

ON PASSION FOR LIFE ACTIVITIES: THE DUALISTIC MODEL OF PASSION*

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* Additional information on this program of research can be obtained by visiting the following Web site www.psychu.uqam.ca/lrcs.

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Abstract

The purpose of this chapter is to review research that focuses on a new conceptualization on passion for activities, the Dualistic Model of Passion (DMP) [Vallerand, R. J., Blanchard, C. M., Mageau, G. A., Koestner, R., Ratelle, C. F., Léonard, M., et al. (2003). Les passions de l'âme: On obsessive and harmonious passion. *Journal of Personality and Social Psychology*, 85, 756–767.]. Passion is defined as a strong inclination toward a self-defining activity that people love, find important, and in which they invest time and energy. This model further posits the existence of two types of passion (harmonious and obsessive) each associated with different determinants, outcomes, and psychological processes. Harmonious passion originates from an autonomous internalization of the activity in identity, leading people to choose to engage in the activity that they love. It is expected to mainly lead to adaptive outcomes. Conversely, obsessive passion is derived from a controlled internalization and is experienced as an uncontrollable desire to engage in the activity that one loves. Obsessive passion is hypothesized to typically predict less adaptive outcomes. Results of several studies conducted with participants of all ages engaged in a diverse range of activities provide support for the model. These findings reveal that passion matters not only with respect to intrapersonal outcomes (e.g., cognition, affect, psychological well-being, physical health, and performance), but also for interpersonal, intergroup, and societal consequences. The determinants of passion as well as the importance of taking into account the nature of the situation to better predict the consequences of the two types of passion are also addressed. Overall, the research reviewed clearly supports the DMP and attests to the significant role of passion in people's lives.



1. ON PASSION FOR LIFE ACTIVITIES: THE DUALISTIC MODEL OF PASSION

“Passion makes idiots of the cleverest men, and makes the biggest idiots clever”

(François de La Rochefoucauld, 1613–1680)

For centuries, scholars and laypeople alike have written and talked about passion extensively. While doing so, they have used the term “passion” to explain human exploits as well as foibles. In fact, rarely has a given construct been used so often to explain diametrically opposed outcomes. As expressed in the quote above, it is often assumed that passion can bring out the best and the worst in people. However, there is no way of telling if such assumptions are supported as they have yet to be subjected to scientific scrutiny. Given the prevalence of the use of the passion construct in everyday life, it is ironic that so little information exists on its role in outcomes and on the psychological processes through which such outcomes take place. Indeed, although philosophers have spent a considerable amount of effort to reflect on the nature of passion, very little work has been done in psychology on this construct until recently.

The purpose of this chapter is to conduct a review of research on a recent model of passion, namely the Dualistic Model of Passion (DMP; [Vallerand, 2008](#); [Vallerand et al., 2003](#)). Because passion is so intrinsically tied with people’s lives, research has been conducted in a number of real-life contexts, including work, sports, education, relationships, and others looking at a variety of activities, settings, participants, and outcomes. Furthermore, several researchers from other research laboratories have recently started to study passion in other areas such as gaming (e.g., [Wang & Chu, 2007](#)), online shopping addiction (e.g., [Wang & Yang, 2007](#)), leisure ([Stenseng, 2008](#)), the Internet ([Tosun & Lajunen, 2009](#)), and gambling (e.g., [MacKillop et al., 2006](#)). Although such research is reviewed, the focus of this chapter is nevertheless on our own research. Following a theoretical discussion on the concept of passion and a presentation of the DMP, research on passion is reviewed in six major sections. In the first section, I review the results of initial research (i.e., [Vallerand et al., 2003](#), Study 1) as pertains to the validation of the concept of passion. Next, I address research on the development of passion. In the following sections, the role of passion is addressed as pertains to intrapersonal consequences (cognition, affect, psychological well-being, physical health, and performance), as well as interpersonal, intergroup, and societal outcomes. Then, integrative research that incorporates the determinants and consequences of passion is reviewed.

Finally, research on the role of the situation as a moderator of the effects of passion on outcomes is reviewed. It will be seen that passion permeates the fabric of everyday life and does make a difference in people's lives. I conclude with suggestions for future research.

2. ON THE PSYCHOLOGY OF PASSION

2.1. Definitional elements of passion

The concept of passion has had many definitions over the years (see the Dictionary of [American Psychological Association, 2006](#), p. 675). One definition refers to a strong liking for an activity, object or, concept. It is this definition that is the focus of the present chapter. This definition of passion helps circumscribe what passions are and what being passionate means. To begin with, a passion is typically oriented toward an object or activity. Someone is passionate about an activity (e.g., basketball), an object (e.g., one's card collection), or even a person (e.g., being attracted to the loved one). Furthermore, it appears that being passionate entails being emotionally charged, or at least affectively inclined toward the object or activity. That is, passion and emotion are related. Such affect toward the object of one's passion implies that the person values the object; if not, no affect or liking would be experienced. However, although related, emotions and passions are not equivalent. As Kant (1724–1804) has proposed, emotions are typically fleeting in nature, lasting only a moment, whereas passions are more enduring in nature as they refer to something more permanent that has come to characterize that person in relation to a specific object or activity. Finally, because there is an intimate person–object link that is rooted in identity, passions should lead people to pursue the object or activity with energy on a long-term basis. Thus, when people are passionate for something, they typically engage regularly in the activity and may do so for several years and sometimes a lifetime.

The above discussion underscores that passion implies a special relation to an object or activity that one loves, values, and that has some ties to one's identity, leading to an important involvement in it. These are the important elements that should be part of a definition of passion. I return to this issue in the discussion of the DMP.

2.2. On the duality of passion

When we started our initial research in the late 1990s, very little research existed on passion from a psychological standpoint. Although passion had generated a lot of attention from philosophers (see [Rony, 1990](#), for a review), it received little empirical attention in psychology. In fact, until

recently, the only empirical work in psychology had focused on is romantic passion (Hatfield & Walster, 1978). Philosophers have long been interested in the concept of passion (although their focus has been more on the emotional aspect of passion than on its motivational dimension), with two distinct perspectives emerging (Rony, 1990). The first posits that passion entails a loss of reason and control. This perspective originates from the Greek philosophers. For instance, according to Plato (429–347 BC), reason moves people upward toward the divine, whereas passions bring people downward toward animal instincts and the flesh. Because passions move people toward the lesser good, they should be avoided. Later on, Spinoza (1632–1677) proposed that acceptable thoughts originated from reason, whereas unacceptable thoughts derived from passion. People afflicted with passion experienced a kind of suffering, in line with the etymology of the word passion (from the latin “passio” for suffering). According to this perspective, individuals with a passion are seen as passive, as slaves to their passion, because it comes to control them. Thus, according to this first position, passions entail a loss of control over the object.

The second perspective portrays passions in a more positive light. For instance, Aristotle proposed that people should not be ashamed of their passions as they reflect human qualities, or what it is to be human. Nevertheless, for Aristotle, passions need to be controlled by reason in order to be positive, or at least not negative. Similarly, in “The Passions of the Soul” (1649/1972), Descartes (1596–1650) defines passions as strong emotions with inherent behavioral tendencies that can be positive as long as reason underlies the behavior. Rousseau (1712–1778) goes further and even suggests that passion can lead to knowledge and truth. Although Rousseau agrees that passions must at times be controlled, he refutes the usefulness of reason in the process. Rather he posits that a passion can only be controlled by another passion. Hegel (1770–1831) further argues that passions are highly energetic and, in fact, are necessary to reach the highest levels of achievement. Thus, this second view of passion sees people as more active in relation to their passion. It even suggests that adaptive benefits will accrue when individuals are in control of their passion (Paturet, 2001; St-Thomas Aquinas, 1225–1274).

2.3. The DMP

Vallerand and his colleagues (Vallerand, 2008; Vallerand & Houliort, 2003; Vallerand et al., 2003) have recently developed a model of passion that addresses the dualism inherent in passion discussed above. In line with Self-Determination Theory (Deci & Ryan, 2000), the DMP proposes that people engage in various activities throughout life in hope of satisfying the basic psychological needs of autonomy (a desire to feel a sense of personal initiative), competence (a desire to interact effectively with the

environment), and relatedness (a desire to feel connected to significant others). Although people do not have much choice over engaging or not in some activities such as school and work (indeed most people have to study and work at some point in life), they do over other activities, especially those engaged in during leisure time (e.g., sports, chess, music, etc.). Eventually, after a period of trial and error, most people will start to show preference for some activities, especially those that are enjoyable and allow the satisfaction of the psychological needs of competence, autonomy, and relatedness (Ryan & Deci, 2003). Of these activities, a limited few will be perceived as particularly enjoyable and important, and to have some resonance with how we see ourselves. These activities become passionate activities. In line with the previous discussion on the definition of passion, the DMP defines passion as a strong inclination toward a self-defining activity that one likes (or even loves), finds important (or highly value), and in which one invests time and energy. These activities come to be so self-defining that they represent central features of one's identity. For instance, those who have a passion for playing basketball, playing the guitar, or writing poetry do not merely engage in these activities. They *are* "basketball players," "guitar players," and "poets." Thus, a passion is much more than experiencing "love" for an activity. It also entails valuing the activity to a high degree, devoting ample time to it, and making it one of the central aspects of one's identity and life.

Past research has shown that values and regulations concerning uninteresting activities can be internalized in either a controlled or an autonomous fashion (Deci et al., 1994; Sheldon, 2002; Vallerand, 1997; Vallerand & Ratelle, 2002). Similarly, the DMP posits that activities that people like will also be internalized in the person's identity to the extent that these are highly valued and meaningful for the person. Furthermore, the DMP proposes that there are two types of passion, obsessive and harmonious, that can be distinguished in terms of how the passionate activity has been internalized into one's identity. Obsessive passion results from a controlled internalization of the activity into one's identity. Such an internalization process leads not only the activity representation to be part of the person's identity, but also to values and regulations associated with the activity, to be at best partially internalized and at worst to be internalized completely outside the integrating self (Deci & Ryan, 2000). Such an internalization of one's regulations for the activity produces a phenomenological experience of a relative lack of control over the activity. A controlled internalization originates from intra- and/or interpersonal pressure typically because certain contingencies are attached to the activity such as feelings of social acceptance or self-esteem, or because the sense of excitement derived from activity engagement is uncontrollable. People with an obsessive passion can thus find themselves in the position of experiencing an uncontrollable urge to partake in the activity they view as important and enjoyable. They cannot

help but to engage in the passionate activity. The passion must run its course as it controls the person. Consequently, people risk experiencing conflicts and other negative affective, cognitive, and behavioral consequences during and after activity engagement. For instance, a young university assistant professor with an obsessive passion for playing the guitar might not be able to resist an invitation to jam with his friends the night before submitting an important research grant. During the jam session, he might feel upset with himself for playing music instead of working on the grant. He might, therefore, not fully focus on the task at hand (playing music) and may not experience as much positive affect and flow as he should while playing.

As seen above, obsessive passion leads individuals to display a rigid persistence toward the activity, as oftentimes they cannot help but to engage in the passionate activity (as was the case for our young university professor). This is so because internally controlling, rather than integrative, self processes (Hodgins & Knee, 2002), are at play with obsessive passion leading the person to engage in the activity with a fragile and contingent sense of self-esteem (e.g., Crocker, 2002; Kernis, 2003), and eventually becoming defensive rather than open to new experiences and information. Clearly, such contingencies can lead the individual to become dependent on the passionate activity and to suffer emotionally in the face of failure. Furthermore, although the dependence and rigid persistence that obsessive passion creates may lead to some benefits (e.g., sustained involvement and improved performance at the activity), it may also come at a cost for the individual. Indeed, depending on the situation and the type of task at hand, the lack of flexibility that obsessive passion entails may potentially lead to less than optimal functioning within the confines of the passionate activity, such as less creativity. Furthermore, such a rigid persistence toward the passionate activity may lead the person to experience conflict with other aspects of his or her life when engaging in the activity (when one should be doing something else, like writing a research grant as in the case of our young professor, for instance), as well as to frustration and rumination about the activity when prevented from engaging in it. Thus, if the obsessively passionate musician professor manages to say no to his friends and the jam session, he still may end up suffering because he may have difficulties concentrating on writing the research grant because of ruminations about the lost opportunity to play music.

Conversely, harmonious passion results from an autonomous internalization of the activity into the person's identity. An autonomous internalization occurs when individuals have freely accepted the activity as important for them without any contingencies attached to it. This type of internalization emanates from the intrinsic and integrative tendencies of the self (Deci & Ryan, 2000; Ryan & Deci, 2003) and produces a motivational force to engage in the activity willingly and engenders a sense of volition and personal endorsement about pursuing the activity. When harmonious

passion is at play, individuals do not experience an uncontrollable urge to engage in the passionate activity, but rather freely choose to do so. It is reminiscent of the second, more positive, philosophical perspective on passion described earlier, where the person remains in control of the passionate activity or object. With this type of passion, the activity occupies a significant but not overpowering space in the person's identity and is in harmony with other aspects of the person's life. In other words, with harmonious passion the authentic integrating self (Deci & Ryan, 2000) is at play allowing the person to fully partake in the activity one is passionate about with a secure sense of self-esteem, as well as a flexibility and an openness to experience the world in a nondefensive (Hodgins & Knee, 2002), mindful manner (Brown & Ryan, 2003). Such an engagement in the activity is conducive to positive experiences. Consequently, people with a harmonious passion should be able to fully focus on the task at hand and experience positive outcomes both during task engagement (e.g., situational positive affect, concentration, flow) and after task engagement (general positive affect, life satisfaction, etc.). Thus, there should be little or no conflict between the person's passionate activity and his/her other life activities. Furthermore, when prevented from engaging in their passionate activity, people with a harmonious passion should be able to adapt well to the situation and focus their attention and energy on other life tasks. Finally, with harmonious passion, the person is in control of the activity and can decide when to and when not to engage in the activity. Thus, when confronted with the possibility of playing music (jamming) with his friends or working on the research grant, the professor with a harmonious passion toward music can readily tell his friends that he will take a rain check and proceed to be fully immersed in the preparation of the research grant without thinking about the jam session. People with a harmonious passion are able to decide not to play on a given day if needed or even to eventually disengage from the activity permanently if they determine that it has become a permanent negative factor in their life. Thus, behavioral engagement in the passionate activity can be seen as flexible when harmonious passion is at play.

2.4. Passion and related constructs

The few psychologists who have looked at the concept have underscored its motivational aspect. For instance, Frijda et al. (1991) posited that "Passions are defined as high-priority goals with emotionally important outcomes" (p. 218). According to these authors, individuals will spend large amounts of time and effort in order to reach their passionate goals. Thus, rightfully so, Frijda et al. underscore the motivational side of passion. Other researchers have proposed that passion (or love) for work as an entrepreneur plays a major role in how one's vision is accepted in the organization and the

performance of the company (Baum & Locke, 2004). Nearly all empirical work on passion has been conducted in the area of close relationships under the rubric of passionate love (e.g., Hatfield & Walster, 1978; Sternberg, 1986). Although such research is important, it does not deal with the main topic at hand, namely passion toward activities.

Other psychologists have focused on related concepts such as positive addiction (Glasser, 1976), and dependence (Hausenblas & Downs, 2002) for activities that people enjoy (such as running). For instance, in line with perspectives from philosophers such as Rousseau's (1712–1778) idea that to control a passion one needs to replace it with another, Glasser proposed that positive addiction entails replacing a negative activity (e.g., gambling) by a more positive one (e.g., running). However, it is not clear from Glasser's position how an addiction can truly be positive as it is merely suggested to replace one addiction by another. Further, this position has been largely atheoretical and to the best of my knowledge has led to no empirical research. Finally, other authors (Duckworth et al., 2007) have started to look at how a concept they call "grit" (which is defined as perseverance and passion for long-term goals) can predict performance. Although grit has indeed been found to predict performance, this concept implies that passion always leads to persistence. As will become obvious in this chapter, there are conditions under which passion (and especially harmonious passion) may not lead to persistence.

The concept of passion is also related to other psychological concepts such as flow (Csikszentmihalyi, 1978), talent-related activities (Rathunde, 1996), well-developed interests (Renninger & Hidi, 2002), and commitment (Meyer & Allen, 1997). However, these constructs do not present a nuanced perspective on processes leading to both adaptive and maladaptive outcomes that are inherent in the duality of passion. Thus, concepts such as talent-related activities and well-developed interests, though sharing the elements of interest and value that characterize the construct of passion, do not make the distinction between two types of interest or talent that would reflect different types of engagement and outcomes inherent in the duality of passion. The same applies to flow. The DMP, as was seen previously, makes that distinction, with harmonious passion being expected to generally lead to adaptive, and obsessive passion to less adaptive and, at times maladaptive, outcomes. In addition, even concepts such as that of commitment may not be as related to passion as expected. For instance, although people who are heavily committed to a given activity can be passionate, other committed people may not be, as they may not necessarily like the activity. It would therefore appear that people may be highly committed to exercising not because they love it but because they desperately need to lose weight. Thus, concepts such as flow, well-developed interests, talent-related activities, and commitment are not equivalent to passion.

Perhaps passion is most closely linked to intrinsic motivation. Intrinsic motivation shares some conceptual similarity with passion, as both involve interest and liking toward the activity. However, intrinsically motivated activities are typically not seen as being internalized in the person's identity and are best seen as emerging from the person–task interaction at the short-term level (Koestner & Losier, 2002). Research has indeed empirically shown that although both types of passion are closely linked to identity (as assessed by the Inclusion of the Other in the Self Scale, Aron et al., 1992), intrinsic motivation is less so (Vallerand, 2009). Furthermore, intrinsic motivation does not address the duality of passion where some adaptive and other maladaptive outcomes are experienced. Intrinsic motivation is hypothesized to lead to only adaptive outcomes (Deci & Ryan, 2000). On the other hand, extrinsic motivation does not entail performing the activity out of enjoyment, but for external reasons (i.e., for reasons other than for the activity itself such as external or internal pressure). Therefore, although some forms of extrinsic motivation such as identified and integrated regulation entail some internalization of an activity that one does not like in the self, a fundamental difference between extrinsic motivation and passion is the relative lack of liking (or loving) for the activity that is present with extrinsic motivation. Research empirically supports these distinctions between passion and intrinsic and extrinsic motivation and even shows that controlling for intrinsic and extrinsic motivation does not change the role of harmonious and obsessive passion in the prediction of positive and negative affect (Vallerand et al., 2003, Study 2).

In sum, although the concept of passion does have conceptual similarities with other motivational constructs, it also differs from them in significant ways. Of major importance is the fact that no other concept seems to convey the duality of effects associated with passion, as specified by the DMP.

3. INITIAL RESEARCH ON THE CONCEPT OF PASSION

In the initial study (Vallerand et al., 2003, Study 1) we sought to develop the Passion Scale and to test the validity of the passion definition. To this end, over 500 university students completed the Passion Scale with respect to an activity that they loved, that they valued, and in which they invested time and energy (i.e., the passion definition), as well as other scales allowing us to test predictions derived from the Passion Model. A large variety of passionate activities were reported ranging from physical activity and sports and music to watching movies and reading. Participants also reported engaging in their passionate activity for an average of 8.5 h per week and had been engaging in that activity for almost 6 years (see also Stenseng, 2008 for similar results). Thus, clearly passionate activities are

meaningful to people and do not simply reflect a fleeting interest. Given that these participants were on average around 20 years of age, it would appear that for most individuals in the study, initial engagement in the passionate activity started in their teen years. These findings would tend to support the position of authors who posit that adolescence represents a crucial period of identity construction (Erikson, 1968; Marcia, 1967).

Interestingly, 84% of our participants indicated that they had at least a moderate level of passion for a given activity in their lives (they scored at least 4 out of 7 on a question asking them if their favorite activity was a “passion” for them). Subsequent research with over 750 participants largely taken from the general population with an age ranging from 18 to 90 years showed that 75% reported being highly passionate about a given activity in their life (using a cut-off point of an average of 5 and more on a 7-pt scale on the four passion criteria of love, value, time spent on the activity, and passion for the activity; Philippe et al., 2009b). Overall, it would appear that the prevalence of passion is rather high, at least in the Province of Quebec.

Research from Vallerand et al. (2003, Study 1) as well as from other authors has provided empirical support for several aspects of the passion conceptualization. First, Vallerand et al. (2003, Study 1) randomly split their sample of over 500 participants in two subsamples. After conducting an exploratory factor analysis supporting the presence of two factors corresponding to the two types of passion with the first sample, they confirmed the bifactorial structure with the second sample using confirmatory factor analysis. These findings on the factor validity of the Passion Scale has been replicated in a number of studies (Carbonneau et al., 2008; Castelda et al., 2007; Houliort et al., 2009b; Rousseau et al., 2002; Vallerand et al., 2006, Study 1). The Passion Scale consists of 2 subscales of 6 items each.¹ Table 3.1 presents the two subscales, namely the Obsessive (e.g., “I almost have an obsessive feeling toward this activity”) and Harmonious Passion subscales (e.g., “This activity is in harmony with other activities in my life”). In addition, much research has supported the construct validity of the Passion Scale by showing that it leads to findings in line with the DMP in several activities and contexts including education (Vallerand et al., 2007, Study 2), dramatic arts (Vallerand et al., 2007, Study 1), work (Carbonneau et al., 2008; Vallerand & Houliort, 2003), Internet use (Séguin-Lévesque et al., 2003), sports (Vallerand et al., 2006), music (Mageau et al., 2009a, Study 3), gambling (Castelda et al., 2007; Rousseau et al., 2002), and literally hundreds of various leisure activities (Stenseng, 2008; Vallerand et al., 2003,

¹ The original Passion Scale (Vallerand et al., 2003) consisted in two 7-item subscales. A slightly revised scale consisting of two 6-item scales is now used. These subscales correlate very highly with their respective original subscale ($r = 0.80$ and above) and yield the same findings with determinants and outcomes. In addition, we have used a 3-item version (Vallerand et al., 2007) and even a 1-item version (Philippe & Vallerand, 2007) of each subscale with much success.

Table 3.1 The passion scale

Describe an activity that you love, that is important for you, and in which you spend a significant amount of time							
My favorite activity is: _____							
<i>While thinking of your favorite activity and using the scale below, please indicate your level of agreement with each item</i>							
Not agree at all 1	Very slightly agree 2	Slightly agree 3	Moderately agree 4	Mostly agree 5	Strongly agree 6	Very strongly agree 7	
1. This activity is in harmony with the other activities in my life	1	2	3	4	5	6	7
2. I have difficulties controlling my urge to do my activity	1	2	3	4	5	6	7
3. The new things that I discover with this activity allow me to appreciate it even more	1	2	3	4	5	6	7
4. I have almost an obsessive feeling for this activity	1	2	3	4	5	6	7
5. This activity reflects the qualities I like about myself	1	2	3	4	5	6	7
6. This activity allows me to live a variety of experiences	1	2	3	4	5	6	7
7. This activity is the only thing that really turns me on	1	2	3	4	5	6	7
8. My activity is well integrated in my life	1	2	3	4	5	6	7
9. If I could, I would only do my activity	1	2	3	4	5	6	7
10. My activity is in harmony with other things that are part of me	1	2	3	4	5	6	7
11. This activity is so exciting that I sometimes lose control over it	1	2	3	4	5	6	7
12. I have the impression that my activity controls me	1	2	3	4	5	6	7
13. I spend a lot of time doing this activity	1	2	3	4	5	6	7
14. I love this activity	1	2	3	4	5	6	7
15. This activity is important for me	1	2	3	4	5	6	7
16. This activity is a passion for me	1	2	3	4	5	6	7

Scoring key

Obsessive Passion : # 2, 4, 7, 9, 11, 12

Harmonious Passion : # 1, 3, 5, 6, 8, 10

Passion Criteria : # 13 to 16

Study 1). Furthermore, internal consistency analyses have shown that both subscales are reliable. Finally, test–retest correlations over periods ranging from 4 to 6 weeks revealed moderately high stability values (Ratelle et al., 2009; Rousseau et al., 2002), thereby supporting the hypothesis that although the two subscales are relatively stable (and thus, that there seems to be a predominant form of passion for each individual), there is still room for temporary fluctuations.²

A second series of critical findings pertained to results from partial correlations (controlling for the correlation between the two types of passion) which showed that both harmonious and obsessive passions are positively associated with the passion criteria of activity valuation and loving, time and energy expenditure on the activity, and measures of the activity being perceived as a passion, thereby providing support for the definition of passion (e.g., Harvey & Vallerand, 2009; Vallerand et al., 2003, Study 1). In addition, although both types of passion have been found to relate to one's identity (e.g., Vallerand et al., 2003, Study 1; Vallerand et al., 2008b, Study 1), obsessive passion has been found to more strongly relate to measures of both identity and conflict with other life activities than harmonious passion (e.g., Vallerand et al., 2003, Study 1; Vallerand et al., 2008b, Study 3). Thus, overall, these findings support the view that both harmonious and obsessive passion are indeed a “passion” as each one reflects the definition of the passion construct. Finally, additional research has also shown that obsessive (but not harmonious) passion leads to rigid persistence in ill-advised activities such as cycling over ice and snow in winter (Vallerand et al., 2003, Study 3) and pursuing one's engagement in activities that have become negative for the person such as pathological gambling (Vallerand et al., 2003, Study 4). We will return to this issue in a later section.

