

# SOCIOLOGICAL FACTORS INFLUENCING HIGH-RISK PHYSICAL ACTIVITIES AMONG ADULTS: A CONCEPTUAL ANALYSIS

**KARIN BRAUNSBERGER, University of South Florida St. Petersburg**

**PHILIP J. TROCCHIA, University of South Florida St. Petersburg**

*Although risk-taking has been investigated widely in psychology and marketing-oriented literature, the vast majority of those risks pertain to lifestyle choices, such as sexual promiscuity, smoking, and illicit drug use. Conversely, relatively little work has explored why adults engage in high-risk physical activities, such as mountaineering and skydiving. To help explain this phenomenon, we create a model based on the theory that the human body is hot-wired to thrive on certain types of stress not provided in modern society. That is, high-risk behaviors provide the stress (and accompanying stress release) that some individuals crave. We propose that, aside from innate personality characteristics, sociological factors influencing one's likelihood of engaging in high-risk activities include a sense of alienation at work, postponement of gratification, the feeling of work as an imposition, a perceived lack of control in one's life, and questioning the meaning of life. We believe that this paper helps explain risk-taking behaviors of a relatively large group of people in modern society, and can provide a springboard for further empirical research; managerial implications for marketers of high-risk activities are discussed.*

## INTRODUCTION

Shortly before the opening ceremonies of the 2010 Winter Olympic competition in Whistler, British Columbia, Georgian athlete Nodar Kumaritashvili, 21, died after flying off the track and into a metal column while going 90 miles per hour on a luge run. The young athlete had expressed fear about the course to his father, among others (Bondy and Vinton 2010). In August 2010, a 31 year old Navy Seal fell to his death while illegally jumping off a cell phone tower in Suffolk, Virginia (Quinlan 2010). The next month, a 41 year old Australian woman attempting to jump off the Alor Setar Tower in Malaysia met a similar fate when her parachute failed to open (Robinson 2010). Considering that both of these structures were both less than 600 feet high and a free fall can last only a few seconds before a parachute needs to open, the risks involved in this endeavor are obvious. Further, considering that even participants admit that BASE (building,

antenna, span, earth) jumping is a frightening experience (Reuters 2002), the question arises as to why more and more individuals feel compelled to risk their lives and limbs to partake in such risky activities.

Over the past century, much research has tried to answer this question by focusing on two related concepts—stress and risk taking. Many have considered both to be negative experiences that should be avoided whenever possible (Kaplan and Garrick 1981; Slovic 1987), whereas others consider stress and risk taking as necessary (Klausner 1968).

The vast majority of risk-taking behaviors studied in the academic literature pertain to so-called risky lifestyle behavior, such as unsafe sexual promiscuity, smoking, and illicit drug use (e.g., Cohn, McCrady, Epstein and Cook 2010; Maman, Yamanis, Kouyoumdjian, Watt and Mbwanbo 2010). Further, teenage risk taking may often be viewed as emanating from distinct issues such as peer pressure, hyperactive hormones, and feelings of invincibility and immortality (Abbott-Chapman, Denholm and Wyld 2008; Goudriaan, Lapauw, Ruige,

Feyen, Kaufman, Brand and Vingerhoets 2010; Hanson, Kjaer, Munk, Tryggvadottir, Hagerup, Liaw and Nygard 2010). In this article, we focus instead on high-risk physical activities among adults. The purpose of this paper is to introduce a model of high-risk physical activity that distinguishes between positive and negative stressors, and considers risk taking to be of key importance in modern society. As such, we propose that risk taking can be positive and even needed (e.g., by adult consumers). To that end, we begin by discussing the concepts of risk and high-risk consumption. In addition, we discuss the role of stress and stress response. Next, we distinguish between dys-stress and eustress (Bernard 1968), and discuss the link between stress and risk taking. Finally, we discuss outlets for coping with stress and commercialization of high-risk consumption. These discussions provide the basis for the development of our model of factors influencing consumption of high-risk physical activities.

### RISK AND HIGH-RISK CONSUMPTION

The manner in which individuals perceive risk depends on factors such as how (un)familiar the individual is with the consequences, the degree to which the exposure to risk is perceived as (in)voluntary, and how (un)controllable the potential damage appears (Pitz 1992). Some researchers argue that, because of its very nature, humans should reject or avoid risk (Kaplan and Garrick 1981; Slovic 1987). In contrast, other researchers argue that risk is an inherently subjective state that is germane to an individual's perception of loss, the significance of loss, and the uncertainty associated with loss (Yates and Stone 1992). In addition, individuals consider both the potential gains and losses when contemplating risks. That is, individuals are generally not attracted by the loss potential of high-risk activities such as racing and mountain climbing, but "by the prospect of the exhilaration which accompanies escaping from the potential loss" (Yates and Stone 1992, p. 22). Lyng (1990), however, who focuses on voluntary risk taking, criticizes the tendency for psychological models of risk taking to consider

anticipated rewards as a principal motivating factor. He argues that some individuals tend to "place a higher value on the experience of risk taking than they do on achieving the final ends of the risky undertaking" and maintains that this "fact" is one of the principal features of voluntary risk taking (p. 852).

