Jan Lewis Central Queensland University PO Box 1319 Gladstone, QLD 4680 Ph 07 4970 7392 Fax 07 4970 7345 m.lewis@cqu.edu.au

Shane Pegg
The University of Queensland
11 Salisbury Road
Ipswich, QLD 4680
Ph 07 3381 1025
Fax 07 3381 1012
s.pegg@uq.edu.au

Title of paper:

Go Hard Or Go Home: Primary Motivations For Engagement At The Elite Level In One Of The Fastest Extreme Sports

# Go Hard Or Go Home: Primary Motivations For Engagement At The Elite Level In One Of The Fastest Extreme Sports

Organisers of extreme sports need to better understand the motivations of participants who are prepared to face significant injury and maybe even death on a regular basis. For example, being flipped from your motorcycle at speeds in excess of 300 km/h or sliding over a hard bitumen surface with no control, often resulting in broken bones, comprise simply one aspect of competition in an activity accepted as an extreme sport (Lewis, 2004). One might wonder do competitors simply suffer from a death-wish or, in fact, just the opposite. That is, they seek to live life to the very fullest and, in so doing, want to enjoy every possible minute. The intent of the study therefore, was to explore the phenomena more closely by determining the primary motivations for engagement of individuals in motorcycle road racing at an Australian Championship. This exploratory study was undertaken using grounded theory with one-on-one phone interviews the primary means of data collection. Advocates of motivational theory (Martens & Webber, 2002) posit that there are three primary types of internal and external motivation, as well as a form of amotivation. Study results indicated that all three intrinsic forms of motivation were experienced but only one extrinsic form was highlighted as significant by study participants. The three instrinsic motivators are the intrinsic motivation to know, to accomplish and to experience stimulation. Intrinsic motivation to know was demonstrated through learning how to ride their bike faster and smoother, resulting in faster lap times. Intrinsic motivation to accomplish occurred when riders derived satisfaction and pleasure from the experience which resulted in personal satisfaction and mastery. Intrinsic motivation to experience stimulation resulted from the respondents' perception of pleasure, fun and excitement from participation. On the other hand, tangible extrinsic rewards were generally limited to riders who had access to a factory-backed motorcycle with the majority of riders considering they suffered financially as a consequence of their participation. Intangible extrinsic rewards revealed themselves in the form of deep, personal identification with the attainment of personal goals which, in turn, lead to personal growth and development. Interestingly, all four motivators were found to result in positive outcomes for the riders which they indicated kept them engaged in the high risk sport. Such results suggest that organisers of such competitive meets need be aware that prize money is not the major attractant for participants. Rather, the personal benefits derived by participants when motorcycle racing was the primary determinant of enduring engagement in this extreme sport.

### Introduction

Researchers have examined personality traits and characteristics in many extreme sports including skydiving (Lipscombe, 1999; Lyng & Snow, 1986), big wave surfing (Diehm & Armatas, 2004), hang gliding (Brannigan & McDougall, 1983; Wagner & Houlihan, 1994), mountain climbing (Cronin, 1991; Ewert, 1985; Mitchell, 1983; Rossi & Cereatti, 1993) and downhill skiing (Bouter, Knipschild, Feij, & Volvics, 1988) but motorcycle road racers have not featured in any published research to date.

Motorcycle racing is a term used to cover a great many disciplines which is inclusive of racing on flat dirt oval tracks (ie. speedway), flat dirt tracks (ie. dirt track racing) and dirt tracks that have many obstacles and jumps (ie. motocross and supercross). However, only one motorcycle discipline takes place on a road or bitumen surface, the sport of road racing. While this discipline originally started on public roads early in the 20<sup>th</sup> Century, issues of public safety have forced most races to be staged on purpose built tracks which offer rider and spectator alike a safer racing environment (Lewis, 2003, 2004). While race organisers have sought to keep pace with changes in equipment and venue, the harsh reality is that technological innovation is advancing at such a rate that older style tracks are having to be discarded as possible race venues as they are no longer considered safe given that today's motorcycles can reach speeds in excess of 300 km/h.

Despite the best efforts of officials to enforce safety precautions at race meetings, riders still crash their motorcycles, injure themselves and, in rare cases, die as a result of their race-related injuries. Such behaviour posed the question, what motivates a motorcycle road racer to participate in a high risk sport that could result in permanent and incapacitating injuries, or even death?