In sum, initial research provided support for the concept of harmonious and obsessive passion. We now turn to research that has explored some of the determinants and outcomes associated with the passion construct.

4. ON THE DEVELOPMENT OF PASSION

4.1. On the initial development of passion

The DMP posits that three processes will influence the initial development of passion toward an activity: activity selection, activity valuation, and the internalization of the activity representation in one's identity. Activity

² It should be noted that there is a third subscale in the Passion Scale. This subscale serves to assess the passion criteria of activity valuation, degree of involvement (time and energy expenditure) and love for the activity, as well as the participant's perception of his or her activity as being a “passion.” This subscale is very useful in allowing researchers to determine if someone is passionate or not.

selection refers to the person's preference for the activity over other activities. To the extent that the person feels that such selection reflects true choice and interests and is consonant with one's identity, it should promote the development of passion toward that activity. Activity valuation (or the subjective importance given to the activity by the person) is expected to play an important role in the internalization of the activity in identity. Research has indeed shown that when the object of interest is highly valued and meaningful, one is inclined to internalize the valued object, to make it part of him or herself (Aron et al., 1992; Deci et al., 1994). The more important (or valued) the activity, then the more the activity will be internalized in the person's identity, and the more passionate the person will be toward this activity. Thus, activity valuation can be seen as the intensity (or quantity) dimension (the fuel) underlying activity internalization and the development of passion.

The DMP further posits that once an interesting activity becomes highly valued, the type of passion that will ensue is determined by the type of internalization that takes place. This last process can be seen as affecting the "quality" dimension or the type of passion that will take place. In line with Self-Determination Theory (Deci & Ryan, 2000), two internalization processes are hypothesized to be involved, the autonomous and the controlled internalization processes. An autonomous internalization of the activity representation is expected to lead to the development of harmonious passion, whereas a controlled internalization is hypothesized to lead to an obsessive passion. The DMP further proposes that one important determinant of the internalization process is the extent to which the social environment promotes one's autonomy (Deci & Ryan, 1987) toward activity selection and activity valuation. Much research has shown that autonomy support (or promoting choice and self-initiation of another person's behavior) from parents and teachers facilitates children's autonomous internalization of values and regulations of uninteresting activities such as school (see Grolnick & Ryan, 1989; Mageau & Vallerand, 2003; Vallerand et al., 1997). Similarly, the DMP proposes that autonomy support facilitates the autonomous internalization of the interesting activity in one's identity, thereby leading to harmonious passion. Conversely, once a given activity has been selected and is highly valued by the individual, a controlling environment should facilitate a controlled internalization of the activity in one's identity, thereby leading to an obsessive passion for the activity.

We tested some of the above hypotheses in a recent study (Mageau et al., 2009a, Study 3). First-year high-school students who had never played a musical instrument completed a series of questionnaires early in the term assessing activity selection and valuation (perceived parental activity valuation and both perceived parental and children activity specialization), perceived autonomy support from parents and music teachers, as well as

the extent to which students perceived music as potentially part of their identity. By following participants who were registered in their first music class over the course of their first semester, we sought to predict who would develop a passion for music at the end of the term, and, among those who did, predict those who would develop a harmonious or an obsessive passion. Based on the passion criteria (see the third subscale in [Table 3.1](#)), it was possible to identify that 36% of the sample was at least moderately passionate for music at the end of the term (having obtained an average of 4 and above on the four criteria). The fact that only a minority of students developed a passion for music was to be expected as the music courses were a compulsory part of the curriculum and did not necessarily reflect a personal choice from students' part. More generally, these findings suggest that people do not develop a passion for any or all activities that they engage in.

Results of a discriminant function analysis revealed that students who ended up being passionate for music (36% of the sample) at the end of the term had reported higher levels of activity valuation and specialization, identity processes, and parental and teacher autonomy support earlier in the term than those students who did not turn out to be passionate. Furthermore, high levels of autonomy support from close adults (parents and music teachers) were conducive to the development of harmonious passion. However, high levels of parental perceived valuation for music (probably experienced as external pressure) and lack of autonomy support (or its opposite, controlling behavior from close adults) predicted the development of obsessive passion. In sum, these results provided support for the role of activity selection and valuation, identity processes, and autonomy support from significant adults in the development of a passion for music in general, and harmonious and obsessive passion in particular.

We have seen above that the social environment represents an important determinant of the internalization process that takes place, leading to the initial development of passion. In a similar fashion, personal factors (i.e., individual differences and personality processes) constitute a second important determinant of the internalization process, and thus indirectly, of the type of passion that initially develops (on this issue, see [Vallerand & Houlfort, 2003](#); [Vallerand & Miquelon, 2007](#)). The DMP posits that personal factors that orient the individual toward autonomy will facilitate the autonomous internalization process and thus lead to the initial development of harmonious passion. Conversely, personal factors that lead the person to feel controlled while engaging in the activity will trigger the controlled internalization process and lead to the development of obsessive passion.

Past research (for reviews, see [Vallerand, 1997](#); [Vallerand & Ratelle, 2002](#)) has shown that an autonomous personality orientation (having a tendency to do things out of pleasure and/or choice) leads to the internalization of uninteresting activities in the self, whereas a controlled personality

orientation (a tendency to do things out of external and/or inner pressure) leads to the controlled internalization of noninteresting activities in the person (Guay et al., 2003; see also Vallerand, 1997, 2001). It thus appears that an autonomous personality is associated with the autonomous internalization process whereas a controlled personality is associated with a controlled internalization style. In light of the above, to the extent that people highly value an enjoyable activity, those with an autonomous personality should be more likely to facilitate the development and maintenance of a harmonious passion. On the other hand, a controlled personality should be more conducive to obsessive passion. Recent research by Vallerand et al. (2006) conducted with athletes supported the above hypotheses. Specifically, Vallerand et al. (2006, Study 1) reported the results of a structural equation modeling analysis that showed that valuation of the sport activity and an autonomous personality (as assessed by the Global Motivation Scale; Guay et al., 2003) both predicted harmonious passion. On the other hand, a controlled personality and valuation of the activity both predicted obsessive passion. These findings appear in Fig. 3.1. Furthermore, these findings were replicated in a second study (Vallerand et al., 2006, Study 3) using a short longitudinal design.

The results presented above provide support for the role of personal factors, and specifically, the autonomous versus controlled personality, in the development of passion. However, there were some limitations, including the fact that participants in both studies had been playing their respective sport for some time already at the time of the study (5.5 years in Study 1 and 4.7 years in Study 3). Thus, as such, these findings are probably more relevant to the on-going, than the initial, development of passion. However, recent research (Lafrenière et al., 2009b, Study 2) has attempted to look at the role of the autonomous versus controlled personality in the *initial* development of passion more directly through an analysis of additional data in the Mageau et al. (2009a, Study 3) study. In this study, the music students had also completed the Global Motivation Scale (Guay et al., 2003) at Time 1 and the Passion Scale and a scale assessing music valuation 4 months later, at Time 2. Results from a path analysis using structural equation modeling replicated the results from Vallerand et al. (2006, Studies 1 and 3). That is, music valuation positively predicted both harmonious and obsessive passion. Furthermore, the autonomous personality predicted harmonious passion and the controlled personality predicted obsessive passion. Moreover, these results held up even controlling for autonomy support provided by music teachers and parents. In fact, both the social (autonomy support from the music teacher and parents) and the personal factor (the personality style) had independent effects as theoretically hypothesized on harmonious and obsessive passion. Because this study looked at the development of passion from day 1 (these participants had never played a musical instrument prior to the start of the study), we can be confident that both social and

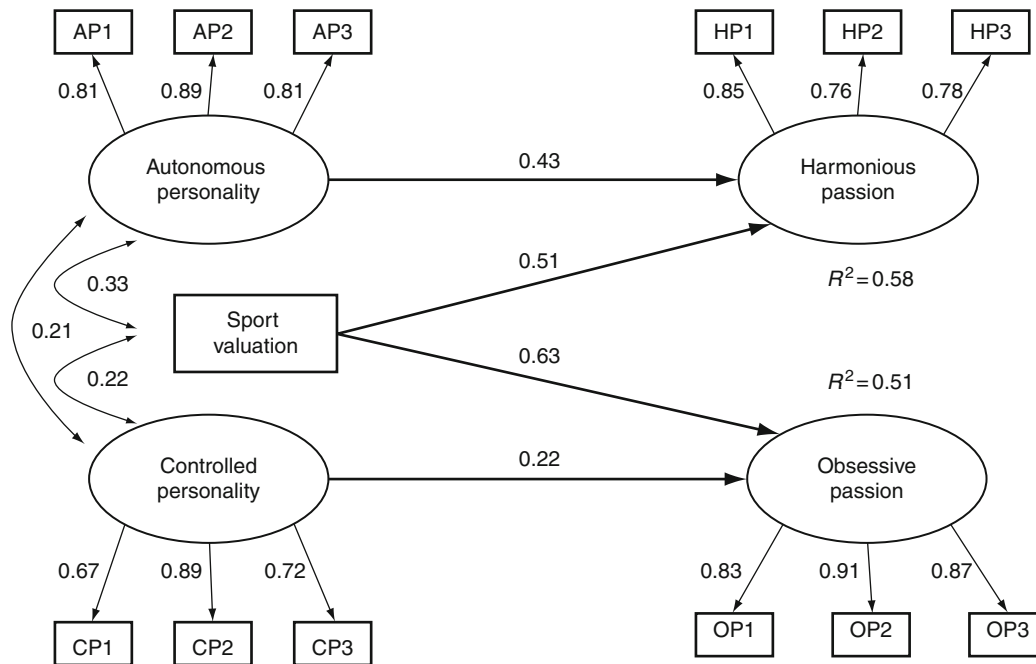


Figure 3.1 Results of the structural equation modeling analyses on the role of activity valuation and personality processes in the prediction of passion. From [Vallerand et al. \(2006, Study 1\)](#); reprinted with permission. For sake of clarity, the disturbances and the covariances are not presented.

personal factors play a key role in the *initial* development of passion. Nevertheless, future research is necessary to replicate these findings with other activities and participants.

4.2. On the on-going development of passion

We have seen above that the type of passion that will initially develop depends on how the activity is internalized in the person's identity. Given equally high levels of activity valuation, an autonomous internalization process should lead to a predominant harmonious passion and a controlled internalization process to a predominant obsessive passion. The DMP further posits that once a passion for a given activity has initially developed, its development continues as it is on-going. Thus, increases and decreases in activity valuation will lead to similar modulation in the intensity of passion. Further, the presence or absence of social and personal factors that pertain to the autonomous versus controlled internalization process will influence the on-going development of passion in a corresponding fashion. Of course, the internalization process is not an all or none process. Although the internalization process leads to the initial development of a predominant type of passion, both types of passion are nevertheless present within the individual to different degrees depending on the social and personal factors at play. The fact that both types of passion are internalized in identity makes it possible to facilitate one or the other by making salient certain social or personal factors. Thus, although the predominant type of passion is usually in operation, it is possible to further reinforce the predominant passion or to make the other type of passion operative depending on which type of social or personal factors is made salient. Below, we look at research that has started to test some of these issues.

4.2.1. Social determinants

Social factors can affect the on-going development of passion, once passion has been initially developed. For instance, recent research conducted in organizational settings underscores the role of organizational and interpersonal variables in such a process. A first variable that was examined is organizational support. Organizational support refers to the extent to which employees perceive that the organization values workers' contributions and cares about their well-being (Eisenberger et al., 1986). Organizational support, then, would be akin to autonomy support provided to the individual by the organization. Thus, it can be hypothesized that organizations that value their employees' work and that make a genuine effort to provide employees with a healthy, flexible, and secure working environment, where their opinion is valued, create conditions that should facilitate harmonious passion. A recent study (Houliort et al., 2009a, Study 1) tested this hypothesis. In this study, individuals who had been working for several

years in various organizations completed a questionnaire assessing perceptions of organizational support, the valuation process, and passion. Results from a path analysis revealed that organizational support and work valuation both positively predicted harmonious passion. However, as hypothesized, only work valuation predicted obsessive passion. Organizational support proved to be unrelated to obsessive passion.

Results from the above study revealed that a social factor at the organizational level, such as organizational support, can positively influence harmonious passion for work. Can other organizational factors affect both types of passion? Further, can interpersonal factors also affect passion? We examined these issues in a second study (Houlihan et al., 2009a, Study 2). Here, the organizational factor that was studied was the prevalent organizational culture. Based on the work of Cameron and Quinn (2006), two particular types of cultures were thought to be relevant, namely the clan and market cultures. The clan culture refers to an environment that promotes positive relationships and caring for the individual worker, whereas the market culture puts forward a more cut-throat setting wherein within-group competition rather than cooperation is promoted. It would thus be expected that a clan culture should promote harmonious passion, whereas a market culture should facilitate obsessive passion. The interpersonal factor assessed was the leadership provided by the immediate supervisor. We focused on two types of leadership, namely transformational and transactional leadership. Transformational leadership (Bass, 1985) entails providing subordinates with intellectual stimulation, individualized consideration, and inspirational motivation provided in a charismatic fashion. As such, this type of leadership should facilitate harmonious passion because it makes the task more interesting and valued while supporting autonomy through individualized consideration. On the other hand, transactional leadership (Bass, 1985) refers to using resources to have subordinates act as expected by the leader. Thus, through the monitoring of subordinates' behavior and the use of contingent rewards, the leader seeks to obtain from subordinates what he or she feels is equitable. Because it sets up the environment in a manner that is conducive to a controlling climate, transactional leadership should promote obsessive passion. In this study, 150 regular workers completed scales assessing leadership perceptions of their immediate supervisor (transformational and transactional leadership), the organizational culture (clan vs. market) prevalent in their organization, and passion for their work. Results from a path analysis revealed, as expected, that transformational leadership and the clan culture positively predicted harmonious passion for work. On the other hand, transactional leadership and the market culture positively predicted obsessive passion.

We have seen previously in Mageau et al. (2009a, Study 3) that autonomy support (i.e., promoting choice and self-initiation of another person's behavior) plays an important role in promoting the initial development of

harmonious passion. Similarly, the DMP posits that autonomy support should also help facilitate the on-going development of harmonious passion once it has been initially developed. Conversely, controlling behavior should facilitate the on-going development of obsessive passion once the passion has been initially developed. Research has provided support for this hypothesis. Thus, in one study with children at the intermediate level of expertise (over 3 years of involvement in various fields of excellence; Mageau et al., 2009a, Study 2) and in a second one with young adults at the expert phase (10 years of music involvement; Mageau et al., 2009a, Study 1), the main variable that distinguished harmonious from obsessive passion was autonomy support. Specifically, harmoniously passionate performers experienced higher levels of autonomy support from their teachers and coaches than obsessively passionate individuals in both studies. These results have been replicated with a different sample of music performance students at the expert level involved in highly rated international summer schools (Bonnevillie-Roussy & Vallerand, 2009) and with high-level athletes where autonomy-support behaviors were reported by the coaches themselves (Donahue et al., 2009a). Furthermore, in line with hypotheses from the DMP, controlling behavior as reported by coaches was found to facilitate athletes obsessive passion.

The above findings would appear to be important for at least two reasons. First, they provide support for the DMP as pertains to the important role that social factors play in the on-going development of harmonious and obsessive passion once passion has developed. Second, as demonstrated in the Donahue et al. (2009a) study, the supervisor's autonomy support and controlling behavior are not simply present in the passionate individual's head but rather derive from the supervisors themselves and are readily observable by individuals in contact with them. It would thus appear that individuals in position of authority influences the nature of the environment and thus contribute in important ways in instilling a harmonious or obsessive passion in subordinates.

4.2.2. Personal determinants

We have also assessed the role of personal factors in the on-going development of passion. One personal factor that would appear relevant is the values held by the individual. Past research (e.g., Kasser, 2002; Kasser & Ryan, 1993) has shown that people can have at least two types of values: intrinsic and extrinsic. Intrinsic values refer to those values that are consonant with one's psychological needs of competence, autonomy, and relatedness and thus are inherently satisfying to pursue. Intrinsic values of self-acceptance, affiliation, and community feeling are particularly important. On the other hand, extrinsic values reflect the relative importance of social praise and rewards. They typically reflect a means to some other ends. Financial success, image, and popularity represent typical extrinsic values. We believe

that these different types of values orient individuals toward one of the two types of passion. Because the intrinsic values are rooted in the authentic self (Kasser, 2002), they should promote harmonious passion. Extrinsic values, however, should facilitate obsessive passion because they reflect controlled and ego-invested self-structures.

One activity that would appear particularly relevant to test the above hypotheses is collecting (stamps, rocks, etc.). Indeed, collectors are typically highly passionate, talking with high enthusiasm about the pieces of their collection. Furthermore, collectors show high levels of persistence, sometimes collecting the same type of pieces for a lifetime. Finally, collectors' passion may also reflect different sets of values. Whereas some collectors seem oriented to self-enhance and experience a boost of ego through their collection, others would appear to learn and grow from it. In other words, both intrinsic and extrinsic values seem at play in collecting. It should then become possible to test the hypothesized relationships between values and passion with such a population.

In a first study (Grenier et al., 2009, Study 2), 100 individuals who had been collecting stones and stamps on average for 22 years completed a questionnaire assessing their passion for collecting and their values (using the Grouzet et al., 2005 questionnaire). Results from structural equation modeling using path analysis supported the hypotheses. Specifically, intrinsic values positively predicted the adoption of harmonious passion whereas extrinsic values predicted obsessive passion. These findings do support the hypothesis that values represent an important personal factor that serves to facilitate or maintain a predominant type of passion that has been present for several years within the individual (in fact for over 20 years for the collectors!). These findings were replicated in a study with individuals selected as important society contributors in the Province of Quebec (Vallerand et al., 2009, Study 1).

Individuals passionate about a given activity not only care a great deal about the activity, but typically want to do very well at it. Thus, a relevant personal determinant of passion might be perfectionism. Perfectionism refers to holding excessively high standards of achievement (Hewitt & Flett, 2002). These authors have proposed a multidimensional model of perfectionism that includes three types of perfectionism, two of which are particularly important for the present purposes. Self-oriented perfectionism represents the first type of perfectionism. It refers to holding excessively high standards for oneself and not for others. This type of perfectionism is under the person's control and involves standards that may be changed by the person in a proactive manner. It typically leads to positive outcomes and has been termed "positive perfectionism" (see Miquelon et al., 2005). The second type of perfectionism of importance is socially prescribed perfectionism. It refers to the perception that significant others are imposing excessively high standards on oneself and that one must meet these standards to please others. It typically leads to negative outcomes (see Miquelon et al.,

2005 for a review). Because the first type of perfectionism takes origin in the autonomous self, one would suggest that it should predict having a harmonious passion toward an activity that we highly value. On the other hand, because the second type of perfectionism (i.e., socially prescribed perfectionism) is rooted in external control, one would predict that it should lead to obsessive passion. Results of two studies conducted with individuals involved in a variety of physical activities and sports (Schiphof et al., 2009) provided support for these hypotheses.

A final issue that deserves attention deals with the change that may take place in passion over time. In line with the DMP, one defining characteristic of passion is that the activity becomes part of one's identity. Thus, passionate individuals should see the activity as being part of their identity much more than nonpassionate individuals. Furthermore, one's autonomous versus controlled personality should determine if the passion would become more harmonious or obsessive over time. In research looking at these issues (Lafrenière et al., 2009b, Study 1), 165 university students were asked to complete the Passion Scale as currently experienced for an activity that was dear to their heart, as well as a measure of the activity as being currently part of their identity. Of importance, participants were also asked to recollect the early times when the activity became a passion for them and then to complete the Passion Scale as experienced early on at that point in time (the presentation order of the two Passion Scale, that assessed the current and initial passion, was counterbalanced and had no effects). Finally, participants also completed the Global Motivation Scale (Guay et al., 2003), a scale that assesses the autonomous versus controlled personality orientation. A path analysis using structural equation modeling analysis was conducted on the data, controlling for the initial passion. Results revealed that activity valuation predicted increases in both current harmonious and obsessive passion. Furthermore, as expected, an autonomous personality predicted increases in harmonious passion, whereas a controlled personality predicted augmentations in obsessive passion. Although the use of a retrospective design is fraught with obvious problems, the results are nevertheless suggestive that the process of changes in passion may function as hypothesized. Clearly, future research is needed on this issue.

In sum, results presented in this section provide support for the DMP as pertains to the development of passion. Specifically, social and personal factors that have some bearing on the internalization process along with the valuation process lead to the initial development of passion. Later on, social and personal factors that are relevant for the internalization process remain involved in the on-going development of passion. Additional research is needed to determine more clearly the vicissitudes of the newly developed passion as a function of prevalent social and personal factors.

5. PASSION AND INTRAPERSONAL OUTCOMES

In this section, I review research on the role of passion in a number of outcomes. These include cognitive and affective processes, well-being and addiction, physical health, and performance.

5.1. Passion and cognitive processes

Based on the DMP, it would be expected that harmonious passion should facilitate adaptive cognitive processes whereas obsessive passion should not, or at least less so. This is so because with harmonious passion, integrative self processes are at play leading the person to fully partake in the passionate activity with an openness that is conducive to mindful attention, concentration, and flow. The situation is different when obsessive passion is at play because ego-invested processes are involved (Hodgins & Knee, 2002). Such processes lead individuals to have an eye on the task, but another on external elements such as the outcomes and other participants, with a defensive orientation that only permits a partial investment in the activity. Thus, less than full attention, concentration, and flow should be experienced in the process. Research provides support for this hypothesis. For instance, in research by Vallerand et al. (2003, Study 1), participants were asked to complete the Passion Scale as well as indicate to what extent they typically experience high levels of concentration while they engage in the passionate activity. A similar procedure was used in research on gambling (e.g., Mageau et al., 2005) and sport refereeing (Philippe et al., 2009a, Study 2). The results of partial correlations from such research revealed that harmonious passion correlated more strongly with concentration on the passionate activity than obsessive passion.

Another form of concentration was empirically scrutinized in research with English soccer fans (Vallerand et al., 2008b, Study 1). In this study, we observed the effects of an upcoming soccer match on the concentration that passionate soccer fans are able to display during other life activities that take place the day of the upcoming night game. Results revealed that obsessive passion for soccer prevented full concentration during same day on other life activities whereas this was not the case for harmonious passion. These results were replicated by Ratelle et al. (2009, Study 1) in regards to romantic love. Specifically, obsessive (but not harmonious) passion for the loved one led to low levels of concentration on life tasks when one was prevented from seeing his or her partner.

It would thus appear that although harmonious passion facilitates concentration during engagement in the passionate activity, it does not detract from full engagement in other life activities that take place while waiting to

engage in the passionate activity. However, obsessive passion detracts from fully concentrating both during engagement in the passionate activity and in other life activities while waiting to partake in the passionate one. Future research is needed to determine the nature of the mediators of such negative anticipatory effects. One potential candidate is rumination. Past research has shown that obsessive passion does predict rumination about the passionate activity, especially when one is prevented from engaging in the activity at the time that one is thinking about it (Ratelle et al., 2004; Vallerand et al., 2003, Study 1). Clearly, the role of rumination about the passionate activity in preventing one from fully engaging in other life tasks should be investigated further as it may shed light on some of the processes involved in psychological well-being.