Bromiley and Curley (1992), who agree that individuals differ in their perceptions of and attitudes toward risk, claim that personality traits interact with situational factors to guide behavior. That is, individuals might avoid risks in certain situations yet seek it in others. For instance, a consumer may gamble his hard-earned money at a Las Vegas casino but never consider skydiving as an attractive activity.

This illustration leads to the topic of high-and-extreme-risk consumption. These two terms have been used interchangeably in much of the literature. In essence, high-risk consumption is described as a form of voluntary risk taking, and individuals who partake in such activities are portrayed as actively seeking "experiences that implicate a high potential for personal injury or death" (Lyng 1990, p. 852). Examples of high-risk activities include the so-called extreme sports, such as parachuting, hang gliding, skydiving, auto racing, snowmobiling, scuba diving, and mountaineering (see Slanger and Rudestam 1997, for a comprehensive literature review), but also activities such as engaging in unprotected sex, consuming drugs and alcohol, and smoking (Zuckerman 1979). However, as noted, our conceptual model will deal with motivations to participate only in the former physical activities rather than the latter lifestyle consumption activities.

High-risk takers are often associated with participating in extreme sports. Although the definition of extreme sports is somewhat ambiguous (Puchan 2004), an extreme sport is one perceived to possess a high level of inherent danger, often emanating from speed, height, and/or high level of physical exertion. Even though the number of injuries sustained while participating in extreme sports is lower than those suffered while playing football (32.3

injuries per 100 participants as compared to mountain climbing with .74 injuries per 100 participants), injuries sustained while participating in extreme sports are often severe, and the fatality rate can be high (Celsi, Rose and Leigh 1993; Greenfield 1999; Palmer 2002; Shoham, Rose and Kahle 2000). Civilian skydiving accidents in the U.S. alone claim the lives of nearly 40 persons per year (Hart and Griffith 2004). Motorized outdoor activities such as the use of all-terrain vehicles (e.g., three- and four-wheelers) have been responsible for over 7,000 fatalities since 1982 (Vierria 2007), an average of 280 deaths annually.

Extreme sports are relatively expensive to the healthcare system (Olivier 2006). For example, it has been estimated that in-line skating leads to over 100,000 injuries per year that require emergency care, and that about ten percent of mountain bikers end up in the hospital for a variety of injuries (Young 2002). In addition, due to the relative newness of many of these extreme-risk activities (e.g., snowboarding events that have evolved into ‘big air’ events which include a launch off a large ramp, or those that have progressed into ‘slopestyle’ where tricks have to be performed over fixed obstacles), few physicians have been specifically trained in the detection of injuries unique to a specific sport. Considering the constant quest for new activities that are ever more challenging and dangerous this predicament might become more severe in the future (Young 2002).

Even though participation in extreme sports has been increasing (Puchan 2004), participants generally have little or even no medical coverage (Young 2002). Individuals might not even know that their health insurance will probably not cover any injuries incurred during these high-risk activities (Vierria 2007). Some insurance providers, however, have decided to target this growing market of high-risk takers. Blue Cross, for example, offers three health insurance options under the brand name “Tonik” (Tonik: Simple, Affordable Health, 2010). The three options (i.e., Thrill Seeker, Part-time Daredevil, and Calculated Risk

Taker), are offered in six states so far, and the cost of coverage differs by location. The first plan, Thrill Seeker, is targeted at individuals who “live life on the edge, and happily go over it.” The second and third plans are targeted at successively less risk-prone consumers. Blue Cross believes that these three plans should mostly appeal to young adults between 19 and 34 years of age. This segment is of interest to the insurer because it targets a rapidly increasing number of individuals without health insurance (Vierria 2007).

### STRESS AND STRESS RESPONSE

Considering the serious physical danger that extreme sports pose, it appears that participants must be experiencing fairly high levels of fear and stress at some point in time. Indeed, as Lyng (1990), Klausner (1968), Fenz and Epstein (1967) report, individuals—including veterans—participating in extreme sports admit to being very tense, fearful, and stressed during the initial, anticipatory phases of the activity. Lyng (1990, p. 860) considers “the popular stereotype of risk takers as fearless individuals” a myth that needs to be dispelled. Stress has been viewed as a means to satisfy a need for arousal (Klausner 1968) or stimulation (Farberow 1980; Steenkamp and Baumgartner 1992). Klausner (1968) further views stress as a means to develop skills that are aimed at successfully controlling environmental objects. Stress has also been defined as behavior targeted at the reduction of tension that is, due to the buildup of intoxicating stress hormones, highly addictive (Delk 1980). Finally, stress has been defined as “indirect self-destructive behavior” that operates as a type of defense mechanism against depression and despair (Achte 1980; Litman 1980).

