagement, and educational aspirations (Hattie, 2009; Marsh, 2007; Martin, 2009b). Indeed, developing an analytical framework that considers gap year participation in the context of motivational and performance factors not only locates the gap year in psychoeducational research but also extends psychoeducational research to a relatively understudied educational phenomenon.

Theory Relevant to Gap Year Participation: The Need for Psychoeducational Perspectives

To date, sociological (and similar) theorizing has dominated the gap year literature. It has been suggested that participation in a gap year enhances an individual's economic, social, and cultural capital, which then has advantages in competitive education and labor markets (Ball, Vincent, Kemp, & Pietikainen, 2004; Brown & Hesketh, 2004; Heath, 2007; Power, Edwards, Whitty, & Wigfall, 2003; Reay, David, & Ball, 2005). *Positional competition* has been identified as the packaging of self to promote and harness better life opportunities (Brown & Hesketh, 2004); some commentators have reported that the "economy of experience" (e.g., a gap year) is taking on disproportionate importance relative to an individual's academic credentials (Brown & Hesketh, 2004; Heath, 2007). Thus, Heath (2007) proposed that

> the ability to mobilize—and hence capitalize upon—the resources necessary for investing in a pre-university gap year also constitutes an important advantage that certain groups of young people are able to gain over others, not only at the point of university entrance, but also at the point of graduate labor market entry. (p. 93)

However, very little formal psychoeducational theorizing has been brought to bear on the gap year issue. This is significant because students' gap year intentions and potential gap year yields are heavily embedded in the educational and academic context—and this brings into consideration psychoeducational factors and processes relevant to the phenomenon (alongside important sociological perspectives). Moreover, to the extent that this is the case, research into the gap year issue will be advantaged by developing understanding around these psychoeducational factors and processes.

Two salient theories of behavioral intention and behavior are the theory of planned behavior (TPB) and the theory of reasoned action (TRA). TPB (Ajzen, 1985, 1988, 1991) and TRA (Ajzen & Fishbein, 1980; Fishbein & Ajzen, 1975) seek to provide explanations of informational and motivational influences relevant to behavioral intention and the influence of behavioral intention on behavior. TRA posits attitudes and social norms as two key predictors of behavioral intention; TPB adds to this by also positing the predictive role of perceived behavioral control. Indeed, research provides consistent support for the predictive and explanatory validity of TRA and TPB (Armitage & Conner, 2001; Conner & Armitage, 1998; Godin & Kok, 1996; Sutton, 1998).

Orbell, Hodgkins, and Sheeran (1997) have proposed that TRA and TPB are particularly effective in explaining behavioral intentions and behavior under conditions of relative certainty and decisional surety. However, when plans are unclear or postponed, or there is uncertainty about one's goals and/or the future, conceptual and operational extensions have been proposed to improve the predictive validity of these theories. One particularly influential and compelling extension is that proposed by Gollwitzer (1990) and Heckhausen (1991), who suggested a postdecisional or implementation phase that is geared toward developing more concrete and specific plans. According to Gollwitzer, implementing goal intentions comprises two stages. The first is akin to the process captured by TRA and TPB (see above). In the second, plans are formed as to how to ensure intentions are enacted. Thus, the implementation intention phase brings clarity to plans and goal intentions, leading to behavior (Sheeran, 2002). According to Orbell et al. (1997), this implementation phase "is characterized by efforts to promote the initiation of relevant actions, via the formation of plans specifying where and when to get started" (p. 946). Thus, because the world can be fuzzy, ill-defined, and ambiguous (Karoly, 1998), it is important to accommodate the need to develop clarity and specificity if a lack of clarity and specificity is in any way relevant or salient to behavioral intention and behavior. Thus, whereas TRA and TPB may hold greater predictive validity when clarity and specificity exists, theorizing around implementation intentions formally builds into their proposed processes the need and mechanisms to develop clarity and certainty.

To translate these concepts to the present study, it might be contended that the gap year can be seen as an opportunity for young people to develop clarity around postschool plans. That is, in the face of possible postschool uncertainty, the gap year might be a pursuit that is a means of developing implementation intentions and specific goals. Indeed, numerous authors have shown that intentions held with greater certainty tend to predict greater intention–behavior consistency (Bagozzi & Yi, 1989; Bassili, 1993; Pieters & Verplanken, 1995). Following from this, a further contention might be that once taken, a gap year should lead to resolution of uncertainty and give rise to adaptive outcomes. These contentions are tested in the present investigation through two studies. In Study 1 of high school students, it is hypothesized that postschool uncertainty predicts the intention to take a gap year after school. In Study 2 of university students, it is hypothesized that participation in a gap year predicts adaptive academic outcomes.

This line of reasoning is consistent with the limited gap year research conducted thus far. Birch and Miller (2007) found that students who are low achievers in school are more likely to take a gap year and suggested this was because they are less certain and clear about further study. Likewise, O'Reilly (2006) found in qualitative work that the gap year provided an opportunity to develop self-identity and certainty (see also Galani-Moutafi, 2000; Noy, 2004; O'Reilly, 2005; Wearing, 2001). However, no gap year research formally builds into predictive models the role of uncertainty in young people's intentions to have a gap year. If implementation intention theorizing (Gollwitzer, 1990, 1993, 1999)

holds, then uncertainty with regard to postschool plans might predict intentions to take a gap year after school. Moreover, to the extent that having a gap year resolves various uncertainties, the positive effects of participation in a gap year may also be evident.

The Role of Motivation and Achievement

In seeking a fuller understanding of the factors underlying young people's postschool uncertainty and postschool intentions, it is noteworthy that the role of motivation is often invoked in the literature on both behavioral intention and the gap year. According to Orbell et al. (1997), "the behavioral intention construct summarizes a person's motivational orientation toward an act or behavioral goal" (p. 946). According to Ajzen (1991), "intentions are assumed to capture the motivational factors that influence a behavior" (p. 181). In terms of gap year participation, Birch and Miller (2007) suggest that students deferring university "do not have the motivation or conviction to continue with study straight after school" (p. 341).

The term *motivation* is often used to describe "what gets people going, keeps them going, and helps them finish tasks" (Pintrich, 2003b, p. 104; see also Pintrich & Schunk, 2002). Thus, at a fundamental level, motivation resonates with behavioral intention and behavior enactment. In an integrative review of motivation and academic processes and outcomes, Pintrich (2003b) suggested that motivation underpins four general outcomes: individuals' choice of activities (and why individuals choose one course of action over another), individuals' level of activity (how much or how little individuals activate this activity), individuals' persistence through an activity, and individuals' performance on an activity. Thus, it is hypothesized that when motivated, an individual is likely to have clarity around choice and is persistent in executing that choice. Conversely, when an individual is unmotivated, he or she is likely to have less clarity around choice and as a result is more likely to have intentions reflecting this lack of clarity. In the case of the present study, it is hypothesized that students lower in motivation are likely to have greater postschool uncertainty, which will be reflected in greater intention to have a gap year (Study 1). Moreover, consistent with theorizing about the positive effects of implementation intentions (Gollwitzer, 1999), it is hypothesized that participation in the gap year predicts resolution of motivational deficits in the form of more adaptive motivational outcomes (Study 2). Hence, Birch and Miller (2007) conclude that "taking a 1-year break between high school and university for travel or work appears to motivate students for study when they commence university" (p. 341).

To capture a breadth of achievement motivation dimensions, the present investigation uses a framework developed by Martin (2007, 2009b) that captures cognitive and behavioral factors identified by Pintrich (2003a) central to the development of motivational science. These factors align with Pintrich's call for conceptualizing and articulating models of motivation that encompass self-efficacy, attributions, valuing, control, self-determination, goal orientation, need achievement, self-regulation, and self-worth. Indeed, this call echoes those by others for more integrative approaches to achievement motivation and engagement research (Bong, 1996; Murphy & Alexander, 2000). Accordingly, the motivation operationalization in this investigation involves cognitive and behavioral factors comprising adaptive dimensions such as goals, values, efficacy, and self-regulation, and less adaptive dimensions such as anxiety, fear, and uncertainty.

