

# Toward a Tripartite Model of Intrinsic Motivation

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**ABSTRACT** Intrinsic motivation (IM) refers to engaging in an activity for the pleasure inherent in the activity. The present article presents a tripartite model of IM consisting of IM to know (i.e., engaging in an activity to experience pleasure while learning and trying to understand something new), IM toward accomplishment (i.e., engaging in an activity for the pleasure experienced when attempting task mastery), and IM to experience stimulation (i.e., engaging in an activity for feelings of sensory pleasure). The tripartite model of IM posits that each type of IM can result from task, situational, and personality determinants and can lead to specific types of cognitive, affective, and behavioral outcomes. The purpose of this research was to test some predictions derived from this model. Across 4 studies (Study 1:  $N = 331$ ; Study 2:  $N = 113$ ; Study 3:  $N = 58$ ; Study 4:  $N = 135$ ), the 3 types of IM as well as potential determinants and consequences were assessed. Results revealed that experiencing one type of IM over the others depends in part on people's personality styles. Also, each type of IM was found to predict specific outcomes (i.e., affective states and behavioral choices). The implications of the tripartite model of IM for motivation research are discussed.

Forty years of research has revealed that intrinsic motivation (IM) is a key factor in well-being and effective functioning (Deci, 1971, 1975). IM represents the force that leads people to engage in an

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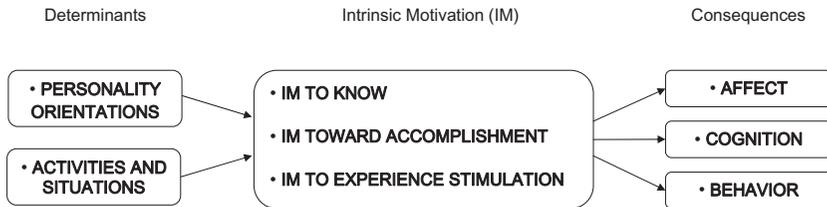
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activity purely for the pleasure and satisfaction inherent in the latter (e.g., Deci, 1975; Deci & Ryan, 1985). Research reveals that a host of positive consequences derive from IM, including better learning (see Lepper, 1994, for a review), greater effort and persistence (Ferrer-Caja & Weiss, 2000), enhanced performance (e.g., Guay & Vallerand, 1997), and greater creativity (Amabile, Hill, Hennessey, & Tighe, 1994). The numerous scholars who have studied IM have generally assumed that it represents a broad and undifferentiated form of motivation. However, certain theorists (e.g., Deci, 1975; Harter, 1981; White, 1959) have proposed that IM may differentiate into more specific motives, thereby suggesting that different types of IM may exist. Vallerand and his colleagues (Vallerand, Blais, Brière, & Pelletier, 1989; Vallerand et al., 1992, 1993; see also Vallerand, 1997) have proposed the existence of three general categories of IM: IM to know, IM toward accomplishment, and IM to experience stimulation. The three types of IM are posited to have some common roots but also some distinct antecedents and consequences. In the present article, we propose and test a framework, the tripartite model of intrinsic motivation, for organizing the basic mechanisms underlying these three types of IM. This model is presented below.

### The Tripartite Model of Intrinsic Motivation

The tripartite model of intrinsic motivation (TMIM; see Figure 1) makes four major propositions. The first posits that IM can be seen as a multidimensional concept. This idea is not new. White (1959) and Deci (1975), for instance, proposed a differentiation process of IM. They argue that in babies, intrinsic (or effectance, for White) motivation is general and undifferentiated. Babies explore and



**Figure 1**  
The tripartite model of intrinsic motivation.

manipulate their environment and appear to be interested in about everything new they encounter. However, gradually, young children behave more selectively and develop preferences for some classes of activities. Thus, through accumulated experiences, basic undifferentiated IM becomes differentiated into specific intrinsic motives (Deci, 1975; White, 1959). However, the nature of the specific types of IM was not specified.

As will be seen later in this article, a variety of IM types has been proposed or studied. Vallerand and his colleagues (Vallerand et al., 1989; Vallerand et al., 1992, 1993; see also Vallerand, 1997) suggested that these could be subsumed into three major types: IM to know, IM toward accomplishment, and IM to experience stimulation. IM to know implies engaging in an activity because of the pleasure and satisfaction of learning, exploring, and trying to understand something new. As Bruner (1966, p. 127) put it: "The will to learn is an intrinsic motive, one that finds both its source and its reward in its own exercise." IM to know has a vast tradition, mainly in educational research. It relates to constructs such as exploration (Berlyne, 1971), learning goals (Dweck, 1986; Dweck & Leggett, 1988), IM to learn (Brophy, 1987), intrinsic intellectuality (Lloyd & Barenblatt, 1984), and intrinsic curiosity (Condry, 1987; Day, 1971; Harter, 1981; Maw, 1971). IM to know also bears some resemblance to what Boekaerts and Boscolo (2002) referred to as interest in learning, which is defined as an inner drive to seek out opportunities to learn more about a specific topic. The teenager who tries a new sport because he likes to discover new activities, the student who goes to school for the pleasure of acquiring knowledge, and people who watch documentaries because of the satisfaction of learning new information are all fueled by IM to know.

IM toward accomplishment refers to engaging in an activity for the satisfaction and pleasure derived from attempting to surpass oneself or trying to accomplish or create something. We underscore the fact that the focus is not on the end result but rather on the process of trying to accomplish something. IM toward accomplishment relates to effectance motivation (White, 1959), mastery motivation (Kagan, 1972), intrinsic challenge (Harter, 1981), and creativity (e.g., Amabile, 1985). When intrinsically motivated toward accomplishment, people derive pleasure from trying to develop new skills and improve their level of competence, characteristics that they share with mastery goal-oriented people (Ames, 1992). This type of

IM is at play when an individual takes a painting class for the pleasure of trying to develop his artistic skills or when a musician practices the guitar for the enjoyment derived from trying to play a difficult solo part.

IM to experience stimulation is operative when one engages in an activity for the stimulating sensations, excitement, or aesthetic enjoyment associated with it. This type of IM has been neglected in research until recently but would appear to be related to constructs such as aesthetic experiences (Berlyne, 1971), sensation seeking (Zuckerman, 1979), the motive for sensory pleasure (Eisenberger et al., 2010), peak experiences (McInman & Grove, 1991; Privette & Bundrick, 1991), and sentience (Jackson, 1989). IM to experience stimulation is also in line with theories of arousal (e.g., Berlyne, 1960; Lee, 1996) that state that people are motivated to reach an optimal level of arousal (which varies between individuals) from their environment. Examples of people displaying IM to experience stimulation would be coworkers meeting over a drink for the pleasure of having a stimulating discussion together and teenagers who ride roller coasters for the intense sensations and feelings of excitement they derive from that activity.