To understand stress, it is helpful to examine the different types of stressors and the resulting stress responses. As a case in point, Sapolsky (1998) distinguishes between three types of stressors. The first type, acute physical stressors, consists of extremely stressful events that require “immediate physiological adaptations” (p. 5) if the individual is to

survive. For instance, a bushman is ambushed by a lion and runs for his life. Throughout evolution, the human body has adapted to handle this type of emergency. This type of stress response has previously been termed the “fight or flight” syndrome, and it usually culminates in stress release. The second type of stressor, namely the chronic physical stressor, consists of infrequent, but sustained and central events. For example, a drought or famine forces humans to roam far in search of food. Again, humans have adapted to deal with these stressors. The third type of stressor, the social and psychological stressor, is unique to human kind and, from the standpoint of evolution, a fairly recent development. For instance, due to their cognitive abilities, humans have the potential to create psychologically stressful events that are “purely in our heads” (Sapolsky 1998, p. 5). Humans may then become preoccupied with these events. For instance, a woman may worry about whether the Social Security system will really provide a solid foundation for her retirement.

A potential problem is that our bodies’ stress response system has adapted to deal with acute and even chronic, (if infrequent), physical stressors but not necessarily with psychological ones. That is, our bodies’ physiological response mechanisms are tailored to deal with short-term physical emergencies, but not with ongoing psychological ones. To complicate the issue, psychological stressors lead to the same physiological responses as physical stressors. For example, a common physiological stress response is the rapid mobilization of stored energy and the inhibition of further storage which leads to an increase in heart rate, blood pressure and breathing rate to transport oxygen and nutrients at an increased rate. Such response is appropriate if the organism is running for its life. But, such mobilization “wrecks havoc with your metabolism, raises your blood pressure, bursts your white blood cells, makes you flatulent, ruins your sex life, and – possibly damages your brain” (Sapolsky 1998, p. 309) when provoked persistently in the face of ongoing psychological stressors.

Although most modern consumers do not have to deal with physical stressors on a daily basis, they are subject to psychological stressors. Our bodies’ stress response system has not caught up with these changes in human lifestyles. As a result, there is a tremendous increase in stress-related diseases (Cannon 1936; Sapolsky 1998). Cardiac arrest, the number one killer in the United States, is linked to stress (Engel 1971; Leor, Poole and Kloner 1996; Meerson 1994), as are ulcers and cancer (Keyes 1985).

### DYS-STRESS VERSUS EUSTRESS

To some extent, the above discussion implies that all stress is negative and eventually leads to health problems. However, it is important to recognize a distinction between positive and negative stressors. We propose that individuals create acute physical stressors (often unconsciously) to help alleviate the impact of the ongoing psychological stressors.

Bernard (1968) proposes that stress is not a pathogenic factor that needs to be minimized or even avoided. Bernard further suggests different terms for different types of stress. “The unpleasant, even painful, kind of stress studied by Selye and his followers may be referred to as *dys-stress*; the pleasant kind . . . as *eustress*” (1968, p. 8). Bernard associates eustress with fun, excitement, and adventure. Central aspects of eustress are its fairly limited duration and its association with a proximate climax and resolution. Bernard derives the term eustress from Max Weber who spoke of eudaemonism, which has been defined as “an unending struggle, an expression of primal strength, a ‘lust for life’ that cannot be long restrained” (Bernard 1968, p. 10). Eustress, therefore, seems to be closely linked to Celsi, Rose and Leigh’s (1993) definition of voluntary high-risk activities, which the authors describe as being dramatic in form. Accordingly, voluntary high-risk activities are “structured with distinct beginnings, middles, and ends,” and “fundamentally related to our inherent dramatic enculturation” (p. 2).

### **Stress-Seeking as a Tool for Social Advancement**

Bernard (1968) and colleagues (Falk 1968; Houston 1968; McNeil 1968; Marshall 1968) consider (eu)stress-seeking to be of paramount importance in any society and regard attempts to eliminate stress as detrimental. "A good population of risk takers, particularly as economic entrepreneurs, enhances the probability of economic development of society" (Klausner 1968, p. vii). Accepting risks, however, is inseparable from accepting stress. Klausner (1968) and McNeil (1968) argue that stress-seeking increases the intensity of emotions and that it results in feelings of pleasure and excitement.

### **The Evolution of Human Stressors**

A closer look at the evolution of human stressors provides a more complete understanding of high-risk consumption. The concepts of fear, stress, and risk are intertwined. Our distant forefathers—"hunter-gatherers"—struggled to obtain sustenance in a hostile environment for approximately one million years. This hunter-gatherer lifestyle exposed individuals to both acute and less frequent chronic physical stressors from a variety of predators and struggles.

