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## Relationships between Calling and Academic Motivation in Postsecondary Students

### Rapports entre la vocation et la motivation académique chez les étudiants postsecondaires

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#### ABSTRACT

The relationships between academic motivation and sense of calling, type of career aspiration, and religious affiliation were examined in a sample of postsecondary students. Data were collected from a sample of 368 students using an online survey. Hierarchical multiple regression analysis revealed that, after the effects of key individual characteristics were controlled for, the two dimensions of calling were small but significant predictors of academic motivation. Specifically, each dimension of calling uniquely related to both intrinsic motivation and extrinsic motivation, while only having a calling was related to amotivation. Additionally, a significant “calling by religious affiliation” interaction effect emerged for intrinsic motivation, as well as a significant calling by “type of career aspiration” interaction for amotivation. Results suggest that calling and its interactions with other key variables are important to consider in understanding the academic motivation of postsecondary students.

#### RÉSUMÉ

Nous avons examiné les rapports entre la motivation académique et le sens de vocation, le type d'aspiration de carrière et l'affiliation religieuse d'un échantillon d'étudiants postsecondaires. Nous avons utilisé un questionnaire en ligne pour recueillir des données auprès de 368 étudiants. Les analyses de régression hiérarchique multiple ont révélé, à la suite du contrôle des caractéristiques individuelles critiques, que les deux dimensions de la vocation étaient des indicateurs faibles, mais significatifs, de la motivation académique. Précisément, il y avait un rapport unique entre chaque dimension de la vocation reliée à la motivation intrinsèque et extrinsèque, tandis que posséder un sens de vocation seulement fut lié à l'amotivation. En outre, deux effets d'interaction significatifs se sont produits : la vocation selon l'affiliation religieuse avec la motivation intrinsèque, et la vocation selon le type d'aspiration de carrière avec l'amotivation. Les résultats portent à croire qu'il est important de considérer la vocation et ses interactions avec d'autres variables clés pour comprendre la motivation académique chez les étudiants postsecondaires.

The phenomenon of calling, as it relates to career development and postsecondary education has recently emerged as a subject of empirical inquiry in counseling psychology (e.g., Dik, Duffy, & Eldridge, 2009; Duffy, Allan, & Dik, 2011;

Hirschi, 2011). Indeed, Duffy and Sedlacek (2010) revealed that 43% of their sample of first-year university students reported that having a calling is either mostly or entirely true of them, while 30% of the same sample reported that they were searching for a calling. Thus, calling appears to be a salient concept not only to researchers but also to young adults as they prepare for their future careers.

#### CALLING

The Christian religious tradition has historically associated calling with being impelled by God to pursue a life of service (e.g., Matthew 4: 17–20; Luke 5: 27–28). Contemporary religious theories of calling have expanded upon the type of work to which a person may be called while still asserting that calling originates from God and is, therefore, a spiritual experience (Guinness, 1998). Conceptualizations of calling that extend beyond religious experiences are also present in the psychological literature. For example, Hall and Chandler (2005) described calling as a strong sense of inner direction to do work that is beneficial to others. More recently, Elangovan, Pinder, and McLean (2010) defined calling as the convergence of prosocial intentions, desires, and actions for the world of work. These perspectives do not require calling to be understood in religious terms but still recognize that some individuals may perceive their callings as coming from God.

One of the more frequently used conceptualizations of calling in the counseling psychology literature is Dik and Duffy's (2009) three-dimensional model that defines a calling as (a) originating from outside of the self (typically from a transcendent entity); (b) meaning-oriented, involving pursuit of a career not as an end in itself, but to gain purpose or meaning in life; and (c) focused on others-oriented and prosocial pursuits. They also clarify that it is the external pull that an individual feels towards a specific career—whether it is from God, family, or a pressing need—that distinguishes a call from vocation (in the more general sense) or related concepts such as meaning or values. This theory of calling is the foundation for the current study.

Although much of the work to define calling has been theoretical (e.g., Charland, 1999; Elangovan et al., 2010; Guinness, 1998; Hall & Chandler, 2005), researchers have begun to empirically examine perceptions of calling. For example, in French and Domene's (2010) qualitative study of Christian university students with a strong sense of personal calling, participants described their callings as being altruistically focused and as aiding in their development of a sense of identity. Callings were also found to be a strong motivating force in their educational and career pursuits, even in the face of substantial barriers. Similarly, Hunter, Dik, and Banning (2010) found personal fit and well-being to be important elements of undergraduate students' callings. Their participants also reported that calling is a means to pursue interests, talents, and meaning; to display altruism; and to engage in effortful dedication. Additionally, Steger, Pickering, Shin, and Dik (2010) concluded that, for university students in the United States, calling is understood more as a method of finding meaning in work than a purely religious experience.

Furthermore, in an examination of calling in a sample of German university students, Hirschi (2011) found three distinct types of calling. Although all types shared three characteristics—career decidedness, career engagement, and career confidence—religion emerged as important in only one type of calling. However, researchers have also found that religious participants who successfully pursued their calling reported that following callings led to challenges to their faith and challenges with being called (French & Domene, 2010; Hernandez, Foley, & Beitin, 2010).

Links between individuals' sense of calling and aspects of vocational behaviour have also been identified. Davidson and Caddell (1994) examined differences between callings, careers, and jobs in employed adults, and found that individuals who worked with people (e.g., counsellors, teachers) were twice as likely to view their work as a calling than those who worked with things (e.g., mechanics, plumbers), and that religious and social justice beliefs were associated with perceiving work as a calling. Wrzesniewski, McCauley, Rozin, and Schwartz (1997) found that individuals who view their employment as callings rather than careers were more likely to have higher self-esteem, perceived status, education, and salary, while Duffy, Bott, Allan, Torrey, and Dik (2012) found that counselling psychologists who view their work as a calling believed their sense of calling to have a positive impact on their work. Sellers, Thomas, Batts, and Ostman (2005) found that having an awareness of personal calling early in life provided an important source of drive and focus for the careers of a sample of women employed in academia. Hirschi (2011) demonstrated that calling requires significant self-exploration, but it may also influence identity achievement and promote career engagement and confidence. Duffy et al. (2012) revealed that possessing a calling and living out that calling are both positively related to career commitment, work meaning, and job satisfaction. Similarly, Duffy, Dik, and Steger (2011) found a moderate relationship between calling and job satisfaction as mediated by career commitment. Additionally, Dobrow and Tosti-Kharas (2012) identified that the strength of an individual's calling is positively related to their ability to ignore discouraging career advice in pursuit of their calling.