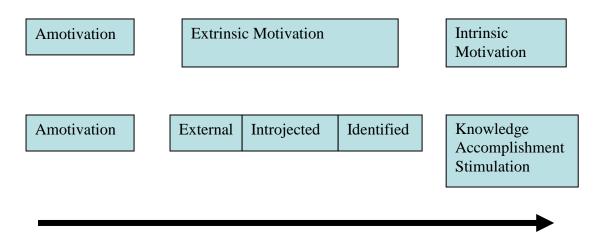
### **Motivation for participation**

Motivation is derived from the Latin movere, meaning to move. The direction of motivation refers to the "purpose and the desired actions of the activity" (Anshel, 1994 p.110). Activities in which participation is motivated by fun are fostered by the desire to do something enjoyable, and fun and enjoyment underlie the intrinsic motivation concept. That is, the participation experience is enough to feel good about performing that task and external rewards are unnecessary. Reliance on extrinsic rewards such as trophies tends to turn play into work and extrinsic motivation is the desire to perform in order to receive rewards such as money or a trophy and this tends to undermine intrinsic motivation (Deci & Ryan, 1985). Studying motivation is important as a developmental outcome in competition and coaching behaviour as well as a developmental influence on persistence, learning and performance (Duda, 1989; Vallerand, Deci, & Ryan, 1987). Self-determination theory consists of three types of motivation that form a self-determination continuum; amotivation, extrinsic motivation, and intrinsic motivation (Figure 1). Intrinsic motivation has three forms: the intrinsic motivation to know; the intrinsic motivation to accomplish things and the intrinsic motivation to experience stimulation. Extrinsic motivation also has three forms: identified, introjected and external regulation. Extrinsic motivation may be used as a means to an end and is a continuum from lower (less autonomy) to higher levels (more autonomy) of self-determination where external regulation and introjection are on the lower levels, identified regulation represents mid-level and integrated regulation is viewed as the highest level of self-determined behaviour (Li & Harmer, 1996).

Intrinsic motivations in sport form the individual's motives for sport participation when actions are performed voluntarily and are perceived to be pleasant (Frederick & Ryan, 1995). It has been assumed that motorcycle road racers freely choose to participate because of their love of the sport and the sensations experienced while competing. Importantly, these motivators can have an uplifting effect and can actually improve an athlete's performance and attitude to a task resulting in long lasting feelings of

achievement, recognition, advancement and personal growth (Herzberg, 1966). Given that little attention has been given to date to an exploration of the motivations for engagement in motorcycle road racing it was decided that a qualitative study using a grounded theory approach was the best means by which to investigate this phenomena.

**Figure 1. The self-determination continuum** (Vallerand & Losier, 1999 p.153)



### Method

"Grounded theory is based on the systematic generating of theory from data, that itself is systematically obtained from social research" (Glaser, 1978 p.2). Grounded theory is a rigorous orderly guide to theory development that is closely integrated with a methodology of social research. When commencing this study using grounded theory, the literature was ignored to ensure that emerging categories were not contaminated. Identifying similarities and differences with the literature was conducted after the core categories emerged (Glaser & Strauss, 1967). Theoretical sampling was used to "discover categories and their properties, and to suggest the interrelationships into a theory" (Glaser & Strauss, 1967 p.62). Theoretical sampling involved reading documents, observing and interviewing, with the interview starting with open-ended conversations while the researcher sat back and listened. As the theory emerged, the first author asked more direct open-ended questions regarding the categories, questioned more people in different positions and in different groups about the same topics. Thus, a constant comparison method was used to generate a theory that was "integrated, consistent, and plausible" (Glaser & Strauss, 1967 p.103).

As little research has been previously undertaken with respect to motorcycle racing and motivations for participation, and as neither author had been involved as an active participant, a qualitative Delphi study of riders at the elite level in Australia was the first stage incorporated in this study. Riders who agreed to participate in the study formed an expert group with respect to motorcycle racing and thus, it can be assumed that the quality of the information given to the researchers was sound. Also, because it is an iterative system, it can be assumed that good quality knowledge has evolved (Murnighan, 1981). The Delphi study approach brings academic rigor to the research and strengthens the validity of the results. The first author asked questions of the experts, undertook analysis, and provided feedback to each expert. An additional benefit from a researcher's perspective is that this study may be conducted over the phone as members should not meet face-to-face (Robbins, Millett, Cacioppe, & Waters-

Marsh, 2001). The results of the Delphi study provided the conceptual framework for further research and helped to draw out the theories of potential relevance.