Research involving the measurement of the three types of IM has demonstrated that while related, these three types can be empirically distinguished from one another. Specifically, research involving exploratory and confirmatory factor analyses conducted in different contexts, such as education (Fairchild, Horst, Finney, & Barron, 2005; Vallerand et al., 1989; Vallerand et al., 1992), work (Blais, Brière, Lachance, Riddle, & Vallerand, 1993), and leisure (Pelletier, Vallerand, Green-Demers, Blais, & Brière, 1996), as well as sports and physical activity (Brière, Vallerand, Blais, & Pelletier, 1995; Hein, Mür, & Koka, 2004; Pelletier, Vallerand, Green-Demers, Blais, & Brière, 1995) reveals that IM to know, IM toward accomplishment, and IM to experience stimulation correspond to three related but different constructs that can be assessed separately. In addition, the correlations among the three constructs are typically moderately high (around .60), suggesting more unique than common variance. Further emphasizing the pertinence of distinguishing the three types of IM from one another is the fact that they appear to have different antecedents (Standage, Duda, & Ntoumanis, 2003) and to differentially predict certain consequences (Hein et al., 2004; Jackson, Kimiecik, Ford, & Marsh, 1998). We return to these issues in later sections.

A second proposition from the TMIM is that the same conditions that have been shown in the literature to lead to the emergence of IM are necessary for the emergence of each type of IM. For example, the literature reveals that IM arises when individuals engage in activities that they find interesting (Deci & Ryan, 1985, 2000). Accordingly, all three types of IM are expected to originate from involvement in activities that present interesting features. While this hypothesis has not been tested directly with the three types of IM, some findings are suggestive of this association. For example, all three types of IM have been found to be highly present in activities in which individuals typically engage out of interest, such as leisure activities (Pelletier et al., 1996), and have been found to be strongly correlated with interest toward the activity in college (Vallerand et al., 1989) and sports (Brière et al., 1995) settings. All three types of IM have also been shown to be associated with other documented antecedents of IM, such as perceptions of competence (Brière et al., 1995; Pelletier et al., 1995; Vallerand et al., 1989) and autonomy support (Pelletier et al., 1995). Thus, the variables that typically influence general IM should similarly influence each type of IM.

The third proposition from the TMIM postulates that each type of IM also has some specific antecedents. Specifically, it is proposed that a match (Sansone & Morgan, 1992) exists between the types of IM and their respective antecedents (i.e., activity, situation, and personality). While, in general, interesting task features facilitate the emergence of IM toward this activity (Deci & Ryan, 1985, 2000), specific types of interesting task features are expected to trigger specific types of IM. For example, involvement in an interesting activity dealing with sensory pleasures (e.g., listening to music, savoring tasty food, riding a roller coaster) should evoke individuals' IM to experience stimulation more so than either IM to know or IM toward accomplishment.

Some hypotheses related to this third proposition from the TMIM have already been tested. Specifically, in past research (Carbonneau & Vallerand, 2010), we examined whether the three types of IM would be experienced to a different degree as a function of the type of activity engaged in. It was hypothesized that activities containing some specific inherent interesting features should facilitate one type of IM more than the other two depending on the nature of these features. Three activities (i.e., studying, working, and gambling) were

selected because they all contain some intrinsic elements and because each of them was hypothesized to facilitate one specific type of IM over the other two. Specifically, we expected collegiate studies to instill predominantly IM to know in students, as one's main source of pleasure should be to learn about things. On the other hand, work (in this case, teaching) was expected to lead mainly to IM toward accomplishment because this is where one typically attempts to surpass oneself to achieve things. Finally, we hypothesized that gambling would facilitate IM to experience stimulation in one's favorite game, as the thrill and excitement experienced while gambling should be more prominent than trying to learn or accomplish things. Overall, these hypotheses received support as results revealed that engaging in educational, teaching, and gambling activities were predominantly conducive to IM to know, IM toward accomplishment, and IM to experience stimulation, respectively.

Although it is proposed that any of the three types of IM can be triggered under the appropriate conditions, it is nevertheless hypothesized that individual differences should also influence the type of IM that would be predominant in various domains. Thus, personality should orient individuals toward typically experiencing a given type of IM over the others. For example, people who are highly curious and who like to learn about the world surrounding them should be likely to display high IM to know when engaging in a new activity that allows them the opportunity to learn something interesting. Although research by Standage et al. (2003) suggested that certain individual characteristics (e.g., dispositional goal orientations) might play a role as antecedents of some of the three types of IM, it remains unclear whether differences in more general personality styles might be predictive of the three types of IM.

The fourth and final proposition of the TMIM is that one specific type of IM should be a better predictor of consequences relevant to that type of IM than the other two types of IM. Thus, once again, a match between the specific type of IM and outcomes is predicted to take place. For example, a student who has a high IM toward accomplishment in her studies should be more likely to experience affective states relevant to achievement and mastering—such as feeling skilled and proud—than to experience affective states such as curiosity and excitement. Similarly, the student's high IM toward accomplishment should lead her to make choices accordingly, such as choosing a challenging topic for a term paper.

Research on the consequences of the three types of IM has typically focused on their common rather than unique consequences. For example, all three types of IM have been shown to be positively associated with satisfaction and positive emotions in different realms, such as school (Vallerand et al., 1989), sports (Brière et al., 1995), and leisure activities (Pelletier et al., 1996). All three types of IM have also been shown to be negatively related to distraction and inertia (Pelletier et al., 1996; Vallerand et al., 1989). Only a few studies have tested for the differentiation of IM by showing that the three types of IM predict different outcomes. For instance, Hein et al. (2004) looked at the predictive role of the three types of IM toward sport with respect to teenagers' intentions to engage in sport and exercise after high school. IM to experience stimulation was found to be the best predictor of the intentions to stay active, followed by IM toward accomplishment. The contribution of IM to know was not significant. Results from another study (Jackson et al., 1998) in the sports realm revealed that IM to experience stimulation was a better predictor of flow than the other two types of IM. However, research has not yet systematically looked at how each type of IM relates to specific affective states and behaviors.

### **The Present Research**

The purpose of the present research was to test hypotheses derived from the TMIM. Specifically, Study 1 aimed at testing the three-factor structure of IM. It was hypothesized that the three types of IM would be best represented by three distinct yet related factors deriving from a general intrinsic motivation second-order factor. Study 2 aimed at examining specific personality styles as antecedents of the three types of IM. Because the three types of IM contain distinctive features, they were hypothesized to have some specific antecedents. Specifically, a match (Sansone & Morgan, 1992) was expected between each type of IM and its respective antecedent such that specific personality styles were hypothesized to predict specific types of IM. Studies 3 and 4 focused on the distinct consequences associated with each type of IM. More precisely, a specific type of affective states (Study 3) and behavioral choice (Study 4) was hypothesized to be associated with each of the three types of IM. Thus, each type of IM was hypothesized to be a better predictor of certain consequences (i.e., affective states, behaviors) relevant to this type of IM than

either general intrinsic motivation (Study 3), external regulation, or the other types of IM (Studies 3 and 4).