A combination of natural selection and the process of evolution equipped man to deal with the stressors and risks in his life (Keyes 1985). Evolution aided those "chosen ones" through an adaptation of man's nervous system, who "not only learned to endure fear but developed a taste for it" (Keyes 1985, p. 32). That is, even though the hunt, and to a more limited extent the foraging of food, was undeniably very stressful, one of the corresponding stress responses is very pleasurable if triggered by acute physical stressors. According to Guillemin, Vargo, Rossier, Minick, Ling, Rivier, Vale and Bloom (1977), stress triggers the release of opioids which function as natural analgesics or painkillers that have an effect that is similar to opiate drugs such as morphine and heroin. The compound discovered by Guillemin

et al. (1977) is called beta-endorphin (i.e., a type of endorphin) and is released by the pituitary gland. At the same time, exposure to stress triggers the release of other opioids, especially enkephalins, within the brain and spine. These opioids build up to a level where they function as natural painkillers and, in addition, lead to feelings of "glowing, irrational euphoria as you edge closer to collapse" (Sapolsky 1998, p. 169). That is, even though fear and, therefore, acute physical stressors begin as negative feelings, once they have been tolerated they can turn into exhilaration and arousal (Keyes 1985). As such, these acute physical stressors might also be labeled as "eustress," the positive kind of stressor identified and named by Bernard (1968).

As centuries passed, human life eventually became safer as individuals succeeded in taming their environment. The hunter-gatherer made a transition to farming life where it was easier to plan for the availability of food sources in more meager times. Even though famines were less of a problem than in hunter-gatherer times, under-nutrition was still widespread, leading to a constant anxiety about providing enough food for one's family. As pointed out by Keyes (1985, p. 40-41), "this seems to be the inevitable trend of progress and civilization: the exchange of immediate fear soon resolved for ongoing, unresolved, and unresolvable anxiety." Even though humans still faced fears and stressors, their nature changed dramatically over the centuries. Thus, the type of stressors medieval man was exposed to on a daily basis, especially the psychological stressors, changed from eustress to the aforementioned dys-stress experiences.

The next stage in the development of human stressors was stimulated by the industrial revolution and its accompanying division of labor. The work process was separated into several tasks, with each task completed by a separate person. As a result, humans were alienated from work and experienced reduced opportunities for enjoyment (Weber 1948). Work thus lost its creative aspect and turned

into drudgery for millions (Celsi, Rose and Leigh 1993; Csikszentmihalyi 1975).

The impact of the industrial revolution cannot be analyzed without considering the impact of religion on work-place attitudes (Bernard 1968). The term "Protestant Ethic" describes a never-ending commitment to one's worldly calling (i.e., work) and ascetic abstinence from any enjoyment of the profits attained through one's labor. The outcome of such beliefs and practices was a rapid accumulation of capital. Being successful in this endeavor signified that one was in God's grace and that the rewards would be bestowed onto the individual in the afterlife. As a result, those who had not been lucky enough to be born to wealth struggled all of their lives to better their lot, to earn the grace of God. Consequently, Bernard (1968) blamed capitalism and the Protestant Ethic for the demise of eudaemonism. Likewise, Weber (1948, p. 119) stated that the spirit of capitalism led to "the destruction of spontaneous, impulsive enjoyment." Thus, the lifestyle of the worker during the industrial revolution did provide many psychological and chronic physical stressors (i.e., dys-stress experiences), but did not allow for acute physical stressors (i.e., eustress experiences) anymore, which, as might be recalled, usually culminate in stress release whereas dys-stress experiences do not.

In comparison, life in the 21<sup>st</sup> century (in a fully industrialized society) is much safer and comfortable than in past generations (Jackson and Csikszentmihalyi 1999). However, humankind has not been able to progress to a life free of fear and dys-stress experiences. Even though our society provides many opportunities to indulge in pleasurable activities and to obtain material comforts, "the statistics on crime, mental disease, alcoholism, venereal disease, gambling, dissatisfaction with work, drug abuse, and general discontent keep steadily worsening" (Csikszentmihalyi 1975, p. 199). The question arises as to what has led to this incongruence. Could it be that those who willingly partake in activities such as crime, alcoholism, unsafe sex, gambling, drug abuse, and extreme-risk sports such as parachuting,