In order to ensure methodological rigour and trustworthiness of the research, the following strategies were employed. The first author has been an observer at motorcycle races over a seven year period in the role of a volunteer official and so prospective study participants did not perceive her as a threat as she was well known to most riders participating in the Australian Superbike Championship. In addition, eight riders from five different motorcycle classes who participated at the national level, with length of racing experience ranging from two to 14 years, and on different levels of the rider hierarchy (factory, semi-professionals and privateers) were interviewed by phone to ensure all categories of riders in the sport were covered. Analysis of the interviews was undertaken using coding steps as described below using the software package "QSR N6 for Qualitative Data Analysis"

### **Results**

This exploratory study of motorcycle road racers was grounded in theory with the motorcycle racing experience the central phenomenon. Experience coding led to the development of central concepts of rider hierarchy, self-preservation and motivations to emerge from the data (see Figure 2). Only the key concepts with respect to Motivations will be discussed in this paper.

Motorcycle racing Rider Hierarchy Motivation Self-preservation Intrinsic Extrinsic Amotivation Injuries motivation motivation Performance Personal Positive **Barriers** Goals deviance Fun **Future** Fast lap times **Expectations** 

Figure 2. Conceptual framework

## Intrinsic motivation in motorcycle road racing

Clay, a privateer competed because motorcycle road racing has all the ingredients he needs such as adrenaline, fear, friendship and hard work. At times it can also be soul destroying, as when things are bad they can be really bad. While intrinsic motivation is present, riders also receive great personal satisfaction from their performance and thus participation is a balance between these two factors.

### **Performance**

Racing a motorcycle is not easy as Gary noted that "the motorcycle does not want to turn, stop, take off or do anything you want it to do, so you need to make it do what you want it to do". When riders talked about personal performance, the related concepts include pre-race nerves, pre-race mental and physical aspects, fun, winning, pressure and sponsorship that facilitates performance and ambition.

In relation to pre-race nerves, one semi-professional rider, Evan stated that at the beginning of his road racing career, despite experience as a motocross racer, he felt very nervous like he was "going to be sick on the start line" but that as soon as the race was underway, he forgot the nerves and concentrated on what had to be done to ride the bike. In fact, he felt that if you didn't get nervous, something was wrong as no one can be that relaxed. A privateer rider, Clay stated that early in his motorcycle road racing career he was terrified mainly due to the unknown which created a very intense feeling. Gary, another semi-professional rider still gets nervous due to the pressure to perform and the fact that "other people are paying the bills and they expect certain results for that money". Consequently he feels more nervous as a semi-professional racer than he did as a privateer. Pressure is placed on a factory rider to perform and this was perceived by a semi-professional as external pressure that may be hard to cope with, but because as riders love the sport and have the determination to get somewhere in it, riders want to do to compete despite external pressures from sponsors or teams. In order for a rider to advance, a positive mind-set is essential.

### **Mind-set**

Anytime between five and 30 minutes prior to a race, a rider needs some solitude to get comfortable in his leathers and to get into his mindset. Gary, a semi-professional rider is always pre-riding the race from the Wednesday before the race meeting which usually starts on the Friday. He also noted that the lead up is important to the round so a rider concentrates on feeling fit and healthy, eating and resting properly and entering "a mindset that gives you the most confidence" for that weekend. Gary likes "to feel relaxed, not only in my mindset but my muscles and my body". Once stretched and relaxed, Gary enters his Zone.

The entire time that I am in my own zone let's say, I am always going through the track layout, the gear changes that I make on the track, each point that I change gear, the revs I like to be at for that point, the braking marker that I need to hit for that turn, the line that I am going to take, everything like that. I am always going through laps of that track in my mind as I am preparing myself for the race. Once I put my suit of armour (leathers) on, that's when it's race time.

For riders, pre-race preparation is an important issue but once on the track the fun begins.

## Fun

Most riders are less concerned with winning and more interested in having fun. When riders dismount their bike and reflect on what they actually achieved while racing, they it was so much fun. In fact, Fred, a privateer believes that "as long as you are out on the track and dicing with somebody, it doesn't matter that you don't win" and for Harry, another privateer in "the class that I race in and the events that I do, it's much more serious—but it's still for fun". Another sensation expressed by David was that "it is one of the best adrenalin rushes I reckon you can ever have and being able to ride faster

than I have ever ridden, that's fun". Therefore while riders race "for fun but the most fun is winning", stated Evan.