Research about the influence of calling on postsecondary students has also emerged. Duffy and Sedlacek (2007) found that first-year university students' perceptions of having a calling was associated with lower levels of career uncertainty, while the search for a calling was associated with greater career uncertainty. Dik, Sargent, and Steger (2008) found in a sample of university students that striving for a sense of calling was positively correlated with intrinsic work motivation, purpose in life, and career decision self-efficacy. Similarly, Duffy and Sedlacek (2010) found a connection between possession of a calling and postsecondary students' educational aspirations, while Duffy, Allan, et al. (2011) found a relationship between calling and academic achievement with significant mediating effects of career decision self-efficacy and work hope. Additionally, Duffy et al. (2012) demonstrated that calling is positively correlated with career development and meaning in life for medical students. Finally, in a sample of Canadian under-

graduate students, Domene (2012) found calling to be related to career outcome expectations, although this relationship was mediated by self-efficacy.

In summary, although calling has deep historical roots, it is a phenomenon that has increasingly become the focus of empirical examination within the vocational psychology literature in the past decade. The emerging body of research evidence suggests that calling can provide individuals with a purpose or motivation for engaging in work, and that it may have various benefits for postsecondary students' career and educational development. What is not known, however, is whether students' sense of calling is related to their academic motivation.

#### ACADEMIC MOTIVATION

Academic motivation has been studied from a multitude of different perspectives (for reviews, see Covington, 2000; Linnenbrink & Pintrich, 2002; Meece, Anderman, & Anderman, 2006). The approach of Vallerand et al. (1992, 1993) is one of the few developed specifically to explain academic motivation in postsecondary students. They propose a three-factor model including (a) intrinsic motivation—an internal drive for purposes such as gaining knowledge, achieving competence, and experiencing stimulation; (b) extrinsic motivation, which originates from outside forces such as parents, friends, or societal norms and is regulated through rewards or punishment, and external rules; and (c) amotivation, a lack of motivation in which an individual is unable to perceive the connection between their actions and the outcomes that occur, and is likely to feel a lack of control and competence.

Researchers have found intrinsic motivation to be an important determinant of success at the postsecondary level, influencing students' performance (Ridgell & Lounsbury, 2004), likelihood of successful completion of their courses (Vallerand & Bissonnette, 1992; Vallerand et al., 1993), acquisition of a second language (Pae, 2008), and creativity in writing (Moneta & Siu, 2002). Academic motivation is also associated with personality (Clark & Schroth, 2010), grades and prospect of future graduation (Van Etten, Pressley, McInerney, & Liem, 2008), future time orientation (Horstmanshof & Zimitat, 2007), and sense of identity (Faye & Sharpe, 2008; Harackiewicz, Durik, Barron, Linnenbrink-Garcia, & Tauer, 2008).

#### PRESENT STUDY

The purpose of this study is to examine relationships between calling and postsecondary students' academic motivation, including possible interactions between calling and individual characteristics (i.e., gender, religious affiliation, career aspiration) on academic motivation. On the basis of the existing research on the nature of calling (Dik & Duffy, 2009; Duffy & Sedlacek, 2010; Hunter et al., 2010) and the propositions of Vallerand et al.'s (1992, 1993) theory of motivation, it was hypothesized that higher levels of having a calling would be related to higher intrinsic and extrinsic academic motivation. In contrast, higher levels of searching for a calling were expected to predict lower intrinsic and extrinsic academic motivation. Additionally, since amotivation is conceptually related to a

lack of personal control, it was hypothesized that amotivation would be negatively related to having a calling and positively related to searching for a calling.

Examination of possible interactions between calling and individual characteristics was exploratory, with no established hypotheses. Nonetheless, there are some indications in the existing literature that relationships between calling and academic motivation may be different for different populations. Some studies have found gender differences in academic motivation (e.g., Fulton & Turner, 2008; Vallerand & Bissonnette, 1992, Vallerand et al., 1992) and in calling and work values (Davidson & Caddell, 1994), supporting the need to attend to gender in the present study. Additionally, there is a body of literature suggesting variation in the relationship between religion and spirituality, on one hand, and both academic motivation and calling, on the other (e.g., Duffy, 2010; Hirschi, 2011; Miller & Stark, 2002). Finally, previous authors have proposed (Dik & Duffy, 2009; Elangovan et al., 2010) or empirically demonstrated (Davidson & Caddell, 1994; Hirschi, 2011) links between calling and career type, particularly whether or not an individual's occupation has a prosocial orientation. This suggests that it may be fruitful to attend to possible interactions between these variables when examining the influence of calling in the lives of students.

## METHOD

### *Participants*

A multimodal recruitment strategy was used, which included advertising via e-mail, posters, and in-class presentations at several postsecondary institutions in British Columbia and Washington State. This was supplemented by direct recruitment through social networking websites, word of mouth, and encouraging participants to forward information to other students. Respondents who were not enrolled in a postsecondary education program in Canada or the United States, or who exceeded the 25-year-old age limit, were excluded.

The final sample consisted of 368 individuals (72.6% female and 27.4% male) enrolled in postsecondary education programs in Canada and the United States. Participants were 17 to 25 years old ( $M$  age = 20.44,  $SD$  = 2.03). For participants who specified ethnicity ( $n$  = 364), 74.4% were of European ancestry; 13.4% were of Asian ancestry; 2.1% were of Latino, South American, or Caribbean ancestry; 1.6% were of African ancestry; 1.0% were of First Nations or Native American ancestry; and 6.7% reported being of mixed race or other ancestry. Most participants were undergraduate university students (88.6%), although 8.8% were enrolled in graduate degrees, and 2.6% were enrolled in trades certification, diploma, or other non-degree educational programs. For participants who reported their religious affiliation ( $n$  = 367), 79.3% of participants were Christian, 8.5% had no religious beliefs, and 8.8% reported having a personal faith but not being a member of an organized religion. Together, members of other organized religions (i.e., Buddhism, Hinduism, Islam, Judaism, Sikhism) composed 3.2% of the sample. See Table 1 for additional demographic information.