Research has also linked school achievement to gap year participation. It appears that low achievers have higher rates of university deferment (Barrett & Powell, 1977; Bornholt, Gientzotis, & Cooney, 2004; Elsworth, Day, Hurworth, & Andrews, 1982; Hillman, 2005; Linke, Barton, & Cannon, 1985; Weaving, 1978). In fact, Birch and Miller (2007) attributed the negative relationship between achievement and gap year participation to a lack of postschool certainty:

> To the extent that taking a gap-year represents uncertainty about tertiary study, the negative correlation between taking a gap year and students' TER [tertiary entrance rank; final year school achievement] suggests that low-achieving students are more uncertain about their tertiary academic studies than high-achieving students. (p. 341)

However, the suggested links between achievement and postschool uncertainty and gap year intentions have not been directly investigated. Accordingly, alongside motivation, achievement is included in this investigation as a potential predictor of postschool uncertainty and gap year intentions (Study 1). Again, to the extent that the gap year resolves any academic deficits (consistent with implementation intentions theorizing; Gollwitzer, 1999), it is hypothesized that participation in a gap year predicts adaptive academic outcomes (Study 2).

Covariates Relevant to the Hypothesized Process

In most appropriately examining these questions, it is important to control for factors known to be significantly associated with numerous constructs under focus in the study. For example, young men are significantly less likely to take a gap year, as are students from non-English-speaking backgrounds (NESB; Birch & Miller, 2007; Hillman, 2005; Jones, 2004; Krause et al., 2005; Lamb, 2001). In terms of motivation and achievement, previous findings have shown that male adolescents reflect more maladaptive profiles on a number of achievement motivation measures during school (Martin, 2004) and at university (Martin, 2009b). In terms of age, adolescence has been found to pose academic difficulties and challenges unique to that time (Anderman & Midgley, 1997; Roeser, Eccles, & Sameroff, 2000); a decline in student motivation and engagement has been found to emerge during high school (see Wigfield & Tonks, 2002) and to continue into the middle years of high school (Martin, 2001, 2003, 2007). Further, it is not unreasonable to consider that gap year intentions may begin to be formulated in early and middle high school, so including the full range of high school students is also not unreasonable. Moreover, to the extent that a lack of postschool work or study clarity is hypothesized to predict gap year intentions, and because students in the early high school years are less likely to have such postschool clarity, it is foreseeable that they will be more likely to report gap year intentions. On the other hand, students closer to graduation are more likely to have greater postschool work and study clarity (there tends to be more postschool guidance in the final years of school) and possibly less intention to take a gap year. Thus, we propose that age is also a relevant covariate in relation to gap year intention and a further test of the role of postschool clarity. Hence, in examining substantive factors relevant to gap year intentions and gap year participation, it is also important to

control for variance attributable to gender, age, and ethnicity. In doing so, the relative salience of motivation, achievement, postschool uncertainty, gap year intentions, and gap year participation can be better assessed over and above the effects of known covariates.

The Present Investigation

The proportion of young people taking time out from further study or work after completing school is not insubstantial and is increasing. There is a need for greater research attention directed at factors that predict postschool intentions (high school students; Study 1) and the academic profile of students in further education and training who have participated in a gap year after completing school (university students; Study 2). Based on theorizing relevant to implementation and behavioral intentions, the roles of motivation and achievement, and the deployment of covariates, the proposed model for Study 1 is shown in Figure 1A; it is one in which (a) demographic factors predict motivation, performance, postschool uncertainty, and gap year intentions; (b) motivation and performance predict postschool uncertainty; and (c) postschool uncertainty predicts gap year intentions; it is hypothesized that lower academic motivation and performance will predict postschool uncertainty, and postschool uncertainty will predict gap year intentions. The feasibility of direct paths linking motivation and performance with gap year intentions (an exploratory element of the study) will be determined through inspection of modification indices (discussed below). Based on theorizing relevant to implementation and behavioral intentions, the tentative benefits of gap year participation posited by (limited) research, and the deployment of covariates, the proposed model for Study 2 is presented in Figure 1B; it is one in which (a) demographic factors predict gap year participation and motivation and (b) gap year participation predicts motivation. It is hypothesized that gap year participation will predict adaptive levels of academic motivation.

Study 1

Method

Participants and procedures. The school sample comprises 2,502 high school students in junior high school (Grades 7 and 8: 47%, age approximately 12–14 years), middle high school (Grades 9 and 10: 40%, approximately 14–16 years), and senior high school (Grades 11 and 12: 13%, approximately 16–18 years) from seven Australian high schools. Just under half (42%) of the respondents were female and 58% were male. The mean age of respondents was 14.08 years (SD = 1.53). One in five students (20%) was from an NESB.

This sample is a subset of a larger project (e.g., Martin, 2009a) and comprises cases with no substantial missing data points on measures central to this investigation (e.g., postschool uncertainty; gap year intentions; ethnicity). Hence, although part of a larger project, a subset of measures and participants relevant to the gap year investigation was analyzed, yielding findings completely distinct from the larger project (i.e., no other publications deal with the gap year issue). Six of the seven schools were comprehensive, comprising students of mixed ability. Three were fee-paying comprehensive schools comprising students at a slightly higher aggregate ability level than most comprehensives (but they do not screen or select students on entry by ability), and the other three were systemic comprehensive schools. One school was academically selective. Two of the largest schools were single-sex boys' schools (hence the higher male representation); two schools (including the smallest school) were single-sex girls' schools; and three were coeducational schools. Teachers administered the instruments to students during class.

Measures.

Motivation. Motivation is assessed in the present study using the Motivation and Engagement Scale–High School (MES-HS; Martin, 2009c). The MES-HS assesses motivation through three

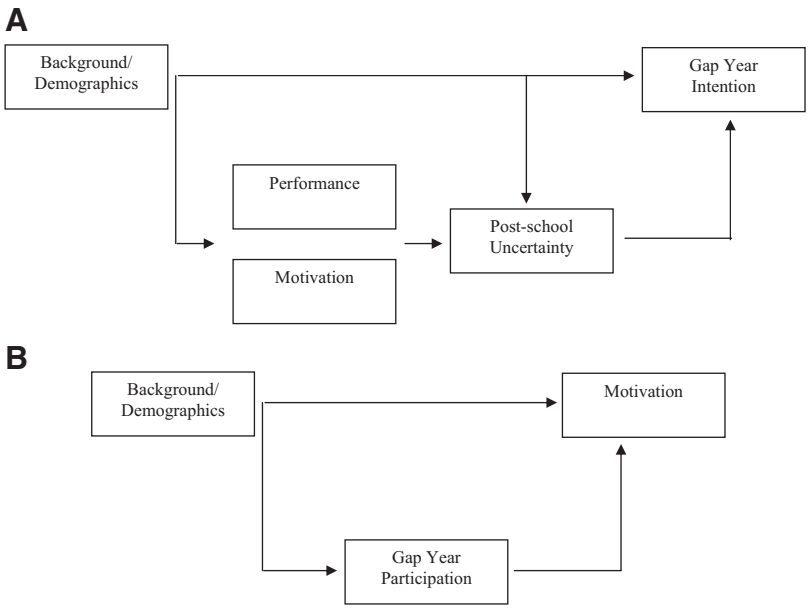

Figure 1. A: Hypothesized school student model. B: Hypothesized university student model.

adaptive cognitive dimensions (self-efficacy, valuing, mastery orientation), three adaptive behavioral dimensions (persistence, planning, task management), three impeding or maladaptive cognitive dimensions (anxiety, failure avoidance, uncertain control), and two maladaptive behavioral dimensions (self-handicapping, disengagement). Each of the 11 factors comprises four items; hence, it is a 44-item instrument. To each item in the MES-HS, respondents rate themselves on a scale of 1 (*strongly disagree*) to 7 (*strongly agree*). For more detailed information on the development and validity of the scales, see Martin (2001, 2003, 2007).