# Winning and personal satisfaction

Chasing has been used in sport as well as in the search for food. Games based on the chase hide the hostile aggression of hunting as well as the search for a loved object (Slovenko & Knight, 1967). Road racing can be likened to a hunting game with the leader becoming the quarry to those behind him and the reward being the receipt of the chequered flag where the winner is home safe having defeated the braying pack hard on his heels. While winning is exciting, it is the competition and trying to better one's previous best lap times that really motivates a rider and makes them satisfied and happy. Achieving a personal best around a circuit really makes you feel good felt Harry and this feeling may last for a day and gives the rider a lot of confidence. Personal satisfaction is closely tied to competing but not necessarily winning as one progresses up the hierarchy in motorcycle road racing. Evan described riding a few perfect laps, achieving some good times as producing the best feeling you get when you are on a good bike. Despite all the fun and success when everything is going well, there are also times when things go wrong and at speeds over 300 km/hr, sometimes very wrong.

## Fast lap times and flow

You can feel that you are on an absolute flier of a lap and you look at the clock and it is slow. You can feel that you are on a slow lap and it is a fast lap. You can't always trust your judgement as such, you really need to ride to the clock... it seems to happen naturally (Gary, semi-professional).

When asked how riders knew they had completed their fastest lap some did not know at the time of the accomplishment. As noted by Gary and Harry, a lap that feels really, really slow will probably turn into a personal best. On the personal best time lap, the rider is relaxed and he stops consciously working and so it all comes together and "just happens because you are not forcing the bike to go where you want it to go. You relax and take your time and the bike actually goes faster that way". One semi-professional, Ace, at Phillip Island in the World Superbikes in 2004 commented that he completed a lap in 1 minute 35 seconds and when re-entering the pits was told his lap time yet he felt that lap was slow. "During that lap I was just so relaxed and so smooth and everything was just working perfectly for me. It could come down to confidence or relaxing and keeping it smooth". The lap record at Phillip Island in Superbikes is 1:35.248 (Motorcycling Australia, 2005) and hence this rider was very close to lap record time. It appears that personal best lap times are achieved when riders are relaxed and comfortable on their bikes and able to complete a smooth, mistake free lap. These fast laps result in feelings of happiness and joy that relate to the flow experience.

However, following feedback of times from team members, riders all clearly remembered the uplifting experience. One rider, Gary had read a biography of Randy Mammola or Mick Doohan, an Australian rider who won the 500cc World Championship from 1994 to 1998, who had described the uplifting experience as flow. Riders talked about pre-race mental focussing, having confidence in their own ability as well as in the motorcycle, needing to find solitude before a race to prepare themselves mentally, needing to focus and concentrate while racing and not be distracted by backmarkers or if they were a backmarker by faster riders overtaking them and time transformation while doing their best lap times. Gary believes that is the achievement of this flow state that riders seek to recreate and riders just have to prepare themselves

the best they can, race with the utmost confidence in the decisions they and their team have made and hopefully it will all fall into place. The exalted feeling which comes from flow was described by Clay, a privateer, as joy in his personal achievement. Intrinsic motivation and positive mind-set may lead to better performances but external factors also play a part in detracting from a positive experience.

#### **Extrinsic motivation and rewards**

Prize money for the Australian Superbike Championships is not a determining factor for participation on motorcycle road racing. Ace felt that he was working to pay for racing and that money or rather the lack of money was a big problem. Thus this rider has to work in order to play during his leisure time. This claim is supported as in 2005 in the Australian Superbike Championship, entry fees for all solo classes are \$275 plus \$60 for Friday's practice and qualifying, plus \$60 for insurance plus \$36 for electronic timing apparatus hire (a total of \$431) (Formula Xtreme, 2005a) and while prize money for Superbikes starts at \$750 per round for 1<sup>st</sup> place and decreases to \$150 for 15<sup>th</sup> place (Formula Xtreme, 2005b) a rider must finish in the top three just to recover his entry fees. For riders in the Supersport class, they must finish in first place to cover the entry fee, while winning riders in each of the other seven classes receive between \$125 and \$300 (Formula Xtreme, 2005b) which is less than the cost of their entry fees. In addition to entry fees one must add on the costs of transport, food and beverage, accommodation for the rider and often other team members as well as bike parts, tyres and repairs. On this basis, all riders would run at a loss and so it would be very difficult to say that extrinsic rewards are a motivational factor. Clay, a privateer rider in Superstock in 2004, found that it had personally cost him \$30,000 to finance one year of racing in the Australian Superbike Championship, an average of \$5,000 per round. Although money is an issue for all except the factory rider, the motivation to participate and to strive towards achieving personal goals exceeds any financial restrictions.