Throughout the series of studies, we assessed the three types of IM and also external regulation, for comparison purposes. IM and external regulation are at opposite ends of the self-determination continuum (Deci & Ryan, 1985) and are thus often contrasted with one another in motivation research, with IM leading to more adaptive outcomes. Accordingly, in the present series of studies, external regulation was expected to be negatively related or unrelated to the various antecedents and consequences of the three types of IM.

## STUDY 1

The purpose of Study 1 was to test for the validity of the trifactorial structure of IM. It was expected that the three types of IM would be better represented by three distinct factors that derive from a second-order factor (i.e., general IM) than by either a unidimensional construct representing IM or a three-factor unidimensional model with no higher-order IM factor.

### Method

#### *Participants*

Participants were 331 undergraduate students (260 females, 70 males, and 1 without gender identification) from a large French Canadian university in Montreal. Participants' mean age was 24.28 years ( $SD = 5.56$  years). Participants were from various programs such as social work, communication, and psychology. They were invited to take part in the study via an email sent through the university mailing list. Participants were directed to an online survey Web site that contained the questionnaire, and all measures were completed via the Internet.

#### *Instrument*

*Academic motivation.* Academic motivation was assessed using the French-Canadian version of the Academic Motivation Scale (Vallerand et al., 1989). Participants were asked, "Why do you go to university?" Four types of motivation were assessed: IM to know (e.g., "Because I experience pleasure and satisfaction while learning new things"; four items;  $\alpha = .88$ ), IM toward accomplishment (e.g., "For the pleasure I experience while surpassing myself in my studies"; four items;  $\alpha = .91$ ), IM to expe-

rience stimulation (e.g., “For the ‘high’ feeling I experience while reading about various interesting subjects”; four items;  $\alpha = .84$ ), and external regulation (e.g., “In order to have a better salary later on”; four items;  $\alpha = .84$ ). The scale’s psychometric properties have been well supported (e.g., Fairchild et al., 2005; Vallerand et al., 1992, 1993). All items were scored on a 7-point Likert scale ranging from 1 (*Does not correspond at all*) to 7 (*Corresponds exactly*).

### Results and Discussion

To examine the factorial structure of the three types of IM, a confirmatory factor analysis (CFA) was performed with EQS 6.1 (Bentler, 1993) using robust maximum likelihood estimation procedures. The first hypothesized model was a single-factor structure representing general IM. This model was tested in order to examine whether IM to know, IM toward accomplishment, and IM to experience stimulation can be represented by a unidimensional construct. The second hypothesized model was a one-level, three-factor structure representing the three types of IM. This model was tested in order to examine whether the three types of IM can be represented by three correlated unidimensional constructs. Finally, the third model was a second-order factor model that examined whether IM to know, IM toward accomplishment, and IM to experience stimulation are distinct first-order factors emanating from a second-order factor (i.e., general IM). This is the model that we hypothesized to reflect the position of the TMIM and thus to best fit the data.

Results revealed that the unidimensional model did not fit the data well (see Table 1). On the other hand, both the three-factor model and the second-order three-factor model had acceptable fits to the data. All factor solutions were proper and the factors were well defined (e.g., all factor loadings on the expected factors were significant). A comparison of the two acceptable models showed the superiority of the second-order three-factor model. Specifically, a  $\chi^2$  difference test revealed a significant improvement of fit with the second-order three-factor model,  $\Delta\chi^2$  ( $df = 1$ ) =  $-14.3$ ,  $p < .05$ . In addition, inspection of the AIC values revealed that this latter model was more parsimonious,  $\Delta AIC = -12.07$ .

The results of Study 1 provided support for a second-order structure in which the three types of IM derived from a general second-order IM factor. Indeed, such a structure was found to better fit the data than models consisting of simply the three types of IM or one

**Table 1**  
**Study 1: Fit Statistics for the Factorial Structure of the Three**  
**Types of IM**

Model	$\chi^2$	<i>df</i>	$\chi^2/df$	CFI	NNFI	RMSEA	AIC
Single-factor	636.66	54	11.79	.78	.73	.18 (.17–.20)	528.63
Three-factor	112.71	51	2.21	.97	.96	.06 (.05–.08)	10.48
Second-order three-factor	98.41	50	1.97	.98	.97	.06 (.04–.07)	–1.59

*Note.* Single-factor model: IM to know, IM toward accomplishment, and IM to experience stimulation are represented by a unidimensional construct. Three-factor model: IM to know, IM toward accomplishment, and IM to experience stimulation are represented by three unidimensional constructs. Second-order three-factor model: IM to know, IM toward accomplishment, and IM to experience stimulation are represented by distinct first-order factors derived from a second-order factor (i.e., general IM).

single factor representing general intrinsic motivation. These results thus provide support for Postulate 1, which posits the existence of three types of IM (IM to know, IM toward accomplishment, and IM to experience stimulation) that derive from a general IM factor.

## STUDY 2

According to Proposition 3 of the TMIM, individual differences are hypothesized to determine which type of IM is experienced. Study 2 aimed at investigating whether certain personality styles would orient individuals toward generally engaging in their activities out of a specific type of IM. Three personality styles were thought to be relevant, with each of them hypothesized to predict a specific type of IM. We first predicted that having a curious personality, characterized by an eagerness to learn new things and a desire to deepen one's understanding of the world (Naylor, 1981), would lead one to typically engage in interesting activities out of IM to know. Second, an achieving-oriented personality, which is characterized by the enjoyment of hard work and the desire to maintain high standards (Jackson, 1974), was hypothesized to mainly lead people to engage in interesting activities out of IM toward accomplishment. Third, a sensation-oriented personality style, an orientation leading one to do

things in order to experience sensory and aesthetic enjoyment (Jackson, 1989), was expected to mainly lead individuals to engage in interesting activities out of IM to experience stimulation. Furthermore, in order to provide a stringent test of the matching hypothesis between each personality style and each type of IM (and not general IM), a structural equation model was tested wherein the three personality styles were used as predictors and a second-order model featuring general IM and the three types of IM as outcome variables (as in Study 1). In line with the TMIM Postulate 3, each personality style was expected to lead only to the type of IM with matching features and not to general intrinsic motivation, or to external regulation.

## Method

### *Participants and Procedure*

Participants were 113 college students (73 females, 39 males, and 1 without gender identification) from a large college in Montreal. Participants' mean age was 18.21 years ( $SD = 3.13$  years). Most of the participants (77.9%) were French Canadians.

Participants first completed the three personality scales (see below). They then were asked to recall and write about three specific interesting situations: a time when they had practiced one of their favorite hobbies, a time when they had participated in a board game, and a time when they had taken part in a discussion with a group of friends. These situations were chosen because all three types of IM could potentially underlie people's involvement in these activities, as was revealed by the results of a pilot study. For example, people may practice a hobby (or take part in a discussion or in a board game) either for the pleasure of learning new things, for the pleasure of trying to master it, or for the pleasure of experiencing sensorial stimulations while doing it. Thus, we thought that the general nature of these activities should allow the role of personality variables to emerge as predictors of each type of IM. For each of the three situations, participants were asked to write down specific details about the activity (e.g., the day it took place, the people who were there) to help them mentally reexperience the situation. Then participants were asked to indicate the reasons why they had done each of the activities (using the situational motivation scale). Finally, demographic information was collected.