Table 1  
*Student Self-reported Demographic Characteristics, Academic Motivation, and Calling, by Gender*

Variables	Male		Female	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
Intrinsic motivation	4.38	1.23	4.52	1.12
Extrinsic motivation	4.72	1.12	4.99	1.09
Amotivation	1.84	1.24	1.58	.94
Have a calling	3.44	1.08	3.63	1.01
Searching for calling	3.12	1.19	3.18	1.19
Age	20.37	2.10	20.48	2.00
High school GPA	2.69	.77	2.54	.64
Parental SES	61.05	13.92	58.16	14.41

### *Instruments*

#### SENSE OF CALLING

Calling was assessed using the Brief Calling Scale (BCS). This instrument consists of four 5-point Likert scale items assessing the degree to which individuals perceive the presence of a calling in their own life, and the degree to which they are searching for a calling (Dik et al., 2008; Steger & Dik, 2006). In previous research with university students, both subscales have demonstrated internal consistency and correlated in conceptually appropriate directions with criterion variables such as career decision self-efficacy, presence of meaning in life, and career decidedness (Duffy & Sedlacek, 2007; Steger & Dik, 2006). Additionally, Dik, Eldridge, Steger, and Duffy (2012) present psychometric evidence related to the convergent and discriminant validity of the instrument. Finally, to date the BCS has been used more frequently than any other instrument in empirical research on the concept of calling.

#### ACADEMIC MOTIVATION

Students' motivation for academics was operationally defined using the three subscales of the Academic Motivation Scale (AMS; Vallerand et al., 1992, 1993). Using a 7-point Likert scale, the AMS consists of 28 items designed to assess intrinsic motivation, extrinsic motivation, and amotivation. Vallerand and colleagues (1992) provide evidence for the concurrent and construct validity of the AMS: it is significantly correlated with other measures of motivation; motivational antecedents (e.g., individuals' perceptions of their own competence) were found to be positively correlated with intrinsic motivation and negatively correlated with amotivation; and motivational consequences (e.g., positive results due to studying) were positively correlated with extrinsic motivation and negatively correlated with amotivation. Previous research has supported the longitudinal and cross-gender factorial invariance of the AMS (Grouzet, Otis, & Pelletier, 2006).

## INDIVIDUAL CHARACTERISTICS

Data for the remaining variables were drawn from participant self-report responses to survey questions. Single-item questions were used to assess gender, type of career aspiration, religious affiliation, parental socioeconomic status (SES), and academic performance in the final year of high school (GPA). The type of career to which a participant aspired was assessed using an open-ended question and coded into the categories of *helping profession* (e.g., teacher, counsellor), *non-helping profession* (e.g., illustrator, business), or *undecided* (e.g., "I don't know"). Religious affiliation was coded into three categories: *organized religion*, *personal spirituality* (i.e., having a personal spirituality but not being a member of an organized religion), and *no religious affiliation*. GPA was assessed using a 6-point Likert scale with categories ranging from *below 50% / below 0.7* to *85 to 100% / 4.0 or higher*.

*Procedures: Data Collection*

Data were collected using an online survey. Given the possibility that multiple students may legitimately respond using the same computer (e.g., using campus computer labs, roommates sharing the same desktop) and the absence of any incentive for participation, multiple responses from the same IP address were permitted. No identifying information was collected. The researchers were available to answer participant questions and concerns through e-mail, and they responded to questions from two participants. All research procedures were reviewed and approved by the Research Ethics Board at Trinity Western University.

## RESULTS

Kolmogorov-Smirnoff (K-S) tests revealed significant deviations from normality for all subscales of academic motivation: intrinsic motivation had a moderate negative skew,  $D(395) = 0.07, p < .001$ ; extrinsic motivation had a moderate negative skew,  $D(395) = 0.06, p < .05$ ; and amotivation had a severe positive skew,  $D(395) = 0.27, p < .001$ . Square root transformation was successful in normalizing the distribution for intrinsic motivation and reduced the skewness for extrinsic motivation. Other transformations were attempted but were not effective, and no transformation was successful in normalizing the amotivation data. Therefore, it was decided to proceed using the transformed data for only intrinsic and extrinsic motivation (reflected back to facilitate interpretation of the results where necessary) and to maintain the original data for amotivation. The calling variables were both positively skewed ( $D(395) = 0.15, p < .001$  and  $D(395) = 0.14, p < .001$ , respectively). Bivariate correlations among the two dimensions of calling, three dimensions of academic motivation, and continuous personal characteristic variables in the final data set were then calculated and reviewed (see Table 2).

Hierarchical multiple regression was used to examine the effects of calling, gender, type of career aspiration, and religious orientation on the three dimensions of academic motivation. Due to their categorical nature, type of career aspiration and religious orientation were dummy-coded for the analyses. In all cases, GPA and SES were entered into an initial block to control for their influence, followed



Table 2  
*Summary of Intercorrelations, Means, and Standard Deviations for Scores on the AMS, BCS, SES and High School GPA*

Measure	1	2	3	4	5	6	7
1. SES							
2. GPA	.034						
3. Intrinsic	.042	.018					
4. Extrinsic	-.023	-.101*	.497**				
5. Amotivation	.002	-.087*	-.179**	-.094			
6. Having Calling	.139*	-.015	.262**	.129*	-.328**		
7. Searching Calling	-.114*	.042	.057	.084	.220**	-.417**	
<i>M</i>	3.57	4.41	1.84	1.73	1.64	3.59	3.16
<i>SD</i>	.97	.66	.31	.32	1.03	1.02	1.18

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

by the individual characteristics variables (gender, aspiration, religion) in a second block, and the two dimensions of calling in a final block. Additional regressions were conducted to examine two-way interaction effects between calling and (a) gender, (b) religious affiliation, and (c) type of aspiration as predictors of academic motivation. Where no significant interaction effects emerged, only the main effects models have been reported.

*Intrinsic Motivation*

The analyses revealed that calling accounted for approximately 11% of the variance in intrinsic motivation ( $\Delta R^2 = .109$ ,  $F(9,358) = 5.178$ ,  $p < .01$ ), over and above the control and personal characteristic variables (i.e., as calling increases so does intrinsic motivation). In the final model, having and searching for a calling were both significant predictors of intrinsic motivation, while the personal characteristic variables were not significant (Table 3), a pattern that supports the first hypothesis. However, these results need to be interpreted in light of significant interactions between each dimension of calling and organized versus personal religious orientation (Have Calling  $\times$  Religion  $\beta = -2.81$ ,  $t = 2.46$ ,  $p < .05$ ; Search Calling  $\times$  Religion  $\beta = -3.67$ ,  $t = -2.04$ ,  $p < .05$ ). It appears that an individual's religious orientation interacts with a sense of calling in influencing intrinsic academic motivation.