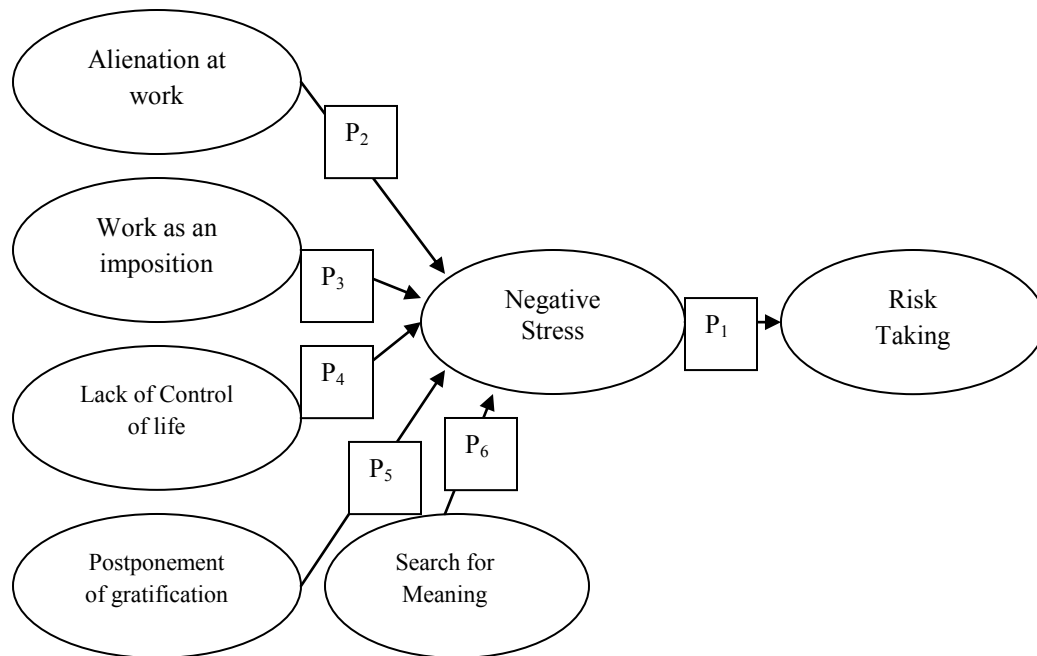
BASE jumping, scuba diving, and rock climbing are eustress-seekers?

Research seems to support that suggestion (Arnould and Price 1993; Celsi, Rose and Leigh 1993; Csikszentmihalyi 1975, 1990; Jackson and Csikszentmihalyi 1999; Keyes 1985; Sapolsky 1998; Zuckerman 1979, 1998). Lyng (1990), for example, suggests that it is very likely that the increase in individuals who report feeling alienated and oversocialised in their institutional roles is related to the increase of extreme-risk takers in our society (see Figure 1). He has found that a growing number of individuals are taking risks because they view it as their only means for achieving self-determination and authenticity. Ironically, at the same time, public institutions are increasing efforts to reduce the risks both in the work and home environments. Likewise, Celsi, Rose and Leigh (1993) suggest that the workplace often places tensions on individuals, who then turn to leisure activities to release these tensions, and to regain their "selves" and self-efficacy. Further, Shoham, Rose and Kahle (2000, p. 237) suggest, in more general terms, that "risky sports may provide a release from the tensions of the modern era."

### **THE HERE AND NOW: STRESS- AND RISK-SEEKING IN THE 21<sup>ST</sup> CENTURY**

To understand why risk taking occurs in industrialized societies, we discuss the following issues as they have been variously described as negative sources of stress in today's society and impediments to the flow experience: a) alienation from work, b) perception of work as an imposition, c) lack of control over one's life, d) perpetual postponement of gratification, and e) the search for meaning. To structure this discussion, we focus on Csikszentmihalyi's theory of flow (1975) and adapt his theory to explain high-risk consumption in modern society. After explaining each issue, we summarize it in the form of a proposition.

**FIGURE 1:  
Risk-Taking Model**



### Optimal Experience or Flow

Optimal experiences describe “the best experiences of our life” (Csikszentmihalyi, 1990, p. 3). Even though they are not necessarily enjoyable at the time they occur, the resultant sense of mastery and of having been in control are so rewarding that many individuals repeatedly seek this type of experience. The theory of optimal experience is based on the concept of flow. Flow is the state in which an individual is so focused on an activity that nothing else seems to matter. Individuals experiencing flow feel in control of their actions, and a deep sense of exhilaration and enjoyment. Reaching this state of flow is not an easy task. There has to be a close match between an individual’s relevant skills and the chosen challenge. If his or her relevant skills are not sufficient to meet the challenge, then the result will be anxiety, and flow will not be achieved. Likewise, if an individual’s skills are more advanced than the challenge, the outcome is boredom and flow will not be accomplished either. Considering, however, that skills generally become more developed the more often a task is performed, the difficulty of the

challenge will have to be increased accordingly to re-establish the equilibrium necessary for the state of flow to be reached. This even match between levels of skill and challenge, however, does not guarantee the experience of flow. Other prerequisites include that the challenge has to provide clear goals and unambiguous feedback. In addition, the individual has to feel a sense of control and be capable of fully focusing on the challenge at hand; that is, his/her attention has to be completely absorbed by the chosen activity. Csikszentmihalyi (1990, p. 44) calls this “a struggle for establishing control over attention.” In our society, this is not an easy task since most of the activities we are involved in on a daily basis do not provide the prerequisites for flow and are further often perceived as sources of stress.

As previously discussed, dys-stress offers no stress release to those who experience it. For that reason dys-stress is an impediment to flow experiences. Risk taking is viewed as positive, and even needed, because it offers a stress release that has been practically eliminated from modern lifestyles due to the shift in the type of stressor to which individuals are

exposed. We propose that as a consequence, individuals turn to high-risk activities since such activities will allow the escape from the drudgery of daily routines and dys-stress and provide these individuals with the opportunities to experience flow. Accordingly, the first proposition states:

**P<sub>1</sub>:** In an attempt to exchange daily routines and negative stressors (i.e., dys-stress) with flow experiences, individuals in industrialized countries may seek out high-risk activities.