### *Instruments*

Three different personality styles were assessed. They were measured on a 7-point Likert scale ranging from 1 (*Almost never*) to 7 (*Almost always*).

*The curious personality.* The curious personality style was assessed using eight relevant items taken from the Melbourne Curiosity Inventory (Naylor, 1981). A sample item is “I deliberate about issues even when they do not affect me personally.” Cronbach’s alpha for the eight items was .88.

*The achieving-oriented personality.* Eight items ( $\alpha = .62$ ) adapted from the Jackson Achievement Motivation Scale (Jackson, 1974) were used to assess the achieving-oriented personality. A sample item is “I often set goals that are very difficult to reach.”

*The sensation-oriented personality.* Eight items were created for the assessment of the sensation-oriented personality. They were inspired by the literature on sensation seeking (Zuckerman, 1979) and sentience (Jackson, 1989). A sample item is “I am easily carried away by music.” Cronbach’s alpha for the eight items was .65.

*Situational motivation.* Twelve items from the Situational Motivation Scale (Guay, Vallerand, & Blanchard, 2000) were adapted for the purposes of this study. Participants were asked, “What are the reasons why you took part in that [hobby, game, discussion]?” Four types of motivation were assessed: IM to know (three items; sample item: “For the pleasure of discovering something new”), IM toward accomplishment<sup>1</sup> (three items; sample item: “For the pleasure I felt as I became more and more skilled”), IM to experience stimulation (three items; sample item: “For the positive stimulations that this activity provided me with”), and external regulation (three items; sample item: “Because I did not want to disappoint certain people”). Each item represents a possible reason for doing the activity. Because we wanted a measure of individuals’ motivation across the different interesting situations, we used aggregate scores corresponding to the mean of each type of motivation across the three situations. The aggregated subscales had alphas ranging from .78 to .81. Using aggregated dependent measures was deemed to be especially relevant in the present study given that, as shown by Epstein (1979), personality traits are not strong predictors of what a person will do in any given situation or event, but they typically predict an individual’s behavior over several occasions quite well.

1. Men were found to have higher IM toward accomplishment ( $M = 5.83$ ) than women ( $M = 5.16$ ). However, controlling for gender in the analyses did not affect the pattern of results.

## Results

### *Preliminary Analyses*

The correlations among all the study variables appear in Table 2. As a preliminary test of our hypotheses, we conducted a series of four separate regression analyses. In all analyses, the three personality styles were the predictors so that they would be allowed to compete with one another to predict each type of motivation. The enter method was used, which evaluates each independent variable in terms of what it adds to the prediction of the dependent variable that is different from the prediction made by other independent variables (Tabachnick & Fidell, 2001). Of the three personality styles, only the curious personality style was a significant predictor of IM to know,  $\beta = .26$ ,  $t(112) = 2.39$ ,  $p < .05$ ; the achieving-oriented personality,  $\beta = .03$ ,  $t(112) = 0.27$ ,  $p = .79$ , and the sensation-oriented personality,  $\beta = .05$ ,  $t(112) = 0.51$ ,  $p = .61$ , did not significantly predict this type of IM. In addition, IM toward accomplishment was significantly predicted by the achieving-oriented personality,  $\beta = .22$ ,  $t(112) = 2.28$ ,  $p < .05$ , but was not significantly predicted by either the curious personality,  $\beta = .11$ ,  $t(112) = 0.99$ ,  $p = .32$ , or the sensation-oriented personality,  $\beta = .02$ ,  $t(112) = 0.16$ ,  $p = .88$ . Similarly, IM to experience stimulation was only significantly predicted by the sensation-oriented personality,  $\beta = .24$ ,  $t(112) = 2.26$ ,  $p < .05$ ; both the curious personality,  $\beta = .09$ ,  $t(112) = 0.83$ ,  $p = .41$ , and the achieving-oriented personality,  $\beta = .07$ ,  $t(112) = 0.69$ ,  $p = .49$ , did not significantly predict this type of IM. Finally, none of the personality styles was a significant predictor of external regulation.

### *Structural Equation Modeling Analyses*

Structural equation modeling analyses were carried out to determine the extent to which the three personality styles could predict each type of IM. The model tested was composed of seven observed variables (i.e., the three personality styles, the three types of IM, and external regulation). Moreover, the three types of IM were used as indicators for a latent variable representing general IM. In line with the results of the regression analyses, three paths were specified: one between the curious personality and IM to know, one between the achieving-oriented personality and IM toward accomplishment, and one between the sensation-oriented personality and IM to experience

**Table 2**  
**Study 2: Means, Standard Deviations, and Correlations Among the Study Variables**

	<i>M</i>	<i>SD</i>	(1)	(2)	(3)	(4)	(5)	(6)
(1) Curious personality	5.35	0.84						
(2) Achieving-oriented personality	4.79	0.78	.34***					
(3) Sensation-oriented personality	4.42	0.91	.48***	.12				
(4) IM to know	5.39	1.76	.29**	.12	.18†			
(5) IM toward accomplishment	5.38	1.68	.20*	.26**	.10	.68***		
(6) IM to experience stimulation	6.06	1.40	.27**	.13	.33***	.61***	.59***	
(7) External regulation	3.46	1.33	-.11	-.08	-.04	-.02	-.04	-.17†

*Note.* *N* = 113. IM = intrinsic motivation.

†*p* < .10. \**p* < .05. \*\**p* < .01. \*\*\**p* < .001.

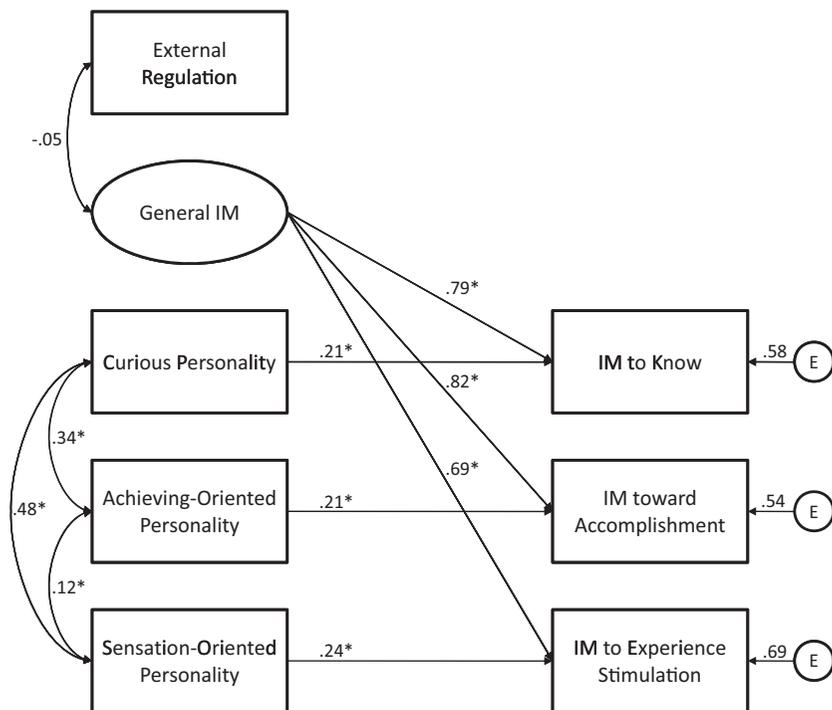


Figure 2

Results of the structural equation modeling analyses for Study 2. IM = intrinsic motivation. In this figure, general IM represents a second-order factor. \* $p < .05$ .  $N = 113$ .