As revealed in Figure 1, although there is a significant positive relationship between intrinsic motivation and people's sense of having a calling, this relationship is more pronounced for students with a personal spirituality than people who are part of an organized religion. So then, undergraduate students with a strong sense of calling, for example, are also likely to have higher levels of intrinsic motivation; although this is true across the sample, the relationship is particularly strong for people who would label themselves as being spiritual but not religious.

The significant interaction between religious orientation and searching for a calling reveals that there is a positive association between intrinsic motivation and the search for a calling for students who profess a personal spirituality, but

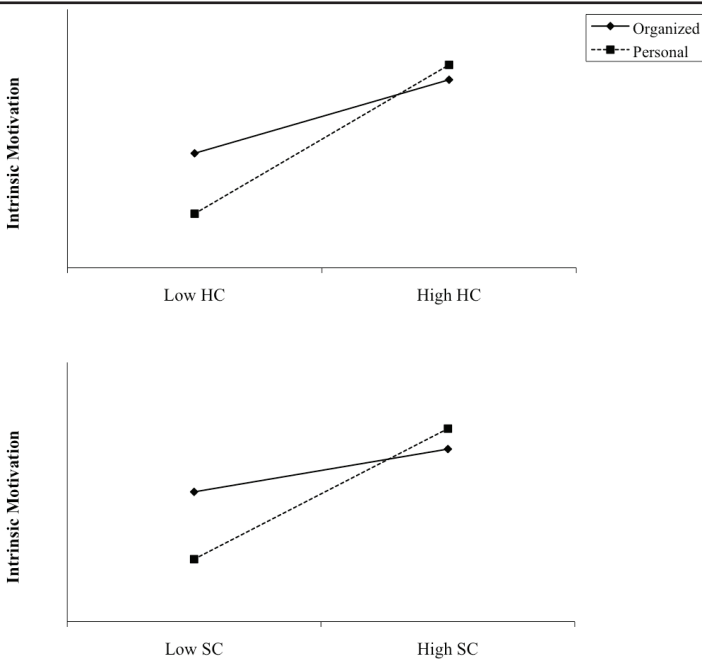


Table 3  
*Hierarchical Regression Analyses for Individual Characteristics and the Dimensions of Calling as Predictors of Intrinsic Motivation*

Variable	Model 1			Model 2			Model 3		
	B	SE B	$\beta$	B	SE B	$\beta$	B	SE B	$\beta$
GPA	.008	-.025	.017	.006	-.025	.013	.010	-.024	.021
SES	.013	-.017	.042	.014	-.017	.044	.011	-.016	.035
Gender				.023	-.038	.033	.007	-.036	.010
Helping vs. non-helping				-.010	-.039	-.014	.032	-.037	.046
Helping vs. undecided				.002	-.046	.002	.079	-.046	.096
Organized vs. none				-.001	-.040	-.021	.002	-.038	.045
Organized vs. personal				.003	-.040	.076	-.000	.038	.000
Having a calling							.155	-.018	.376**
Searching for a calling							.054	-.015	.206**
$R^2$		.002			.006			.115**	
$F$ for $R^2$ model		.378			.320			21.991**	

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

Figure 1. *Change in intrinsic motivation levels from low to high sense of having a calling (HC) and searching for a calling (SC), for students who are members of an organized religion versus students who are not a member of an organized religion but have a personal spirituality.*



motivation levels are relatively consistent for those who are members of an organized religion. It would appear that the results for searching for a calling are somewhat different than for having a calling: For people who are spiritual but not part of a religion, the more they are searching for a calling, the more they are also likely to have a high level of intrinsic academic motivation. In contrast, for someone who belongs to an organized religion (e.g., is a Christian or a Muslim), the search for a calling does not appear to be connected to intrinsic motivation.

*Extrinsic Motivation*

Similar results emerged for extrinsic motivation. As hypothesized, the two dimensions of calling together accounted for a small but significant proportion of the variance in extrinsic motivation ( $\Delta R^2 = .036, F(9,358) = 3.639, p < .05$ ), over and above the control and personal characteristic variables. Each dimension of calling was a significant predictor (Table 4), indicating that higher levels of having and searching for a calling were both associated with stronger extrinsic motivation. Additionally, GPA was significantly inversely associated with motivation; that is, better high school academic performance is associated with lower extrinsic motivation. None of the interaction effects were significant for extrinsic motivation. These results indicate that, irrespective of type of occupation or religious orientation, a stronger sense of having a calling and a stronger sense of searching for a calling are both associated with higher extrinsic academic motivation. For

Table 4  
*Hierarchical Regression Analyses for Individual Characteristics and the Dimensions of Calling as Predictors of Extrinsic Motivation*

Variable	Model 1			Model 2			Model 3		
	B	SE B	$\beta$	B	SE B	$\beta$	B	SE B	$\beta$
GPA	-.048	-.025	-.101	-.056	-.025	-.117*	-.053	-.024	-.111*
SES	-.007	-.017	-.021	-.003	-.017	-.021	-.003	-.017	-.008
Gender				.074	-.038	.104	.064	-.037	.090
Helping vs. non-helping				.013	-.038	.018	.033	-.038	.046
Helping vs. undecided				-.035	-.045	-.042	-.009	-.047	-.011
Organized vs. none				-.003	-.039	-.076	-.003	-.039	-.068
Organized vs. personal				.010	-.039	.236	.010	-.039	.233
Having a calling							.057	-.018	.183*
Searching for a calling							.047	-.015	.178*
$R^2$		.011			.047*			.084*	
$F$ for $R^2$ model		1.981			2.767*			7.123**	

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

example, a young woman who feels called to a particular profession is likely to be highly motivated by external factors in her academics. Similarly, a young man who is strongly and actively seeking to figure out a calling for his life is also likely to be highly motivated by external factors.