In the next sections, we will explore more fully the reasons why individuals feel detached and stressed in their daily lives.

### **Alienation from Work**

Few jobs appear to provide the match between skills and challenges necessary to achieve flow. Studies have shown that American workers, especially those in lower-level occupations, have complained about the lack of variety and challenge at their jobs. In contrast, those in higher-level occupations have a tendency to complain about the pressure, the stress, the lack of control often felt, and the long hours spend on the job (Csikszentmihalyi 1990). It appears that the American worker, regardless of the level of occupation, has been victim of a deep-seated alienation from work. This situation, of course, is not new, and workers across the industrialised world appear to report similar experiences (Keniston 1960; Ginzberg 1971; Terkel 1974).

We propose that the alienation from work provokes feelings of dys-stress in individuals, and that dys-stress prevents individuals from experiencing flow. Since dys-stress also does not lead to a stress release, we further propose that those who feel alienated at work—as opposed to those who do not harbor these feelings—are likely to look for stress release outside their normal range of activities and thus tend to seek out high-risk activities which are expected to provide flow experiences. Hence the next proposition states:

**P<sub>2</sub>:** Individuals who feel alienated at work are more likely (a) to report negative sources of stress (i.e., dys-stress) than those who do not; and (b)—in the pursuit of flow experiences—are also more likely to seek out high-risk activities.

### **Perception of Work as an Imposition**

Individuals, even though they complain about feeling bored, stressed, and frustrated on their jobs, also feel boredom and even guilt when they are at leisure. What highlights this contradiction is that work (even though many feel that time spent at work is basically wasted) provides more flow experiences than leisure activities do. Csikszentmihalyi (1990) followed a group of subjects through their lives for one week. The informants were equipped with a pager and were contacted at random intervals, at which time they reported their activities and how they felt. It was found that those involved in work-related activities experienced flow 54 percent of the time. In contrast, those engaged in leisure activities (e.g., reading, watching TV, socializing), reported flow experiences only 18 percent of the time. Only 16 percent of responses reported from work are categorised as apathy, whereas an astounding 52 percent of leisure activities are classified as such. Thus, for many individuals, leisure largely consists of passive activities that do not require any skills or provide opportunities for action. Thus, it is not surprising that only 19 percent of employed men claim that leisure is more satisfying than work, whereas 49 percent state that their work is more satisfying than leisure (Veroff, Douvan and Kulka 1981). Hence, we are faced with a paradox. On the one hand, many consider work to be drudgery, something they have to do in order to earn a living. On the other hand, work actually provides more challenges and satisfaction than leisure activities. To address this paradox, Csikszentmihalyi (1990, p. 160) concludes that “when it comes to work, people do not heed the evidence of their senses. They disregard the quality of immediate experience, and base their motivation instead on the strongly rooted cultural stereotype of what work is supposed to be like. They think of it as



an imposition, a constraint, an infringement of their freedom, and therefore something to be avoided as much as possible.” This cultural stereotype has been blamed to be a remnant of the Protestant Ethic (Ginzberg 1971) and is also a psychological stressor.

We propose that those who perceive work to be an imposition—as compared to those who do not—are more likely to experience dys-stress. These individuals are also expected to be more likely to seek out high-risk activities in an attempt to create stress-releasing flow experiences in their lives. Thus, the third proposition suggests:

**P<sub>3</sub>:** Individuals who view work as an imposition in their lives are more likely (a) to report negative sources of stress (i.e., dys-stress) than those who view work a more positive manner; and (b)—in the pursuit of flow experiences—are also more likely to seek out high-risk activities.

### **Lack of Control over One’s Life**

In everyday life, few individuals feel that they are entirely in control of their lives (Jackson and Csikszentmihalyi 1999). First, many individuals have negative feelings toward their jobs. Second, many consumers look forward to their leisure time which then is often spent in passivity. As a result, it is not surprising that life has been described to pass in a succession of “boring and anxious experiences over which a person has little control” (Csikszentmihalyi 1990, p. 69). Control (or the perception that one is in control of a situation) has been found to reduce stress response (Glass and Singer 1972) and is considered to be one of the characteristics of flow. Hence, we propose that those individuals who feel that are not in control of their lives—as opposed to those who perceive they are—are likely to feel dys-stress and are thus less likely to experience flow in their daily lives. We further propose that these individuals, in an attempt to find stress release through the experience of flow, are likely to seek out high-risk activities. Therefore, the next proposition maintains:

**P<sub>4</sub>:** Individuals who feel a lack of control in their lives are more likely (a) to report feeling negative stress (i.e., dys-stress) than those who feel in control of their lives; and (b)—in the pursuit of flow experiences—are also more likely to seek out high-risk activities.