stimulation (see Figure 2). Moreover, four covariance paths were estimated: three among the personality variables and one between general IM and external regulation. The results showed that the model had an acceptable fit to the data,  $\chi^2 (df = 11) = 9.31, p > .05$ , CFI = 1.00, NNFI = 1.00, RMSEA = .00 [.00–.09]. In addition, all paths were significant. As shown in Figure 2, the results revealed that the curious personality was the only significant and positive predictor of IM to know ( $\beta = .21$ ), the achieving-oriented personality the only significant and positive predictor of IM toward accomplishment ( $\beta = .21$ ), and the sensation-oriented personality the only significant and positive predictor of IM to experience stimulation ( $\beta = .24$ ).

Additional analyses were performed to examine whether similar results would be obtained if only the most strongly intrinsically motivated (i.e., the activity with the higher mean level of IM relative

to the level of external regulation) of the three activities was considered for each participant. The model was specified as in Figure 2. The pattern of results obtained was similar to that obtained when using the aggregated measures of motivation across the three activities. Specifically, the model had an acceptable fit to the data,  $\chi^2$  ( $df = 11$ ) = 10.11,  $p > .05$ , CFI = 1.00, NNFI = 1.00, RMSEA = .00 [.00–.09]. In addition, all paths were significant. The results<sup>2</sup> revealed that the curious personality positively predicted IM to know ( $\beta = .21$ ), the achieving-oriented personality positively predicted IM toward accomplishment ( $\beta = .20$ ), and the sensation-oriented personality positively predicted IM to experience stimulation ( $\beta = .25$ ).

### Discussion

The results from Study 2 provided support for the hypotheses that specific personality styles can lead to the experience of a specific type of IM. Specifically, a curious personality leads people to engage in various interesting activities out of IM to know, whereas people having achieving-oriented and sensation-oriented personalities tend to partake in these same activities out of IM toward accomplishment and IM to experience stimulation, respectively. These results are in line with the literature (see Deci & Ryan, 1985, 2000; Vallerand, 1997) suggesting that personality is an important source of influence on people's motivation. In line with the TMIM Proposition 3, however, what these results reveal is that certain types of personality styles will predict certain types of IM and not others or external regulation. This finding underscores the pertinence of distinguishing among the three types of IM rather than considering IM as a unidimensional construct. The assumption that external regulation results from different antecedents than IM was also supported since none of the personality styles significantly predicted this type of motivation. Overall, the results from Study 2 uncovered an important determinant that makes people more or less likely to experience a specific type of IM, namely personality variables.

### STUDY 3

The purpose of Study 3 was to examine some of the specific consequences associated with each type of IM. Specifically, this study

2. Complete results from this analysis are available from the first author.

aimed at testing whether each of the three types of IM would lead to distinct affective states experienced within the purview of the same activity. Participants' situational motivation and affective states were assessed immediately after activity engagement in order to prevent recall biases. In line with Postulate 4 of the TMIM, a match was expected between individuals' situational motivation to engage in a game and the actual affective states experienced during game engagement. Specifically, we hypothesized that the more participants would undertake the game out of a specific type of IM (e.g., IM to know), the more they would experience affective states related to that specific type of IM (e.g., feeling curious and attentive) in the purview of the game. Finally, each type of affective states was expected to be predicted *only* by the matching type of IM and not by general intrinsic motivation or external regulation.

## Method

### *Participants and Procedure*

Participants were 58 students (31 females and 27 males) from a large university in Montreal. Participants' mean age was 22.59 years ( $SD = 4.17$  years). Most of them (77.6%) were French Canadians. They were recruited in the university library and were from various programs. First, participants completed a demographic questionnaire. Then they took part in a game that we created for the purpose of this study. The game consisted of three colorful, stimulating images in which participants had to find hidden objects, similar to the "Where's Waldo?" game. The three images also contained bubbles of information on varied subjects (e.g., "A shrimp's heart is situated in its head"). The game was referred to as the Extraterrestrial activity because of the many aliens represented in the images. The game was designed in a way that could elicit any one of the three types of IM: IM to know because of the pieces of information, IM toward accomplishment because of the challenge to find the hidden objects, and IM to experience stimulation because of the colorful and visually stimulating images. Following the game, participants were asked to indicate the reasons why they had taken part in it using the Situational Motivation Scale (Guay et al., 2000). They were also asked about the affective states they had felt while playing the game.

### *Instruments*

*Situational motivation.* Participants indicated the reasons why they had taken part in the activity using a version of the Situational Motivation

Scale (Guay et al., 2000) adapted for the purposes of this study, so as to assess the three types of IM. Four types of motivation were assessed: IM to know (three items; sample item: “For the pleasure of discovering something new”;  $\alpha = .89$ ), IM toward accomplishment (three items; sample item: “For the satisfaction I felt while trying to take up interesting challenges”;  $\alpha = .79$ ), IM to experience stimulation (three items; sample item: “For the pleasure of being stimulated [experience sensations]”;  $\alpha = .76$ ), and external regulation (three items; sample item: “Because this is what was expected of me”;  $\alpha = .82$ ).

*Affective states.* Participants were presented with the stem “While taking part in the Extraterrestrial activity, I felt . . .,” and then they rated different affective states using a 7-point Likert scale ranging from 1 (*Not at all*) to 7 (*Very strongly*). Three types of affective states<sup>3</sup> were assessed: affective states related to knowledge (e.g., curious, attentive;  $\alpha = .64$ ), to accomplishment (e.g., skilled, proud;  $\alpha = .73$ ), and to stimulation (e.g., excited, entertained;  $\alpha = .85$ ), with each type assessed using five items.