Although there is a first-order structure that underpins the model, for a number of reasons the present study emphasizes the higher order factors. First, previous research focusing on these first-order constructs (Green, Martin, & Marsh, 2007; Marsh, Martin, & Debus, 2001) has shown substantial shared variance of first-order factors within each higher order cluster. Second, numerous studies have now demonstrated the excellent fit of the higher order solution (Martin, 2001, 2003, 2007, 2009b). Third, very high mean first-order correlations among adaptive factors, impeding factors, and among maladaptive factors have been consistently reported (Martin, 2001, 2003, 2007, 2009b).

The adaptive cognition items in the MES-HS reflect individuals' positive attitudes and orientations toward school and assess such dimensions as self-efficacy, valuing, and mastery orientation (e.g., for self-efficacy: "If I try hard, I believe I can do my schoolwork well"). Adaptive behavior items reflect positive behaviors and engagement with school and comprise constructs reflecting planning, management, and persistence (e.g., for planning: "Before I start an assignment, I plan out how I am going to do it"). Impeding or maladaptive cognition items reflect inhibited (and in some cases reduced) motivation and engagement from a cognitive perspective and include constructs reflecting fear of failure, uncertainty surrounding schoolwork, and anxiety (e.g., for anxiety: "When exams and assignments are coming up, I worry a lot"). Maladaptive behavior items reflect reduced motivation and engagement from a behavioral perspective and comprise constructs such as self-handicapping and disengagement (e.g., for self-handicapping: "I sometimes don't study very hard before exams so I have an excuse if I don't do as well as I hoped").

Performance. The objective performance task comprised a subset (due to class time restrictions) of literacy and numeracy items shortened and adapted from the Wide Range Achievement Test 3 (Wilkinson, 1993), standardized by grade level. Because the study is a domain-general one (not located in a specific school subject), the literacy and numeracy scores were aggregated to provide a general performance score. Martin (2009a) has demonstrated the validity of this adapted and aggregated measure, significantly relating it to numerous cognate motivation measures.

Gap year intention, postschool uncertainty, and demographic factors. Other factors in the hypothesized model included gap year intention, postschool uncertainty, gender, age, and language background (for ethnicity)—all included as single indicators. For gap year intentions, the term *gap year* was first defined ("a break—e.g., travel—before or after starting university/college/work"); participants were then asked if they intended to have a gap year after leaving school (coded 0 and 1 for *no* and *yes*, respectively). In terms of postschool uncertainty, participants indicated whether they were sure or unsure of their postschool plans (coded 0 and 1, respectively). On language background, participants were asked if they spoke English (0) or another language (1 = NESB) at home. Gender was coded 0 for female adolescents and 1 for male adolescents. Age was retained as a continuous variable. All categorical variables were estimated as ordinal.

Statistical analyses.

Confirmatory factor analysis (CFA) and structural equation modeling (SEM). CFA and SEM, performed with LISREL 8.80 (Jöreskog & Sörbom, 2006), were used to test the factor structure of the proposed measures and the hypothesized models. In CFA and SEM, the researcher posits an a priori structure and tests the ability of a solution based on this structure to fit the data by demonstrating that (a) the solution is well defined, (b) parameter estimates are consistent with theory and a priori predictions, and (c) the subjective indices of fit are reasonable (McDonald & Marsh, 1990). Maximum likelihood was the method of estimation used for the CFA and SEM. In evaluating goodness of fit of alternative models, the root-mean-square error of approximation (RMSEA) is emphasized. Although the RMSEA is apparently the most widely endorsed criterion of fit, the nonnormed fit index (NNFI), the comparative fit index (CFI), the χ^2 test statistic, and an evaluation of parameter estimates are also reported. For RMSEAs, values at or less than .08 and .05 are taken to reflect an acceptably close fit and an excellent fit, respectively (see Jöreskog & Sörbom, 1993; Marsh, Balla, & Hau, 1996; Schumacker & Lomax, 1996). The NNFI and CFI vary along a 0-to-1 continuum in which values at or greater than .90 and .95 are typically taken to reflect acceptable and excellent fits to the data, respectively (McDonald & Marsh, 1990). The CFI contains no penalty for a lack of parsimony so that improved fit due to the introduction of additional parameters may reflect capitalization on chance, whereas the NNFI and RMSEA contain penalties for a lack of parsimony.

In the CFA and SEM, 10 factors were modeled: four higher order MES-HS factors and six performance, background, gap year intention, and postschool factors. All multi-item scales were estimated as latent factors, and single-item measures were estimated as observed variables with the loading fixed to unit value and the uniqueness fixed to zero. SEM was used to test the predictors of gap year intentions. The hypothesized SEM is presented in Figure 1A, where (a) demographic factors predict motivation, performance, postschool uncertainty, and gap year intentions; (b) motivation and performance predict postschool uncertainty; and (c) postschool uncertainty predicts gap year intentions.

Modification indices. In CFA and SEM, it is well known that alternate models can fit the data equally well or better than the hypothesized one (Kaplan, 1990; Martens & Haase, 2006). Hence, researchers rarely test a single model in isolation but often make post hoc decisions to improve the fit between a model and the data (Byrne, 1998). One of the most commonly used methods for modifying covariance structure models involves inspection of modification indices (Jöreskog & Sörbom, 1988) and the expected parameter change statistic proposed by Saris, Satorra, and Sörbom (1987). These indices suggest statistically significant improvements in the fit of a model. The model modification process adopted in the present study is a forward search (see Chou & Bentler, 1993) in which both the modification indices and the expected parameter change are inspected and fixed parameters in the existing model are freed and successively reestimated. Under this approach, parameters with large modification indices and large expected change values were freed, provided it made substantive

sense to do so. As a result, additional parameters were only freed if (a) modification indices indicated a large estimated change, and (b) these parameters were conceptually defensible.

Missing data. For large-scale studies, the inevitable missing data are a potentially important problem, particularly when the amount of missing data exceeds 5% (e.g., Graham & Hoffer, 2000). A growing body of research has emphasized potential problems with traditional pairwise, listwise, and mean substitution approaches to missing data (e.g., Graham & Hoffer, 2000); this has led to the implementation of the expectation maximization (EM) algorithm, the most widely recommended approach to imputation for missing data, as operationalized using missing value analysis in LISREL. In fact, 2.6% of our data were missing, so the EM algorithm was considered an appropriate procedure. Also explored were alternative approaches to this problem which showed that results based on the EM algorithm used here were very similar to those based on the traditional pairwise deletion methods for missing data—as expected when there was so little missing data.

Explained variance, effect sizes, and descriptive analyses. Correlation and SEM findings can be interpreted in terms of explained variance and effect sizes. In terms of correlational analyses, the percentage of variance explained (i.e., r^2) can be derived from the correlation matrix. Indeed, r^2 is one of the more classic effect sizes available in parametric analyses (Cohen, 1988, 1992). When presenting SEM findings, the present article reports the completely standardized solution, which can be interpreted in the traditional effect size manner such that a change of 1 *SD* in the independent variable will result in a change of *.zz* (where *.zz* is the completely standardized beta coefficient) *SD* in the dependent variable.

In addition to the multivariate quantitative techniques described above, a series of summary (and univariate) techniques were used to examine descriptive, reliability, and distributional properties of the items and scales. Specifically, to examine reliability, Cronbach's alpha coefficients were examined. To determine distributional properties, means, SDs, skewness, and kurtosis were assessed.