### **Perpetual Postponement of Gratification**

The emphasis on postponement of gratification in our society can add to stress as well. Even though some bemoan that society has increasingly been embracing immediate gratification and consumption (Laney 1981), research in the social sciences appears to paint a different picture. Accordingly, postponement of gratification is a still powerful relic of the Protestant Ethic. In our society, business profits are reinvested to build enterprises and lay the foundation for future productivity (Laney 1981). Further, children are taught that voluntary delay leads to a much greater and preferred gratification in the future (Jacobsen, Huss, Fendrich, Kruese and Ziegenhain 1997). Adolescents are taught that delaying certain actions until future times is desirable. For instance, it is prescribed that the postponement of sexual gratification until marriage leads to a more enjoyable marriage (Salts, Seismore, Lindholm and Smith 1994) and postponement of material possessions in favor of getting an education will, eventually, lead to more income and thus relatively more material possessions at a later time.

As a result, Americans are caught in an environment of perpetual postponement. For the past 30 years, Western European societies have made decisions that are very different from those that have been made in the U.S. (De Graaf 2003). In many European countries, there is a movement to encourage a simpler, more balanced life style. Consequently, many people work fewer hours and are satisfied with lower pay (i.e., 16 percent lower, on average). However, Americans now work about 199 hours more per year than they did in 1973, even though worker productivity doubled during that period. The outcome of longer work hours and

higher worker productivity has been an increase in wages and consumption, accompanied by (1) a rise of stress-related diseases, such as heart disease and weakened immune systems; (2) increased consumption of fast foods and lack of exercise that have led to an increase in obesity and diabetes, and (3) parents who spend little time with their children and are too busy to become involved in their communities (De Graaf 2003). In light of this discussion, the question remains: “When will we actually get a chance to live and harvest the rewards of our sacrifices?”

Based on the above discussion we propose that postponement of gratification can lead to feelings of dys-stress. We further propose that those individuals who find postponement of gratification stressful—as opposed to those who do not—will have difficulty achieving flow and thus seek out high-risk activities that are likely to allow them to experience flow with its resulting stress release. Accordingly, the next proposition states:

**P<sub>5</sub>:** Individuals who postpone gratification are more likely (a) to report feelings of negative stress (i.e., dys-stress) than those who do not delay gratification; and (b)—in the pursuit of flow experiences—are also more likely to seek out high-risk activities.

### The Search for Meaning

In the past, religions provided answers to questions concerning the meaning of life. Nevertheless, religious worldviews are challenged by scientific rationality as an opposing force (Csikszentmihalyi 1990). In response, many consumers become active in creating meaningful, enjoyable lives for themselves (Belk and Costa 1998; Celsi, Rose and Leigh 1993; Schouten and McAlexander 1995). For some, this task seems to be easy. For example, Schouten and McAlexander (1995, p. 50) who immerse themselves in the world of the “new biker” (i.e., the non-criminal biker) find that the Harley-Davidson motorcycle has become “a religious icon around which an entire ideology of consumption is articulated.”

Both new bikers and outlaw bikers seem to be drawn by the “spirituality of the riding experience.” The cohesiveness and the core values of these groups, as well as a specific language and a feeling of liberation from confinement, appear to enhance the experience. Further, the followers of the mountain man myth, as described by Belk and Costa (1998, p. 230), have found “an opportunity to live a more meaningful life combining work and play in the mountain man fantasy.”

For others, this task can be exceedingly difficult and frustrating, and thus adds to the psychological stressors. Not surprisingly, it has been found that tackling questions dealing with core values and the meaning of life is likely to lead to emotional and professional burnout, to feelings of disillusionment and crisis (Gemza 2001). This burnout, in its mildest form, manifests itself as apathy. In its most severe form, it appears as depression (Gambone 2000).

Accordingly, we propose that individuals who are unsure about the meaning of life—as compared to those who are not—are more likely to experience dys-stress and are thus more likely to turn to high-risk activities in an attempt to relieve their daily stressors through flow experiences. As a result, the next proposition suggests:

**P<sub>6</sub>:** Individuals who question the meaning of life are more likely (a) to report feelings of negative stress (i.e., dys-stress) than those who feel in control of their lives; and (b)—in the pursuit of flow experiences—are also more likely to seek out high-risk activities.