## Results

### *Preliminary Analyses*

The correlations among all the study variables appear in Table 3. As a preliminary test of hypotheses, a series of three separate regression analyses was conducted. In all analyses, the three types of IM and external regulation were the predictors so that they would be allowed to compete with one another to predict each type of affective state. The enter method was used. First, IM to know was found to be the only significant predictor of the affective states related to knowledge,  $\beta = .47$ ,  $t(57) = 3.83$ ,  $p < .001$ ; IM toward accomplishment,  $\beta = .20$ ,  $t(57) = 1.36$ ,  $p = .18$ , IM to experience stimulation,  $\beta = .09$ ,  $t(57) = 0.59$ ,  $p = .55$ , and external regulation,  $\beta = .00$ ,  $t(57) = 0.02$ ,  $p = .99$ , did not significantly predict this type of affective state. Second, the affective states related to accomplishment were

3. The factorial structure of the three affective states subscales was tested in a pilot study. A multilevel second-order CFA was performed across three different activities where each subscale corresponded to one of three affective states categories deriving from a second-order factor (i.e., general positive affect). Results supported the factorial validity of the three affective states subscales with separate, yet correlated, dimensions of affective states,  $\chi^2$  ( $df = 172$ ) = 533.20,  $p < .05$ , normed  $\chi^2 = 3.10$ , CFI = .95, NNFI = .94, RMSEA = .08 [.07–.08]. The factor solution was proper and the factors were well defined (e.g., all factor loadings on the expected factors were significant).

**Table 3**  
**Study 3: Means, Standard Deviations, and Correlations Among the Study Variables**

	<i>M</i>	<i>SD</i>	(1)	(2)	(3)	(4)	(5)	(6)
(1) IM to know	5.24	2.26						
(2) IM toward accomplishment	4.88	1.97	.41**					
(3) IM to experience stimulation	4.58	1.83	.44**	.67***				
(4) External regulation	3.36	2.14	-.26†	.01	-.09			
(5) Affective states related to knowledge	4.29	1.14	.59***	.45***	.43**	-.13		
(6) Affective states related to accomplishment	3.59	1.13	.29*	.53***	.46***	-.11	.67***	
(7) Affective states related to stimulation	3.46	1.33	.18	.43**	.61***	-.21	.54***	.62***

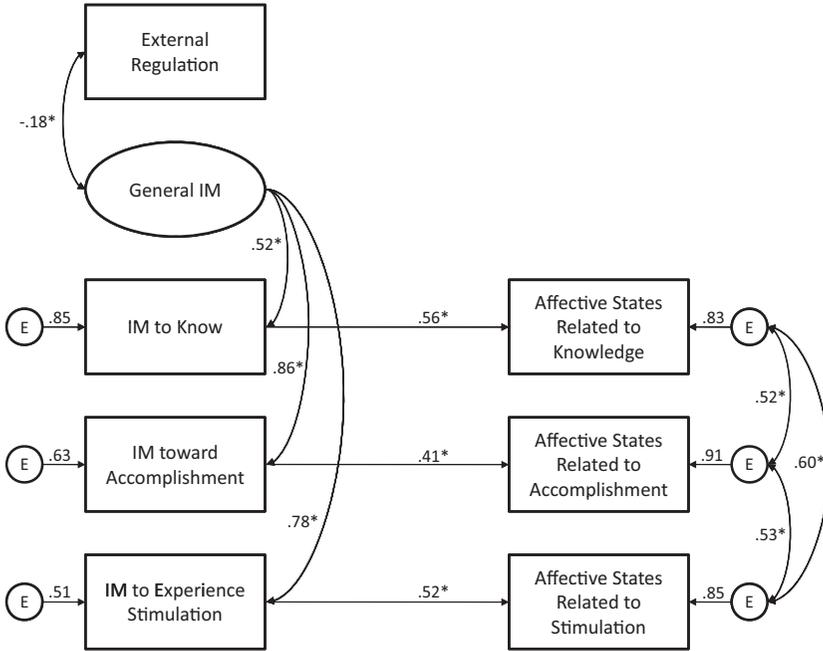
*Note.* *N* = 58. IM = intrinsic motivation.

†*p* < .10. \**p* < .05. \*\**p* < .01. \*\*\**p* < .001.

significantly and positively predicted by IM toward accomplishment,  $\beta = .41$ ,  $t(57) = 2.55$ ,  $p < .05$ , but not significantly predicted by either IM to know,  $\beta = .03$ ,  $t(57) = 0.25$ ,  $p = .81$ , IM to experience stimulation,  $\beta = .16$ ,  $t(57) = 1.01$ ,  $p = .32$ , or external regulation,  $\beta = -.09$ ,  $t(57) = -0.76$ ,  $p = .45$ . Finally, IM to experience stimulation emerges as the only significant positive predictor of the affective states related to stimulation,  $\beta = .60$ ,  $t(57) = 4.09$ ,  $p < .001$ . Both IM to know,  $\beta = -.17$ ,  $t(57) = -1.42$ ,  $p = .16$ , and IM toward accomplishment,  $\beta = .10$ ,  $t(57) = 0.71$ ,  $p = .48$ , did not significantly predict this type of affective state, whereas external regulation,  $\beta = -.20$ ,  $t(57) = -1.84$ ,  $p = .07$ , was even marginally negatively associated with it.

### *Structural Equation Modeling Analyses*

Structural equation modeling analyses were carried out to determine the extent to which the three types of IM would predict affective consequences. The model tested in the present study was composed of seven observed variables (i.e., the three types of IM, external regulation, and the three types of affective states). The three types of IM were also used as indicators of a latent variable representing general IM. In line with the results of the preliminary regression analyses, three paths were specified: one between IM to know and affective states related to knowledge, one between IM toward accomplishment and affective states related to accomplishment, and one between IM to experience stimulation and affective states related to stimulation (see Figure 3). Moreover, four covariance paths were estimated: one between general IM and external regulation and three among the affective states variables. The results showed that the model had an acceptable fit to the data,  $\chi^2 (df = 10) = 15.21$ ,  $p > .05$ , normed  $\chi^2 = 1.52$ , CFI = 0.97, NNFI = 0.93, RMSEA = .09 [.00–.18]. The fit of the model was considered adequate in the present context, especially in light of the small sample size and the complexity of the model (Hu & Bentler, 1995). In addition, all paths were significant. As shown in Figure 3, IM to know was the only significant and positive predictor of affective states related to knowledge ( $\beta = .56$ ), IM toward accomplishment the only significant and positive predictor of affective states related to accomplishment ( $\beta = .41$ ), and IM to experience stimulation the only significant and positive predictor of affective states related to stimulation ( $\beta = .52$ ). Lagrange multiplier tests were conducted and indicated that no additional



**Figure 3**  
**Results of the structural equation modeling analyses for Study 3.**  
**IM = intrinsic motivation. In this figure, general IM represents a**  
**second-order factor. \* $p < .05$ .  $N = 58$ .**

parameters could significantly improve the fit of the model. Thus, neither general IM nor external regulation was found to predict any types of affective states over the three types of IM.

### Discussion

The present results fully supported the hypotheses and revealed a match between the types of IM and the types of affective states experienced. Specifically, the more individuals engaged in the game out of IM to know, IM toward accomplishment, and IM to experience stimulation, the more they experienced affective states related to knowledge (e.g., curious, attentive), accomplishments (e.g., proud, skilled), and stimulation (e.g., excited, entertained), respectively. Conversely, as hypothesized, general intrinsic motivation and external regulation were not found to predict any of the affective states.