Results

Descriptive statistics and preliminary psychometric properties of measures. Table 1 presents means, SDs, distributions, and reliability coefficients (Cronbach's alpha) for the 10 factors in the hypothesized model (four higher order MES-HS factors and six performance, background, gap year intention, and postschool factors). All multi-item factor scores are reliable and distributional properties are consistent with prior research (Martin, 2007). To test the dimensionality and factor structure of the measures under focus, the 10-factor model was examined using CFA. The CFA yielded a very good fit to the data, $\chi^2(1126, N = 2{,}502) = 6{,}639.46$, CFI = .97, NNFI = .97, RMSEA = .04. Factor loading ranges and means are also presented in Table 1. Taken together, the loadings are acceptable.

Hypothesized SEM. SEM was then used to test the predictors of gap year intentions. The hypothesized SEM was one in which (a) demographic factors predict motivation, performance, postschool uncertainty, and gap year intentions; (b) motivation and performance predict postschool uncertainty; and (c) postschool uncertainty predicts gap year intentions (see Figure 1A). This model fitted the data very well, $\chi^2(1131, N = 2{,}502) = 6{,}715.89$, CFI = .97, NNFI = .97, RMSEA = .04. Standardized beta coefficients for all paths are presented in Table 2. Paths significant at $p < .05$ are presented in Figure 2. Statistically significant predictors of gap year intentions were postschool uncertainty ($\beta = .18$), gender ($\beta = -.12$; female), language background ($\beta = -.31$; NESB), and age ($\beta = -.09$; younger students). Significant predictors of postschool uncertainty were performance ($\beta = -.13$; lower performers), adaptive behavior ($\beta = -.23$; lower adaptive behavior), age ($\beta = -.18$; younger students), and language background ($\beta = -.05$; NESB).

The modification indices were examined to assess for direct effects of performance and motivation on gap year intentions. These indicated one additional parameter: adaptive behavior to gap year intention ($\beta = -.12$; lower adaptive behavior), resulting in slightly improved model fit, $\chi^2(1130, N = 2{,}502) = 6{,}672.86$, CFI = .97, NNFI = .97, RMSEA = .04. Note also that postschool uncertainty partially mediates the relationship between (a) adaptive behavior, performance, gender, and language background and (b) gap year intention. Further, adaptive behavior partially mediates the relationship between (a) age and language background and (b) gap year intention. Given these mediating parameters, analyses also determined total effects in the model. These are presented in Table 2. Findings show that the total effects on gap year intentions are significant for age ($\beta = -.10$; younger students), gender ($\beta =$

Table 1
School Students: Descriptive and Distributional Statistics, Cronbach's α, Confirmatory Factor Analysis (CFA) Factor Loadings

Factor	*M*	*SD*	Kurtosis	Skewness	Cronbach's α	CFA loadings range (*M*)
Age	14.08	1.53	−0.64	0.43		1.00
Gender (FM/M)						1.00
NESB (N/Y)						1.00
Performance	0	1.00	0.59	−0.49		1.00
Adaptive cognition	5.82/7	0.84	1.86	−1.10	.87	.82–.91 (.85)
Adaptive behavior	4.80/7	1.08	−0.11	−0.40	.89	.82–.86 (.84)
Impeding cognition	3.53/7	1.05	−0.24	0.18	.84	.52–.86 (.67)
Maladaptive behavior	2.55/7	1.10	0.02	0.66	.83	.67–.86 (.77)
Postschool uncertainty (N/Y)						1.00
Gap year intent (N/Y)						1.00

Note. All factors with loading of 1.00 are single item factors. Performance is standardized. NESB = non-English-speaking background.

Table 2
School Students: Structural Equation Modeling Findings

Predictor	Dependent variables										
	Performance	Adaptive cognition	Adaptive behavior	Impeding cognition	Maladaptive behavior	Postschool uncertainty	Gap year intent	Indirect effects on postschool uncertainty	Total effects on postschool uncertainty	Indirect effects on gap year intent	Total effects on gap year intent
Age	.00	−.16***	−.13***	.03	.23***	−.18***	−.09***	.04	−.14	−.01	−.10
Gender (FM/M)	−.09***	−.07*	−.03	−.06*	−.02	−.04†	−.12***	.03	−.01	.01	−.11
NESB (N/Y)	.38***	.05*	.12***	.12***	.01	−.05*	−.31***	−.08	−.13	−.04	−.35
Performance						−.13***			−.13	−.02	−.02
Adaptive cognition						−.09			−.09	−.02	−.02
Adaptive behavior						−.23***	(−.12**)		−.23	−.04	−.16
Impeding cognition						.01			.01	.01	.01
Maladaptive behavior						−.03			−.03	−.01	−.01
Postschool uncertainty (N/Y)							.18***		—	—	.18

Note. Parameters in parentheses freed following inspection of modification indices. NESB = non-English-speaking background.
† $p < .10$. * $p < .05$. ** $p < .01$. *** $p < .001$.

–.11; female students), adaptive behavior (β = –.16; lower adaptive behavior), and postschool uncertainty (β = .18; NESB).

Taken together, structural parameters were consistent with hypotheses. Postschool uncertainty significantly predicted gap year intentions, and lower motivation and performance predicted postschool uncertainty and gap year intentions. The covariates (age, gender, and ethnicity) were also significant through the model; hence, the roles of postschool uncertainty, motivation, and performance are significant over and above the effects of covariates. The question now is the extent to which participation in a gap year resolves deficits that may have precipitated postschool uncertainty and gap year intentions. If theories of implementation and behavioral intentions are relevant to these processes (e.g., Gollwitzer, 1990, 1999; Heckhausen, 1991), it is hypothesized that university or college students who had participated in a gap year should evince more adaptive motivation. That is, the gap year should (at least in part) contribute to some resolution of deficits evidenced in high school. To test this, Study 2 deployed a model in which (a) demographic factors predict gap year participation and motivation, and (b) gap year participation predicts motivation (see Figure 1B).

Study 2

Method

Participants and procedures. University (college) respondents were 338 undergraduate students from two Australian universities. One university is well established and one of the oldest in the country (75% of sample). The other is a more recently established institution (25%). Most respondents were female (80%); 20% were male. It is important to note that gender was included as a covariate, so effects of a gap year on achievement motivation controlled for variance explained by gender. This was one of the study's efforts to address, in part, the gender imbalance. Notwithstanding this, given that young women are more likely to take a gap year (Birch & Miller, 2007; Hillman, 2005; Krause et al., 2005), some oversampling of female participants is not inappropriate. The mean age of students was 19.14 years (SD = 1.39). One in four students (24%) was from an NESB.

Of the sample, approximately 20% reported taking a gap year (in line with trajectories reported in recent years; Birch & Miller, 2007; Jones, 2004; Martin, 2005b). Most students were enrolled in education (69%); other students were enrolled in arts (19%), psychology or social science (6%), social work (3%), science (2%), and communications (1%). Given the preponderance of education students in the sample, a multivariate analysis of variance was conducted to explore for differences between education and other students on the motivation dependent variables, yielding no significant multivariate effect, $F(4, 333) = 0.20$, *ns*. A chi-square test was conducted to explore for differences between education and other students on the gap year variable, also yielding no significant effect, $\chi^2(1) = .67$, *ns*. Most were in their first year of study (73%), with 20% in second year, 5% in third year, and 2% in fourth or fifth year. Students completed the instrument in lecture or tutorial time. Students were asked to complete the Motivation and Engagement Scale—University/College (MES-UC; Martin, 2009c) on their own and return the completed instrument at the end of the lecture or tutorial they were attending at the time.