### DISCUSSION

A key premise of this model is that risk taking is of paramount importance in modern society. Risk taking, in this context, is viewed as positive and even needed, because it offers consumers a form of stress release that has practically been eliminated from 21<sup>st</sup> century lifestyles due to the shift in the type of stressors individuals are exposed to. Nowadays, the prevalent stressor, termed dys-stress, does not

offer a stress release and is an impediment to flow experiences. Hence, another key premise is that an increasing number of individuals create acute physical stressors (consciously and unconsciously) to help alleviate the impact of ongoing, unresolvable psychological stressors. As a case in point, individuals who feel alienated and over-socialised in their institutional roles are likely to participate in high-risk taking, because they regard this type of risk taking as their only means for achieving self-determination and authenticity (Lyng 1990). In addition, individuals who actively pursue flow experiences (Csikszentmihalyi 1990) and those who actively seek instant gratification in their leisure time to offset the perpetual postponement of gratification in other parts of their lives, are likely to participate in high-risk activities, because these types of activities have a high potential to promote flow and thus enable individuals to feel in control of their actions and a sense of exhilaration. Further, those individuals who seek and take high risks restrict themselves to those areas where they feel the ambition to master the skills necessary to succeed in a chosen challenge. This desire for achievement and mastery has been identified as the primary motive for participation in high-risk activities. In those chosen areas, perceived self-efficacy will be high, the level of anxiety low, and the need for achievement will boost the motivation to succeed (Slanger and Rudestam 1997). Additionally, individuals who have a tendency to repress possible negative outcomes and more easily remember successes are more likely to engage in high-risk behavior (Slanger and Rudestam 1997).

Participation in high-risk activities carries with it potentially negative consequences for numerous parties. Mistakes in strategy and/or execution may result in catastrophe for participants and grief for their families. Such mistakes may also place undue risk on the individuals who are called upon to rescue ill-fated thrill-seekers. Further, increasing participation in risky activities results in higher costs for the healthcare system and for society in general. The model presented attempts to

provide a better understanding of why individuals engage in risky behaviors so that such costs may be reduced.

Understanding this consumer segment might also aid commercial providers of risky endeavors to train their frontline employees accordingly, and to develop products that provide a better fit to their target audiences and thus have the potential to be safer while still challenging. For example, as Simon (2002) compares “summiteering” to mountaineering, it becomes clear that those participating in the former are solely driven by reaching the summit, whereas those involved in the latter are focusing on mastering climbing techniques or acquiring knowledge of natural life and emergency medicine. Making sure that recreational firms hire mountaineers instead of summiteers as guides, and training these guides in understanding high-risk takers, could save lives. Additionally, an understanding of risk-seeking personalities may aid employers in tailoring potential reward systems around their employees’ risk taking propensity, and potentially providing more stimulation to those risk-seekers who are subjected to mundane tasks.

#### **MANAGERIAL IMPLICATIONS: HIGH-RISK CONSUMPTION AND COMMERCIALIZATION**

A wide variety of marketers have embraced the public’s fascination with extreme sports. Times Mirror Magazine publishes *TransWorld’s Stance*, a periodical built around extreme sports to attract the teen-age male (TransWorld’s Stance, 2010) Sponsors of the 2010 Summer X Games included such major corporations as Sony (Spangler 2010) as well as Taco Bell, Mountain Dew, Nike, Coors, AT&T, and Chevrolet (Independent Studies 2010).

As a result of this commercial focus on extreme sports, critics sometimes claim that the media and advertisers endanger lives by not telling the whole story. For example, Larry van Slyke, chief ranger at Canyonlands National Park, Moab, Utah, which has experienced a dramatic

increase in mountain bikers, maintains that “the advertising gurus who make the commercials never allude to the potential for ending one’s life by partaking in some of these sports...Not everyone makes a safe landing after taking an airborne jump on a mountain bike, but you won’t see that on TV” (Wilkinson 1999). Further, Palmer (2002) warns of the increasing commercialization of extreme-risk taking because it has led many unskilled novices to embrace high-risk, high-adrenalin activities without being aware of the dangers. In regards to tourist-oriented versions of extreme sports, tour operators assure the public that high-thrill adventure vacations are safe since the guides are fearless “experts” who take care of everything. As a result, the commercial packaging of extreme sports is often void of references to danger. Further, tour operators do not ask their clients to prepare through training, diet, or personal restraint nor do they highlight the level of skills needed to navigate safely through extreme-risk situations.

This commercialization of extreme vacations has led to a number of accidents that have claimed the lives of quite a number of adventure tourists and their guides. For instance, a 17-year-old girl who was chaperon to a group of even younger Pathfinder Girls was killed in a whitewater rafting accident in British Columbia’s fast-moving Elaho River (Armstrong 2005). In Zambia, a professional tour guide fell 90 meters to his death while trying to save a tourist “playing with death” at Victoria Falls’ infamous Devil’s Pool (Muchemwa 2009). On a larger scale, a canyoning (wild river rafting without the raft) disaster in Interlaken Switzerland claimed the lives of 18 extreme tourists and three guides. Despite heavy rain, the tour guides decided to take their clients into a steep and narrow gorge. The guides and travelers were subsequently washed away by a flashflood (Palmer 2002). As illustrated by these examples, the commercialization of extreme sports can alter perceptions of danger and risk. This view is supported by Arnould and Price’s research (1993) which shows that although river rafting is an expensive and time consuming activity,

potential participants do not seem to spend much time and effort considering potential outcomes before going on a trip. Search behavior seems to be negligible, and many do not have specific expectations; most simply expect to enjoy the experience and “not get killed” (Arnould and Price 1993, p. 24).

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