Another cognitive concept of interest is flow (Csikszentmihalyi, 1978; Csikszentmihalyi et al., 1993). Flow refers to a desirable state that people experience when they feel completely immersed in the activity (e.g., “I have a feeling of total control”). Because harmonious passion allows the person to fully partake in the passionate activity with a secure sense of self-esteem, flexibility, and an openness to experience the world in a nondefensive, mindful manner, it should be conducive to focusing on the task at hand and consequently to experiencing flow. Conversely, with obsessive passion, internally controlling, rather than integrative self-processes are at play leading the person to engage in the activity with a fragile and contingent sense of self-esteem (e.g., Crocker, 2002; Kernis, 2003), and eventually becoming defensive rather than open to experience. Such a state should not be conducive to the experience of flow. Using cluster analyses, Wang et al. (2008) looked at the role of passion in flow in online gaming. They found that passionate individuals experienced more flow relative to less passionate individuals. Although these findings underscore the fact that passionate “gamers” experience higher levels of flow than nonpassionate individuals, these findings are not entirely clear because Wang and colleagues (2008) did not differentiate between harmonious and obsessive passion in their analyses. In the initial study of Vallerand et al. (2003, Study 1), we had participants involved in a variety of activities complete various flow indices (including the challenge, absence of self-consciousness, and control dimensions of flow; Jackson & Marsh, 1996) as well as the Passion Scale. The results did reveal that harmonious passion facilitates the experience of flow, whereas obsessive passion typically does not. These results have been replicated in a number of studies, including some in sport with 90 national and international soccer referees from France (Philippe et al., 2009a, Study 1), as well as in the work domain with workers involved in diverse types of jobs (Forest et al., 2008, 2009). The results of the Vallerand et al. (2003, Study 1) and Philippe et al. (2009a, Study 1) studies appear in Fig. 3.2.

A final cognitive process that has been examined is decision making. Decision making, like most cognitive processes, is perhaps most revealed in

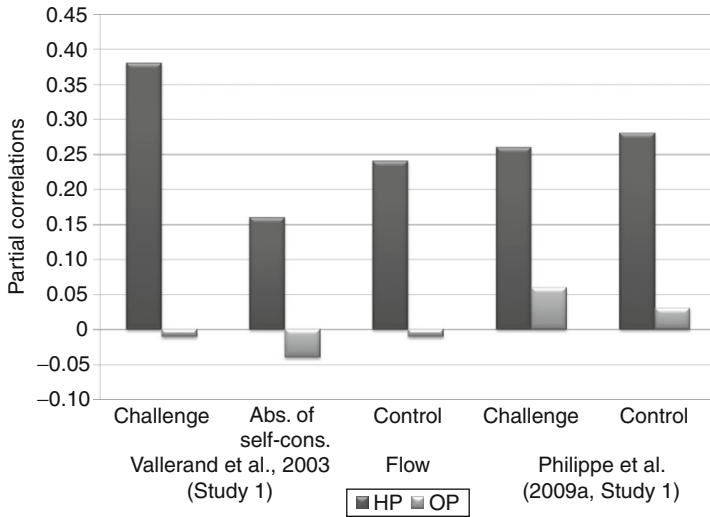


Figure 3.2 Partial Correlations (controlling for the other type of passion) between Passion and Various Flow Indices (Challenge, Control, and Absence of Self-Consciousness) during Activity Engagement. Adapted from Vallerand et al. (2003; Study 1) and Philippe et al. (2009a).

real-life situations (Neisser, 1976) and especially under pressure. This is because such situations typically entail making important decisions that need to be made quickly. It is thus possible to unveil optimal decision-making processes. One such real-life situation takes place in sport refereeing after having made a bad call (e.g., Dorsch & Paskevich, 2007). Referees' reactions and strategies to deal with their own mistakes vary drastically, ranging from rumination over the error, lack of concentration, to even engaging in make-up calls (i.e., favoring the party or team that has been unjustly penalized by the poor call [Wolfson & Neave, 2007]). Make-up calls are particularly interesting as they amount to deliberately making a second poor decision, after the first error. Make-up calls represent the type of decision-making processes that referees should try to avoid at all costs as they can potentially entrap themselves in a vicious circle of unending poor decisions. On top of this, such decision-making processes can drive players crazy because refereeing then becomes unpredictable.

Based on the DMP, it can be hypothesized that passion might account for the different ways in which referees react after having committed an important error. Because harmonious passion emanates from the integrating self, making an error should be accepted as such without experiencing a self-threat that one needs to remove through an immediate correction (i.e., a make-up call). Consequently, with harmonious passion, it should prove possible to deal with the situation without engaging in make-up calls to

repair the first mistake. Conversely, with obsessive passion, the person's identity is attached contingently to the activity such that doing well on the passionate activity becomes important for one's self-esteem. Therefore, making an error becomes highly self-threatening leading one to seek to remove the threat through a make-up call. Philippe et al. (2009a, Study 2) conducted a study to test these hypotheses. European soccer referees (including some professional referees) completed the Passion Scale as well as their tendency to engage in make-up calls after having made an important mistake. Results revealed, as expected, that subsequent to an important error obsessive passion was *positively* associated with engaging in make-up calls. Conversely, harmonious passion was *negatively* associated with make-up calls. Thus, as hypothesized, obsessive passion was found to undermine, whereas harmonious passion found to facilitate, optimal cognitive functioning and decision making.

Clearly, the two types of passion lead to different cognitive functioning, with harmonious passion leading to the most adaptive and obsessive passion to the least adaptive types of cognitive processes. Future research on the role of coping strategies as mediators in the relationship between passion and cognitive functioning would appear important, especially under pressure situations.

5.2. Passion and affect

Historically, in the reasoning of philosophers, passion and emotion were closely linked. There is a good reason for this, as people highly value the activity they are passionate about. Given that task valuation increases affect (Brown & Weiner, 1984), being passionate for an activity would also increase affect. However, such affect should differ as a function of the type of predominant passion held by the person. Thus, with harmonious passion, people volitionally engage in the passionate activity with an openness and a mindfulness that allow them to fully partake in the activity, and thus to experience positive affective experiences (Hodgins & Knee, 2002) during task engagement (e.g., positive affect). Furthermore, the lack of conflict with other life activities that harmonious passion entails should maximize the duration of the positive affect experienced during activity engagement and lead one to experience positive self-related affect after task engagement. Finally, because task engagement is volitional, one is unlikely to experience negative affect when unable to engage in the passionate activity (such as feelings of dependence).

Conversely, with obsessive passion, one engages in the activity with a defensive, rather than an open, orientation preventing one from fully experiencing the positive emotions that should be derived from engaging in one's favorite activity. Moreover, because engagement is often out of one's control, and may be performed at ill-advised times, some conflict may

thus be experienced with other life activities, thereby preventing one from fully enjoying participation in the passionate activity and leading one to experience negative affect following task engagement (e.g., guilt, shame, anxiety). Finally, one is likely to experience high levels of negative affect when prevented from engaging in the passionate activity because engagement in the passionate activity out of obsessive passion is experienced as an uncontrollable desire to partake in the activity. Consequently, being prevented from engaging in the passionate activity should lead to some sense of suffering.

Results from partial correlations between the two types of passion and affective variables have supported these hypotheses in a number of studies. For instance, [Vallerand et al. \(2003, Study 1\)](#) asked college students who were passionate toward an activity to complete the Passion Scale and to report the positive and negative emotions they typically experience during and after task engagement, as well as when they are prevented from engaging in their passionate activity. Results from partial correlations (controlling for obsessive passion) revealed that harmonious passion was positively associated with positive experiences such as positive emotions during activity engagement. In addition, harmonious passion was positively related to positive emotions and the absence of negative affect following task engagement, and the absence of negative emotions when prevented from engaging in the passionate activity. On the other hand, when controlling for harmonious passion, obsessive passion was positively associated with negative emotions (especially shame) and unrelated to positive emotions both during and following activity engagement. Furthermore, obsessive passion was strongly related to negative affect when one is prevented from engaging in the activity. These results have been replicated in several contexts and activities (e.g., [Mageau et al., 2005](#); [Philippe et al., 2009a, Study 1](#); [Ratelle et al., 2004, 2009](#); [Vallerand et al., 2006, Studies 2 and 3](#)).

We have seen so far that obsessive passion rarely predicts positive affect. However, should not one expect obsessive passion to be conducive to some forms of positive affect at least some times or in certain situations? For instance, given that the passionate activity is internalized in one's identity, might it be expected that affect related to the self (e.g., proud, confident, competent, etc.) is positively related to both obsessive and harmonious passion? We have tested this hypothesis in a recent study with collectors ([Grenier et al., 2009, Study 2](#)). In this study, we asked 115 collectors to complete the Passion Scale as well as scales assessing positive self-related affect (e.g., proud, valued), positive (nonself) affect (e.g., happy, joyful), and negative affect typically experienced during a purchasing episode (e.g., anxious). Results of partial correlations revealed that, controlling for obsessive passion, harmonious passion positively predicted the two different types of positive emotions, but was unrelated to negative affect. On the other hand, controlling for harmonious passion, obsessive passion predicted the

experience of negative emotions but also, as expected, positive self-related affect. As in past research, obsessive passion was not significantly related to general (nonself) positive affect.

In a second study, Grenier et al. (2009, Study 2) went further and hypothesized that there might be some situations where obsessive passion leads to the experience of both types of positive emotions, just like harmonious passion. One of these situations should be following an important successful experience such as acquiring an important new piece for one's collection. Indeed, such a successful experience should represent a strong enough event to lead to the experience of both types of positive affect. This is because conditions of high success such as this one should lead to a sense of self-validation for those with a predominant obsessive passion that should facilitate the experience of self-related affect and the concomitant general positive affect. Therefore, obsessive passion, just like harmonious passion, should then lead to both types of positive affect, as well as to some negative affect (e.g., anxiety). However, harmonious passion, once again, should positively predict both types of positive affect but not negative affect. Grenier et al. (2009, Study 2) had collectors recall how they typically feel after having acquired an important piece for their collection. They assessed the two types of positive affect, as well as negative emotions. Results supported the above hypotheses.

Results reported so far have been obtained with participants who are actively involved in activities such as collecting, playing sports, and others. Would the same results be obtained with individuals whose passion can be seen as experienced vicariously as is the case for sport fans (Vallerand et al., 2008b). The DMP posits that it should indeed be the case to the extent that the activity (in this case, sport) is internalized in the fans' identity. Specifically, when sport fans are passionate for their favorite team, the latter is internalized in their identity, allowing them to experience emotions as if they were actually playing themselves. As Vass (2003) suggested, it would appear that when sport fans cheer their team on, they also "cheer for self," because their favorite team is also part of their self. Vallerand et al. (2008b, Studies 1 and 2) have recently tested some of these hypotheses. In one study (Vallerand et al., 2008b, Study 2), Canadian fans of the two finalist countries (France and Italy) in the 2006 World Soccer Cup Finals completed the Passion Scale and both general and positive self-related emotions experienced up to that point in the tournament. Results replicated those of Grenier et al. obtained during the acquisition phase. Specifically, harmonious passion positively predicted both types of positive affect. On the other hand, obsessive passion correlated positively only with positive self-related affect.

The results from the above research (Grenier et al., 2009, Study 2; Vallerand et al., 2008b, Study 2) are important because they show that, in addition to negative affect, there are some types of positive affective experiences (i.e., self-related affect) that can be derived from activity engagement

fueled by obsessive passion. Furthermore, under certain situations (i.e., an important success), obsessive passion may also lead to the same types of positive affect as harmonious passion. Future research is needed in order to replicate these findings in various situations and activities. Finally, the fact that passionate fans can react affectively in a manner very similar to the players that they cheer for deserves future scientific scrutiny. For instance, it is obvious that fans do not always experience the same emotions as the players (if they did, they would never boo the players). So, the conditions under which fans experience similar versus dissimilar emotions relative to players deserve attention as research on this issue could lead to important insights on the role of identity in the emotional functioning of highly involved (passionate) individuals.

One interesting question with respect to affect is “If passion contributes to situational affective experiences can it also influence one’s general affect in life (i.e., outside the purview of the passionate activity)?” Indeed, it could be hypothesized that because the passionate activity is highly valued, affect experienced as a function of engagement in the passionate activity should spill-over in one’s life in general. To test this hypothesis, [Mageau and Vallerand \(2007\)](#) conducted a diary study in which they followed university students for 14 days. At Time 1, participants completed the Passion Scale with respect to their favorite activity as well as a short general positive affect scale (the short version of the PANAS; [Watson et al., 1988](#)). Then, for the next 13 days, each night before going to bed, participants indicated if they had engaged or not in their passionate activity and responded to the positive affect scale. Results from HLM analyses showed that on days when participants engaged in their passionate activity, harmonious (but not obsessive) passion increased general positive affect experienced at the end of the day (controlling for Time 1 positive affect). Furthermore, on days when they did not engage in a passionate activity, obsessive (but not harmonious) passion predicted a decrease in people’s positive affect. These findings suggest that the positive affective experiences triggered by harmonious passion within the realm of the passionate activity linger at least to the end of the day and seem to generalize to one’s life in general. In addition, the findings obtained with obsessive passion are in line with those of [Vallerand et al. \(2003, Study 1\)](#) that showed that when one cannot engage in the passionate activity, obsessive passion leads to some emotional suffering (in this case a drop in positive affect).

Although informative, the [Mageau and Vallerand \(2007\)](#) study only lasted 14 days. In addition, negative affect was not assessed. What about the more long-term effects of passion on general positive and negative affect? A study by [Vallerand et al. \(2003, Study 2\)](#) attempted to provide an answer to this question. The authors followed collegiate football players over the course of an entire football season and assessed passion and positive and negative affect prior to and after the end of the season. Results revealed

that harmonious passion predicted an increase in general positive affect, whereas obsessive passion predicted an increase in general negative affect, in one's life over the course of an entire football season. Furthermore, these findings were obtained while controlling for intrinsic and extrinsic motivation toward football. Thus, passion matters not only with respect to situational affect experienced within the purview of the passionate activity, but also as pertains to general affect in life.

5.3. Passion and psychological well-being

If harmonious and obsessive passion are respectively conducive to increases in general positive and negative affect over time as shown in research presented previously (Mageau & Vallerand, 2007; Vallerand et al., 2003, Study 2), is it possible that they also affect one's psychological well-being? Research supported this hypothesis. For instance, in a study with senior individuals, Rousseau and Vallerand (2003) showed that harmonious passion positively predicted positive indices of psychological well-being (life satisfaction, meaning in life, and vitality) but negatively predicted negative indices (anxiety and depression). Conversely, obsessive passion positively predicted anxiety and depression, was negatively related to life satisfaction, and was unrelated to vitality and meaning in life. Research with young adults and teenagers using different measures has yielded similar findings. Specifically, harmonious passion is positively related to life satisfaction and vitality (Vallerand et al., 2007, Studies 1 and 2; Vallerand et al., 2008a, Study 2), whereas obsessive passion is either negatively related (Vallerand et al., 2007, Study 2) or unrelated (Vallerand et al., 2007, Study 1; Vallerand et al., 2008a, Study 2) to these indices.

In the research discussed so far, the focus was on people who are passionate for a given activity and how such passion relates to psychological well-being. Another way to look at the potential contribution of passion to well-being is to compare passionate and nonpassionate individuals. Such a strategy allows us to deal with a crucial question: "Does being passionate make a difference in people's life relative to being nonpassionate?" Initial research has started to answer this question as pertains to psychological well-being. For instance, in one study (Philippe et al., 2009b, Study 1), over 750 men and women aged between 18 and 90 years completed a questionnaire assessing the passion criteria (i.e., loving and valuing the activity, spending regular time on the activity, and the activity being perceived as a "passion"; see Table 3.1) and the harmonious and obsessive passion subscales with respect to an activity that was dear to their heart. Participants also completed scales assessing hedonic (i.e., life satisfaction; Blais et al., 1989) and eudaimonic well-being (i.e., self-realization; Ryff & Keyes, 1995; see Miquelon & Vallerand, 2006, 2008, on this issue). Using the passion criteria discussed previously, we distinguished those individuals who were highly passionate

(a mean of 5 and more on a 7-pt scale on the 4 passion criteria) from those who were not. Furthermore, in line with [Vallerand and Houlfort \(2003\)](#), among the passionate individuals, those with a higher z -score on the harmonious passion than on the obsessive passion subscale were considered as “harmoniously passionate,” whereas those with a higher z -score on the obsessive than the harmonious passion subscale were considered as “obsessively passionate” (see also [Koestner & Zuckerman, 1994](#) for similar procedures). We then compared the three groups on the two types of psychological well-being indices.

The results showed that being harmoniously passionate for a given activity leads to higher levels of psychological well-being on both types of well-being relative to being nonpassionate (see [Fig. 3.3](#)). As in other research ([Vallerand et al., 2007](#), Studies 1 and 2; [Vallerand et al., 2008a](#), Study 2), being harmoniously passionate led to higher levels of well-being than being obsessively passionate. Nonpassionate and obsessively passionate individuals did not differ. It should be noted that age or gender did not interact with passion. Thus, the role of passion in well-being seems to be similar for both men and women across the lifespan. Furthermore, additional research ([Philippe et al., 2009b](#), Study 2) revealed that over a 1-year period, people who were harmoniously passionate for a given activity experienced a significant increase in psychological well-being, whereas obsessively passionate and nonpassionate individuals both experienced a slight, but significant, decrease in psychological well-being. In sum, it does appear that passionate activity engagement leads to increases in

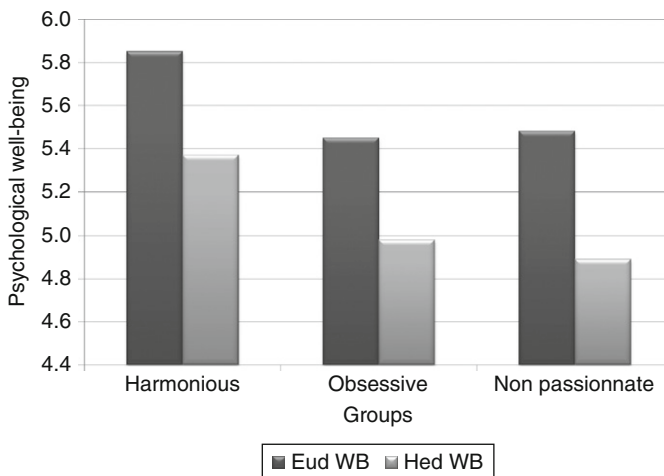


Figure 3.3 On the hedonic and eudaimonic well-being of harmoniously, obsessively, and nonpassionate individuals. Adapted from [Philippe et al. \(2009b\)](#), Study 1).

well-being relative to being nonpassionate. However, such psychological benefit is only conferred to those who are harmoniously passionate toward the activity.

If passion affects psychological well-being, then what are the processes mediating such effects? We feel that at least two processes are at play. A first refers to the repeated experience of situational (or state) positive affect during the course of engagement of the passionate activity. Much research has focused on the adaptive role of positive affect in a variety of outcomes, including well-being (Lyubomirsky et al., 2005; Sedikides et al., 2008). In one important line of research, Fredrickson (2001) has proposed and found support for a Broaden-and-Build Theory that posits that positive emotions are adaptive because they broaden people's thought-action repertoires and self, leading to better decisions and higher levels of psychological well-being. For instance, Fredrickson and Joiner (2002) uncovered the existence of a spiral where positive affect leads to higher levels of psychological well-being which then leads to subsequent experiences of positive affect and so on.

One key issue, however, pertains to the nature of the psychological processes that trigger the positive emotions so important for psychological well-being. We posit that regularly engaging in a meaningful activity out of harmonious (but not obsessive) passion can play that role. In the initial study on passion with college students, Vallerand et al. (2003, Study 1), it was found that passionate people spend on average approximately 8 h per week on the passionate activity. Some spend a lot more, especially if the passionate activity is their work (see Vallerand & Houliort, 2003) or an activity they want to devote themselves fully to such as music (Mageau et al., 2009a, Study 1) or "gaming" (Lafrenière et al., 2009a). In such cases, it is common to spend more than 20 h per week on the passionate activity. But even a "mere" 8 h per week represents roughly 10% of our waking time. Taking into consideration the fact that harmonious passion positively contributes to the experience of positive affect during activity engagement (e.g., Mageau et al., 2005; Vallerand et al., 2003, Study 1; Vallerand et al., 2006, Study 2), and that such positive affect seems to endure for a substantial period of time (Mageau & Vallerand, 2007), it would appear that harmonious passion can lead people to experience at least an additional 10% of cumulative positive affect per week on top of what may be experienced in other life domains. Such cumulative experience of positive affect may facilitate psychological well-being.

A recent study by Rousseau and Vallerand (2008) tested this hypothesis with senior individuals who had a passion for physical activity. At Time 1, participants completed the Passion Scale with respect to physical activity, as well as a measure of psychological well-being using the French form (Blais et al., 1989) of the Satisfaction with Life Scale (Diener et al., 1985). Five weeks later, at Time 2, immediately following an exercise session, they completed situational measures of general positive and negative affect experienced while exercising (e.g., feeling happy, joyful). Finally, 3 weeks later,

at Time 3, participants completed measures of psychological well-being again. Results from a path analysis using structural equation modeling revealed that harmonious passion positively predicted positive affect that led to *increases* in psychological well-being from Time 1 to Time 3. On the other hand, obsessive passion was unrelated to positive affect but positively predicted negative affect. The latter did not predict psychological well-being. These findings are illustrated in Fig. 3.4. These basic findings have been replicated in the work domain (Houliort et al., 2009b) where it was shown that two affective indicators, namely work satisfaction (Study 3) and positive affective experiences at work (Study 4) mediated the positive effects of harmonious passion on different indices of psychological well-being. As in the Rousseau and Vallerand (2008) study, the negative relation between obsessive passion and well-being was direct and was not mediated by positive affect.

Overall, these findings provide strong support for the role of situational positive affect experienced during engagement in a passionate activity as a mediator of the positive effect of harmonious passion on psychological well-being. However, such research also showed that although obsessive passion is negatively related to psychological well-being, neither situational positive nor situational negative affect mediated the obsessive passion–psychological well-being relationship. So, what is the mediator of such a relation? One

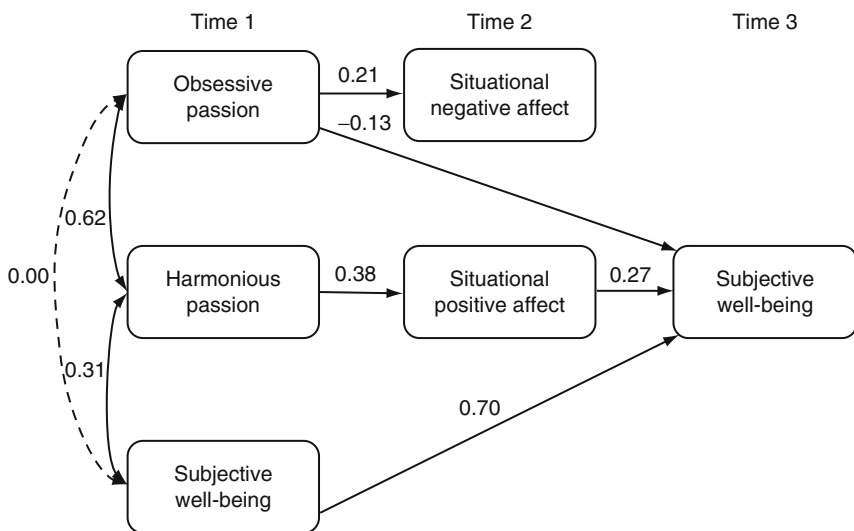


Figure 3.4 Results of the path analysis on the role of passion and affect in subjective well-being. From Rousseau and Vallerand (2008); reprinted with permission. For sake of clarity, the disturbances and the covariances are not presented.

likely candidate is the psychological conflict experienced between the passionate activity and other life activities. This constitutes the second process involved in the passion–well-being relation. Because with obsessive passion one experiences an uncontrollable urge to engage in the passionate activity, it becomes very difficult for the person to fully disengage from thoughts about the activity (or from the activity altogether), leading to conflict with other activities in the person's life. Such conflict can create additional stress in the person's life preventing him or her from enjoying other life pursuits. In addition, because obsessive passion is typically unrelated to positive affective experiences during activity engagement, at some point the person experiences little affective rewards in his or her life (both during task engagement in the passionate activity and in other life pursuits), leading to relatively low levels of psychological well-being. Conversely, with harmonious passion, the person can let go of the passionate activity after task engagement and fully immerse in other life pursuits without experiencing conflict between the two. Thus, harmonious passion should allow the person to experience affective rewards both during task engagement in the passionate activity as well as in other life pursuits, thereby leading to high levels of psychological well-being.