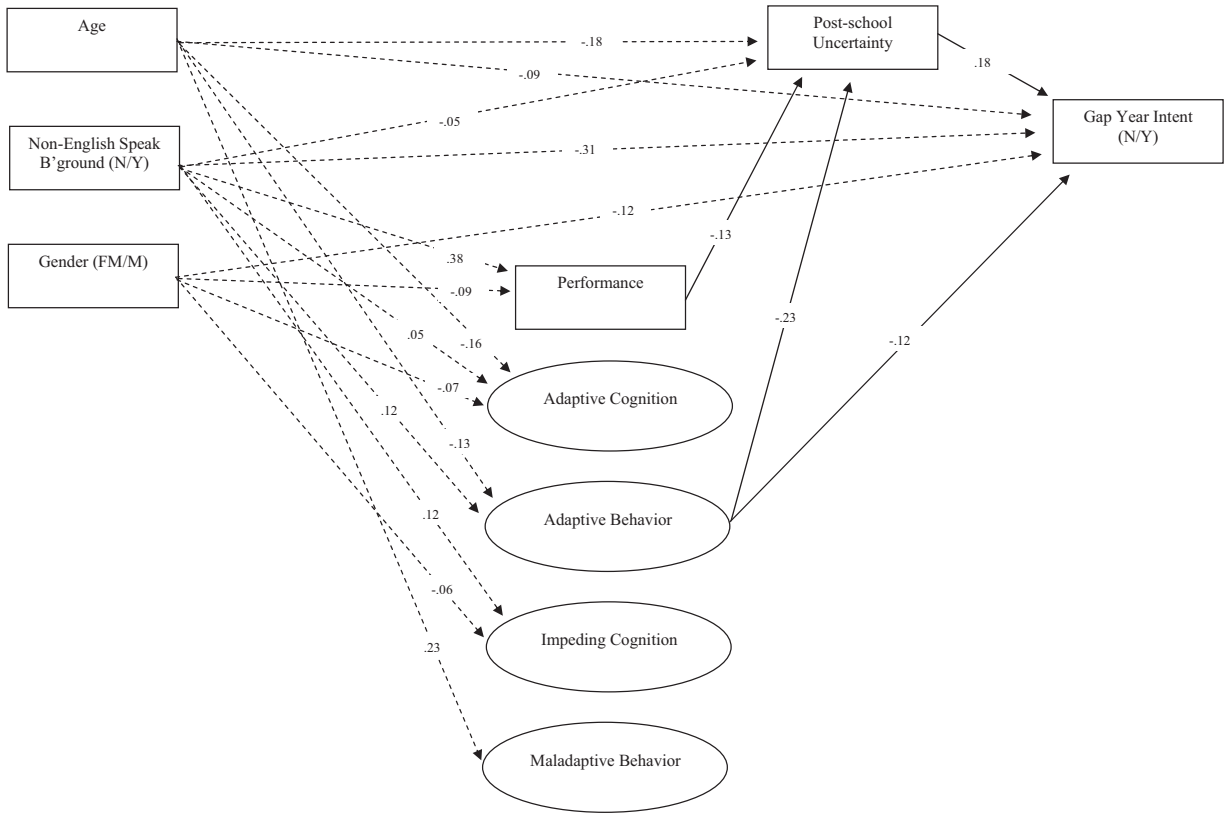

Figure 2. School student structural equation modeling. All paths are statistically significant. Dashed line represents paths from covariates. Model fit: $\chi^2(1130, N = 2{,}502) = 6{,}672.86$, comparative fit index = .97, nonnormed fit index = .97, root-mean-square error of approximation = .04.

The sample and instrumentation are a subset of a larger project aimed at assessing the construct validity of motivation among university and college students (Martin, 2008b, 2009b). This subset comprises only students who had taken at least one year off after completing school (thus excluding breaks such as 3 months) or had taken no break after school, were below the age of 25 years (so as not to confound mature age entry with younger gap-year students), and were full-time (very few were part-time students, so it was decided to exclude them). Although the dataset was not purpose-designed for a study on gap year participation, it represented an ideal extension and test of the issues assessed in Study 1 because it comprises motivation measures, information on gap year participation, and covariates common to the high school sample (Study 1). Taken together, Studies 1 and 2 shed light on the input and output dimensions of the gap year phenomenon.

Measures.

Motivation. Motivation was assessed using the MES-UC (Martin, 2009c). The MES-UC is directly parallel to the MES-HS but with simple word adjustments using the term *university/college* instead of *school* (e.g., self-efficacy school item: "If I try hard, I believe I can do my schoolwork well"; self-efficacy university item: "If I try hard, I believe I can do my university work well"). To each item in the MES, respondents rate themselves on a scale of 1 (*strongly disagree*) to 7 (*strongly agree*). For more detailed information on the development and validity of the MES-UC, see Martin (2008b, 2009b). Consistent with Study 1, the higher order MES factors are of central interest here.

Gap year and demographic factors. Consistent with Study 1, other factors in the hypothesized model included gap year participation, gender, age, and language background (for ethnicity)—all included as single indicators. The term gap year was first defined ("a break—e.g., travel—before or after starting university/college/work"), and then participants were asked if they had taken a gap year since leaving school (coded 0 and 1 for *no* and *yes*, respectively). Language, gender, and age were assessed and empirically treated in the same way as Study 1.

Statistical analyses. CFA and SEM along the lines of Study 1 were conducted, using the same fit indices and methods of estimation (see Study 1 Method above). In CFAs and SEMs for Study 2, eight factors were modeled: four higher order MES-UC factors and four background and gap year factors. All multi-item scales were estimated as latent factors, and single-item measures were estimated as observed variables with the loading fixed to unit value and the uniqueness fixed to zero. The hypothesized SEM is presented in Figure 1B, where (a) demographic factors predict gap year participation and motivation and (b) gap year participation predicts motivation. As with Study 1, the inevitable missing data are a potentially important problem, particularly when the amount of missing data exceeds 5% (e.g., Graham & Hoffer, 2000). In Study 2, 3.1% of the data were missing and so the EM algorithm

was considered an appropriate procedure. Because the model is a "fully forward" one (all "upstream" factors predicting all "downstream" factors; see Figure 1B), modification indices for beta paths are not relevant.

Results

Descriptive statistics and preliminary psychometric properties of measures. Table 3 presents means, *SD*s, distributions, and reliability coefficients (Cronbach's alpha) for the eight factors in the hypothesized model (four higher order MES-UC factors and four background and gap year factors). All multi-item factor scores are reliable and distributional properties are consistent with prior research (Martin, 2009b). To test the dimensionality and factor structure of the measures under focus, the eight-factor model was examined using CFA. The CFA yielded an acceptable fit to the data, $\chi^2(1046, N = 338) = 2{,}246.64$, CFI = .91, NNFI = .91, RMSEA = .06. Factor loading ranges and means are also presented in Table 3. Taken together, the loadings are acceptable.

Hypothesized SEM. SEM was then used to test the predictors of gap year participation and the predictive role of this participation on motivation. The hypothesized SEM was one in which (a) demographic factors predict gap year participation and motivation and (b) gap year participation predicts motivation (see Figure 1B). This model yielded an acceptable fit to the data, $\chi^2(1046, N = 338) = 2{,}246.64$, CFI = .91, NNFI = .91, RMSEA = .06; note that as a fully forward model, it yields the same fit as the CFA). Standardized beta coefficients for all paths are presented in Table 4. Statistically significant paths are presented in Figure 3. Statistically significant predictors of gap year participation were age ($\beta = .55$; older students) and language background ($\beta = -.34$; NESB). Significant predictive effects of gap year participation on motivation included adaptive behavior ($\beta = .31$; higher adaptive behavior) and, to a lesser extent, maladaptive behavior ($\beta = -.16$, $p < .10$; lower maladaptive behavior). Although not central to the present study's substantive concerns, gender (particularly) yielded direct effects on motivation and engagement, as did age and ethnicity (to a lesser extent).