### *Amotivation*

The hypotheses regarding amotivation were only partially supported. The two dimensions of calling accounted for 7% of the variance in amotivation ( $\Delta R^2 = .074$ ,  $F(9,358) = 8.138$ ,  $p < .001$ ). However, examination of the regression coefficients (Table 5) reveals that, although having a calling is significantly negatively related to amotivation, no such relationship exists between searching for a calling and amotivation. It appears that university students who have a stronger sense of having a calling are less likely to be amotivated, but their sense of searching for a calling is not related to amotivation. The interactions between both dimensions of calling and helping versus undecided career aspirations were also significant (having a calling  $\beta = -.33$ ,  $t = -4.41$ ,  $p < .001$ ; searching for a calling  $\beta = -0.17$ ,  $t = -2.53$ ,  $p < .05$ ). As can be seen in Figure 2, for students who are undecided in terms of their career paths, levels of amotivation are lower for those who experience higher levels of having a calling. For example, in comparing two students who are undecided in their career paths, the one with a stronger sense of having a calling is likely to feel less apathy than the one whose

Table 5  
*Hierarchical Regression Analyses for Individual Characteristics and the Dimensions of Calling as Predictors of Amotivation*

Variable	Model 1			Model 2			Model 3		
	B	SE B	$\beta$	B	SE B	$\beta$	B	SE B	$\beta$
GPA	-.136	.081	-.087	-.104	.079	-.067*	-.105	.076	-.067
SES	.004	.056	.003	-.037	.054	-.034	-.018	.052	-.016
Gender				-.229	.121	-.098	-.213	.116	-.091
Helping vs. non-helping				-.098	.122	-.043	-.197	.119	-.085
Helping vs. undecided				.689	.144	.255**	.409	.148	.151**
Organized vs. none				-.183	.126	-1.294	-.199	.121	-1.406
Organized vs. personal				.174	.126	1.229	.194	.121	1.376
Having a calling							-.248	.057	-.244**
Searching for a calling							.077	.047	.088
$R^2$		.008			.096**			.170**	
$F$ for $R^2$ model		1.404			7.024**			15.955**	

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

sense of having a calling is weaker. In contrast, for students aspiring to helping professions, amotivation remained approximately the same regardless of their sense of having a calling; that is, calling did not appear to be related to amotivation in students who were planning to become teachers, nurses, or psychologists, for example.

Figure 2 also illustrates the nature of the interaction between career aspirations and sense of searching for a calling: Higher levels of searching for a calling are associated with lower levels of amotivation for students who are undecided, but for those aspiring to careers in helping professions, higher levels of searching for a calling are associated with higher levels of amotivation. Therefore, it would appear that, for people who have not yet decided on a career path, those with a low sense of searching for a calling are likely to have higher amotivation than those who are actively seeking a calling. In contrast, for students pursuing a helping profession, those who have a strong sense of searching for a calling are likely to be the ones who have more amotivation than their counterparts.

#### DISCUSSION

In this study, multiple connections between calling and academic motivation were examined, with most of our hypotheses supported. Calling appears to play a small but meaningful role in postsecondary students' academic motivation. Specifically, a stronger sense of having and searching for a calling for one's life were both associated with higher intrinsic and extrinsic academic motivation. For example, a student who has a sense of calling may be more likely to be motivated for personal, internal reasons (e.g., to experience intellectual stimulation) but also by external factors (e.g., to please others). Also, as the sense of having a calling increased, the level of amotivation decreased (i.e., students who have a calling toward a particular career are more likely to feel greater control over their academics). These results reveal that postsecondary students in Canada and the United States who have a calling are also generally more motivated in their educational preparation for their future careers. Therefore, both having a calling to a meaningful purpose in one's life and searching for such a calling may have a beneficial influence on motivation for engaging in studies. It could well be that calling leads to greater commitment to a particular course of study and a stronger sense of the reasons for pursuing postsecondary education.

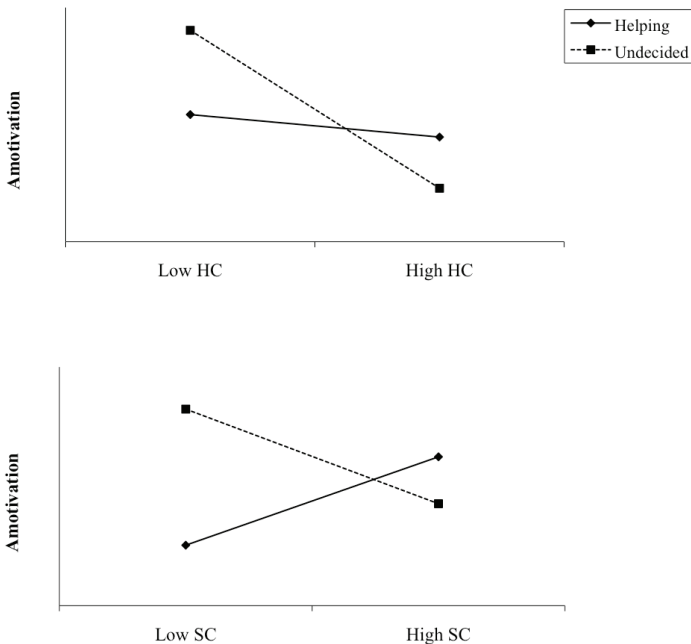
However, some of the relationships between calling and academic motivation appear to be stronger or weaker, depending on individuals' beliefs and career aspirations. Specifically, the significant calling by religious affiliation interactions indicate that, although the relations between each dimension of calling and intrinsic motivation are positive across the sample, the effects are stronger for individuals who possess a personal spirituality than for individuals who belong to an organized religion. Students who possess a personal spirituality but are not members of an organized religion may experience their spiritual life on a more internal basis than their traditionally religious peers. If so, they would likely connect their callings

more with internal factors and experience it as more of an internal motivator than individuals who experience their religious orientation at a more external level.

Overall, the intrinsic motivation results complement Dik and colleagues' (2008) finding that students who are currently pursuing their calling through education possess a greater level of intrinsic work motivation. In combination, the two sets of results imply that individuals who experience a calling for their life are likely to be more internally motivated across multiple life roles (e.g., student role, worker role). Clearly, further research about the links between calling and motivation is warranted, but the limited body of existing findings does suggest that calling may be an important source of motivation for some postsecondary students.

Having a calling may also buffer students against the development of amotivation, at least for some kinds of postsecondary students. Amotivation is not simply a lack of motivation; it occurs when an individual is unable to recognize the link between their actions and the outcomes of those actions (Vallerand et al., 1992, 1993). Consequently, amotivated individuals tend to feel that they are not in control of their circumstances. Results indicate that the inverse relationship between amotivation and having a calling is more pronounced for individuals who are undecided in terms of their career paths than for individuals who have career aspirations for helping professions (e.g., teacher, counsellor). Students who had a

Figure 2. *Change in amotivation levels from low to high sense of having a calling (HC) and searching for a calling (SC), for students who aspire to a career in the helping professions versus students who are undecided about their future career.*



stronger sense of calling are less amotivated, suggesting that these individuals are able to understand the cause-and-effect nature of their actions, and are also more likely to have a sense of control. This benefit of having a calling is particularly experienced by individuals who are undecided about their future career. Perhaps the meaning they derive from having a calling provides these students with a sense of why they are in school, even though they do not yet have a specific career path to pursue. This finding has implications for career counselling with university students who are undecided about their future career: exploring and promoting their sense of having a calling may be an effective way to combat amotivation, at least until they have chosen an occupation.