We have recently conducted research to test a model on professional burnout using psychological conflict and work satisfaction as mediators between the two types of passion and burnout. In line with the above reasoning, the model proposes that obsessive passion contributes to burnout, whereas harmonious passion prevents it, through their differential relations to work satisfaction and conflict between work and other life activities. More specifically, the model posits that obsessive passion produces conflict between work and other life activities, because the person cannot let go of the work activity. Furthermore, in line with past research (e.g., [Houlihan et al., 2009b](#)), obsessive passion should be unrelated to work satisfaction. Conversely, harmonious passion is expected to prevent conflict while positively contributing to work satisfaction. Finally, as discussed above, conflict is expected to contribute to burnout, whereas work satisfaction should prevent its occurrence. This model was tested in two studies ([Vallerand et al., in press](#), Studies 1 and 2) with professional nurses from two cultures (France and Quebec, Canada). In Study 1, 100 nurses from France completed scales assessing passion, psychological conflict, work satisfaction, and burnout. The results from structural equation modeling are displayed in [Fig. 3.5](#). It can be seen that the model was supported, even when controlling for the weekly number of hours worked. Specifically, obsessive passion facilitated the experience of burnout through the psychological conflict it induces between work and other life activities. On the other hand, harmonious passion prevented the experience of conflict and contributed to the experience of work satisfaction, thereby protecting the person from experiencing burnout. These findings were replicated in a

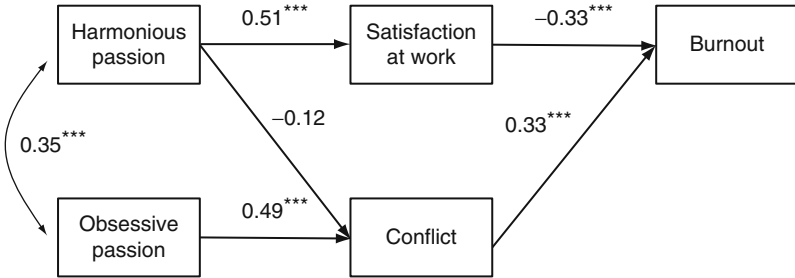


Figure 3.5 Results of the structural equation modeling analyses on the passion–burnout model. Reprinted from [Vallerand et al. \(in press, Study 1\)](#) with permission. For sake of clarity, the disturbances and the covariances are not presented.

second study using a prospective design with nurses from the Province of Quebec ([Vallerand et al., in press, Study 2](#)), allowing us to predict changes in burnout over a 6-month period.

Results from the [Vallerand et al. \(in press\)](#) research showed that harmonious and obsessive passions lead to different effects on burnout in part because they relate differently to conflict with other life activities outside of work. Specifically, harmonious passion leads one to be relatively free from conflict with other life activities and thus, presumably allows one to fully engage in nonwork activities. While doing so, harmonious passion for work helps individuals to replenish themselves in other activities and thus to prevent burnout. Conversely, because it leads to rumination about the activity (i.e., work) when away from it, obsessive passion should prevent one from fully engaging in these activities, and thus from recovering from stress at work, thereby facilitating the experience of burnout. Research by Sonnentag and colleagues has indeed shown that engaging in recovery activities (e.g., psychological detachment from work, relaxation, mastery activities) in one’s free time predicts subsequent well-being ([Sonnentag & Zijlstra, 2006](#); [Sonnentag et al., 2008](#)). However, such research has not identified the nature of psychological variables that would allow one to let go of work and engage in such recovery activities, or conversely, that would put one at risk of neglecting engagement in recovery activities. As suggested above, the DMP posits that harmonious and obsessive passion, respectively, should lead to such effects.

In line with the above, [Crevier-Braud et al. \(2010\)](#) investigated further the role of the two types of passion in leading workers to engage (or not) in recovery activities outside of work and how these may mediate the impact of passion on burnout. These authors had workers complete the Passion Scale, the Recovery Experience Questionnaire ([Sonnentag & Fritz, 2007](#)), rumination about work outside of work, and burnout. Results of structural

equation modeling analyses revealed, as expected, that harmonious passion positively predicted engagement in recovery strategies that, in turn, prevented burnout. Conversely, obsessive passion did not relate to recovery experiences but positively predicted rumination about work that, in turn, positively predicted burnout.

The findings from the above research (Crevier-Braud et al., 2010; Vallerand et al., *in press*) are important for a number of reasons. First, they provide support for the role of obsessive passion for work in leading to burnout. Such effects take place through two routes. In the first one, obsessive passion prevents workers from replenishing themselves outside of work through rumination about work, psychological conflict between work and other life activities, and lack of engagement in recovery activities. In the second route, obsessive passion is unrelated to important positive affective experiences during activity engagement, namely work satisfaction. This is unfortunate as work satisfaction appears to serve as an antidote to burnout. Thus, it would appear that obsessive passion puts one at risk of developing burnout because of its impact on what transpires both at and away from work. Years ago, burnout researchers suggested that because of their passion, people remain strongly psychologically engaged in their work, cannot disengage from it, and under harsh conditions, come to experience burnout (e.g., Freudenberger & Richelson, 1981). The present findings suggest that such an analysis is only partially correct because it applies specifically to obsessive passion, but not to harmonious passion (for a similar analysis as pertains to passion, see Tassel & Flett, 2007).

Finally, the present findings also highlight the fact that with harmonious passion, instead of experiencing burnout, people actually come to thrive at work (Martin, 2005). Specifically, harmonious passion was found to prevent burnout through its positive and negative relations with work satisfaction and conflict, respectively. Thus, because harmonious passion leads to a more flexible task engagement toward work, one can enjoy one's experience at work and derive satisfaction from it. Furthermore, such a flexible engagement allows one to let go of work at the end of the day. Rather than experiencing conflict between work and life activities one can then fully enjoy life outside of work, engage in recovery activities, and consequently return to work refreshed the next day. In sum, the type of passion one holds toward work matters greatly as it sets in motion mediating processes that directly impact on psychological well-being and the prevention of psychological problems such as burnout.

As a closing note to this section, it should be underscored that the research conducted on passion and outcomes has been largely correlational in nature. Thus, a caveat is in order as pertains to causality issues. One recent study has attempted to shed some light on this issue. In this study (Carbonneau et al., 2008), a cross-lagged panel design was used where 500 teachers were asked to complete measures of passion toward teaching

as well as outcomes dealing with the teaching profession (satisfaction with teaching, perceived adaptive student behavior, etc.) twice over a 3-month period. Results of a cross-lagged path model with structural equation modeling revealed that passion predicted changes in outcomes whereas outcomes did not predict changes in passion. Passion, then, would appear involved in producing changes in psychological outcomes, whereas the reverse may not be true. Clearly, additional research on the causality issue between passion and outcomes is necessary before one can firmly conclude that passion *causes* outcomes. However, results from the [Carbonneau et al. \(2008\)](#) study suggest that it may indeed be the case.

5.4. Passion and addictive behaviors

Because the passionate activity is very dear to the heart of those who engage in it (after all, it is part of their identity), people are likely to persist in the activity for long periods of time. However, as described previously, there would seem to be some differences in the type of persistence associated with the two types of passion. With harmonious passion, the person is in control of the activity. As such, the person can decide when to and when not to engage in the activity and should even be able to drop out of the activity if the latter has become permanently negative for the person. Thus, behavioral engagement and persistence can be seen as flexible. Such is not the case with obsessive passion. Typically, because the activity has taken control of the person, obsessive passion would be expected to lead to persistence. However, such persistence can be seen as being rigid because it can take place not only in the absence of positive emotional experience, but even when important costs are accrued to the person. Such rigid persistence can lead the person to persist in the passionate activity even though some permanent negative consequences are experienced, eventually leading to addiction.

Individuals addicted to an activity come to lose control over it such that they no longer willfully choose to participate. Rather, engagement in the activity frequently reflects a lack of control over the urge to partake in the activity even when one should not. This aspect of dependence is similar to a characteristic of obsessive passion where the individual cannot help but engage in his/her activity as if the activity controlled the person rather than the opposite. For some individuals, the passionate activity can have profound negative psychological consequences. For other passionate people, however, the exact same activity might just be a great source of pleasure, entertainment, and harmless distraction. Therefore, it is reasonable to suggest that the two types of passion should be differently related to psychological addiction toward various activities, with obsessive passion being a stronger predictor of addiction than harmonious passion.

Research in the realm of gambling provides support for this analysis. For instance, research has shown that obsessive passion predicts pathological

gambling whereas harmonious passion does not (Philippe & Vallerand, 2007; Ratelle et al., 2004; Skitch & Hodgins, 2005). Furthermore, obsessive passion also predicts higher amounts of money gambled and more time spent gambling whereas harmonious passion is unrelated to these outcomes (Rousseau et al., 2002). In addition, obsessive passion has been found to be positively associated with negative emotions such as anxiety and guilt as well as with rumination when prevented from gambling, which suggest some form of dependence toward gambling (Ratelle et al., 2004). On the other hand, harmonious passion for gambling has typically been found to be positively related only to positive affective experiences while gambling such as pleasure, fun, and enjoyment (see Mageau et al., 2005).

The research above suggests that obsessive passion predicts the occurrence of pathological gambling, presumably because obsessive passion entails a rigid persistence in the activity that is out of the person's control. But is it the case? Is rigid persistence toward the passionate activity really at play in addictive problems such as pathological gambling? We have tested this hypothesis in one study (Vallerand et al., 2003, Study 4) comparing the two types of passion of regular casino gamblers (who played at least once a week) with those of people with gambling problems so severe that they ended up asking the Montreal Casino to bar them from entry. Clearly, these individuals do have important problems (93% of the self-exclusion sample displayed pathological gambling vs. 37% for the regular casino players). These are very high numbers as roughly only 2–4% of the general population experiences pathological gambling. As such, the self-exclusion gamblers should have stopped gambling a long time ago. And yet, they have rigidly persisted. The question is why?

Based on the above, it can be hypothesized that the two types of gamblers should hold different types of predominant passion. Specifically, they should strongly differ on obsessive passion but not necessarily on harmonious passion. The results indeed revealed that the self-exclusion gamblers reported significantly higher levels of obsessive passion than regular casino gamblers. No difference existed on harmonious passion. Results from a discriminant analysis further revealed that obsessive passion was able to correctly predict group membership in 80% of all cases. Furthermore, for the self-exclusion group, their obsessive passion was significantly higher than their harmonious passion. There were no differences between the two scales for the control group (regular gamblers). These last results were replicated in a recent study on the role of passion in the prevalence of gambling problems (Philippe & Vallerand, 2007). It would thus appear that obsessive (but not harmonious) passion lead gamblers to persist while they should not, thereby sending them on a path toward addiction to an activity that can have lethal effects on their life.

This general pattern of results over gambling problems was also found in the domain of problematic (addictive) Internet use. For instance, Wang and

Chu (2007) showed that the two types of passion were differentially related to problematic gaming in a sample of over 400 participants. Specifically, obsessive passion was positively related to problematic gaming, whereas harmonious passion was not. Lafrenière et al. (2009a) extended the Wang and Chu study by looking at both positive and negative outcomes (including problematic or excessive gaming) with a sample of 222 participants of massively multiplayer online games. These games are like video games with the difference that they are interactive, involving several other players. These players were highly involved as they had been playing for more than 2 years and were playing on average more than 22 h per week at the time of the study. Participants completed the Passion Scale and a variety of measures including those assessing positive and negative affect, problematic behaviors usually associated with excessive gaming (Tejeiro, & Morán, 2002), and eudaimonic well-being. A canonical correlation was performed on the data. Results revealed the presence of two significant correlations. The first one was predicted by obsessive passion and showed proof of mainly maladaptive outcomes (negative affect, problematic or addictive behaviors, inordinate number of hours played per week, and low eudaimonic well-being) but also some adaptive outcomes (positive affect). The second canonical correlation was predicted by harmonious passion and only involved adaptive outcomes (positive affect, the absence of negative affect and problematic behaviors, and high well-being). Of major importance for the present discussion are the findings that obsessive passion for online gaming was positively related to problematic behaviors such as getting irritable or restless when prevented from playing as a way to escape from problems. Harmonious passion was unrelated to such behaviors. Finally, it should be noted that Wang and Yang (2007) also found that having a predominant obsessive passion for online shopping puts one at greater risk of developing online shopping dependency than harmonious passion.

In sum, preliminary evidence reveals that obsessive passion may contribute to addictive behavior evidenced by pathological gambling, excessive online gaming, and online shopping dependency, whereas harmonious passion may not. Longitudinal research involving other types of well-known addictive activities (e.g., drugs, internet sex) is needed to replicate these findings and more firmly identify the nature of psychological processes involved in the obsessive passion–addictive behavior relation.

5.5. Passion and physical health

Passion may affect one's physical health in a number of ways. One of these is clearly positive. For instance, by leading individuals to regularly engage in physical activity, passion may positively contribute to their health. At the same time, passion can also lead to excess and people may engage in fitness behavior when they should not, thereby placing their health at risk.

Thus, failing to take into account changes in the situation or circumstances and engaging in risky behavior represents a first health hazard. For instance, take cycling as an example. In the spring, summer, and fall this activity can be a lot of fun and can promote one's health. However, the reality in the winter can be very different (at least in the Province of Quebec). The roads are icy and full of snow and they make cycling a very hazardous affair that may lead to falls and injuries. Clearly, it would be advisable not to cycle under such conditions. If our hypothesis on the rigid persistence induced by obsessive passion is correct, then obsessive passion should lead one to engage in risky behaviors such as winter cycling. On the other hand, if we are correct with respect to the flexible persistence of harmonious passion, then the latter should not lead to such a behavior. Indeed, with harmonious passion, people are more mindful of the changing situations and can then adapt accordingly. Thus, they should be able to refrain from cycling outside in winter.

We have tested these very hypotheses with cyclists (Vallerand et al., 2003, Study 3). Regular cyclists completed the Passion Scale in August with respect to cycling. Six months later, they were contacted again through e-mail to determine who was still cycling in February. Results showed that only 30% of participants were still cycling outside in winter. It was found that those persistent cyclists had reported higher levels of obsessive passion 6 months earlier than those who did not cycle in the winter. No differences were found with respect to harmonious passion. Results from a discriminant analysis further revealed that obsessive passion was able to correctly predict group membership in 79% of all cases. Thus, obsessive passion may potentially affect people's health by leading them to engage in certain risky activities that they should not (such as cycling under dangerous conditions). Such is not the case for harmonious passion.

Although informative, the above study (Vallerand et al., 2003, Study 3) did not show that those who cycled during the winter saw winter cycling as dangerous. They may be quite cautious and may even see such behavior as relatively safe. So, the question remains, does obsessive passion lead one to engage in behavior that they perceived as risky? A recent study with swing dancers suggests that it is indeed the case (Harvey & Vallerand, 2009). In this study, only obsessive passion was significantly associated with engaging in both safe and *dangerous* acrobatics (air steps). For harmonious passion there was only a tendency ($p < 0.11$) to be positively correlated with engaging in safe acrobatics. There was no relation with dangerous acrobatics. It would thus appear that obsessive (but not harmonious) passion predicts engaging in behavior perceived as dangerous and risky.

The above results suggest that obsessive passion can lead people to put themselves at risk of experiencing injuries when engaging in the passionate activity. Does obsessive passion represent a risk factor for injuries? This question has been recently addressed in a study by Stephan et al. (2009). In their study with competitive long-distance runners, the authors showed

that obsessive passion positively predicted perceived susceptibility to injury while controlling for a number of variables including the number of weekly training sessions and years of experience in running. Harmonious passion was negatively related to susceptibility to injury. Of additional interest, Stephan et al. reported that obsessive (but not harmonious) passion was positively related to the number of past injuries. Thus, it would appear that obsessive passion is a risk factor for sport injuries.

Research by Rip et al. (2006) with modern-jazz dance students went one step further and examined the passion–injury relation by distinguishing between acute and chronic injuries. Apparently, the important question with dancers is not whether or not they get injured, but rather how they respond once they do (Turner & Wainwright, 2003). Obsessive passion, as we have seen earlier, is associated with rigid persistence. Therefore, when injured, obsessive passion should lead people to continue dancing, thereby leading to chronic injuries. On the other hand, with harmonious passion, the person is in control of the activity, and thus, persistence is expected to be flexible as was seen in the cycling study. As such, the harmoniously passionate dancer can decide to stop dancing when injured if there is a risk of developing a chronic injury. In the study by Rip et al. (2006), participants ($n = 80$) completed the Passion Scale as well as questions pertaining to injuries incurred over the past year and how they typically act when injured (behavioral items). Results from partial correlations revealed that both types of passion were negatively related to acute injuries. This was expected as the more passionate the dancers, the more likely they are to dance, to keep fit, and thus to prevent acute injuries. The real test of our hypothesis deals with chronic injuries. Results revealed that obsessive passion was positively related to the number of weeks missed due to chronic injuries, whereas harmonious passion was unrelated to chronic injuries. These findings appear in Fig. 3.6. Furthermore, additional analyses with the behavioral items revealed that obsessive passion positively predicted ignoring the pain and having one's pride interfere with treatment. These latter two types of behavior are particularly troublesome because they lead dancers to neglect their physical condition and may lead to injury aggravation. Conversely, harmonious passion was positively related to seeking information on the injury and its treatment and being able to completely stop dancing to let the injury heal, but was negatively related to ignoring the pain and hiding an injury. Thus, the Rip et al. research suggests that obsessive passion is a risk factor for chronic injuries. Future research is needed in order to replicate these results and determine the role of harmonious and obsessive passion in objective acute and chronic injuries.

A final area where passion comes into play with respect to one's health pertains to situations where prolonged engagement in the passionate activity leads to health problems. Online gaming is such an activity. Indeed, people may engage in gaming activities for excessively long periods of time, leading

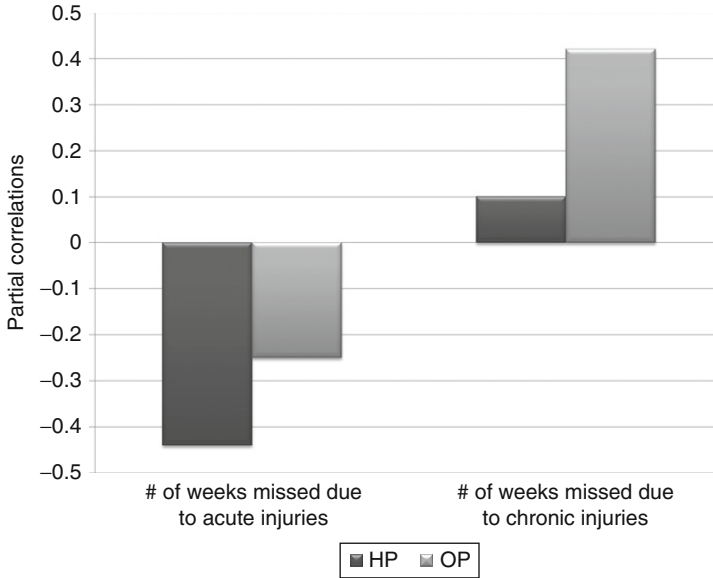


Figure 3.6 On the role of harmonious and obsessive passion in the prediction of acute and chronic injuries (partial correlations). Adapted from Rip et al. (2006).

them to disregard biological needs such as hunger, thirst, and sleep. Over time, such neglect takes its toll on physical health and people then experience health problems. Stories abound of people who played for days and suffered important health problems as a result (e.g., Chuang, 2006). Because of the rigid persistence it entails, obsessive passion should positively predict such problems. Conversely, because people with a harmonious passion remain in control of their activity, they should be able to stop when needed and thus prevent hurtful consequences on their health. Results from a recent research (Lafrenière et al., 2009a) on online gaming supported these hypotheses. Obsessive passion for gaming was found to be positively associated with negative physical symptoms (e.g., loss of appetite, sleep disorders, etc.), whereas harmonious passion was unrelated to such symptoms. In addition, in line with past research, harmonious passion was found to lead to some positive outcomes such as higher psychological well-being (i.e., higher life satisfaction, self-realization, and general positive affect) whereas obsessive passion was not.

In sum, harmonious and obsessive passion can lead to positive and negative effects on one's health, respectively, through the different mediating processes that are triggered, such as rigid persistence and engagement in risky behavior. Future research is needed to replicate the present findings with more objective measures of injuries and health such as medical records and informant reports.

5.6. Passion and performance

Over the years, much effort has been deployed to identify the nature of processes involved in expert performance (see [Ericsson, 1996](#); [Starkes & Ericsson, 2003](#)). Some authors have suggested that natural talent is one of the key elements (see [Gagné, 2007](#)). Although some “natural” talent is indeed necessary, it surely does not explain all because some top performers such as Bob Dylan and Michael Jordan initially failed at their craft. Indeed, Dylan (then known as Robert Zimmerman) was often booed off stage early in his career in his state of Minnesota and Jordan was cut from his varsity high-school basketball team when he first tried out for the team. Research with top-level athletes provides support for the claim that natural talent does not explain high levels of performance (see [Moran, 2009](#)). In fact, such research reveals that outstanding athletes *do not* have faster reaction times than the normal population on nonsport tasks! What they do have is a sport-specific cognitive (knowledge), rather than physical, advantage that has developed over time with practice in their respective sport. Other authors would like us to believe that special circumstances (or opportunities) are the key element responsible for the success of high performers ([Gladwell, 2008](#)). For instance, Bill Gates benefited from access to a personal computer in his high school, a rare feat at the time in the 1960s. However, other children also benefited from this computer in the same school and did not reach Gates’ level of expertise. Thus, special circumstances do not explain all.

So what is it that matters with respect to performance? Although it is hard to dispute that some talent is necessary to reach high levels of performance and that special circumstances may give one an edge on the competition, I suggest that passion for the activity is the missing ingredient. Indeed, if one is to engage in the activity for long hours over several years and sometimes a lifetime, one must love the activity dearly and have the desire to pursue engagement especially when times are rough. For instance, although they failed initially, Dylan and Jordan did not give up. Rather, they worked harder at their craft each day for long hours. Their passion was not a fleeting interest and it helped them overcome obstacles and eventually reach high levels of performance. And Gates? He is still involved in computers, outguessing the competition on the new technological trends to come, some 40 years after regularly sneaking out from home at night to work on the high-school computer until the early morning hours.

The above discussion on top performers was just anecdotal in nature. So, is there empirical evidence supporting the claim that passion is indeed involved in high-level performance? The results of a recent study ([Mageau et al., 2009a](#), Study 3) shed some light on this issue. In this study, we compared two groups of *passionate* musicians on harmonious and obsessive passion and the passion criteria discussed previously. A first group ($n = 70$) had become passionate after 4 months of their first music classes in their high

school, whereas the second ($n = 85$) were college students at a highly recognized Canadian University Faculty of Music. This latter group had on average 10 years of music experience and comprised musicians of national and international caliber. As such, this last group can be seen as a high-level performing group of musicians. If our hypothesis is correct, then, the high expert group should score higher on the various passion indices than the novice group. Results supported the hypothesis. The high-performance group scored significantly higher than the low performance group on harmonious and obsessive passion, as well as on three of the four passion criteria (activity valuation, time investment, and the number of weekly practice hours). It should be underscored, that based on our criteria, both groups displayed at least a moderate level of passion toward music (an average score of 4 and up on the passion criteria). It is simply that those who persisted for 10 years (or more) and who reached high levels of performance were much more passionate than the low-performance group. As an aside, it should be noted that there was no difference between the two groups on the fourth criterion item, *love* for music. This last result suggests that passion and intrinsic motivation are indeed different constructs. Obviously, this study was cross-sectional in nature and longitudinal research is needed to replicate the findings. Nevertheless, the results are in line with the position that passion is a necessary ingredient in high-level performance.

So, if passion is involved in performance, what is the process through which such effects take place? Research on expert performance reveals that high-level performers spend several years of considerable engagement in deliberate practice (i.e., engagement in the activity with clear goals of improving on certain task components), to reach excellence in their chosen field of expertise (see [Ericsson & Charness, 1994](#)). Although clinging to special circumstances as the major contributor to excellence, [Gladwell \(2008\)](#) nevertheless admits that deliberate practice is important in reaching excellence in one's field. And rightly so, as research is clear on this issue: to train to reach the Olympics and/or the professional levels takes a full 10 years of dedication and 10,000 h of deliberate practice ([Ericsson & Charness, 1994](#)). This amounts to 4 h a day, 6 days a week for 10 years. That is a lot of practice! [Vallerand et al. \(2007\)](#) proposed that passion is needed to go through such training regimens. Thus, it is hypothesized that the two types of passion (harmonious and obsessive) lead to engagement in deliberate practice that, in turn, leads to improved performance.