Overall, Study 3 provided evidence for Postulate 4 of the TMIM and the distinct role of each of the three types of IM in the experience of specific affects.

## STUDY 4

Study 3 revealed that the type of affective states individuals are likely to experience in the purview of an activity depends on the type of motivation that has driven them to engage in this specific activity. Study 4 examined whether people's orientations with respect to the three types of IM they typically display toward a given life context (or one's contextual motivation; Vallerand, 1997) would differentially predict another type of outcome, namely behavioral choice in a real-life situation. Specifically, people's contextual motivation with respect to leisure activities was assessed and used to predict behavioral choice of an actual activity to be engaged in. Participants completed a questionnaire assessing their regular motivation for leisure and then were allowed the possibility of selecting one of three leisure games to be played online. These games pertained to each of the three types of IM. In line with Postulate 4 of the TMIM, a match was expected between participants' type of IM and the game they most wanted to play. Thus, the higher the participants' IM to know in their leisure activities, the more they were expected to choose to play the leisure game of knowledge in the purview of the study, and so on. Finally, participants' external regulation was not expected to predict selection of a game in particular.

## Method

### *Participants and Procedure*

Participants were 135 adults (85 females and 50 males) from the province of Quebec. Participants' mean age was 25.41 years ( $SD = 5.64$  years). Most of them (95.6%) reported that French was their first language. More than half of the respondents (52.3%) were students, 43.2% were employed, and 4.5% were unemployed or on maternity leave. Participants were recruited through an advertisement targeting people from the province of Quebec on the Facebook Web site. Participants who were interested in taking part in the study were directed to an online survey Web site that contained our questionnaire. All measures were completed via the Internet.

First, participants completed a demographic questionnaire and a leisure motivation scale. Then they completed a filler questionnaire to prevent them from making the link between different types of IM and subsequent choice of games. Finally, participants were led to believe that they would take part in an online game and were asked to indicate their game preferences.

### *Instruments*

*Leisure motivation.* Participants' motivation toward leisure activities was measured with the Leisure Motivation Scale (LMS; Pelletier et al., 1996). This scale assesses different motivations for engaging in leisure activities and has been shown to have adequate psychometric qualities (e.g., Pelletier et al., 1995, 1996). The following four subscales were used in the present study: IM to know (four items; sample item: "Because it allows me to deepen my understanding of subjects that interest me";  $\alpha = .87$ ), IM toward accomplishment (four items; sample item: "For the pleasure of surpassing myself while doing activities that are challenging for me";  $\alpha = .93$ ), IM to experience stimulation (four items; sample item: "For the pleasure I feel in living exciting experiences";  $\alpha = .80$ ), and external regulation (four items; sample item: "To show others that I am a dynamic person";  $\alpha = .66$ ). Responses were scored on a 7-point Likert scale ranging from 1 (*Do not agree at all*) to 7 (*Very strongly agree*).

*Behavioral choices.* Participants were informed that to thank them for their participation in the study, we were offering them the opportunity to take part in a fun online game. Three games were briefly described to them: a game of knowledge, in which they would learn new, interesting things; a game of accomplishments, in which they would take up interesting challenges; and a game of stimulation, in which they would experience pleasant sensations. The order in which the names of the games appeared was random. Participants were asked to indicate which of the three games they most wanted to engage in.

## **Results and Discussion**

To examine the relationship between the relative role of the three types of IM and external regulation in activity selection, we conducted a series of multinomial logistic regressions, with activity choice as a categorical variable. The three types of IM and external regulation were standardized and entered as explanatory covariates. Multinomial logistic regressions examine the relationships between a categorical dependent variable and independent variables by com-

binning multiple binary logistic regressions. The odds ratio (i.e.,  $\text{Exp}(B)$ ) represents the change associated with a one-unit change in a predictor variable while other predictors are held constant. For example, given that predictors are standardized in the present research, an odds ratio of 3 indicated that for each standard deviation above the mean on a predictor, participants are three times more likely to choose this category rather than another one.

A chi-square test confirmed that the full model was a better fit to the data than a model containing no explanatory variables,  $\chi^2 (df = 8) = 34.58, p < .05$ . In addition, IM to know,  $\chi^2 (df = 2) = 13.51, p < .05$ , IM toward accomplishment,  $\chi^2 (df = 2) = 17.85, p < .05$ , and IM to experience stimulation,  $\chi^2 (df = 2) = 10.57, p < .05$ , were significantly related to activity choice. Conversely, external regulation was unrelated to activity choice,  $\chi^2 (df = 2) = 4.16, p > .05$ . Specifically, the higher participants' IM to know, the more likely they were to choose the game of knowledge rather than the game of accomplishments,  $\text{Exp}(B) = 2.96, p < .05$ , or the game of stimulation,  $\text{Exp}(B) = 2.70, p < .05$ . Similarly, the higher participants' IM toward accomplishment, the more likely they were to choose the game of accomplishments rather than the game of knowledge,  $\text{Exp}(B) = 3.30, p < .05$ , or the game of stimulation,  $\text{Exp}(B) = 3.10, p < .05$ . Finally, the higher participants' IM to experience stimulation, the more likely they were to choose the game of stimulation rather than the game of knowledge,  $\text{Exp}(B) = 1.99, p < .05$ , or the game of accomplishments,  $\text{Exp}(B) = 2.39, p < .05$ .

To sum up, the three types of IM were found to predict different behavioral choices in a real-life situation (an online game). As predicted by Postulate 4 of the TMIM, a match was found between each type of IM and the game most likely to be selected by participants. Overall, this study provided further support to the different predictive capacities of the three types of IM.

## GENERAL DISCUSSION

The general purpose of the present research was to propose and test a model of the antecedents and consequences of three types of IM, namely the tripartite model of intrinsic motivation. This model proposes the existence of three types of IM (i.e., IM to know, IM toward accomplishment, and IM to experience stimulation) that derive from

a more general form of IM. Each type of IM is proposed to be linked to the same determinants as general IM but also to specific determinants and outcomes. Results of four studies provided empirical support for the differentiation of these three types of IM. First, it was shown that the three types of IM were distinct first-order factors deriving from a second-order factor representing general IM (Study 1). Results also revealed a match between certain personality orientations (e.g., an achieving-oriented personality leading one to experience IM toward accomplishment; Study 2). Finally, a match was also found between each type of IM and outcomes, with each type of IM leading to specific types of affective states (Study 3) and behavioral choices of activities (Study 4). Overall, these findings lead to a number of important implications.

#### *On the Tripartite Model of Intrinsic Motivation*

A first implication is that the present findings provide support for the TMIM. Specifically, in line with past research (see Vallerand, 1997), the three types of IM were systematically distinguished among themselves and were seen as deriving from a higher general IM factor. Also, each type of IM was optimally affected by matching personality orientations. For instance, the curious personality leads one to engage in an activity predominantly out of IM to know. Finally, the presence of a match was found between each type of IM and specific outcomes (e.g., affective states and behavioral choices of activities) related to that type of IM.