Additionally, the relationship between amotivation and searching for a calling differs substantially for individuals with undecided career paths (higher levels of searching for a calling were associated with lower levels of amotivation), than for individuals aspiring to helping professions (higher levels of searching for a calling were associated with higher levels of amotivation). These results suggest that experiencing a calling for one's life (both in the sense of having such a calling and in the sense of actively searching for one's calling) may buffer against academic amotivation in postsecondary students who do not have a clear aspiration for a future career. In contrast, students who have a clear career aspiration but also continue to search for their calling may be experiencing doubt or uncertainty that their current aspiration is right for them or distress that their aspiration has not yet been confirmed through a calling, thus causing them to question the purpose or value of their current program.

The results also suggest that students with a stronger sense of the presence of a calling in their lives are less likely to be experiencing an absence of meaning and direction in terms of their education. Although no previous research has examined the relationships between calling and academic amotivation, there is some related research that supports this interpretation. Duffy and Sedlacek (2007) found that searching for a calling is negatively related to decidedness, self-clarity, and choice-work salience in university students, and, more recently, Duffy and Sedlacek (2010) found that life satisfaction and life meaning are correlated with the presence of a calling.

### *Implications for Theories of Calling*

The results have important implications for understanding the nature of calling. There is debate in the literature about whether calling is a single phenomenon, or if multiple types of calling exist. Some authors have suggested that callings experienced by persons who are religious are qualitatively different from callings experienced by non-religious individuals (e.g., Elangovan et al., 2010; Hirschi, 2011). The present findings further suggest that calling may be different again for people who are members of an organized religion versus those who profess to have a personal spirituality but are not members of an organized religion. Specifically, calling may be perceived as both an internal and an external force in the lives of the former, but purely as an internal force in the lives of the latter. At a minimum, it

appears important to include “spiritual but not a member of an organized religion” as a category of religious experience in future studies about the phenomenon of calling, because this type of individual may be distinct in important ways from both traditionally religious students and non-religious, non-spiritual ones.

Additionally, the somewhat distinct relationships that emerged between academic motivation and having versus searching for a calling provide support for Dik and Duffy’s conceptualization of calling: “the distinction between ‘presence of’ and ‘search for’ in the study of calling and vocation [is] critical” (Dik & Duffy, 2009, p. 7). This was certainly evident in the present study, where different patterns of results emerged for the two dimensions of calling as predictors of academic motivation. Therefore, it appears to be important to retain the distinction between having and seeking as theories of calling are refined and expanded in the future.

### *Implications for Career Development and Counselling*

Dik and Duffy (2009) have asserted that gaining a greater understanding of calling may be important for counselling psychology practice in numerous ways. This study supports their claim, revealing a link between people’s sense of calling and their academic motivation. This link is particularly important to consider in light of existing research on the effects of motivation on academic success. The present results, coupled with previous research delineating the benefits in postsecondary students’ lives of experiencing a calling (e.g., Dik et al., 2008; Duffy & Sedlacek, 2010), suggest that it is important to consider issues of calling and purpose when promoting academic and vocational success in these students.

A better understanding of the relationship between these aspects of career development will allow practitioners working in university and college settings to better serve both individuals who possess and those who perceive the absence of a calling for their life. For example, a counsellor could discuss the benefits of possessing a calling to encourage individuals who are currently seeking a calling for their life but struggling with the process. This may be particularly true for students who are already in university and yet remain undecided in terms of their career motivations: in this population, even the process of searching for a calling may decrease their amotivation, and developing a sense of having a calling may be beneficial for promoting intrinsic and extrinsic motivation and, consequently, academic success. Interventions designed to promote students’ sense of calling may also have benefits for reducing amotivation and increasing motivation for academics. Dik and Steger’s (2008) calling-infused career workshop, an approach to incorporating calling into a small structured career exploration group, may be fruitfully adapted for calling-oriented academic counselling.

It is also important to consider the impact that career counselling may naturally have on the search for or identification of a calling. Specifically, as an individual engages in counselling and learns more about their own identity, they may also feel motivated to search for a calling or gain a sense of calling. Additionally, there are a number of services that students may be able to access, including a psychovocational assessment that could highlight an individual’s strengths and interests and



may help to provide some direction for engaging in a further search for a calling or possibly even identifying a calling. Additionally, practitioners who adopt a narrative or constructivist framework for career counselling (e.g., Guichard, 2009; McMahon & Watson, 2008; Peavy, 1997; Savickas, 2012) can easily incorporate working with calling into their practice. This would first involve raising the question of whether the idea of calling is salient to the client (if it is not salient, then there would likely be limited benefit in using the construct in counselling). For clients who do find calling to be a meaningful construct, counsellors can then engage in an extended discussion of what calling means to the client, how they perceive calling to emerge in their lives, and how it might guide the client in their present academic life and future career. Furthermore, existing systems for working with values, meaning, and purpose in career counselling (e.g., Amundson, 2010; Charland, 1999; Cochran, 1997; Savickas, 2011) can be adapted and framed in the language of calling. However, given the correlational nature of the present study (i.e., it was not designed to establish a causal connection between sense of calling and academic motivation), it is necessary to confirm that intervening at the level of calling will actually improve academic motivation before these practices are adopted.

### *Limitations*

The results of this study must be interpreted with caution due to the presence of several limitations. First, the use of self-report methods of data collection means that the results only reflect participants' perceptions and presentations of themselves, rather than objective indicators of the variables that were measured. It is possible that there is some discrepancy between participants' actual sense of calling or academic motivation and what they reported. This possibility must be balanced by the fact that the AMS is a well-established measure of academic motivation (Fairchild, Horst, Finney, & Barron, 2005; Grouzet et al., 2006; Vallerand et al., 1992, 1993), and that calling, by definition, is a subjective, internal experience (Dik & Duffy, 2009).

The fact that over 70% of participants were female raises some concern about the generalizability of the results to male postsecondary students. It is important to reflect upon the lack of significant gender results found in the present study, given the presence of some studies that have indicated that the experience of calling may be different for males and females (e.g., Sellers et al., 2005, wrote about the experience of women who are dually called to motherhood and academic careers). However, these studies are primarily qualitative in nature. It is possible that gender differences occur primarily in the subjective experience of calling, rather than in how calling is related to other academic and career constructs. If this is the case, it is not surprising that the present study and others that have examined calling as a predictor of different aspects of human functioning have not yielded gender differences.