This first basic model was tested in a study with dramatic art performers ([Vallerand et al., 2007](#), Study 1). Male and female dramatic arts students enrolled in the best schools of the Province of Quebec completed scales assessing their passion as well as deliberate practice (based on [Ericsson & Charness, 1994](#)). Then, later, teachers independently rated the students' performance on a number of dimensions previously identified by teachers

and actors as key to a career in this field of excellence. A path analysis using structural equation modeling provided support for the basic model. Both types of passion led to engagement in deliberate practice that, in turn, led to objective performance. These findings were replicated in a study with college basketball players (Vallerand et al., 2008a, Study 1). It thus appears that both types of passion positively contribute to deliberate practice and thus, indirectly, to performance. These findings are in line with those of the Mageau et al. (2009a, Study 3) study reported previously. In this study, expert performers not only reported higher levels of harmonious and obsessive passion, but also indicated spending 10 times more hours weekly practicing their craft (21 vs. 2 h) than low-performance novice musicians. Also of interest is the finding that in the study with dramatic arts students, harmonious passion was positively and significantly related to life satisfaction, whereas obsessive passion was unrelated to it. This is in line with research discussed previously on the positive role of harmonious passion in psychological well-being.

The results of the two performance studies presented above established a direct relation between passion and deliberate practice, and an indirect relation between passion and performance (through deliberate practice). We conducted an additional study (Vallerand et al., 2008a, Study 2) in order to examine the psychological processes through which passion contributes to deliberate practice, and indirectly contributes to performance. We proposed that achievement goals should represent important mediators between passion and deliberate practice. Elliot and colleagues (Elliot, 1997; Elliot & Church, 1997; Elliot & Harackiewicz, 1996) have distinguished between three types of achievement goals: mastery goals (which focus on the development of personal competence and task mastery), performance-approach goals (which focus on the attainment of personal competence relative to others), and performance-avoidance goals (which focus on avoiding incompetence relative to others). Passion has been found to relate to affective and cognitive investment in an activity, thereby implying that the individual is committed to engaging in that activity in a competent manner. Harmonious passion, being an autonomous form of regulation is predicted to be positively related to mastery goals but not to performance goals of either type. On the other hand, obsessive passion, being a more pressured, internally controlling form of regulation is likely to lead the individual to feel compelled to seek any and all forms of success at the activity. As such, obsessive passion should be positively related to mastery and performance-approach goals, as well as to performance-avoidance goals.

A study with men and women water-polo and synchronized swimmers (including some who were part of the junior national teams) was conducted over an entire season to test the above model (Vallerand et al., 2008a, Study 2). At Time 1, individuals completed the Passion Scale, the Achievement

Goals Scale (see Elliot & Church, 1997), and scales assessing psychological well-being. At Time 2, they completed the Deliberate Practice Scale. Finally, at Time 3, coaches assessed players' performance over the entire season. A path analysis tested the proposed model. The results are illustrated in Fig. 3.7. As can be seen, harmonious passion positively predicted mastery goals that, in turn, led to deliberate practice that positively predicted objective performance. On the other hand, obsessive passion was positively related to all three goals. Although performance–approach goals did not predict any variables in the model, performance–avoidance goals negatively predicted performance. Finally, as in the Vallerand et al. (2007, Study 1) study with the dramatic arts performers, harmonious passion was positively associated with psychological well-being whereas obsessive passion was unrelated to it. This basic model was replicated in a study with students who had a passion toward studying psychology as their future profession and with objective exam scores in a psychology course as a measure of performance (Vallerand et al., 2007, Study 2) and in another study with national and world-class classical musicians (Bonneville-Roussy et al., in press). These last two studies underscore the fact that passion triggers a process

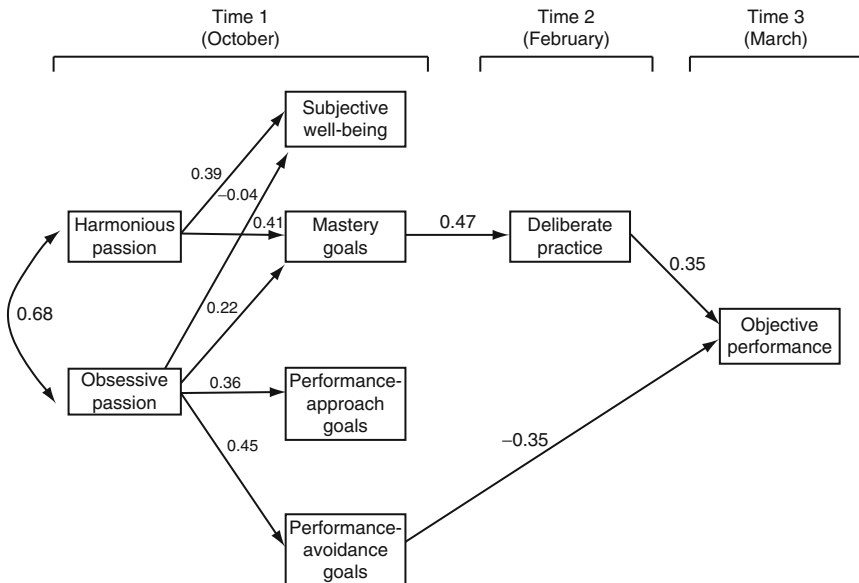


Figure 3.7 Results from the path analysis of the passion–performance model in sport. Reprinted from Vallerand et al. (2008a, Study 2) with permission. (Note: All coefficients were significant ($p < 0.05$), except the link between obsessive passion and subjective well-being). For sake of clarity, the disturbances and the covariances are not presented.

that eventually can affect actual objective performance at the highest levels. Furthermore, once again, harmonious (but not obsessive) passion positively predicted life satisfaction in both studies.

Overall, the above research on passion and performance suggests the existence of two roads leading to performance attainment. The first road originates from harmonious passion, and promotes an exclusive focus on trying to master the activity. This mastery focus leads the person to engage in activities specifically aimed at skill improvement, and such deliberate practice eventually leads to high levels of performance. Of additional interest is that this harmonious engagement process also facilitates psychological well-being. The second road leading to performance attainment emanates from obsessive passion. Such a road is more complex than the first, as it involves the adoption of both adaptive (mastery goals) and maladaptive (performance-avoidance) achievement goals. This second road to performance would thus appear to be less than optimal for the individual. Indeed, in addition to leading to mixed performance through the adoption of mastery and performance-avoidance goals, it also prevents people from enjoying themselves during activity engagement and does not facilitate psychological well-being. Thus, contrary to what is typically believed, an obsessively passionate engagement in the activity where performers focus almost exclusively on their activity at the expense of other life pursuits, and who end up suffering in the process, is not the only road to excellence. Therefore, one message from the present research is that one need not suffer psychologically in order to reach the pinnacle of success. One can be a high-level performer and lead a relatively balanced, happy, life at the same time, to the extent that harmonious passion underlies one's engagement in the field of excellence.



6. PASSION AND INTERPERSONAL, INTERGROUP, AND SOCIETAL OUTCOMES

Research presented so far has focused on intrapersonal outcomes. In this section, I focus on outcomes with implications for other people, and even for society as a whole. Such research addresses the role of passion in interpersonal, intergroup, and societal outcomes.

6.1. Passion and quality of interpersonal relationships

Csikszentmihalyi and his colleagues (1993) in their book on talented teenagers noted that individuals who spend a lot of time developing their talents tend to spend more time alone and less time with peers, and score higher on social introversion. Thus, an important question is, “Does passion affect the

quality of one's relationships?" A complete answer to this question must take into consideration the object (or activity) of one's passion, the type of passion underlying one's engagement in the passionate activity, as well as the context within which one's relationships take place. Below, we consider three contexts where passion operates.

A first context where one's passion can affect the quality of relationships takes place within the purview of the passionate activity. It would appear reasonable to suggest that being passionate for an activity may influence the quality of relationships that one develops in this area. Indeed, passionate individuals are typically seen as highly engaging and as such should be highly popular and able to make friends easily. But if it is the case, what is the process through which they make friends? Further, does it make a difference if one is harmoniously or obsessively passionate? It was seen earlier that one's positive affective experiences mediate the impact of passion on psychological well-being (Rousseau & Vallerand, 2008). In line with the work of Fredrickson (2001), the DMP posits that the experience of situational positive affect is also conducive to high quality of relationships. This is so because positive affect opens up people's thought-action repertoires and self, leading one to experience the world more fully, thereby facilitating smiles, positive sharing of the activity, connection, and openness toward others that are conducive to positive relationships (see Waugh & Fredrickson, 2006). Because harmonious passion leads one to experience positive affect during engagement in the passionate activity, it would be hypothesized that it should therefore indirectly lead to high-quality relationships within the passionate activity. Conversely, because it is typically unrelated to positive affect and at times correlated with negative affect, obsessive passion would be expected to negatively affect the quality of relationships that develop within the purview of the passionate activity.

Initial research conducted on this issue in a field setting (Lafrenière et al., 2008a, Study 1), revealed that athletes' harmonious passion toward their sport was positively related, whereas obsessive passion was either unrelated or negatively related, to various indices of relationship satisfaction with their coach. Subsequent research (Lafrenière et al., 2008a, Study 2) with coaches confirmed the role of positive affect generally experienced by coaches while coaching, as a mediator of the relation between harmonious passion toward coaching and perceived relationship quality with their players. Obsessive passion was unrelated to affect or relationship quality.

Although this research (i.e., Lafrenière et al., 2008a,b) provides preliminary support for the "Harmonious Passion→Positive Affect→Interpersonal Relationship" hypothesized sequence, it nevertheless remains that such research showed some limitations. First, data relied exclusively on self-reports. Second, because coaches and athletes knew each other at the time they completed the questionnaire, it is possible that quality of relationship influenced passion, rather than the other way around. Third, these studies all

took place at one point in time, thereby precluding looking at the *development* of relationships as such. Finally, these studies did not identify a potential mediator of the impact of obsessive passion on relationship quality. Recent research conducted in a variety of settings, including work and sports, has addressed these issues (Philippe et al., *in press-a*). For instance, in one study dealing with work teams in an educational setting (Philippe et al., *in press-a*, Study 4), 185 students who did not know each other at the beginning of the term completed the Passion Scale toward their studies in management. Then, at the end of the term, they indicated the positive (general) and negative emotions experienced within their work teams over the semester and reported on the positive (connectedness) and negative (seclusion) interpersonal aspects that they had experienced during the term. Furthermore, participants were asked to rate their perceptions of each of their teammates' quality of interpersonal relationships developed with the other people in the work team over the semester on positive and negative interpersonal dimensions. It was hypothesized that harmonious passion would positively predict positive affect, but negatively predict negative affect, experienced over the semester. Conversely, obsessive passion was expected to only positively predict negative affect. In turn, positive and negative affects experienced in the work team over the semester were hypothesized to predict the positive and negative relationship assessments, respectively. Results from structural equation modeling analyses provided support for the hypotheses. These findings were also obtained in another study conducted in summer basketball camps where players did not know each other at the beginning of the camps (Philippe et al., *in press-a*, Study 3).

Overall, the findings from the Philippe et al. (*in press-a*) studies are important for at least three reasons. First, they show that passion does affect the quality of relationships that people develop in the passionate activity, from day 1. Second, these studies also reveal the nature of the processes, namely positive and negative affect, through which harmonious and obsessive passion differentially affect relationships, respectively. Finally, these affective processes are not only experienced by the passionate performers, but are also being picked up by the people with whom they engage in the activity. In other terms, the impact of passion on relationship quality does not simply take place in the head of the passionate individual but rather fully extends to other people.

A second relevant context where passion affects relationships takes place outside the purview of the passionate activity. Specifically, it pertains to the role of passion for a given activity (e.g., work) on the quality of relationships outside of the passionate activity (e.g., relationship with one's spouse). The DMP posits that having an obsessive passion toward an activity should lead to conflict with other life activities because with obsessive passion, one cannot let go of the passionate activity, whereas this should not be the case for harmonious passion. One will recall that results from the Vallerand et al.

(2003, Study 1) provided preliminary evidence for this hypothesis on the role of obsessive (but not harmonious) passion in conflict between the passionate activity and other life domains. This basic hypothesis has important implications for the quality of interpersonal relationships that people experience outside the realm of the passionate activity. For instance, people with a passion for using the Internet may surf the net at night on a regular basis. If obsessive passion underlies such activity engagement, people may forget what time it is, even ignoring their spouse's call to come to bed for the night. If done on a repeated basis, such behavior may have severe detrimental effects on a couple's relationship. Such should not be the case with harmonious passion because the person can let go of the passionate activity when needed and thus will not experience conflict between pursuing engagement in the passionate activity and spending time with the loved one. Séguin-Lévesque et al. (2003) have specifically addressed this very issue with regular Internet users who were in a relationship. The results showed that controlling for the number of weekly hours that people engaged in the Internet, obsessive passion for the Internet was positively related to conflict with one's spouse, whereas harmonious passion was unrelated to it. Thus, it is not the number of hours devoted to the passionate activity that is the major problem, but rather when one engages in this activity and to what extent such engagement conflicts with one's love life.

A subsequent research with 150 English soccer fans (Vallerand et al., 2008b, Study 3) tested more directly the hypothesized sequence. English soccer fans were contacted at the soccer stadium of a large metropolitan city and asked to complete a questionnaire assessing passion toward soccer, perceptions of conflict between soccer and the loved one (adapted from Séguin-Lévesque et al., 2003), and the satisfaction with one's intimate relationship using the Perceived Relationship Quality Components Inventory (Fletcher et al., 2000). Structural equation modeling analyses were conducted. The results appear in Fig. 3.8. As can be seen, the results

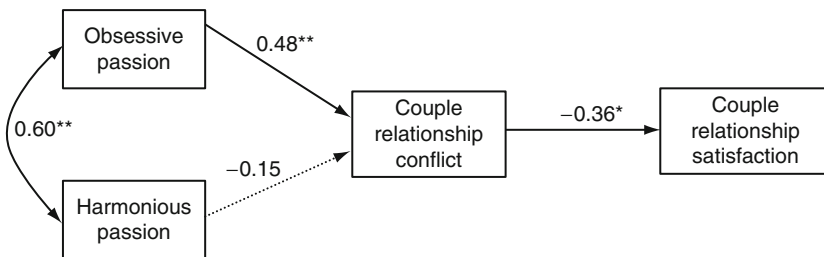


Figure 3.8 Results from the Passion–Conflict–Couple Relationship satisfaction model. Reprinted from Vallerand et al. (2008b, Study 3) with permission. For sake of clarity, the disturbances and the covariances are not presented.

revealed that an obsessive passion for one's soccer team predicted conflict between soccer and the loved one. Conflict, in turn, negatively predicted satisfaction with the relationship. Harmonious passion was unrelated to these variables. Of additional interest, individuals who were single were asked to indicate if their passion for soccer was responsible for being single. There was a strong positive correlation between obsessive passion and this measure, but a negative correlation for harmonious passion.

Findings from the two studies discussed above reveal that having an obsessive passion for a given activity leads one to experience conflict between that activity and one's spouse (or loved one), thereby affecting the quality of this relationship. Harmonious passion toward the activity is unrelated to conflict and relationship satisfaction. Future research is needed to explore this sequence with other types of relationships (e.g., friends, parents, siblings, etc.) as well as identify the processes through which harmonious passion may positively contribute to these relationships.

A third and last area where passion can affect relationships pertains to the impact one's passion for the loved one can have on the quality of the romantic relationship. Thus, here the passion is for another person. In line with [Aron et al. \(1992\)](#), who have shown that one can internalize the loved one in the self, and [Hatfield and Walster \(1978\)](#), who posit the existence of passionate love, the DMP also proposes that one can be passionate for the loved one. Contrary to these conceptual approaches, however, the DMP posits that there are two (rather than one) types of internalization processes (an autonomous and a controlled one) leading to two types of passion (harmonious and obsessive) for the loved one. Furthermore, in line with findings reviewed previously ([Philippe et al., in press-a](#)), it is predicted that our own passion for the loved one will have an influence on both ourselves and our partner. Thus, harmonious passion should lead to more positive personal and relational outcomes than obsessive passion both for ourselves and our partner.

Recently, [Ratelle et al. \(2009\)](#) have conducted a series of three studies to test the applicability of the DMP to intimate relationships. The purpose of Study 1 was to basically validate the construct of passion to romantic relationships. In this study ([Ratelle et al., 2009](#), Study 1), participants who were in a romantic relationship completed a modified version of the Passion Scale for relationships. For instance, a harmonious passion item was: "My relationship with my partner allows me to live varied experiences," whereas an obsessive passion item was "I almost have obsessive feelings for my partner." Results of an exploratory factor analysis provided support for the bifactorial validity of the scale and the reliability of the scale was high (α s were over 0.80 for both subscales). Furthermore, a subset of participants completed the Passion Scale twice over a 6-week period. Correlations supported the moderately high temporal stability of the scale ($r = 0.63$ for harmonious passion; $r = 0.77$ for obsessive passion), suggesting that

while passion is relatively stable, there is nevertheless room for some changes and fluctuation. Participants also completed scales assessing passionate love from the theoretical perspectives of [Hatfield and Sprecher \(1986\)](#) and [Sternberg \(1997\)](#) (these authors posit the existence of only one type of passion), as well as the [Aron et al. \(1992\)](#) scale to assess the level of internalization of the loved one in the self (the Inclusion of Other in the Self-scale).

Results revealed that both types of passion correlated equally high with all scales thereby supporting the hypotheses that both harmonious and obsessive passions are perceived by individuals as a “passion” toward the loved one and that the latter is seen as highly internalized in the self. In line with the initial study of [Vallerand et al. \(2003, Study 1\)](#), well-being was assessed under three different conditions: when one spends time with the partner, after one has spent some time with him or her, and when the partner is unavailable. Well-being was measured through positive emotions (the PANAS; [Watson et al., 1988](#)) and subjective vitality ([Ryan & Frederick, 1997](#)). The results replicated those of the [Vallerand et al. \(2003, Study 1\)](#). Specifically, in the first two conditions, harmonious passion was strongly and positively associated with well-being whereas obsessive passion was not. In the third condition (when the partner was unavailable and thus the person could not spend time with him or her), harmonious passion predicted higher feelings of vitality but not positive emotions, whereas obsessive passion predicted both variables negatively. Furthermore, in line with research from [Vallerand et al. \(2003, Study 1\)](#), obsessive passion also strongly predicted not being able to concentrate on other activities and feeling guilty when one’s partner was unavailable, whereas harmonious passion was negatively associated with guilt but unrelated to concentration problems.

The above results are important as they show the validity of the scale and the constructs of harmonious and obsessive passion for the loved one. Furthermore, results largely replicated the results from [Vallerand et al. \(2003, Study 1\)](#) with respect to the cognitive and affective intrapersonal consequences of being harmoniously or obsessively passionate toward one’s partner. An important issue, however, is that these results do not address the issue of the role of passion in the quality of one’s relationship with the partner. Does the type of passion matter? In [Ratelle et al. \(2009, Study 1\)](#), participants also completed the [Spanier \(1976\)](#) Dyadic Adjustment Scale. Results revealed that having a predominant harmonious passion for the loved one positively predicted all four subscales (i.e., satisfaction with the relationship, cohesion, consensus, and affective expression), as well as the total score, whereas obsessive passion was either slightly negatively related or unrelated to these various indices. These results were replicated in a second study ([Ratelle et al., 2009, Study 2](#)) with some nuances using a different instrument, the Perceived Relationship Quality Components Inventory ([Fletcher et al., 2000](#)). Harmonious passion was strongly and

positively related to all relationship quality dimensions. On the other hand, obsessive passion was positively related to commitment and love, negatively related to trust, and unrelated to satisfaction, intimacy, and sexual passion.

What the results of Studies 1 and 2 suggest is that harmonious passion does contribute positively to how people experience their relationship, whereas obsessive passion seems to lead people to commit and persist in a relationship where they love their partner but seem to receive little rewards from the relationship in return. Rigid persistence seems at work once again with obsessive passion, but this time with respect to interpersonal relationships.

In the final study (Ratelle et al., 2009, Study 3), we delved into the interpersonal issue more deeply, and attempted to answer the question “Does one’s passion influence the relationship quality as experienced by the partner?” To this end, both members of 116 heterosexual couples completed the Passion Scale toward the loved one, as well as the Perceived Relationship Quality Components Inventory (Fletcher et al., 2000). Results from hierarchical regression analyses involving the passion of both partners revealed that the passion of one partner made a significant contribution to the level of satisfaction toward the relationship reported by the other partner. For instance, controlling for women’s own harmonious and obsessive passion, men’s harmonious passion positively predicted women’s general satisfaction with the relationship. Even better, men’s harmonious passion proved to be a better positive predictor of women’s satisfaction with their sex life than women’s own harmonious passion! Men’s obsessive passion for the loved one was a significant negative predictor of women’s satisfaction with their sex life. These findings were also obtained with men’s relationship satisfaction, although the prediction was not as strong. It can be noted that there was no support for the matching of passion types among partners of a given couple (i.e., the number of partners who were both obsessively or harmoniously passionate was not greater than the number of those who were mismatched). Of additional interest, the couples where both partners had an obsessive passion had the lowest levels of relationship quality across all indices.

Overall, these findings suggest that having a balanced harmonious passion toward the loved one can positively affect not only the quality of the relationship as we experience it, but also as experienced by our partner. The opposite is also true for obsessive passion. As indicated above when discussing the interpersonal effects of passion for an activity on the quality of the relationships that we develop within that activity (e.g., Lafrenière et al., 2008a; Philippe et al., *in press-a*), the behavior of harmoniously and obsessively passionate individuals is picked up by their partner and influences the satisfaction with the relationship of both partners. Future research focusing on identifying such behaviors and clarifying their role in relationship quality, length of the relationship, and breakups would appear important from both conceptual and applied perspectives.

6.2. Passion and intergroup outcomes

International sport events are a fascinating area to study from the fans' perspective. Perhaps because passionate fans have internalized both the sport and their country, activity valuation is very high. Soccer fans, for instance, display high levels of support for their national team, ranging from flag waving, to singing national anthems, and even to have one's body painted in their country's colors. Such sport events are often the display of pride in one's team achievement as well as frustration after defeat. They also showcase much intergroup behavior as these games are much more than games. Indeed, Canadian hockey fans old enough to have witnessed the 1972 Canada-former USSR hockey series will remember that series as more than just hockey games. As such, these athletic events represented a confrontation of two countries and in fact, two systems, a democratic and a communist one (at the time) at the height of the cold war.

It is thus not surprising that such confrontations can lead to much antagonistic behavior (Stott et al., 2001). For instance, it is well documented that fans have hurt and even killed players (and even referees) perceived as responsible for their team's loss and violent attacks against fans from the opposing team occur with alarming regularity. Why would fans engage in such behavior? Of course, frustration (e.g., [Dollard & Miller, 1941](#)) following a loss provides one answer. However, frustration does not explain all as people can engage in violent behavior even following team victory. For example, fans of the winning team can celebrate their team victory in the street peacefully or they can mock fans from the losing team, thereby triggering escalation and violence between the two groups of fans. What are the psychological processes underlying such diametrically opposed behavior following team victory?

It is hypothesized that the type of passion that one holds and the emotions that it triggers can help explain these different behaviors. Two relevant emotions are pride and hate. Pride is closely linked to one's identity. Therefore, it should lead one to want to express this emotion publicly, such as peacefully celebrating especially following a win from one's team. On the other hand, hate is a negative emotion specifically oriented at someone. It can lead to outward behavior aimed at someone, such as mocking other people, like fans from the losing team. It is expected that both harmonious and obsessive passion would be positively related to the emotion of pride, especially after success, because for both types of passion the team one is rooting for is part of identity. On the other hand, the hatred experienced toward opponents should be differentially predicted by the two types of passion. Because harmonious passion takes roots in the authentic integrating self ([Deci & Ryan, 2000](#); [Hodgins & Knee, 2002](#)), it should lead the person's identity to be secured and thus, the fans of the other team should not be perceived as obstacles or enemies, but rather as mere

opponents. Therefore, harmonious passion should not lead to the experience of hate toward supporters of other teams. Conversely, because obsessive passion originates from ego-invested self-structures (Hodgins & Knee, 2002), it may lead to the perception that fans of other teams are obstacles in the way of the team's victory or even as a symbolic threat to the self (Steele, 1988). Thus, obsessive passion would be expected to lead to the experience of hate toward opposing teams. In turn, the emotions of pride and hate should have different effects on the two types of behavior discussed previously, namely celebrating peacefully or mocking fans of the losing team. Specifically, hating supporters of other teams should primarily lead one to go in the street to make fun of them or mock them (or worse!), whereas the emotion of pride is expected to primarily lead to celebrating in the streets peacefully.³

We have recently conducted research to explore these issues (Vallerand et al., 2008b, Study 2). In this study, conducted in Montreal just a few hours before the start of the 2006 World Soccer Cup Finals, we asked fans of the two finalist countries (France and Italy) to complete a questionnaire assessing their passion for soccer, various emotions experienced during the tournament up to that point, including those of pride and hate toward the other teams they faced. Finally, we also asked them the extent to which they engaged in peaceful celebration and in mocking the other team's fans following team victory during the tournament. Because both teams had won all their games up to the finals, this study allowed us to provide some answers to the question posed above with respect to acceptable and unacceptable behavior following team victory. Results from structural equation modeling provided support for the hypothesized model. Specifically, both types of passion predicted the emotion of pride that, in turn, predicted peacefully celebrating team victory. However, as expected, only obsessive passion predicted the emotion of hate that, in turn, was found to lead to mocking fans from the losing team.