Given these direct and mediating parameters, analyses also determined total effects in the model. These are presented in Table 4. Findings show that the total effects on adaptive cognition are significant for age ($\beta = .14$; older students) and gender ($\beta = -.15$; women). Total effects on adaptive behavior are significant for age ($\beta = .14$; older students), gender ($\beta = -.39$; women), ethnicity ($\beta = .17$; NESB), and gap year participation ($\beta = .31$; participation). Total effects on impeding cognition are significant for gender ($\beta = -.30$; women). Total effects on maladaptive behavior are significant for gap year participation ($\beta = -.16$; no participation).

Discussion

The proportion of young people taking time out from further study or work after completing school is substantial and is increasing. There is a need for research attention directed at factors that predict postschool intentions (high school students; Study 1) and the academic profile of students in further education and training who have participated in a gap year after completing school (university students; Study 2). To date, little research has integrated theory and targeted quantitative modeling to determine academic predictors of postschool uncertainty and gap year intentions in high school and then the role of gap year participation in academic motivation once at university or college. Findings in Study 1 showed that postschool uncertainty and dimensions of adaptive motivation predicted gap year intentions, that motivation and performance predicted postschool uncertainty, and that these effects are significant over and above the significant effects of the demographic covariates. Findings in Study 2 showed that gap year participation positively predicted academic motivation and that this effect was significant over and above the significant effects of the demographic covariates.

Implications of the Present Findings for Theory

The present investigation was shaped around a confluence of theorizing about implementation intentions (Gollwitzer, 1990, 1993, 1999; Heckhausen, 1991), TPB (Ajzen, 1985, 1988, 1991), TRA (Ajzen & Fishbein, 1980; Fishbein & Ajzen, 1975), and achievement motivation in educational contexts (Pintrich, 2003b). Considering the findings in the context of these perspectives, it is suggested that gap year research can benefit from psychoeducational theorizing and that there is merit in incorporating psychoeducational perspectives in future gap year research.

Theorizing on implementation intentions suggests that in the face of uncertainty, individuals are likely to engage in activities that assist decision making and shape specific behavioral plans (Gollwitzer, 1990, 1993, 1999; Heckhausen, 1991). In the context of the present investigation, this was hypothesized and found to take the form of gap year intentions in the face of postschool uncertainty. Moreover, if the gap year does play a part in the formation of plans and is a factor in the resolution of academic

Table 3
University Students: Descriptive and Distributional Statistics, Cronbach's α, Confirmatory Factor Analysis (CFA) Factor Loadings

Factor	*M*	*SD*	Kurtosis	Skewness	Cronbach's α	CFA loadings range (*M*)
Age	19.14	1.39	2.19	1.51		1.00
Gender (FM/M)						1.00
NESB (N/Y)						1.00
Adaptive cognition	5.82/7	0.63	0.19	−0.51	.81	.71–.89 (.78)
Adaptive behavior	4.77/7	0.82	0.19	−0.26	.84	.67–.80 (.72)
Impeding cognition	3.88/7	1.01	−0.46	0.06	.85	.57–.80 (.66)
Maladaptive behavior	2.97/7	1.02	−0.31	0.33	.82	.57–.79 (.68)
Gap year (N/Y)						1.00

Note. NESB = non-English-speaking background.

Table 4
University Students: Structural Equation Modeling Findings

	Dependent variables												
Predictor	Gap year intent	AC	AB	IC	MB	Indirect effects on AC	Total effects on AC	Indirect effects on AB	Total effects on AB	Indirect effects on IC	Total effects on IC	Indirect effects on MB	Total effects on MB
Age	.55***	.13†	−.03	−.03	.01	.01	.14	.17	.14	.02	−.01	−.09	−.07
Gender (FM/M)	.01	−.15*	−.39***	−.30***	.13†	.01	−.15	.001	−.39	.001	−.30	.001	.12
NESB (N/Y)	−.34***	.06	.28***	−.01	−.06	−.01	.05	−.10	.17	−.01	−.02	.05	.01
Gap year (N/Y)		.02	.31***	.03	−.16†		.02		.31		.03		−.16

Note. AC = adaptive cognition; AB = adaptive behavior; IC = impeding/maladaptive cognition; MB = maladaptive behavior; NESB = non-English-speaking background.
† $p < .10$. * $p < .05$. ** $p < .01$. *** $p < .001$.

deficits, then implementation intentions theorizing would also predict that participation in a gap year should resolve these academic deficits. It is important to note that in the context of the present investigation, this was found to be the case: Gap year participation positively predicted adaptive behavior and negatively predicted maladaptive behavior at university or college. Indeed, the very factor found to significantly (negatively) predict postschool uncertainty and gap year intentions at high school—adaptive behavior—was the very factor significantly (positively) predicted by gap year participation at university. Thus, consistent with implementation intentions theorizing, it appears that participation in a gap year may enable possible resolution of motivational deficits between high school and university.

In the context of TPB and TRA, motivation underpins the direction and intensity of a decision and action and so is central to the attitude–behavior nexus (Sheeran, 2002). However, when the relevant level and/or element of motivation is lacking, it is likely to negatively impact behavioral intentions and the capacity of these intentions to lead to clear decision-making and action (Conner & Armitage, 1998). Hence, TPB and TRA suggest that problematic levels of motivation and performance would interfere with individuals' capacity to form effective behavioral intentions. Consistent with these contentions, in the present study it was hypothesized and found that lower levels of adaptive behavior and performance predicted postschool uncertainty. Hence, motivation—as suggested by TPB and TRA—explains significant variance in postschool plans and gap year intentions.

Motivation was also considered in the context of educational theorizing. In an integrative review of motivation and academic processes and outcomes, Pintrich (2003b) suggested motivation underpins four general outcomes: students' choice of activities, students' level of activity, students' persistence through an activ-

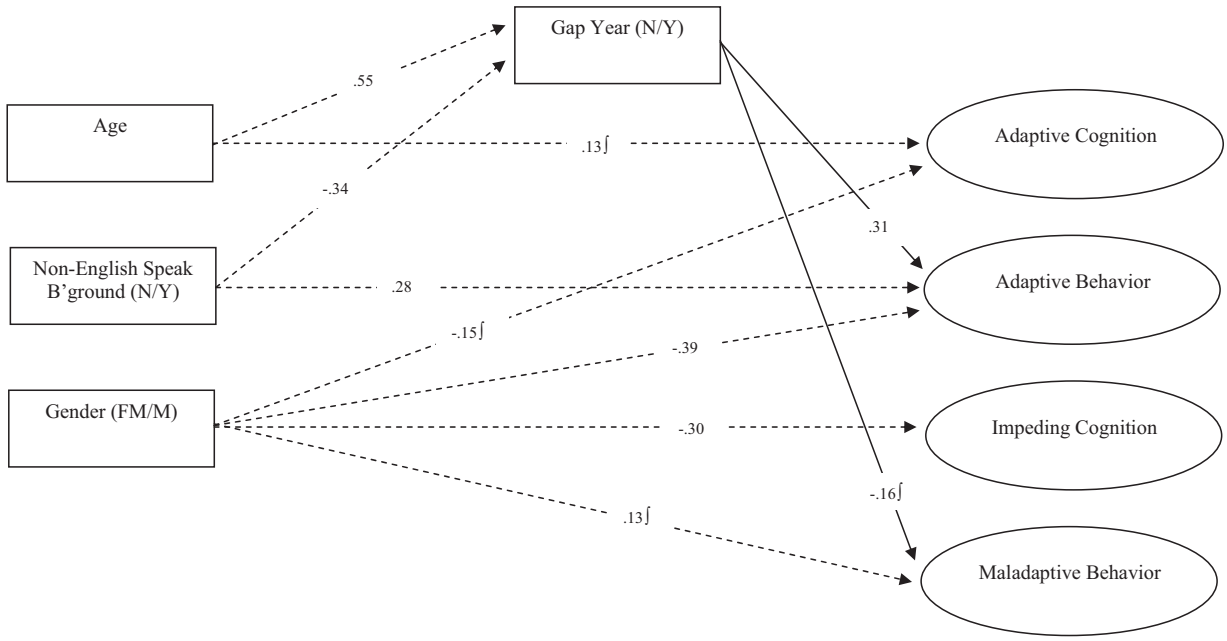

Figure 3. University student structural equation modeling. All paths are statistically significant (∫ statistically significant at $p < .10$). Dashed line represents paths from covariates. Model fit: $\chi^2(1046, N = 338) = 2{,}246.64$, comparative fit index = .91, nonnormed fit index = .91, root-mean-square error of approximation = .06.