Additional limitations to the generalizability are created through the fact that nearly 80% of the sample identified themselves as Christian and nearly 89% were

in bachelor degree programs. Therefore, it is unclear how applicable the results are to persons of other faiths, an important consideration given the historical association between calling and Christianity. Generalizability to students in forms of postsecondary education other than undergraduate degree programs (e.g., trades programs, graduate degrees) is also unclear, which is important in light of Duffy and Sedlacek's (2010) finding that individuals in advanced professional degree programs are more likely to possess a sense of calling than those in undergraduate programs. Replication of this study with more participants from underrepresented populations will be important to establish the generalizability of the findings.

The sample contained numerous individuals who defined themselves as being spiritual but not member of an organized religion, and several interactions emerged based on the spirituality categories. It is important to recognize that, in the contemporary Canadian social context, there are individuals who perceive themselves to be spiritual beings who are open to transcendence and the divine while simultaneously rejecting involvement in any organized religion. The presence of this population motivated the inclusion of a separate category for these individuals within the demographic item pertaining to religion. Unfortunately, the meaning of the results related to spirituality is somewhat ambiguous because the categorization was based simply on participants' self-report, no measure of spirituality or religiosity was used in the study, and no qualitative follow-up questions were asked about what their personal spirituality means to them. Nonetheless, the pattern of results that emerged suggests that future research should attend to multiple facets and dimensions of spirituality in research on calling.

In conclusion, despite the presence of several potential limitations, the results of this study expand knowledge on the phenomenon of calling, especially as it is manifested in Christian undergraduate students. Sense of calling can clearly be a motivating factor in the pursuit of postsecondary education. Although additional research needs to be conducted, especially in terms of incorporating the notion of calling into counselling for students with motivation problems, this study confirms the importance of continuing to empirically examine the phenomenon in the lives of young adults.

### References

- Amundson, N. E. (2010). *Metaphor making: Your career, your life, your way*. Richmond, BC: Ergon.
- Charland, W. A. (1999). *Life-work: A career guide for idealists* (2nd ed.). Richmond, IN: Friends United Press.
- Clark, M. H., & Schroth, C. A. (2010). Examining relationships between academic motivation and personality among college students. *Learning and Individual Differences, 20*, 19–24. doi:10.1016/j.lindif.2009.10.002
- Cochran, L. (1997). *Career counselling: A narrative approach*. Thousand Oaks, CA: Sage.
- Covington, M. V. (2000). Goal theory, motivation, and school achievement: An integrative review. *Annual Review of Psychology, 51*, 171–200. doi:10.1146/annurev.psych.51.1.171
- Davidson, J. C., & Caddell, D. P. (1994). Religion and the meaning of work. *Journal for the Scientific Study of Religion, 33*, 135–147. doi:10.2307/1386600
- Dik, B. J., & Duffy, R. D. (2009). Calling and vocation at work: Definitions and prospects for research and practice. *The Counseling Psychologist, 37*, 424–450. doi:10.1177/0011000008316430

- Dik, B. J., Duffy, R. D., & Eldridge, B. M. (2009). Calling and vocation in career counseling: Recommendations for promoting meaningful work. *Professional Psychology: Research and Practice, 40*, 625–632. doi:10.1037/a0015547
- Dik, B. J., Eldridge, B. M., Steger, M. F., & Duffy, R. D. (2012). Development and validation of the Calling and Vocation Questionnaire (CVQ) and Brief Calling Scale (BCS). *Journal of Career Assessment, 20*(3), 242–263. doi:10.1177/1069072711434410
- Dik, B. J., Sargent, A. M., & Steger, M. F. (2008). Career development strivings: Assessing goals and motivation in career decision-making and planning. *Journal of Career Development, 35*, 23–41. doi:10.1177/0894845308317934
- Dik, B. J., & Steger, M. F. (2008). Randomized trial of a calling-infused career workshop incorporating counselor self-disclosure. *Journal of Vocational Behaviour, 73*, 203–211. doi:10.1016/j.jvb.2008.04.001
- Dobrow, S. R., & Tosti-Kharas, J. (2012). Listen to your heart? Calling and receptivity to career advice. *Journal of Career Assessment, 20*(3), 264–280. doi:10.1177/1069072711434412
- Domene, J. F. (2012). Calling and career outcome expectations: The mediating role of self-efficacy. *Journal of Career Assessment, 20*, 281–292. doi:10.1177/1069072711434413
- Duffy, R. D. (2010). Spirituality, religion, and work values. *Journal of Psychology and Theology, 38*, 52–61.
- Duffy, R. D., Allan, B. A., & Dik, B. J. (2011). The presence of a calling and academic satisfaction: Examining potential mediators. *Journal of Vocational Behavior, 79*, 74–80. doi:10.1016/j.jvb.2010.11.001
- Duffy, R. D., Bott, E. M., Allan, B. A., Torrey, C. L., & Dik, B. J. (2012). Perceiving a calling, living a calling, and job satisfaction: Testing a moderated, multiple mediator model. *Journal of Counseling Psychology, 59*, 50–59. doi:10.1037/a0026129
- Duffy, R. D., Dik, B. J., & Steger, M. F. (2011). Calling and work-related outcomes: Career commitment as a mediator. *Journal of Vocational Behavior, 78*, 210–218. doi:10.1016/j.jvb.2010.09.013
- Duffy, R. D., & Sedlacek, W. E. (2007). The presence of and search for a calling: Connections to career development. *Journal of Vocational Behavior, 70*, 590–601. doi:10.1016/j.jvb.2007.03.007
- Duffy, R. D., & Sedlacek, W. E. (2010). The salience of a career calling among college students: Exploring group differences and links to religiousness, life meaning, and life satisfaction. *Career Development Quarterly, 59*, 27–41. doi:10.1002/j.2161-0045.2010.tb00128.x
- Elangovan, A. R., Pinder, C. C., & McLean, M. (2010). Callings and organizational behavior. *Journal of Vocational Behavior, 76*, 428–440. doi:10.1016/j.jvb.2009.10.009
- Fairchild, A. J., Horst, S. J., Finney, S. J., & Barron, K. E. (2005). Evaluating existing and new validating evidence for the Academic Motivation Scale. *Contemporary Educational Psychology, 30*, 331–358. doi:10.1016/j.cedpsych.2004.11.001
- Faye, C., & Sharpe, D. (2008). Academic motivation in university: Role of basic psychological needs and identity formation. *Canadian Journal of Behavioral Science, 40*, 189–199. doi:10.1037/a0012858
- French, J. R., & Domene, J. F. (2010). Sense of calling: An organizing principle for the lives and values of young women in college. *Canadian Journal of Counseling, 44*, 1–14.
- Fulton, E., & Turner, L. A. (2008). Students' academic motivation: Relations with parental warmth, autonomy granting and supervision. *Educational Psychology, 28*, 521–534. doi:10.1080/01443410701846119
- Grouzet, F. M. E., Otis, N., & Pelletier, L. G. (2006). Longitudinal cross-gender factorial invariance of the Academic Motivation Scale. *Structural Equation Modeling, 13*, 73–98. doi:10.1207/s15328007sem1301\_4
- Guichard, J. (2009). Self-constructing. *Journal of Vocational Behavior, 75*, 251–258. doi:10.1016/j.jvb.2009.03.0042009-22608-002
- Guinness, O. (1998). *The call*. Nashville, TN: Thomas Nelson.
- Hall, D. T., & Chandler, D. E. (2005). Psychological success: When the career is a calling. *Journal of Organizational Behavior, 26*, 155–176. doi:10.1002/job.301