In sum, it appears that passion matters as pertains to intergroup behavior. Specifically, the present research supported the view from the DMP that harmonious and obsessive passions predict different emotions that in turn lead to different behaviors (including some that can lead to violence) toward fans of other teams. Future research is needed on this issue because it may lead to an increased understanding of some of the roots of hooliganism (e.g., Stott et al., 2001). Furthermore, additional research is needed on the role of passion in intergroup behavior that takes place in other contexts.

³ It should be noted that during the World Soccer Cup, including that of 2006, certain streets are closed in Montreal so that soccer fans can celebrate following games.

6.3. Passion for a cause: Seeking societal changes

For a number of people, the passionate activity they engage in is related to a cause or an aspiration that transcends the self and has implications for society. Some causes are more local, such as raising money to ensure proper computer equipment in one's high school, whereas others are more global such as saving the environment (or the planet) or reinstating democracy in one's country, such as in Iran in 2009. Some of these causes may translate into important societal changes, such as the fall of the Berlin wall in the late 1980s, whereas others may not, or at least not to the same extent, like the Tiananmen Square massacre in China in 1989. Irrespective of the type of cause, working effectively toward achieving a cause would appear to result at least from two major determinants: having a vision and having the necessary passion to achieve it. Indeed, to make a vision happen, it would appear that one needs to be passionate in order to invest time and energy on a long-term basis, sometimes for a lifetime.

But is it the case? Is passion necessary to achieve one's vision and to make the cause a successful one? We have recently started to address these issues. For instance, [Vallerand et al. \(2009, Study 1\)](#) had prominent contributors to the Quebec society and regular workers complete the Passion Scale. Each of the Quebec society contributors ($N = 100$) had been selected by the Province most influential newspaper ("La Presse") as personality of the week for their significant contribution to society, typically through marshalling a cause. We contacted those who had been selected as personality of the week over the past 10 years in one of many areas (science, arts, business, sports, etc.) and asked them to complete a questionnaire that contained the Passion Scale for their cause. Regular workers ($N = 206$) completed the Passion Scale for their work on a commuter train on their way back home after work. A comparison between the two groups could lead to a better understanding of the variables that distinguish those who make an important societal contribution from those whose contribution is less important. In particular, does passion characterize those who make a widely recognized societal contribution? And if so, which type of passion seems more important for those significant societal contributors. The results from a MANOVA provided an affirmative answer to the first question. First, the Quebec society contributors reported higher levels of passion (the passion criteria) than the regular workers. In fact, using the regular criteria (a mean of 4 on the four passion criteria) showed that 100% of the society contributors and 70% of the regular workers reported at least a moderate level of passion toward their work. However, if one takes a higher criterion denoting a high level of passion (a mean of 5 on the passion criteria, as used in the [Philippe et al., 2009b](#) study), then 96% of the society contributors were highly passionate, whereas this was the case for only 33% of the regular workers. Irrespective of the criterion that is selected, these differences are

highly significant. In addition, the prominent Quebec society contributors had higher levels of both harmonious and obsessive passion and worked longer hours each week than the regular workers (9 h more per week, on average). However, it should be noted that these group differences on the passion variables held up even controlling for the number of work hours. Thus, it is not the number of hours worked that is the crucial difference between these two groups, but rather if individuals are passionate or not.

Although the above results reveal that people recognized for their significant contribution to society are more passionate than those whose contribution is less important, these findings do not provide information as to which type of passion toward the cause is more likely to lead the most to positive societal outcomes. When people aim at achieving a cause, they typically try to produce changes in other people, or at least convince them to support their position. To do so, they may engage in a variety of behaviors, including some more “mainstream” and some less so. For instance, if one is working for an environmental agency that promotes the preservation of the environment, he or she may try to do so in a number of ways. One may engage in mainstream behaviors such as encouraging people to attend public lectures, hand in useful information, and so on. However, one may also engage in more extreme behaviors such as using violence against people and industries that do not respect the environment. It would appear that to provide information and to educate people is a more positive means to produce societal changes than using extreme behaviors. Though some may disagree, it would even appear that extreme and violent behaviors may hurt the cause more than anything else by leading people to rebel against it, or at least not to support it.

So which of harmonious or obsessive passion is more likely to lead to the use of more extreme means to achieve the cause to make it happen? Based on the findings presented in this chapter so far, obsessive passion would be expected to lead people to use any means possible (mainstream and or extreme behavior) in order to achieve the cause. Indeed, with obsessive passion the cause may be so important that it may take over individuals and lead them to engage in any kind of behaviors, including extreme ones, to ensure that the cause is attained. Such is not the case for harmonious passion because achieving the cause should remain under the person’s control and people would not adhere to behaviors that would conflict with other aspects of their self (e.g., values). Therefore, one would be inclined to predict that harmonious passion would be more likely to lead to the use of more mainstream means in line with their values and not to use extreme means to achieve the cause.

A recent study by [Gousse-Lessard et al. \(2009, Study 1\)](#) with over 100 environmentalist workers and volunteers ($M = 32.3$ years) tested the above hypotheses. In this study, participants who had been committed to the environmental cause for close to 8 years, on average, completed the Passion

Scale as well as a scale asking to what extent they perceived a variety of behaviors as acceptable to achieve the cause. Some of these behaviors were mainstream whereas others were clearly extreme (as determined by a pilot study with environmentalist experts). An example of a mainstream behavior was “participating in discussion groups to persuade people of the importance of the environment,” whereas an extreme behavior was “physically attack a polluting factory’s representative.” Results of partial correlations between each type of passion and the two types of behavior are reported in Fig. 3.9. It can be seen that harmonious passion toward the environment was positively related only to mainstream behaviors. Conversely, obsessive passion was positively related to both mainstream and extreme behaviors. Presumably when obsessive passion is operative, failure to achieve the cause is not an option, the ends justify the means, and engaging in all kinds of behaviors, including extreme ones to achieve their goal, becomes acceptable. These findings were replicated in a second study (Gousse-Lessard et al., 2009, Study 2) this time using a measure of behavioral intentions rather than perceived acceptability in a real-life situation. Finally, a study by Rip and Vallerand (2007) with people working toward a political cause yielded similar findings.

Overall, results from the above research suggest that in the long run, harmonious passion may lead to the most desirable forms of behavior

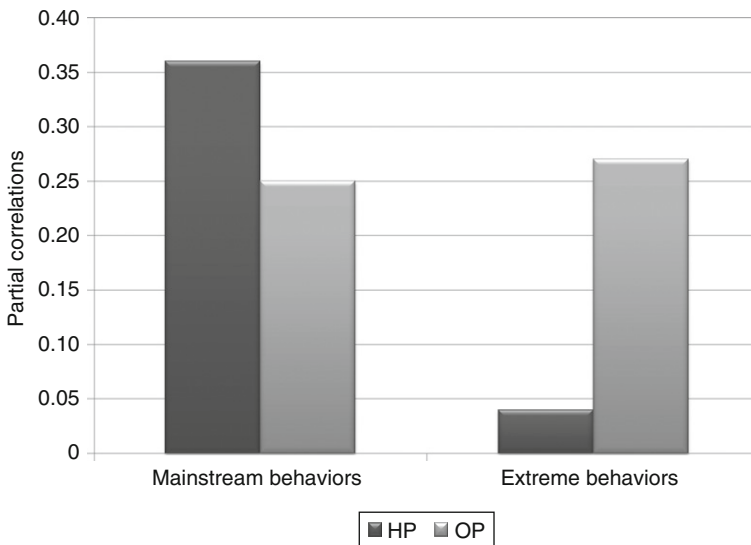


Figure 3.9 Partial correlations between harmonious and obsessive passions for the environment and mainstream and extreme environmental behaviors (Gousse-Lessard et al., 2009, Study 1).

toward achieving the cause and eventually best serving the cause. Although it may help the cause to some extent by leading to the adoption of effective and mainstream behaviors, obsessive passion may at the same time hurt the cause by promoting the use of extreme behaviors. Future research on these issues is important in order to delineate the nature of the mediators of the differential impact of harmonious and obsessive passion on extreme form of behaviors that may work against the very cause that one is trying to promote.

In the last two sections, I have reviewed research focusing on the outcomes of passion. It was seen that passion matters with respect to a variety of consequences. [Table 3.2](#) summarizes the relationship between harmonious and obsessive passion on the one hand, and outcomes on the other. It can be seen that, overall, harmonious passion leads to positive outcomes and is unrelated or negatively related to negative outcomes. Conversely, obsessive passion is typically positively related to negative outcomes and unrelated to positive consequences, although there are some exceptions such as certain types of positive affect (self-related affect and high-activation positive affect), performance, and societal behavior.



7. INTEGRATIVE RESEARCH

In previous sections, I reviewed research on the determinants and outcomes of passion. In the present section, I briefly review integrative research that has incorporated both the determinants and the outcomes of passion into a coherent “Determinants→Passion→Outcomes” sequence. In addition, whenever possible the mediators of the passion–outcomes relation are presented.

7.1. Social determinants, passion, and outcomes

One important question often asked in organizational settings deals with how best to promote high commitment toward the organization’s goals and values (affective commitment) and not simply being committed for lack of alternatives or costs associated with leaving the organization (continuous commitment). I propose that creating the social setting necessary for harmonious passion to thrive and flourish should lead to an affective commitment being displayed by employees. Research on the social determinants of passion ([Houlfort et al., 2009a](#)) reveals that to the extent that there is a prevalent clan organizational culture and that one’s supervisor displays a transformational leadership style, then harmonious passion is facilitated. On the other hand, transactional leadership and the market culture positively predict obsessive passion. In [Houlfort et al. \(2009a, Study 2\)](#), the type of

Table 3.2 Passion and outcomes: A summary

	Harmonious passion	Obsessive passion
1. Cognitive		
• Conflict (intrapersonal)	0	+
• Concentration (on task)	+	0
• Concentration (other tasks)	+	–
• Rumination	0	+
• Flow	+	0
• Decision making	+	–
2. Affect		
On task affect		
• Moderate positive affect (e.g., happy)	+	0/+
• High positive affect (e.g., excited)	+	+
• Self-related positive affect (e.g., proud)	+	+
• Negative affect	0/–	+
After the task		
• Positive affect	+	0
• Negative affect	0	+
When preventing from engaging in the activity		
• Moderate positive affect	0/+	–
• Negative affect	0	+
3. Psychological well-being	+	0/–
4. Addictive behaviors	0	+
5. Physical health		
• Injury susceptibility	0	+
• Acute injury	–	–
• Chronic injury	0	+
6. Performance		
• Indirectly through deliberate practice	+	+
• Indirectly through goals	+	+/0/–
7. Interpersonal relationships		
• Conflict (interpersonal)	0	+
• Quality of interpersonal relationships	+	0/–
8. Intergroup relations		
• Through positive affect (positive behaviors)	+	+
• Through negative affect (negative behaviors)	0	+

Table 3.2 (continued)

	Harmonious passion	Obsessive passion
9. Societal outcomes		
• Positive (mainstream behaviors)	+	+
• Negative (extreme/violent behaviors)	0	+

Note. +, Positively related; 0, Unrelated; −, Negatively related.

culture (clan vs. market), the manager's leadership style (transformational vs. transactional), and the two types of commitment were assessed, and a model incorporating determinants, passion, and outcomes was tested. That model posited that the determinants (culture and leadership) would predict the two types of passion as discussed above. Furthermore, the model posited that harmonious passion should positively predict affective commitment but negatively predict continuous commitment. Obsessive passion, on the other hand, was not expected to predict commitment. Results from a structural equation modeling supported the hypothesized model.

Another important social determinant of passion previously discussed is autonomy support (or promoting choice and self-initiation of another person's behavior). Research reveals that autonomy support from people in a supervisory position (e.g., teachers, coaches, managers) not only promotes the development of passion (Mageau et al., 2009b, Study 3) but also helps sustain harmonious passion once it has been developed (Mageau et al., 2009, Studies 1 and 2). A recent study by Bonneville-Roussy and Vallerand (2009) sought to replicate those findings and to further test whether harmonious passion would also predict intentions to pursue one's involvement in music. A total of 150 musical students enrolled in international summer schools, completed scales assessing the two types of passion for music, perceived autonomy support from their teachers, and intentions to pursue their music involvement in years to come. Results from structural equation modeling analyses revealed that autonomy support from music teachers positively predicted harmonious passion for music that, in turn, positively predicted future intentions to pursue playing their musical instrument. Obsessive passion was unrelated to autonomy support or to intentions. Thus, these results provided support for the proposed sequence.

7.2. Personal determinants, passion, and outcomes

What are some of the personal factors likely to trigger the "passion–outcomes" relation? Research by Vallerand et al. (2006, Study 1) reveals that having an autonomous versus controlled personality represents such a

factor. Specifically, to the extent that people highly value an enjoyable activity, those with an autonomous personality orientation are more likely to develop and maintain a harmonious passion. On the other hand, a controlled personality orientation is more conducive to obsessive passion. In a subsequent study, Vallerand et al. (2006, Study 3) tested the same sequence of personal determinants but also included subjective well-being at Time 2 as an outcome. It was predicted that only harmonious passion would predict well-being at Time 2. Elite athletes completed questionnaires assessing activity (sport) valuation, personality orientations, and passion at Time 1 and well-being at Time 2 (4 months later). The hypothesized model posited that the more athletes value their sport and display an autonomous personality, the more harmonious their passion would become. On the other hand, highly valuing their sport and holding a controlled personality, should lead athletes to develop an obsessive passion for their sport. In turn, it was hypothesized that harmonious passion would lead to higher levels of well-being in sport, whereas obsessive passion was expected to be unrelated to well-being. Results of structural equation modeling analyses provided support for the model.

Intrinsic versus extrinsic values represent another personal factors that should trigger the “Passion→Outcomes” sequence. It will be recalled that in research with collectors already discussed in the section on personal determinants (Grenier et al., 2009, Study 2), intrinsic values predicted harmonious passion, whereas obsessive passion was predicted by extrinsic values. This is because the intrinsic values are rooted in the authentic self, and as such allow one to orient his or her harmonious passion in line with true interests, aspirations, and values. On the other hand, because they reflect controlled and ego-invested structures, extrinsic values facilitate obsessive passion with the various contingencies that it entails. In this study, we had also measured some adaptive and less adaptive outcomes that one can derive from one’s engagement in collecting. For example, positive outcomes included learning new things through the collection and collecting making one’s life more positive. Examples of the less adaptive outcomes included feeling depressed when one is unable to obtain a special piece for the collection and having spent more money than one wanted on a given piece. Grenier et al. conducted structural equation modeling analyses to test the model that posits that intrinsic values lead to harmonious passion that predicts adaptive outcomes whereas extrinsic values predict obsessive passion that, in turn, leads to less adaptive outcomes. Results largely supported the model with one exception. Although obsessive passion strongly predicted maladaptive outcomes, it also slightly predicted adaptive outcomes. Figure 3.10 illustrates the results.

Research discussed so far in this section has focused on how passion for a personal activity (e.g., collecting stamps) affects outcomes. Thus, one may wonder whether the integrative sequence also works with respect to

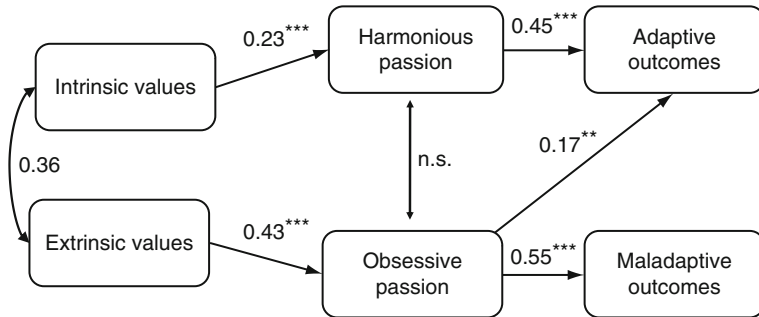


Figure 3.10 Results from the structural equation modeling analyses on the integrative model of intrinsic and extrinsic values, passion for collecting, and outcomes (Grenier et al., 2009). For sake of clarity, the disturbances are not presented.

interpersonal activities. To address this issue, we have conducted research on integrative models in the close relationship area. An interesting issue with respect to romantic relationships is that most people seem to change when they are in a relationship. Aron et al. (2005) posit that such changes are due to self-processes that are in operation while people are in a romantic relationship. Specifically, these authors suggest that over time, people come to internalize the partner in their self. While doing so, new dimensions coming from one's partner are incorporated into the self. This process called self-expansion is expected to lead to personal growth. Furthermore, Aron and colleagues (Lewandowski et al., 2002) suggest that people may also experience a process of self-constriction where they end up losing some elements of the self. However, this process is hypothesized to take place especially following a breakup. Carboneau and Vallerand (2010) have built upon the seminal work of Aron and his colleagues and have sought to extend this work in at least three ways. First, although Carboneau and Vallerand (2010) agree that self-expansion takes place during relationships, they posit that one needs not go through a breakup to experience self-constriction. This phenomenon can take place while one is in a relationship, as well. Second, Carboneau and Vallerand suggested that people can experience self-expansion and self-constriction to different degrees, even in combination, and one of the personal determinants of these self-processes is the type of passion that one has for the loved one.

Finally, Carboneau and Vallerand also propose that self-expansion and self-constriction are embedded in different conceptions of love that differ as a function of passion. Several authors (e.g., Fromm, 1956) have proposed the existence of two conceptions of love. A first conception of love is what is referred to as a "symbiotic union" where one seeks to fuse completely with the loved one and to become more like him or her. This is achieved through internalizing elements of the loved one in the self (self-expansion)

as well as eliminating elements of one's self that would differ from the loved one (self-constriction). This would appear to characterize obsessively passionate individuals who wish to be constantly with the loved one and who suffer when they cannot be with him or her (Ratelle et al., 2009). As Fromm suggests, the person who adopts this conception becomes "a slave to his passion." Such a conception of love would not appear as particularly healthy as one may lose him or herself in the relationship, losing past elements of self in the hope of getting closer to the loved one. The second type of love is what is often called "mature love" where there is union with the loved one but while preserving one's identity. This is achieved by internalizing some elements of the loved one (self-expansion) without engaging in self-constriction. Such a conception of love should be conducive to personal growth as one adds to the self without any loss of prior self content. Carbonneau and Vallerand (2010) reasoned that because harmonious passion entails an open and nondefensive interaction with one's partner this should lead to self-expansion and the prevention of self-constriction. These hypotheses were tested in two studies. Results of the first study (Carbonneau & Vallerand, 2010, Study 1) using structural equation modeling analyses provided support for these hypotheses. Specifically, harmonious passion was found to prevent self-constriction and lead to self-expansion. In turn, self-expansion predicted perceptions of personal growth due to the relationship. However, obsessive passion led to both self-expansion and self-constriction with the latter negatively predicting personal growth.

The purpose of the second study (Carbonneau & Vallerand, 2010, Study 2) was to replicate and extend the above findings by incorporating the personal determinants of passion in the sequence. Aron et al. (1992) have shown that one can internalize the loved one in the self. However, they do not posit the existence of different types of internalization. In line with the DMP and the research of Ratelle et al. (2009) discussed previously, Carbonneau and Vallerand proposed that the internalization of the loved one can be autonomous or controlled depending on the type of personality (autonomous vs. controlled orientations) held by the individual, thereby respectively leading to a harmonious or obsessive passion for the loved one. In sum, Carbonneau and Vallerand (2010, Study 2) proposed a model where an autonomous personality orientation with an internalization of the loved one should lead to a harmonious passion, whereas a controlled personality orientation with an internalization of the loved one should lead to an obsessive passion. In turn, harmonious passion is expected to strongly lead to self-expansion and the prevention of self-constriction, whereas obsessive passion is expected to lead to both self-expansion and self-constriction. Finally, self-expansion is expected to promote personal growth in the relationship, whereas self-constriction is hypothesized to undermine self-growth. To test the above model, a total of 215 university students who were involved in a regular heterosexual relationship

completed scales assessing the internalization of the loved one in the self (through the Aron et al., 1992 overlapping circles), the autonomous versus controlled personality orientations with the Global Motivation Scale (Guay et al., 2003), the Romantic Passion Scale (Ratelle et al., 2009), self-expansion (Lewandowski & Aron, 2002), self-constriction (Carbonneau & Vallerand, 2010, Study 1), as well as a measure of personal growth due to the relationship (a scale validated for the purpose of the study). Results from structural equation modeling analyses controlling for the length of the relationship provided support for the model. The results are illustrated in Fig. 3.11.

The research of Carbonneau and Vallerand (2010) underscores the fact that not all relationships lead to personal growth. Rather, personal growth due to the relationship takes place only for those relationships that are fueled by harmonious passion. In fact, those that are triggered by obsessive passion lead to some positive elements (some self-expansion), but also to a loss of self through self-constriction processes. Thus, it would appear that the net result is mixed at best. Future research is needed to identify the nature of the differential behaviors emitted by harmoniously and obsessively passionate individuals that would lead to such diametrically opposed outcomes. Finally, perhaps the most important conclusion from such research is that they provide support for the position that there seems to be two different conceptions of love with each one rooted in a specific type of passion for the loved one. Research along those lines would appear exciting.

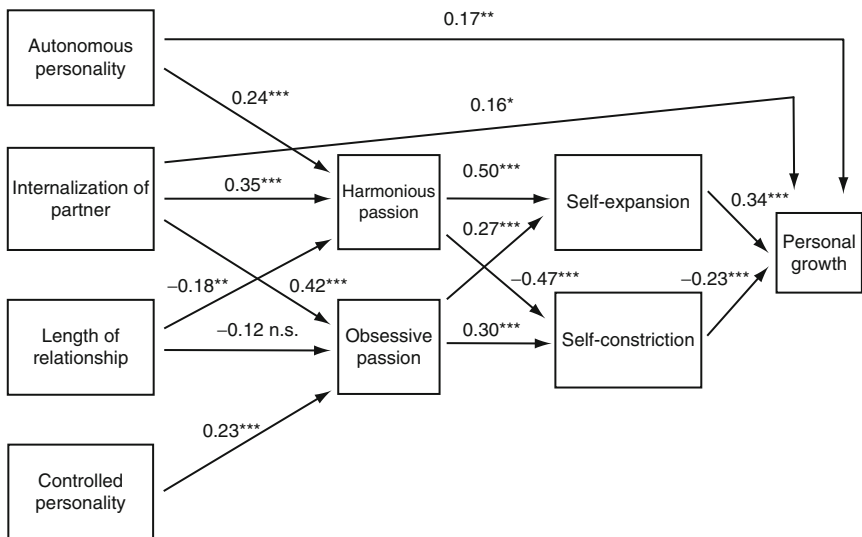


Figure 3.11 Results from the Structural equation modeling analyses of the passion and self-expansion/self-constriction model (Carbonneau & Vallerand, 2010). For sake of clarity, the disturbances and the covariances are not presented.

Overall, the findings presented in this section provide support for an integrative sequence where social and personal determinants facilitate harmonious and obsessive passion that, in turn, generally lead to adaptive or less adaptive outcomes, respectively. Results on this sequence are important theoretically, as they provide support for the DMP. Furthermore, from an applied perspective, increased understanding on the determinants of passion is amenable to personal and social changes, eventually leading to adaptive outcomes. Future research on this issue is thus deemed important.

8. PASSIONATE FUNCTIONING UNDER DIFFERENT SITUATIONS

It is typically assumed in social psychology that the internalization process is unimodal. That is, the internalization of a person (e.g., Aron et al., 1992) or an object or activity is hypothesized to go through only one type of internalization process. Indeed, most self/identity theories posit that activities (Csikszentmihalyi et al., 1993), groups (Tajfel & Turner, 1986), or individuals (Aron et al., 1992) are internalized or not. However, based on Self-determination Theory (e.g., Deci & Ryan, 2000; Deci et al., 1994; Ryan & Deci, 2000), the DMP posits that the type of internalization (autonomous vs. controlled) matters greatly and thus the DMP makes more refined predictions regarding the behavior of highly involved individuals, such as passionate ones, in specific situations. This is especially the case when situations have implications for one's sense of identity (e.g., success or failure; Sedikides & Gregg, 2003; Sedikides & Strube, 1997). When finding themselves in such situations, passionate individuals should react differently as a function of the predominant type of passion that they hold toward the passionate activity. At least three situations seem relevant: (1) facing irremediable success and failure; (2) preventing failure by aggressively removing interpersonal obstacles; and (3) performing following the reception of positive or negative self-information. These situations and relevant research are discussed below.