ity, and students' performance on an activity. Following from this, it was suggested that a motivated student is likely to have clarity around decision-making and execution of that decision at the appropriate time. In contrast, an unmotivated student is likely to have less clarity around decision-making and decision execution. Translating these contentions to the present investigation, it was hypothesized and found that students who were lower in motivation reflected greater postschool uncertainty and greater intention to have a gap year. Thus, considering the present issues through the motivational lens offered by Pintrich provided important support for the framing of hypothesized models; in turn, the findings supported this framing and theoretical backdrop.

More broadly, in terms of gap year research, the present investigation is among the first to explicitly invoke psychoeducational theorizing to explain gap year intentions and gap year participation. To date, gap year research has been very applied and atheoretical or conducted and interpreted from sociological perspectives. In the case of the former, researchers have focused on participation numbers, gap year activities, gap year providers, and the demographic (or similar) profile of those taking a gap year (e.g., Betts, 2004; Birch & Miller, 2007; Jones, 2004). In the case of sociological perspectives, researchers have focused on issues relevant to access, equity, human capital, and social justice (Ball et al., 2004; Brown & Hesketh, 2004; Heath, 2007; Power et al., 2003; Reay et al., 2005; Simpson, 2004, 2005). Although there have been some references to psychological (e.g., identity formation; Galani-Moutafi, 2000; Noy, 2004; O'Reilly, 2006) and educational (e.g., experiential education; Heath, 2007) dimensions, these have not been employed to develop hypothesized models of gap year intentions and gap year participation that can be quantitatively confirmed or disconfirmed. The present investigation has centrally positioned psychoeducational theorizing as an important consideration in identifying and assessing factors and students for whom postschool uncertainty and gap year intentions are relevant. The present investigation has also centrally positioned psychoeducational theorizing in relation to the potential yields of a gap year in resolving problematic motivational orientations that may have precipitated students' uncertainty and interest in taking time out after completing school.

Implications of the Present Findings for Practice

Fishbein (1997; see also Conner & Armitage, 1998) reported that a key indication of the utility of TPB and TRA (and by extension, implementation intentions) is evidenced through their effectiveness in shaping interventions that bring about intention clarity and behavior change. It is significant to note that intervention research drawing on principles fundamental to implementation intentions, TPB, TRA, and motivation have been successful in supporting or changing individuals' planning, decision-making, and behavior. According to Orbell et al. (1997), implementation intentions research "provides strong support for the view that implementation intentions improve the predictive validity of the behavioral intention construct in TPB" (p. 952). Given this, specific strategies developed under the goal-setting research domain (Locke & Latham, 1990, 2002; see also Elliot & Sheldon, 1997) are an important means by which uncertain and/or postponed plans can be converted to behavioral intention and then behavior (see also Martin, 2006, in relation to personal bests goals). Miller, Shoda, and Hurley (1996) have also suggested intervention for self-regulatory processes that may be helpful in directing the execution of intentions in the most effective ways and at the most effective times.

Given the role of motivation in predicting postschool uncertainty and gap year intentions, it is also encouraging to recognize successful motivation intervention efforts demonstrated in the research literature. For example, focusing on the motivation dimensions in the present investigation (adaptive cognition, adaptive behavior, impeding cognition, maladaptive behavior), Martin (2005a, 2008a) has applied successful interventions to help high school students. In workshop (Martin, 2005a) and workbook (Martin, 2008a) formats, cognitive-behavioral strategies have been employed to target specific dimensions of high school students' achievement motivation. Pre- and posttesting has demonstrated significant gains in adaptive dimensions and significant reductions in impeding and maladaptive dimensions. By implication, practitioners seeking to shape clearer postschool plans and certainty may do so not only through a direct focus on the plans but also through motivational support. Interestingly, it appears that of the four motivational dimensions, adaptive behavior (comprising planning, task management, and persistence first-order factors), has the strongest link to postschool uncertainty and gap year intentions. Hence, targeting adaptive behavior may be a useful first point of intervention. Further research is needed to explore why adaptive behavior is the stand-out motivation factor, but it is perhaps no coincidence that in a study of behavioral intention, the (adaptive) behavioral dimension of motivation instrumentation is a salient predictor.

Alongside motivation was the significant role of performance in predicting postschool uncertainty. Previous research has linked school achievement to gap year participation. In relation to this, it seems that relatively lower achievers have higher rates of university deferment (Barrett & Powell, 1977; Bornholt et al., 2004; Elsworth et al., 1982; Hillman, 2005; Linke et al., 1985; Weaving, 1978). However, the absence of a significant direct path to gap year intentions suggests that low performance has its influence via postschool uncertainty. This is consistent with Birch and Miller (2007), who attributed the negative relationship between achievement and gap year participation to a lack of postschool certainty—an attribution supported by present findings that show the link between performance and postschool uncertainty. Hence, the yields of intervention seeking to enhance students' performance (through any number of approaches, including literacy and numeracy intervention, study skill development, tutoring, differentiated instruction, etc.; see Hattie, 2009; Hayes, Mills, Christie, & Lingard, 2006; Marzano, 2003) will be more relevant to strengthening postschool clarity than directly influencing gap year intentions and participation. The present findings, then, have shed important light on the differential roles of motivation and performance in predicting postschool uncertainty and gap year intentions.

Findings also provide pragmatic and logistic insights into the gap year phenomenon. They show that young women and students from English-speaking backgrounds are more likely to hold intentions to take a gap year. Thus, the present study provides direction for anyone who wants to identify groups of students for whom these issues are relevant. Findings also suggest that having a gap year does not adversely affect academic motivation at university.

In fact, results showed that students who had participated in a gap year reflected a more adaptive profile of motivation. Hence, integrating findings from the two studies suggests that participation in a gap year may be one means of addressing motivational difficulties that might have been present at school. This is not to imply that a gap year will not be beneficial for students who evince more positive motivation and performance profiles at school; however, it does suggest a gap year is not needed to redress any motivational deficits for these students.

It is also noteworthy that age in high school predicted gap year intentions, such that senior high school students were less inclined to participate in a gap year. As suggested earlier, to the extent that a lack of postschool work or study clarity can be hypothesized to predict gap year intentions, and because students in the early high school years are less likely to have such postschool clarity, it was predicted that they would be more likely to report gap year intentions. In contrast, there tends to be more postschool guidance in the upper years, and so senior students are more likely to have greater postschool work and study clarity and therefore less intention to take a gap year. Thus, the present findings support the role of guidance and counseling in the senior school years to help students develop postschool plans that best reflect their aspirations for postschool life. This will better ensure that students who decide to take a gap year are doing so from an informed position—a position that is likely to underpin a constructive year before formal work or further study.