- Harackiewicz, J. M., Durik, A. M., Barron, K. E., Linnenbrink-Garcia, L., & Tauer, J. M. (2008). The role of achievement goals on the development of interest: Reciprocal relations between achievement goals, interest, and performance. *Journal of Educational Psychology, 100*, 105–122. doi:10.1037/0022-0663.100.1.105
- Hernandez, E. F., Foley, P. F., & Beitin, B. K. (2010). Hearing the call: A phenomenological study of religion in career choice. *Journal of Career Development, 38*, 62–88. doi:10.1177/0894845309358889
- Hirschi, A. (2011). Callings in career: A typological approach to essential and optional components. *Journal of Vocational Behavior, 79*, 60–73. doi:10.1016/j.jvb.2010.11.002
- Horstmannshof, L., & Zimitat, C. (2007). Future time orientation predicts academic engagement among first-year university students. *British Journal of Educational Psychology, 77*, 703–718. doi:10.1348/000709906X160778
- Hunter, I., Dik, B. J., & Banning, J. H. (2010). College students' perceptions of calling in work and life: A qualitative analysis. *Journal of Vocational Behavior, 76*, 178–186. doi:10.1016/j.jvb.2009.10.008
- Linnenbrink, E. A., & Pintrich, P. R. (2002). Motivation as an enabler for academic success. *School Psychology Review, 31*, 313–327.
- McMahon, M. L., & Watson, M. B. (2008). Systemic influences on career development: Assisting clients to tell their career stories. *Career Development Quarterly, 56*, 280–288. doi:10.1002/j.2161-0045.2008.tb00043.x
- Meece J. L., Anderman, E. M., & Anderman, L. H. (2006). Classroom goal structure, student motivation, and academic achievement. *Annual Review of Psychology, 57*, 487–503. doi:10.1146/annurev.psych.56091103.070258
- Miller, A. S., & Stark, R. (2002). Gender and religiousness: Can socialization explanations be saved? *American Journal of Sociology, 107*, 1399–1423. doi:10.1086/342557
- Moneta, G. B., & Siu, C. M. Y. (2002). Trait intrinsic and extrinsic motivations, academic performance, and creativity in Hong Kong college students. *Journal of College Student Development, 43*, 664–683.
- Pae, T. I. (2008). Second language orientation and self-determination theory: A structural analysis of the factors affecting second language achievement. *Journal of Language and Social Psychology, 27*, 5–27. doi:10.1177/0261927X07309509
- Peavy, R. (1997). A constructivist framework for career counseling. In T. Sexton & B. Griffin (Eds.), *Constructivist thinking in the counseling practice, research and training* (pp. 122–140). New York, NY: Teachers College Press.
- Ridgell, S. D., & Lounsbury, J. W. (2004). Predicting academic success: General intelligence, “big five” personality traits, and work drive. *College Student Journal, 38*, 607–619.
- Savickas, M. L. (2011). *Career counseling*. Washington, DC: American Psychological Association.
- Savickas, M. L. (2012). Life design: A paradigm for career intervention in the 21st century. *Journal of Counseling & Development, 90*, 13–19. doi:10.1111/j.1556-6676.201200002.x
- Sellers, T. S., Thomas, K., Batts, J., & Ostman, K. (2005). Women called: A qualitative study of Christian women dually called to motherhood and career. *Journal of Psychology and Theology, 33*, 198–209. doi:0091-6471/410-730
- Steger, M. F., & Dik, B. J. (2006, March). *Advances in spirituality research: The role of meaning in work*. Paper presented at APA Division 36: Religion, Baltimore, MD.
- Steger, M. F., Pickering, N. K., Shin, J. Y., & Dik, B. J. (2010). Calling in work: Secular or sacred? *Journal of Career Assessment, 18*, 82–96. doi:10.1177/1069072709350905
- Vallerand, R. J., & Bissonnette, R. (1992). Intrinsic, extrinsic, and amotivational styles as predictors of behavior: A prospective study. *Journal of Personality, 60*, 599–620. doi:10.1111/j.1467-6494.1992.tb00922.x
- Vallerand, R. J., Pelletier, L. G., Blais, M. R., Brière, N. M., Senécal, C., & Vallières, E. F. (1992). The Academic Motivation Scale: A measure of intrinsic, extrinsic, and amotivation in education. *Educational and Psychological Measurement, 52*, 1003–1017. doi:10.1177/0013164492052004025

- Vallerand, R. J., Pelletier, L. G., Blais, M. R., Brière, N. M., Senécal, C., & Vallières, E. F. (1993). On the assessment of intrinsic, extrinsic, and amotivation in education: Evidence on the concurrent and construct validity of the Academic Motivation Scale. *Educational and Psychological Measurement, 53*, 159–172. doi:10.1177/0013164493053001018
- Van Etten, S., Pressley, M., McInerney, D. M., & Liem, A. D. (2008). College seniors' theory of their academic motivation. *Journal of Educational Psychology, 100*, 812–828. doi:10.1037/0022-0663.100.4.812
- Wrzesniewski, A., McCauley, C., Rozin, P., & Schwartz, B. (1997). Jobs, careers, and callings: People's relations to their work. *Journal of Research in Personality, 31*, 21–33. doi:10.1006/jrpe.1997.2162

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