8.1. Subjective well-being following irremediable success and failure

Getting an A+ on a finals exam; playing poorly and losing in the last game of the season; failing to make the school's orchestra. Certain situations connote clear success or failure that cannot be changed (at least not in the near future). Thus, one has to deal affectively with these situations (Campbell & Sedikides, 1999; Sedikides & Gregg, 2008). How should individuals with a predominant obsessive or harmonious passion react

psychologically to such situations? Following success, all is well, and thus similar levels of well-being should be experienced by harmoniously and obsessively passionate individuals. However, it is expected that the major difference between the two types of passionate individuals should take place following failure. Indeed, because so much is riding on doing well for obsessively passionate individuals (e.g., maintaining their identity and their sense of self-esteem), failure may have a more devastating psychological impact on their well-being than for those who are harmoniously passionate and who have a secure sense of self to face the negative information head on, in a mindful and nondefensive manner.

We recently tested these hypotheses in two studies (Lafrenière et al., 2009c). In the first study, 64 professional painters, who had more than 20 years of experience, participated in a web survey. They first completed the Passion Scale with respect to painting and were then randomly assigned to one of two conditions. In these conditions, they were asked to recollect either a period of their professional life where they were highly creative (success condition) or not very creative (failure condition). Then participants were asked to recall how satisfied they were with their life at that point in time using the French form (Blais et al., 1989) of the Satisfaction with Life Scale (Diener et al., 1985). Participants were split into harmoniously and obsessively passionate groups (using the procedures described previously) and a 2 (Passion Type: Harmonious vs. Obsessive Passion groups) \times 2 (Success/Failure) ANOVA was conducted on the life satisfaction scores. The results revealed the presence of a significant interaction. This interaction is displayed in Fig. 3.12. As hypothesized, when successful, both types

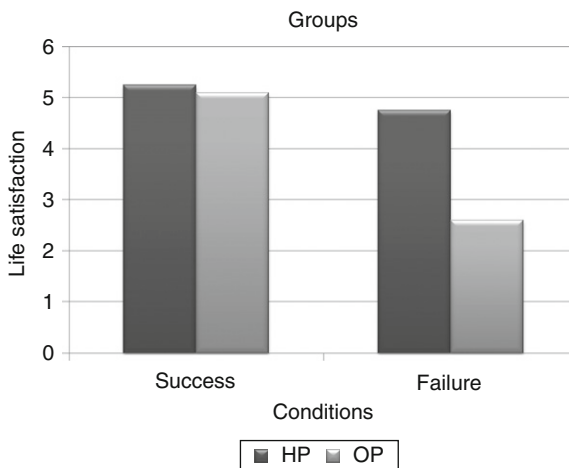


Figure 3.12 Results of the analyses of variance on the effects of passion types and success/failure on the life satisfaction of professional painters (Lafrenière et al., 2009c, Study 1).

of passionate painters had equally high levels of life satisfaction. However, when unsuccessful (the less creative condition), harmoniously passionate painters remained highly happy with life, whereas obsessively passionate people showed a highly significant reduction in life satisfaction.

The above findings suggest that obsessively passionate individuals experience a decrease in life satisfaction following an important failure on the passionate activity. However, this first study had one important limitation: it relied on participants' recollection of their life satisfaction. Thus, it is possible that the memory of the two passionate groups works differently and may have biased their life satisfaction assessment (Sedikides & Green, 2000, *in press*). We thus conducted a second study (Lafrenière et al., 2009c; Vallerand et al., 2009, Study 2) to replicate the findings of Study 1 while correcting this limitation. This second study was conducted with 77 passionate hockey fans using a diary study during the 2009 National Hockey League (NHL) playoffs. Fans of various hockey teams first completed the Passion Scale and the life satisfaction scale through a web survey before the start of a playoffs series involving their favorite team. They then completed the French form of the Satisfaction with Life Scale each morning following their team's game (whether it was a loss or a win). Hierarchical linear modeling (HLM) analyses were conducted on the life satisfaction data. The results replicated those of Study 1. Specifically, the results revealed the presence of a significant between-person level effect where obsessive passion moderated the relation between performance and life satisfaction. The more fans reported an obsessive passion toward their team, the greater was the positive impact of a win on their life satisfaction. Furthermore, the more fans reported an obsessive passion toward their team, the greater was the negative impact of a loss on their life satisfaction. As expected, harmonious passion had a main effect (the higher one's harmonious passion, the higher one's life satisfaction). However, harmonious passion did not moderate the relation between team performance and life satisfaction. These findings reveal that the two types of passionate individuals do react differently to objectively identical success versus failure situations (of one's favorite hockey team).

One key assumption of the DMP is that the two forms of passion differ with respect to the type of contingencies underlying their engagement in the passionate activity. Specifically, it is hypothesized that with obsessive passion certain contingencies are attached to the activity, such as self-esteem. However, such is not the case with harmonious passion that is hypothesized to be relatively free from such contingencies. Past research on self-esteem contingencies (e.g., Crocker & Park, 2004) has shown that people who have high self-esteem contingencies with respect to a variable source (e.g., one's performance on a given activity) will see their self-esteem fluctuate more than those with lower contingencies. It thus follows from the above that the self-esteem of obsessively passionate individuals should

fluctuate much more in situations of success and failure than that of harmoniously passionate individuals.

To test the above hypothesis, [Mageau et al. \(2009b\)](#) carried out a study with young adults who were passionate about Magic_{The Gathering} card games. This game is based on the Dungeons and Dragons role playing games. Participants were recruited through various ads and came to the lab to participate in a Magic_{The Gathering} tournament. The tournament started with a first questionnaire in which players completed measures of passion ([Vallerand et al., 2003](#)), self-esteem contingencies (of the Magic card game; using an adapted version of the [Crocker et al., 2003](#) scale), as well as global ([Rosenberg, 1965](#)) and state self-esteem ([McFarland & Ross, 1982](#)). All participants played at least five rounds with the top eight players of each tournament playing three additional rounds. Actual performance for each round was recorded and players completed measures of state self-esteem ([McFarland & Ross, 1982](#)) after each round.

HLM analyses were conducted on the self-esteem data. The results revealed that actual performance was a significant within-person predictor of state self-esteem, with games won overall producing higher levels of state self-esteem than games lost. At the between-person level, as expected, global self-esteem positively predicted state self-esteem. Of major interest, results showed that obsessive passion moderated the relation between actual performance and state self-esteem. This interaction revealed that the more people reported an obsessive passion toward the Magic card game, the greater was the positive impact of a win on their state self-esteem. As expected, harmonious passion did not moderate the relation between actual performance and state self-esteem. Additional analyses revealed that the self-esteem contingencies scale (for the Magic card game) yielded the same findings as obsessive passion. Further, when both obsessive passion and self-esteem contingencies were incorporated in the same analyses, the effects of obsessive passion disappeared. It would thus appear that the effects of obsessive passion on state self-esteem operate through self-esteem contingencies processes.

The studies reviewed so far in this section showed that following failure, harmoniously passionate individuals do not suffer as much as those who are obsessively passionate. But is it always the case? Is it possible to identify situations where even harmoniously passionate individuals will show a drop in psychological well-being? What about situations where an outcome is of utmost importance and cannot be changed at the short-term level? An instance of such a situation would be failing to get into graduate school or not making a much-desired team or orchestra. Would such situations also affect the well-being of harmoniously passionate individuals?

We tested this possibility in the final study to be discussed in this section ([Amiot et al., 2006](#)). Male adolescent and young adult hockey players ($n = 233$) who had been playing competitive hockey for several years

presented themselves at a tryout camp for a team playing in a highly competitive league. Making the most competitive league was very important for their future career as a hockey player. Athletes completed a questionnaire at Time 1 assessing their level of passion toward hockey as well as their subjective well-being (the French form of the Satisfaction with Life Scale by [Blais et al., 1989](#); the PANAS Scale of [Watson et al., 1988](#); and the Center for Epidemiological Studies Depression Scale, [Radloff, 1977](#)). Two weeks later, at Time 2, athletes completed a second questionnaire assessing well-being immediately after finding out if they had made the team or not. We created two groups of harmoniously and obsessively passionate hockey players using the same procedures as those reported earlier (e.g., [Philippe et al., 2009b](#); [Vallerand & Houliort, 2003](#)). Then a 2 (Passion Type) \times 2 (Success/Failure) ANCOVA was conducted on Time 2 well-being, controlling for Time 1 well-being. Results showed that participants who did not make a team from a highly competitive league (and thus whose future career in hockey was seriously jeopardized) experienced significantly lower levels of psychological well-being than those who made that team (i.e., those who were selected by a more competitive league), irrespective of their type of passion. Harmoniously passionate individuals, then, can suffer psychologically following failure just as obsessively passionate individuals do. However, what these findings suggest is that it takes a highly significant negative event to negatively affect harmoniously passionate individuals' psychological well-being.

There was also a second purpose to the Amiot et al. study. Specifically, in line with Person-Environment Fit (P-E) perspective, we sought to determine if there were different situations or contexts wherein each type of passionate individuals would thrive psychologically and experience high levels of well-being. A P-E fit is achieved when there is a match between personal characteristics of the person and characteristics of the environment. Past research has shown that having a P-E fit is positively associated with various indices of psychological well-being, including life and work satisfaction, and personal accomplishment, and negatively associated with negative indices such as emotional exhaustion, depersonalization, and somatic complaints ([Harackiewicz et al., 1987](#); [O'Connor & Vallerand, 1994](#); [Tauer & Harackiewicz, 1999](#)). It was hypothesized that highly competitive environments that promote a rigid and inflexible type of persistence and involvement, and which require individuals to be overly involved in the activity at the expense of other life domains, can be seen as fitting well with an obsessive type of passion. Conversely, less competitive environments, while still being demanding, do not require an inordinate investment of time and energy in the activity. Such environments should fit better with individuals holding a harmonious passion who may have more diversified interests ([Vallerand & Houliort, 2003](#); [Vallerand et al., 2003](#)). In line with past motivation research (e.g., [Tauer & Harackiewicz, 1999](#)), a match

between the passion type and the environment would be expected to lead to higher levels of subjective well-being.

To provide a test of the above hypotheses, the hockey players of the Amiot et al. study were followed 2 months after the team selection (i.e., after approximately one-third of the regular hockey season had elapsed). This period of time allowed players ample time to get used to their environment. Participants completed the same well-being measures at this time (Time 3). In line with the P-E fit perspective, results from the ANCOVA revealed the presence of an interaction at Time 3, controlling for Time 1 well-being. More specifically, it was found that obsessively passionate individuals who were playing in the highly competitive leagues displayed higher levels of well-being compared to harmoniously passionate athletes who did. Conversely, among the athletes who ended up playing in the less competitive leagues, harmoniously passionate athletes reported higher levels of well-being than obsessively passionate ones.

Overall, these results provide support for the match hypothesis. Thus, to the extent that the environment people engage in on a regular basis is consonant with their type of passion, people will adapt positively and experience increased well-being. However, if there is no match between their predominant type of passion and the environment in which they operate, people's adaptation will not be as positive, and may even be downright negative.

Future research is needed to expand the present findings in at least two ways. First, we need to identify the processes through which matches and mismatches affect the well-being of harmoniously and obsessively passionate individuals. A potential explanation may have to do with conflict. Specifically, although harmonious passion has previously been associated with less conflict between the passionate activity and other life pursuits (Stenseng, 2008; Vallerand et al., 2003, Study 1), it is possible that in a highly competitive context, conflict might actually be experienced more by harmoniously passionate than by obsessively passionate individuals. This is because harmoniously passionate individuals may experience conflict between the high levels of sustained activity involvement necessary to achieve high levels of performance in the activity, on the one hand, and their harmoniously oriented needs and goals, which (in addition to involvement in the passionate activity) may also include personal development and engagement in other life pursuits, on the other hand. However, the neglect of other life pursuits at the expense of increased engagement in the activity may actually fit in well with the objectives sought by obsessively passionate athletes. In such conditions, these individuals would therefore experience less conflict than their harmoniously passionate counterparts. The exact opposite situation would appear to take place in less competitive environments where less conflict would be experienced by harmoniously passionate than obsessively passionate individuals.

A second research avenue of interest would use longitudinal designs to determine if harmoniously passionate individuals adapt over longer periods of time to “obsessive” environments, such as high-level leagues. This is a key question from both theoretical and applied perspectives. From a theoretical standpoint, such research would allow us to better understand the coping and adaptive processes of harmoniously passionate individuals. From an applied standpoint, it would allow us to determine if harmoniously passionate individuals can function optimally in high-pressure environments conducive to high performance. Research on performance (e.g., Vallerand et al., 2007, 2008a) that has shown that individuals with a predominant harmonious passion for their craft are found at the highest levels of performance suggests that they can. It would thus appear that harmoniously passionate individuals can thrive in highly demanding environments. So, why the discrepancy with the present findings? One potential answer is that it takes some time for harmoniously passionate individuals to adjust to environments that are opposite their nature (i.e., highly demanding environments). However, these individuals can adjust and eventually should experience high levels of well-being because they should be able to engage in a flexible reorganization of their life. Such a reorganization should allow them to engage more often in the passionate activity (and derive positive affect from participation), and yet to mentally disengage from the activity when not performing it, and thus experiencing positive affect from engagement in other life activities. A second possibility is that harmoniously passionate individuals may proactively work to produce changes in the high-demanding environment so as to make it more amenable to a harmonious coexistence with other life pursuits. Future research is needed in order to probe these issues.

In sum, we have seen in an earlier section that, in general, obsessive passion leads to lower levels of psychological well-being than harmonious passion. The results from the research reported in the present section suggest that this conclusion must be qualified to some extent. First, although in general, harmonious passion may lead to higher levels of well-being, differences with obsessive passion seem to operate mainly in failure situations (Lafrenière et al., 2009c; Mageau et al., 2009a). Indeed, in success conditions, no differences appear between the two types of passionate individuals. Second, when the outcome is supremely important, no differences were obtained between the two types of passionate individuals, at least as pertains to psychological well-being (Amiot et al., 2006). Finally, it would appear that a P-E fit process is at play where environments that match one’s type of passion are conducive to higher levels of subjective well-being. Future research is needed to better understand the psychological processes at play for passionate individuals in different situations and how these processes affect their sense of well-being and other outcomes.

8.2. When failing can be prevented by attacking the threat source

We have seen in the section on passion for a cause that having a predominant obsessive passion can lead one to engage in extreme behavior more than having a harmonious passion (Gousse-Lessard et al., 2009; Rip & Vallerand, 2007). We have recently conducted a series of studies to gain a better understanding of the conditions under which such aggressive behavior is likely to occur, in various real-life situations, including those that pertain to sport and road rage.

The basic relation between passion and aggression was first tested in two studies with basketball players (Donahue et al., 2009b). Results of Study 1 confirmed that college basketball players with a predominant obsessive passion generally report being more aggressive when they play than those with a predominant harmonious passion. The goal of Study 2 was to determine under which circumstances obsessively passionate athletes are more likely to display aggressive behavior. We posited that these violent or aggressive behaviors are more likely to take place when one's sense of competence and identity has been threatened. Indeed, research has shown that aggressive behavior can result from threatened egotism (i.e., highly favorable views of the self that are disputed by others; Baumeister et al., 2000). When their self-views are threatened, people are motivated to act aggressively in order to restore positive self-views. This would be even more the case if such aggression leads to success in the situation at hand. Thus, it would be under conditions where identity is threatened or diminished that one would be likely to react aggressively toward others in order to restore one's positive self-views (Steele, 1988). Furthermore, we propose that such an effect should be even more important for obsessively passionate individuals. This is because of their defensive mode of functioning that leads them to be highly motivated to defend against any threat that is targeted at the self (see Hodgins et al., 2006). Such is not the case for harmoniously passionate individuals who can face threatening information nondefensively. Of additional importance is the fact that research has shown that when individuals have the opportunity to self-affirm (Steele, 1988) or to focus on some of their competent personal skills or abilities before having their identity threatened, then they become less defensive about the threatening information. One would then predict that people would be much less aggressive under self-affirming conditions. In fact, under conditions of self-affirmation, differences between the two types of passionate individuals should be much less pronounced because their sense of identity has been secured before receiving the threatening information.

In Study 2, Donahue et al. (2009b) tested the above hypotheses. College basketball players first completed the passion scale toward basketball and were then randomly assigned to one of two conditions: identity threat or

self-affirmation. In line with research on self-affirmation (e.g., [Steele, 1988](#)), identity threat was induced by asking participants to reflect on some of their weaknesses as a basketball player, whereas participants in the self-affirmation conditions were asked to reflect on their strengths. Finally, participants read three hypothetical situations and for each one responded to four items that measured the athletes' intention to use aggression in that situation. For instance, the first situation read:

There are 2 seconds left in an important game. Your team is winning by one point. The other team shot the ball and there is a rebound. An opponent is just about to make a "tip in" and win the game. You are under the basket and nobody is looking at you (not even the referees) because all eyes are turned toward the opposing player. What do you do to the opposing player?

Participants then indicated on a 7-pt scale the extent to which they would behave aggressively on each of four items that reflected a linear increase in aggression: (1) "I let him (her) shoot," (2) "I try to break his (her) concentration by screaming," (3) "I touch him (her) slightly and hope that it will be enough to make him (her) miss," and (4) "I clip his (her) legs and act as if it was a box out." A composite score reflecting the linear increase in aggression from items 1 to 4 was computed.

It was expected that obsessively passionate players in the identity-threat condition would display higher levels of situational aggression compared to harmoniously passionate players because they would want to defend against such threat and restore the integrity of their identity. Moreover, we expected to find no difference on the situational aggression between obsessively and harmoniously passionate players under the self-affirming condition because the player's identity is not on the line in such a situation. A 2 (Passion Types) \times 2 (Identity-threat vs. Self-affirmation) ANOVA was conducted on the behavioral intentions of aggression. The results revealed the presence of a main effect for passion where obsessive passion led to higher levels of aggression than harmonious passion. These findings replicated those of Study 1. More importantly, the results also revealed the presence of an interaction that supported the hypotheses. Although no difference took place between the two types of passionate groups under conditions of self-affirmation, significant differences appeared under identity-threat conditions. Specifically, under these conditions, obsessively passionate athletes were found to be more aggressive than harmoniously passionate ones.

Although research by [Donahue et al. \(2009b, Study 2\)](#) provides empirical support for the hypotheses, it nevertheless relied on self-reports of behavioral aggressive intentions, rather than on observable behavior. In another series of studies on passion and aggression, [Philippe et al. \(in press-b\)](#) were interested in examining the role of passion in actual

aggressive driving behavior. The phenomenon of aggressive driving behavior (or road rage) is worth investigating because it deals with the very situation that interests us in the present section: the aggressive removal of the obstacle that threatens one's identity. Indeed, in the phenomenon of road rage, individuals display aggressive behavior toward the slow driver because he or she represents a threat to their identity as a good driver by slowing them down. Furthermore, by displaying aggressive behavior not only do they vent anger but they also typically enhance their chances that the slow driver will move to the side and let them go forward with their driving quest. Two studies were interesting in particular. In one study (Philippe et al., *in press-b*, Study 2), 465 middle-age individuals ($M = 47.8$ years) who represented a random sample representative of the drivers of the Province of Quebec, were asked to complete the Passion Scale for driving and then to recollect a recent real-life driving event where they were frustrated by another driver. They then indicated the extent to which they behaved aggressively using various behavioral indices such as showing the finger or one's fist to the driver, cursing, or even using one's car to get back at the driver based on the Driving Anger Expression Inventory (Deffenbacher et al., 2002). The results revealed that obsessive (but not harmonious) passion predicted aggressive behavior in the recent incident.

In the second study (Philippe et al., *in press-b*, Study 3), we went further and had highly passionate male drivers come to a driving simulation lab. This lab contains a real car facing a huge screen vividly simulating the road ahead. Participants were first introduced to a second driver who ostensibly would be driving a yellow car in another room. Both drivers were to be in the same "race." In reality, the second driver was an accomplice and all obstacles, including the yellow car, were controlled by the computer. Of importance is that participants were videotaped the whole time. There was only one condition, the same for all participants. They were told that their goal was to reach destination by a certain time. After some acclimation time, the experiment began. All went well for the first few minutes until the yellow car passed the participant's car, got in front of him, and slowed down. Then, each time that the participant tried to pass the yellow car, it would not let him pass. Periodically, the participant was reminded that he was already late and if it continued like this he would not reach destination on time (identity threat). Finally, after 30 min the participant reached destination (late) and was asked to complete scales assessing various questions, including some dealing with his anger toward the driver of the yellow car and his level of aggressive behavior displayed toward that driver during the driving episode.⁴

⁴ It should be underscored that the whole set up was highly realistic and believable. In fact, several participants let their frustration show several times during the experimental session. In fact, one of the participants bursting with anger got out of the car and wanted to see the driver of the yellow car. Thus, we believe that participants were taken by the whole set up, thereby increasing the validity of our findings.

Results from correlational analyses revealed that obsessive passion positively predicted anger and both self-report and objective measures of aggression (as assessed by video observers) whereas harmonious passion did not. In addition, results from a path analysis revealed that obsessive passion predicted feelings of anger that, in turn, predicted both the objective and subjective indices of aggression.

Overall, research reviewed in this section revealed that obsessive passion does indeed lead to aggressive behavior, whereas harmonious passion does not. These results were obtained in real-life situations, as well as under controlled laboratory conditions and with an objective assessment of aggression. These results thus replicate with some improvement those obtained previously on passion for a cause and extreme behaviors (Gousse-Lessard et al., 2009; Rip & Vallerand, 2007). Of additional importance, we found that aggression is especially likely to take place for obsessively passionate individuals following identity threat and when aggression is likely to help remove the obstacle (or threat) that prevents achieving success. Research is needed to determine under which conditions, if any, harmonious passion is likely to lead to aggression.

8.3. Performance following the reception of positive or negative self-relevant information

Although the research on performance reviewed previously showed that in general both types of passion were conducive to better performance through their impact on achievement goals and deliberate practice (e.g., Bonneville-Roussy et al., *in press*; Vallerand et al., 2007, 2008a), there might be some distinctions with respect to the situations in which the two types of passionate individuals perform best. One such situation deals with having to perform immediately following the reception of positive or negative self-information. For example, a pianist has just been criticized by the orchestra director in front of everybody at rehearsal for having made a glaring mistake. How will she perform now that she is about to repeat her performance? How would she perform if she had received positive feedback?

As discussed previously, the DMP posits that the two types of passion, harmonious and obsessive, lead to two different modes of functioning with different implications as pertains to performance following the positive or negative information one receives in such situations. Because harmonious passion entails engaging in the passionate activity with a secure self-esteem and a flexibility and openness to experience information in a nondefensive, mindful manner (Brown & Ryan, 2003), there would be no need to self-protect in the face of negative self-information. Thus, a harmoniously passionate individual should be able to directly face negative self-relevant information, to attempt to make sense of it, and perhaps even to learn from it (Kumashiro & Sedikides, 2005). Reception of positive information is also

performed in a nondefensive fashion, where the positive feedback is seen as an important cue that one is progressing well toward self-relevant goals. Such positive information should enhance one's motivation to pursue task engagement fully. The second, more obsessive, mode of functioning leads people to engage in the passionate activity with a fragile and contingent sense of self-esteem (Crocker, 2002; Kernis, 2003) and a defensiveness against experience that leads one to self-protect. As a consequence, facing negative self-relevant information is highly threatening and obsessively passionate individuals would be highly motivated to eliminate or reduce such threats. These individuals would also perceive positive information defensively. Instead of perceiving such information as cues regarding one's goal progression, obsessively passionate individuals would rather perceive such information as an indication that threats have been successfully avoided and that all is safe. There would then be little motivation to outperform oneself.

These two modes of functioning have crucial implications for how harmoniously and obsessively passionate individuals perform following positive and negative self-relevant information. We propose that reflecting on personal weaknesses with respect to their passionate activity would represent a highly self-threatening situation that obsessively passionate individuals would defend strongly against. In line with Self-Affirmation Theory (Steele, 1988), engagement in a subsequent task where performance is assessed would represent a welcome opportunity to redeem oneself and alleviate negative self-perceptions, to the extent that such a task is perceived as self-relevant (Green et al., 2008, Study 2). Thus, this hypothesis should hold whether the task is the one people are passionate about or another task that is part of one's identity. In this situation (following reception of negative self-information) an augmentation of performance should be observed for obsessively passionate individuals. However, when in a self-affirmation state, such as after having been made aware of one's personal competence in the passionate activity, obsessively passionate individuals should perceive all threats to have been removed and their identity as secure. Consequently, their motivation to perform should be highly reduced and lower performance would be observed.