In addition to providing important new insights as pertains to the processes responsible for the experience of a predominant type of IM, the TMIM is also useful as it allows refined prediction of certain outcomes. For instance, the findings of Study 3 showed that the best predictor of certain affective outcomes (e.g., affective states related to learning) is a specific type of IM that matches the outcomes (e.g., IM to know). A similar finding was obtained as pertains to the behavioral choice of an activity to be engaged in online. The implications would appear clear. If we wish to predict specific outcomes such as the ones used in the present research, we need to pay attention to the role each of the three types of IM plays in the process. Future research is needed in order to look at the role of the three types of IM in the prediction of other outcomes. For example, the three types of IM might be differently related to persistence. Indi-

viduals' high levels of IM to experience stimulation might lead them to persist much less than other types of IM in the same activity, as they may periodically engage in new jobs or even romantic partners as soon as they think that a new job or person might provide them with more stimulation. Conversely, individuals who have a high IM to know might persist in the same job or relationship for decades, presumably because they may feel that there is always something new to discover and learn from one's job or relationship.

In the present research, the three types of IM were contrasted with external regulation, but one may still wonder how they relate to other forms of motivation, especially identified and introjected regulations. Past research indicates that the associations between the three types of IM and both introjected and identified regulations are modest to moderate in domains such as sport, work, and leisure activities (Blais et al., 1993; Brière et al., 1995; Pelletier et al., 1995, 1996; Standage et al., 2003). In addition, in these studies, the intercorrelations among the types of IM were generally stronger than the correlations between the types of IM and identified regulation, which were stronger than the correlations between the types of IM and introjected regulation; this pattern of results is coherent with the simplex structure of the self-determination continuum. However, it is worth mentioning that the correlation between IM toward accomplishment and introjected regulation is typically more substantial in the education domain (Fairchild et al., 2005; Vallerand et al., 1989; Vallerand et al., 1993). Such findings suggest that IM toward accomplishment and introjected regulation might be conceptually closer in evaluative achievement contexts (such as in the education domain) than in other domains. Future research should examine this issue in greater depth.

Finally, one may ask if there are advantages to typically experiencing more than one type of predominant IM toward a specific task. Being high on more than one type of IM may promote an adaptive flexibility allowing one to switch from a type of IM to another one when the situation requires it. Thus, being high on IM to know toward education might be adaptive when learning the material, but being high on IM toward accomplishment might be more adaptive during exams. This example also begs the question as to whether some types of IM may be maladaptive under some situations. For example, take the case of IM to experience stimulation. This type of IM may lead individuals to get involved in activities, such as gambling, that provide high levels of positive stimulation. Engaging in

gambling activities is not problematic per se and might permit playful times, social integration, and connection with others (Hope & Havir, 2002; Vander Bilt, Dodge, Panday, Shaffer, & Ganguli, 2004). However, gambling can also lead one on a dangerous path to addiction and pathological gambling. Thus, individuals' IM to experience stimulation might drive them to engage in activities that can eventually lead to negative outcomes.

### *On Self-Determination Theory*

The present research also has implications for self-determination theory (SDT; e.g., Deci & Ryan, 1985, 2000). One major contribution of SDT has been to propose a self-determination continuum where different types of motivation are placed from the highest (intrinsic motivation, identified regulation) to the lowest levels of self-determination (external regulation, amotivation). Research has confirmed that motivational constructs higher on the continuum lead to more adaptive outcomes than those lower. What the present findings suggest is that it might be important to not only distinguish types of motivation based on their different position on the self-determination continuum (e.g., external regulation vs. IM) but to also contrast types of IM that are conceptually at the same level on the self-determination continuum. Because the three types of IM are hypothesized to be at the same level of self-determination on the continuum and were still found to predict different outcomes in the present research, it would appear that other processes are at play than self-determination. We suggest that such a process is the adaptive function that a match between the type of IM and the outcome serves in a given situation. Such a match leads one type of IM to become optimal in a given situation and thus to lead to the highest level of positive outcome. Past research (Sansone & Morgan, 1992) has also underscored the positive function of a match between the person's goal and the immediate situation for outcomes in certain life domains, such as education. Future research on the adaptive functions of a match hypothesis seems promising.

For the past 40 years, motivation researchers have spent a great deal of effort investigating the deleterious effects of external rewards, evaluations, deadlines, competition, and surveillance on IM (see Deci & Ryan, 1985, 2000, for reviews). SDT posits that the reason why such negative effects take place is because these variables

undermine the satisfaction of three basic psychological needs (Ryan & Deci, 2000). These three needs are the need for autonomy (i.e., the need to endorse and be the origin of one's behavior), the need for competence (i.e., the need to interact effectively with one's environment), and the need for relatedness (i.e., the need to feel connected, cared for, and close to others). The TMIM raises the possibility that the satisfaction of certain types of needs is more important to certain types of IM than others. For example, is the need for competence more conducive to IM toward accomplishment than to the other types of IM? This constitutes an interesting avenue for future research.

Finally, the present findings also have implications for the field of positive psychology. Positive psychology (e.g., Seligman & Csikszentmihalyi, 2000) is a branch of psychology that deals with human strengths and optimal functioning. The results of the present series of studies attest to the importance of studying the optimal type of motivation (i.e., IM) by focusing on the different forms it may take as well as on examining what it promotes. It would thus appear that creating the conditions (or even selecting individuals) such that a match is experienced between the optimal type of IM for a desired outcome might represent an interesting strategy to promote optimal functioning. Future research on this issue might prove fruitful.

### *Limitations*

The present results must be interpreted in light of the limitations of the research. A first limitation of the present research is that data for all studies were collected at one point in time. Future research should study the three types of IM using longitudinal and prospective designs in order to investigate, for example, whether changes in the three types of IM would lead to changes in outcomes (e.g., affect). Another limitation is that none of the studies used an experimental design. Experimental research conducted in laboratory settings would definitely allow us to better control conditions of task engagement. Although most of the variables in this research were self-reported, it is important to note that an objective measure of participants' choice behavior was used in Study 4. Also, all studies reported herein were conducted with French Canadian participants from the province of Quebec, Canada. It should be noted, however, that past research with scales assessing the three types of IM in other cultures has supported

the tridimensional IM structure (e.g., Martín-Albo, Núñez, & Navarro, 2009). Nevertheless, the cross-cultural invariance of the TMIM should be tested. Finally, although the designation of the three types of IM was based on a careful review of various approaches in the intrinsic motivation literature, this taxonomy might not be exhaustive, and other types of IM may potentially be uncovered.

## CONCLUSION

In sum, the TMIM was proposed and postulates from this model were tested. Results of four studies revealed that the three types of IM have common roots as well as specific determinants and consequences in line with postulates from the TMIM. These findings suggest that while IM can be studied as a unitary construct, new perspectives where IM can be considered as a multidimensional construct would appear promising.

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