Additional Considerations on the Gap Year and Its Context

Notwithstanding the potential merits of participation in a gap year, there are numerous considerations that shape the broader context in which young people contemplate and elect to have time out after completing school. One of these concerns the educational and employment advantages that a gap year is said to instill in a young person (Heath, 2007)—indeed, an advantage not inconsistent with findings in Study 2. To the extent that this is the case and to the extent that there is any socioeconomic or similar bias relevant to gap year participation (Birch & Miller, 2007; Heath, 2007; Simpson, 2005), the gap year may widen the gap between those sufficiently advantaged to have a gap year and those who are not. As Heath (2007) notes, "in a period of increased competition and heightened emphasis on the 'economy of experience,' the gap year serves to widen the gap between different groups of students as part of an ongoing process of positional competition" (p. 101). Although it appears there is increasing heterogeneity among gap year participants (Jones, 2004), it remains important to recognize access and equity issues.

Social justice issues have also been raised. Although recognizing the potentially stimulating elements of gap year activities, Simpson (2004) points out that they can also lack a "pedagogy for social justice" (p. 690). For example, activities often involve volunteer work in disadvantaged communities and countries, but "there are limited stimulants or frameworks for asking why there are global differences, or how people's lives in different places intersect. A pedagogy of social justice would seek to bring such critical engagement to gap year experiences" (p. 690; see also Raymond & Hall, 2008, on the need for quality cross-cultural understanding). Hence, notwithstanding the merits in assisting people experiencing disadvantage, a high quality pedagogical experience would also encourage gap year participants to better understand the factors and circumstances that contribute to disparity and disadvantage.

It is also important to recognize that the diversity of gap year activities and pursuits is vast (Jones, 2004). Broadly, activities are considered to be either structured (e.g., volunteer tourism or volunteer work) or unstructured (e.g., leisure and travel). The present research did not assess the precise nature of gap year activities, and further research would do well to more closely assess this. It is also worth noting that there tends to be little regulation of the gap year industry (Jones, 2004)—that is, little regulation and monitoring of the organizations and individuals that arrange, coordinate, and/or provide gap year services (e.g., transport, activities, accommodation etc.). Given the nature of many gap year activities, there will inevitably be an element of risk and personal danger involved. Although there are moves toward formal accreditation of some gap year programs that will potentially reduce risk and create greater regulation of the industry, this will also affect the nature of the gap year as currently understood and may have implications for its espoused and actual educational and other benefits. Thus, as the gap year phenomenon develops in coming years, ongoing research and evaluation will be needed.

Limitations and Future Research Directions

There are a number of potential limitations important to consider when interpreting findings, which provide direction for further research. The gap year participation data presented in this investigation were self-reported; hence, it is important to conduct research that examines participation on the basis of data that can verify what students are reporting. In relation to the sampling, Study 2 was limited to two universities and is positioned as somewhat preliminary in that it did not comprise all measures (e.g., performance) paralleling the school sample. Thus, because the university sample was a subset of a larger project, future research should expand the sample and the measures to confirm and extend what was found here. Having said this, university findings were consistent with what would be predicted by high school findings and highlighted motivational yields consistent with implementation intentions, TPB, and TRA theorizing. Thus, although considered preliminary at this stage, Study 2 findings are conceptually and empirically feasible. Another consideration relevant to sampling is the applicability of these issues to other life stages. Increasingly, adults are taking a break after completing university or in midcareer (Heath, 2007), and the theoretical and empirical terrain covered in the present investigation would no doubt be applicable at these life stages as well.

Another sampling consideration is that junior and middle high school students were in the study, and it is appropriate to acknowledge that they would be relatively less informed on the gap year they were asked to report on. Although the present study positioned this as another perspective on postschool clarity, it is also a potential constraint to validity, and so findings must be interpreted in this light. Having said this, employing age as a covariate controlled for its variance in motivation, performance, and gap year intentions, and so findings in relation to these parameters can be considered unique over and above age. In the university sample, the gender (predominantly female) and discipline (predominantly

education) imbalances are important to recognize. Although gender was included as a covariate (thus controlling for its variance), and preliminary analyses showed no significant differences on motivation and gap year intentions as a function of discipline, future research would do well to gain better representation on gender and discipline (particularly using data from distinct disciplines, such as science).

Another limitation is that nothing is known about the young people who do not commence university study or work after having a gap year. Inevitably, for some the gap year will not resolve postschool uncertainty. There may also be some for whom the gap year is a distraction from clear purpose rather than a crystallizing experience that sharpens future plans and behavior. It is also not clear how many high school students who report gap year intentions actually take a gap year—or how many students reporting no intention to take a gap year actually do take a gap year. Although meta-analytic and literature reviews support the predictive validity of behavioral intentions (e.g., Armitage & Conner, 2001; Conner & Armitage, 1998; Godin & Kok, 1996; Sutton, 1998), future gap year research must construct analytic models that track students from school to postschool pathways. Accordingly, longitudinal data are needed to track the same students across the educational stages under focus in the present investigation (high school through to university or college). More specifically, definitive research on the issues raised here would track large samples of students from senior high into two or three years of college (and beyond) and examine correlates of gap year decisions (across the sample as a whole and within identified subgroups). It would also involve comparing students who never considered taking a gap year, students who decided to take one and did, students who wanted to take one but were financially or otherwise unable to do so, and students who could have and seriously considered doing so but decided not to.

Further research is also needed to better understand the mental processes that link postschool uncertainty to gap year intentions, the mental processes that link gap year intentions to subsequent behavior, and the mental processes that occur through the gap year that appear to lead to adaptive academic outcomes. Gollwitzer's (1990, 1993, 1999) research into behavior and intention processes involving mental representation, self-regulation, and memory traces may be relevant to these questions and is an avenue for further work. In seeking to identify other factors relevant to the gap year phenomenon, it will also be important to collect additional data relevant to parental expectations, parental pressures, and peers' plans. It is known that parents and peers are a significant influence on students' achievement motivation and achievement (Martin & Dowson, 2009; Martin, Marsh, McInerney, & Green, 2009; Martin, Marsh, McInerney, Green, & Dowson, 2007), and additional research is needed to know how they interface with postschool intentions in the context of the models tested here. Following from this, there may also be scope to explore school-level factors. Some schools may promote a gap year; some may be neutral; others may negatively construe the desirability of gap year participation. Indeed, there may also be systematic differences in the ways schools help students cultivate postschool plans and resolve postschool uncertainty. Because only seven schools were in the present investigation, it was not possible to appropriately test these questions. Larger numbers of schools would enable appropriate multilevel (hierarchical linear) modeling (Bryk & Raudenbush, 1992; Goldstein, 2003; Muthén, 1991, 1994) to determine variance in gap year intentions, gap year participation, and postschool certainty or uncertainty attributable to students and variance attributable to schools.

Conclusion

Although much opinion exists about the merits—or otherwise—of taking time out after completing school, relatively little research has formally assessed the issue among students intending to take a gap year and students who have taken a gap year. Accordingly, numerous commentators have identified a need for rigorous research in terms of the factors that predict gap year intentions and participation and the effects of participation in a gap year. This was the focus of two studies in the present investigation. The first study showed that postschool uncertainty and lower motivation predicted gap year intentions, that lower motivation and lower performance predicted postschool uncertainty, and that these effects are significant over and above the effects of demographic covariates. The second study showed that gap year participation positively predicted academic motivation and that this effect was significant over and above the effects of demographic covariates. Through assessing an analytical framework in the context of motivational and performance factors, both studies have more centrally positioned the gap year in mainstream psychoeducational research and extended psychoeducational research to a relatively understudied educational phenomenon. Taken together, the findings hold theoretical and applied implications for researchers and practitioners seeking to investigate and address students' postschool plans and postschool activities and provide directions for future efforts aimed at better understanding an increasingly salient postschool phenomenon.

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