On the other hand, harmoniously passionate individuals, who do not hold such ego-invested self-structures, should react differently to the conditions of identity threat and self-affirmation. Because these individuals engage in their passionate activity nondefensively, providing them with identity-threat information should make them face the negative information directly and attempt to integrate it usefully. Such focus on the negative information at hand, and the integrative work that follows, should reduce the cognitive resources that can be allocated to a subsequent task, thereby leading to a drop in performance on this task. Conversely, in situations where self-affirmation is present, we posit that harmoniously passionate individuals would perceive such information as an indication that they are

progressing well toward a valued self-relevant goal and would therefore subsequently invest themselves actively in that goal and, thus, exhibit a higher level of performance.

Bélanger and Vallerand (2009) tested these hypotheses in a series of studies, including three that are discussed here. In one of these studies (Bélanger & Vallerand, 2009, Study 2), regular exercisers at a university fitness center were approached and performed a pretest strength performance task (the hand grip dynamometer task; Peters et al., 2005). Participants then completed a questionnaire that contained assessments of harmonious and obsessive passion (that allowed us to create the two passion groups). Participants were then randomly assigned to either a self-affirmation or an identity-threat manipulation. In line with the manipulations used by Donahue et al. (2009b), the identity-threat (self-affirmation) manipulation involved asking participants to elaborate on two important personal weaknesses (strengths) that they display as exercisers. Subsequent to the manipulation, their physical performance was assessed once more at Time 2. As expressed above, it was hypothesized that obsessively passionate exercisers would perform better following identity threat than following self-affirmation conditions, whereas the opposite results should take place for the harmoniously passionate exercisers. An analysis of covariance was performed on the performance data at Time 2, controlling for performance at Time 1. Results revealed that no main effects were found for either the manipulations or the passion type. Thus, just as in past research on performance (Bonneville-Roussy et al., *in press*; Vallerand et al., 2007, 2008a,b), there was no difference between the two passion types, and no gender main effect or interaction. Only a Passion type \times Conditions interaction was obtained that provided support for the hypotheses. These results are displayed in Fig. 3.13.

Results from the above study allow us to identify the various conditions under which each type of passionate individuals perform best (and worst). Based on these findings, it would appear that the pianist in the preceding example would perform best following negative feedback if she is obsessively passionate, but best following positive feedback if she is harmoniously passionate. However, there is another similar situation that needs attention and it deals with performance on an unrelated task following feedback on the passionate activity. For instance, how would the pianist perform on her math finals exam, minutes after having received negative or positive feedback from the director? It is hypothesized that to the extent that being a student is part of the pianist's identity, then the same hypotheses are formulated with respect to the performance on the second, unrelated, activity. Indeed, Steele (1988; see also Sherman & Cohen, 2006), posits that using a second activity to redeem oneself may actually be the most preferred strategy following the experience of identity threat. Bélanger and Vallerand (2009, Study 1) have also conducted another study in which they

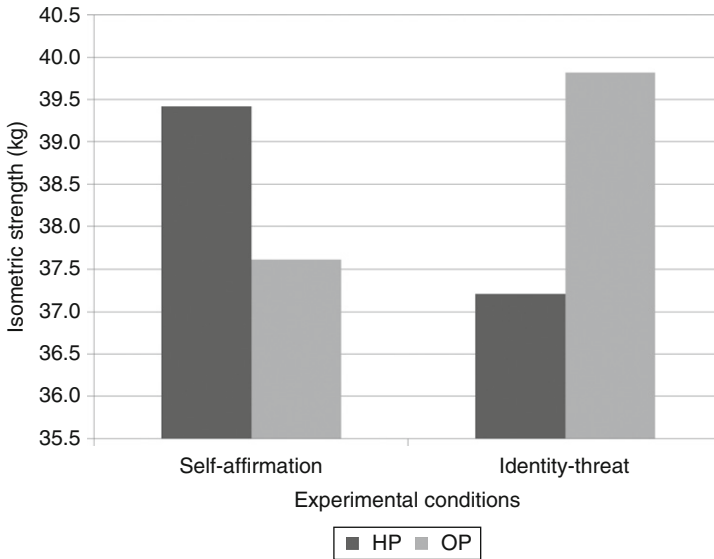


Figure 3.13 Physical performance as a function of passion types and conditions of identity–threat and self-affirmation (Bélanger & Vallerand, 2009, Study 2).

tested the above hypotheses. They used the same design as the previous study with two crucial modifications. First, the identity–threat and self-affirmation manipulations pertained to the activity that participants indicated was the dearest to their heart (so different passionate activities were mentioned by different individuals) and not exercise. And second, subsequent performance took place on a task unrelated to the passionate activity but related to one’s identity as a student (i.e., a cognitive [anagrams] task). The results revealed the presence of the same interaction as in the preceding study.

Finally, in a third study (Bélanger & Vallerand, 2009, Study 3), the same design as the preceding study was used except that we also added a no-information control group to better understand the functioning of passionate individuals in the absence of objective self-relevant information. The results yielded two important findings. First, as found in the previous study, only a Passion type \times Manipulations interaction was obtained, yielding the same findings. In addition, the performance of the control group for the harmoniously passionate individuals was equivalent to that obtained in the self-affirmation condition, whereas the performance of the control group for the obsessively passionate individuals was equivalent to that of the identity–threat condition. It thus appears that the usual functioning of harmoniously passionate people in the absence of self-information feedback is oriented toward a positive outlook where one perceives that things are progressing positively. On the other hand, the present results suggest that

the normal functioning of obsessively passionate individuals in the absence of self-information seems to be oriented toward a negative outlook where one perceives that things are not going well and is thus motivated to restore one's positive identity by performing well.

Overall, results from the above series of studies lead to at least three implications. First, neither type of passion proved superior to the other one overall. Rather, optimal performance depended on the interaction between the type of passion and the situation. The nondefensive style put forward by harmoniously passionate individuals proved to work best following reception of positive information but to be less effective after having received negative information. Conversely, the more defensive style espoused by obsessively passionate individuals was found to be highly effective following the reception of negative information but less so following positive information. These findings are in line with those of [Amiot et al. \(2006\)](#) where the two types of passionate individuals fared better psychologically in different types of environments. Thus, a P-E fit seems to exist such that there is a match between the person (type of passion) and a certain type of environment (supportive vs. threatening environment). Future research is needed to determine if other types of environmental conditions are conducive to a similar P-E fit as pertains to performance and other outcomes. Second, the fact that the open and nondefensive mode of functioning of the harmoniously passionate individuals proved to be counterproductive under identity-threat conditions deserves mention. Although the integrative work performed by harmoniously passionate individuals typically yields positive benefits in the long term ([Paulhus, 1998](#); [Robins & Beer, 2001](#); [Weinstein & Hodgins, 2009](#)), it appears to have some deleterious effects at the short-term level. Perhaps the key is to delay such integrative work until after completion of the immediate subsequent task. Clearly, future research is needed in order to compare the short- versus long-term impact of these two modes of functioning on performance as such research has clear theoretical and applied significance.

A final implication of the present findings is that they provide some support as well as certain challenges for Self-affirmation Theory ([Steele, 1988](#)). First, it appears that Self-affirmation Theory describes the functioning of obsessively passionate individuals very well following self-affirmation and self-threat conditions, but not that of harmoniously passionate people. Specifically, contrary to their obsessively passionate counterparts, who excelled when confronted with identity threats, harmoniously passionate individuals did not use performance to restore self-integrity under such conditions. Future research is needed to determine if or when harmoniously passionate individuals engage in processes outlined by Self-affirmation Theory. Second, of great importance is the finding that certain people (obsessively passionate individuals) can elevate their self-image through performance in the same domain in which the threat is presented. Self-affirmation Theory has

typically suggested that for self-affirmation processes to operate, people should be provided with the opportunity to perform on a second unrelated task (see [Sherman & Cohen, 2006](#)). As the results of the Bélanger and Vallerand study (Study 2) have shown, this is not necessarily the case. Indeed, obsessively passionate exercisers restored their identity by increasing their performance on the same task (hand-grip performance task). Thus, what these findings suggest is that for highly involved individuals being able to redeem oneself in the same activity may not only represent an acceptable way to self-affirm, but perhaps their number one option because the activity means so much to them. If such an option does not exist, however, then performance on a second activity might do as well, to the extent that it is part of identity.

In sum, the results from this overall section provide a better understanding of the situations and contexts that trigger different processes and outcomes in people with predominant types of passion. Future research in this area should prove particularly fertile.

9. FUTURE RESEARCH ISSUES

So far, in this chapter, I have reviewed several studies that provide strong support for the DMP. Although the research conducted to date is indeed encouraging, additional research is necessary to probe further the role of passion in people's lives. Below, I present certain directions for future research that would appear particularly exciting.

9.1. More on the development of passion

Research (e.g., [Mageau et al., 2009b](#)) reveals that a number of processes are important for the development of passion to take place (i.e., activity selection and valuation, identity, and internalization processes). However, other important issues should also be considered in the development of passion. These are discussed below.

9.1.1. The transmission of passion

Most people seem to remember a teacher who has inspired them and who has planted the seed of passion toward their studies and their future career. But does such a phenomenon exist? Can passion be transmitted by others? And if so, what are the processes involved in passion transmission and do they differ for the two types of passion? Some authors (e.g., [Cardon, 2008](#)) have proposed that the contagion of passion from an entrepreneur to his or her employees can take place and further posits that it takes place largely through emotional mimicry and goal alignment with those of the

entrepreneur. I agree with Cardon that individuals in a supervisory position (e.g., teachers, coaches, managers) who are dynamic, energetic, and enthusiastic should be more likely to transmit their passion for the task than those who are boring. However, I believe that the processes through which such a transmission takes place are different from those proposed by Cardon. The affect (e.g., enthusiasm) that is displayed by supervisors is picked up by others' (as was seen in the [Philippe et al., in press](#)—a studies on passion and quality of interpersonal relationships). Whereas perceived enthusiasm may lead to some positive affect in others (as would posited by [Cardon, 2008](#)), it is hypothesized that its main function is to underscore the value of the activity or issue at hand ([De Cremer & den Ouden, 2008](#)). Therefore, having an enthusiastic teacher should highlight the value of the activity and should set up conditions likely to lead to the internalization of the activity. Which type of internalization takes place, and thus which type of passion develops, depends on the immediate conditions (that are also largely under the control of the teacher or supervisor). Cardon does not distinguish between harmonious and obsessive passion. However, I suggest that it might prove important to do so as harmoniously passionate supervisors are more likely to transmit harmonious passion than obsessive passion to their subordinates whereas it should be the opposite for obsessively passionate supervisors. This is so because passionate individuals should seek to create for others the very same environment that they prefer. Thus, harmoniously passionate individuals should provide others with high levels of autonomy support, whereas obsessively passionate individuals should provide others with controlling behavior. As was seen in earlier sections, such behaviors influence the two types of internalization processes that lead to harmonious and obsessive passion, respectively ([Bonneville-Roussy & Vallerand, 2009](#); [Mageau et al., 2009b](#)). Though preliminary, cross-sectional, research is supportive of these hypotheses (see [Donahue et al., 2009a](#)). Future longitudinal research is clearly needed to provide stronger support for the proposed sequence.

9.1.2. On the stages of passion

When people think about passion and how it develops, they often believe that there might be some stages that people go through. For instance, people may initially experience an obsessive passion that, at some point in time, changes and becomes more harmonious in nature. Is it the case? Do the two types of passion follow some stages? Unfortunately, at this point in time, we do not have any conclusive empirical evidence on this issue. Preliminary evidence, however, seems to indicate that such is not the case. Thus, in the [Vallerand et al. \(2003, Study 1\)](#) study, we did not find any relation between length of involvement and the two types of passion. Furthermore, it will be recalled that in the [Mageau et al. \(2009a, Study 3\)](#) study reported earlier with beginning (4 months of experience) and experienced (10 years of

music involvement) music students, the experienced students reported higher levels of both harmonious and obsessive passion, as well as higher levels of passion (the passion criteria) than the beginners. In addition, for both groups, participants' score on harmonious passion was higher than that of obsessive passion. These results are contrary to a sequence where novices should have one type of predominant passion (e.g., obsessive passion) and experienced musicians another (e.g., harmonious passion) after a certain number of months or years of activity involvement. However, the findings from the two studies above are limited in scope as the design used was cross-sectional and not longitudinal in nature. In an analysis of additional data from the longitudinal study of [Mageau et al. \(2009a, Study 3\)](#) on the development of passion, [Lafrenière et al. \(2009b, Study 2\)](#) showed that for the few who ended up being passionate toward music (36% of the sample), the type of predominant passion (i.e., harmonious, obsessive, or nonpassionate) for music that was developed initially at the beginning of the term was maintained for approximately 70% of participants at the end of the term. Once again, these findings do not support the existence of stages of passion. Future research using longitudinal designs is needed in order to more clearly determine whether stages in passion take place or not.

9.1.3. Can passion be changed?

Another issue related to that of the development of passion deals with the change from one passion to another. For example, can an obsessive passion be changed into a harmonious one? Besides the work on attribution training (e.g., [Wilson & Linville, 1982, 1985](#)), I am not aware of any experimental research on this issue in the passion or motivation literature. Given that the activity is already passionate, this means that the activity is sufficiently important to have been internalized into one's identity. Thus, based on the DMP, one way to induce changes from an obsessive to a harmonious passion would be to replace the controlled by the autonomous internalization process. This could be done by having the person reflect on the variety of ways through which the activity is consonant with one's intrinsic values ([Kasser, 2002](#)) or identifying the different autonomous reasons why the activity is important for the person (e.g., fun aspect of it, the positive feelings experienced when engaging in the activity, perceptions of competence and creativity, sense of choice in deciding when and how to do the activity, etc.).

A related issue pertains to reducing or killing altogether an obsessive passion for an activity that has become permanently negative for the person. This may be the case for pathological gamblers, for instance (see [Philippe & Vallerand, 2007](#); [Ratelle et al., 2004](#); [Vallerand et al., 2003, Study 4](#)). Because of the negative nature of the activity for these individuals, and its negative role in the person's life, it would then appear best to eradicate the passion rather than change it into a more harmonious one. Based on the DMP, this could be done by undermining the valuation process because

it is the main process through which the internalization takes place. Thus, in line with the above, this could be done by having individuals list as many reasons as possible indicating why the activity is not important for them anymore and to elaborate on these. Furthermore, individuals could further elaborate on why the activity conflicts with aspects of their identity. Alternatively, in line with Glasser (1976), it might prove useful to lead individuals experiencing problems with respect to a given activity such as pathological gambling to develop a passion (even if obsessive) in activities with much less negative outcomes (e.g., running, painting, playing a musical instrument). The issue of change and undermining of passion is a fascinating one both from conceptual and applied perspectives and future research would do well to focus on this issue.

9.1.4. On the role of progression perceptions in the on-going development of passion

What is the role that perceptions of progression toward the activity play in the on-going development of the passion for a given activity? Among other things, we need to assess the relative role of perceptions of competence and of progression in maintaining one's passion high. Take the example of the passionate high-school guitar player who, although highly competent for her age, realizes that her music development has started to stall. How will this plateau in her abilities (or predicted relative lack of progression) affect her passion for music? Such perceptions of lack of progression (even in light of very high levels of competence relative to nonmusicians) might undermine one's passion because people might feel that the joy of playing music and excitement no longer will be forthcoming at some point. For instance, one may presently feel competent but nevertheless see that progression no longer will continue. Such perceptions of lack of progression might curtail the development of one's passion, especially if individuals feel that their desired "future self" (Markus & Nurius, 1986) or future identity as a musician no longer is attainable. However, individuals who perceive that they are progressing and are likely to continue doing so in the passionate activity might be more likely to develop or maintain a passion for this activity. Thus, perceptions of competence and progression would appear to have different implications for the on-going development of passion, with progression being perhaps more important as one engages further and comes to specialize in the activity.

Furthermore, it might prove important to determine if progression has the same impact on the two types of passion. Because of the rigid persistence that it creates, obsessive passion may lead one to persist in the activity no matter what the progression is likely to be. However, perceptions of progression should influence harmonious passion because it leads one to engage in the passionate activity with choice and flexibility. Persistence in the activity in this case represents a continued reflective choice to pursue

task engagement and perceptions of progression may represent one of the determinants of such choice. Thus, it would appear that perceptions of progression are more important for the maintenance of harmonious than obsessive passion. Future research on these issues would appear important to predict long-term passionate activity engagement that is needed to reach the highest levels of excellence.

9.2. Is harmonious passion all that good and obsessive passion all that bad?

The research reviewed in this chapter overwhelmingly revealed that, overall, harmonious passion leads to adaptive outcomes whereas obsessive passion leads to less adaptive and at times clearly maladaptive outcomes (see [Table 3.2](#)). Yet, we hasten to add that this does not mean that harmonious passion is always “good” and obsessive passion always “bad.” Let us first take a look at harmonious passion. We have seen that under certain conditions (especially identity threat), harmonious passion is conducive to lower levels of performance ([Bélanger & Vallerand, 2009](#)). Furthermore, it should be recalled that harmoniously passionate hockey players playing in highly competitive leagues experienced a decrease in subjective well-being ([Amiot et al., 2006](#)). These results highlight the fact that we have uncovered certain situations where harmonious passion does not lead to optimal functioning and future research is needed to pursue such work. One likely area where to conduct such research pertains to identity-threat situations. It appears that facing negative self-relevant information head on has deleterious effects on harmoniously passionate individuals’ situational performance. Perhaps these individuals should learn to use the coping device that obsessively passionate individuals are using at least at the short-term level when actually performing. Later on, they may very well want to further probe the issues, learn from the negative information, and grow from the experience.

On the other hand, obsessive passion has been found at times to lead to some positive outcomes. For instance, in the study with collectors ([Grenier et al., 2009, Study 1](#)), obsessive passion correlated positively with self-related positive affect (e.g., pride), but not with general type of affect (e.g., enjoyment) during a purchasing episode. Similar results were also obtained with soccer fans ([Vallerand et al., 2008b, Study 2](#)). Furthermore, recent evidence with online gaming has revealed that obsessive passion has been found to correlate positively with positive (and negative) affect ([Lafrenière et al., 2009a](#)). Finally, obsessive passion has been found to positively predict deliberate practice that, in turn, predicted objective levels of performance ([Vallerand et al., 2007, 2008a](#)). Future research is needed to determine why at times obsessively passionate experience some positive outcomes and why at other times they do not.

Overall, these findings reveal that obsessive passion is not all that “bad.” This comes out even more clearly when obsessively passionate individuals are compared to nonpassionate individuals (Philippe et al., 2009b, Studies 1 and 2). In this research, these two groups were not found to differ on various indices of subjective well-being. Unfortunately, these are the only two studies that compared these two groups. What these results suggest, however, is that in general obsessively passionate individuals suffer mainly when they are compared to harmoniously passionate individuals. They do not fare that badly when compared to nonpassionate people, especially as pertains to psychological well-being. Although obsessively passionate individuals seem to suffer more in certain situations such as following failure (Lafrenière et al., 2009c; Mageau et al., 2009b), such research did not include nonpassionate individuals and it still remains to be seen if these two groups would differ in such situations. In any event, we can safely conclude that engaging in a passionate activity out of obsessive passion prevents one from fully deriving the benefits that such involvement provides those who engage in it out of harmonious passion. Thus, somehow, obsessively passionate individuals cheat themselves out of some important positive outcomes (see Table 3.2 for a list of such outcomes). Clearly future research is needed to determine more clearly why this is so.

9.3. Are nonpassionate individuals doomed?

The preceding discussion raises the issue of nonpassionate individuals. Based on the available evidence (Philippe et al., 2009b; Vallerand et al., 2003, Study 1), these individuals represent between 15% and 25% of the population. We do not know much about these people. The only thing we know is that they do not hold a passion for even one activity in their lives and as a result are less happy (on a variety of well-being indices) than those with a predominant harmonious passion. However, they are just as happy as those who are obsessively passionate (Philippe et al., 2009b). So why are nonpassionate individuals less happy than harmoniously passionate individuals? Is it because there is some zest missing from their life due to the absence of a meaningful activity or cause (as is the case for harmoniously passionate individuals)? And why are they just as happy as obsessively passionate individuals? And why do they refrain from passionate pursuits? Is it because they do not want to experience the highs, fearing to experience the lows that often come with them? How do they handle success and failure in meaningful activities such as school or work? Other questions come to mind: Who are they (what is their personality like)? What is their life like? How are they perceived by friends and relatives? Are they perceived as bland and lifeless or, to the contrary, as well-balanced? These and other questions would appear important both from conceptual and applied perspectives.

9.4. On letting go: When the time has come to end engagement in the passionate activity

One interesting question that the DMP raises, deals with the consequences of permanently stopping activity engagement. Who is likely to adjust better psychologically after such “retirement” from the activity? Harmoniously passionate or obsessively passionate individuals? It could be hypothesized that harmoniously passionate individuals should fare better, because harmonious passion is characterized by a flexible engagement toward the activity (Vallerand et al., 2003). Thus, it should be easier for these individuals to disengage from the activity (see Wrosch et al., 2003) and move on to (or reinvest in) something else. On the other hand, because obsessive passion is characterized by a rigid persistence toward the activity and given that contingencies such as self-esteem are attached to the activity, individuals with an obsessive passion should have a difficult time letting go of their passionate activity. They should therefore not adjust well after retirement. Thus, athletes with a predominant obsessive passion may be more likely to come out of retirement à la Michael Jordan, and sometimes more than once.

A study of ours within the work domain (Houlfort & Vallerand, 2009) has addressed some of these issues. Workers who had recently retired were asked to retrospectively report their level of passion toward work and their current subjective well-being. Results revealed that harmonious passion for work was associated with enhanced subjective well-being, whereas obsessive passion was negatively related to well-being, following retirement. Because of the obvious limitations of retrospective designs, prospective and longitudinal research is needed in order to more clearly demonstrate the psychological processes involved in letting go of the passionate activity and determine if different processes are at play for the harmoniously and obsessively passionate workers. Future research should establish the role of passion in the decision to permanently disengage from an activity that people have been involved with for a lifetime, such as work, and the implications such a decision may have on subjective well-being.

10. SUMMARY AND CONCLUSION

The purpose of this chapter was to present the DMP (e.g., Vallerand, 2008; Vallerand & Houlfort, 2003; Vallerand et al., 2003) and review some of the related research. Passion is defined as a strong inclination toward a self-defining activity that one loves, values (finds important), and devotes a significant amount of time and energy to. Furthermore, two types of passion are proposed. Harmonious passion originates from an autonomous internalization in identity and entails control over the activity and a harmonious coexistence of the passionate activity with other activities in the self. On the

other hand, obsessive passion follows a controlled internalization and entails a relative lack of control over the passionate activity, rigid persistence, and conflict with other activities in one's life. Furthermore, a number of social and personal determinants are hypothesized to determine the initial and on-going development of passion for a given activity. Finally, in general, more adaptive outcomes are hypothesized to follow from harmonious than obsessive passion.

The review of evidence provides strong support for the model. Specifically, a Passion Scale was developed, assessing harmonious and obsessive passion. In addition, research on the development of passion provided support for the processes proposed by the DMP. Furthermore, research has shown that harmonious passion was found to promote adaptive outcomes to a greater extent than obsessive passion on a number of cognitive, affective, behavioral, psychological and physical health, interpersonal, intergroup, societal and performance outcomes using self-report as well as informant reports and objective data. It was also found that under certain specific situations, obsessive passion can lead to some positive outcomes and harmonious passion to less adaptive ones. Although much of the research conducted to date is correlational in nature, several studies using prospective and longitudinal designs showed that passion leads to changes in outcomes over time. Furthermore, although passion has been found to predict changes in outcomes, outcomes do not seem to predict changes in passion (e.g., Carbonneau et al., 2008). In addition, an increasing number of studies use experimental designs to test the processes and conditions through which passion leads to different outcomes. Thus, overall, the findings from such research would tend to support the view that passion can produce outcomes. Finally, directions for future research were also proposed.

The use of the word "passion" permeates people's lives, and yet very little theory and research have focused on this concept until recently. It is hoped that this presentation of the DMP and associated research will encourage future research on the passion concept, thereby providing important insights, as Aristotle proposed, on the very processes that contribute to being human.

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