# Personal goals and future expectations

Personal goals are often expressed as future goals and career paths. Competing at the international level in MotoGP is perceived by riders as the highest level in motorcycle road racing and represents the ultimate goal for many riders. However, the pathway is circuitous for Australian riders. One factory rider, Don wants to go overseas to Europe in a couple of years to first compete in World Supersport and then progress to MotoGP. Other semi-professional riders perceive their career path to MotoGP through racing in America or England and then on the world scene or via the British Championships as he feels they are a pretty well known stepping stone into the World series. Other riders not in Superbike or Supersport classes, will keep riding while they are having fun (Fred, a privateer) or until they reach A Grade (Clay, a privateer). Riders at different stages of the rider hierarchy have different definitions of success according to their own abilities, length in the sport and personal goals. On the other hand, two riders mentioned negative outcomes as a consequence of their racing.

## **Amotivation**

Negative consequences or a lack of achievement may cause a participant to decrease involvement and may eventually lead a person to disengage from the activity. One privateer, Fred, expressed concern that some good riders achieve a certain level and because they either haven't got a coach or they haven't met up with someone that can get the best out of them, they get frustrated and sometimes give up the sport. This is exemplified by a semi-professional, Evan who has questioned his continuing

commitment as "at the end of every year and at stages during the year, I have often thought what am I doing and where am I heading because this isn't taking me anywhere". This is particularly frustrating for a semi-professional rider who sees younger riders than himself progressing up the hierarchy while he remains stationary. However, it should be noted that this rider is also devoted to doing his best and trying to succeed at the Australian level with plans to move to the world level if sponsorship can be found.

This study has so far examined motivation for participation in motorcycle road racing based on the perceptions of the riders and using their own words to describe their reasons. In the next section, motivations will be examined using the theoretical underpinnings of the self-determination continuum and positive deviance which relates to continued sport participation while injured.

### **Discussion of results**

All of the concepts derived from rider interviews can be related back to current theory and each concept is dealt with in the same order as discussed earlier in the results section. The personal perception of danger can create excitement and a desire to master the challenge (Anshel, 1994) and extreme sports participants pursue high levels of excitement, adrenaline rush, thrill, challenge, feelings of uniqueness, sense of psychological, physical and spiritual well-being and accomplishment (May & Slanger, 2000). One outcome of these high levels may be the experience of the flow state and the achievement of peak performance. To achieve a peak performance, it is reasonable to assume that intrinsic motivation is present and the next section examines the self-determination continuum in relation to motorcycle road racers.

### **Intrinsic motivation to know**

Intrinsic motivation to know relates to constructs of exploration, curiosity, learning goals and learning through the need to know and understand. Some motorcycle road racers have an intrinsic motivation to know which is demonstrated by one privateer who had a real interest in the technical side of motorcycle racing. Harry expressed this as having an interest in all the technical aspect of racing. "In the engine, how it all works and how things can be changed to make it a little bit different as well as all the physics of suspension systems and that sort of thing". In terms of learning goals, one privateer, Clay, had developed his skills to a level of riding at a certain speed but he found that to actually step into riding 3 or 4 seconds quicker a lap he needs additional skills of bike handling to achieve this.

## **Intrinsic motivation towards accomplishments**

Intrinsic motivation towards accomplishments can be defined as engagement in an activity for the pleasure and satisfaction experienced when attempting or creating something. For Gary, a semi-professional personal achievement was a fairly major factor in his racing. Mastery of the task produces personal satisfaction. Constructs include mastery motivation, efficacy motivation and task-orientation. Receiving pleasure from participation is best explained by Gary, "when you are feeling comfortable, you are feeling good, it is just magic". Outcomes of accomplishment were the best feelings received from completing a few perfect laps, and putting in some good times (Bill, a semi-professional) and another semi-professional, Ace stated that a rider must concentrate on what he is doing and when he wins and finally crosses the finish line, the effort expended and achievement gained makes it all worthwhile.

Efficacy motivation is demonstrated by a privateer, Harry who felt that racing is all about himself. As a rider he is not worried about what how well other competitors do, it's just how well he does. A semi-professional, Ace participated for the love of doing racing and wanting to advance as far as he could and to win an Australian championship.

Task-orientation was described by Harry, a privateer, as "if you've been around the track enough times and you know it well enough you can feel where you are quick and where you might have made a little mistake and where you could have gone faster".

Mastery motivation resulting in efficacy motivation was described by Clay, a privateer, as if a rider goes faster than he has ever been before then he feels that he is improving. A rider can judge their progress by comparing his own with competitors lap times and if they are fairly sort of close, like point two of a second, then the rider will feel that he has made a personal achievement. When a rider achieves a personal best around a circuit it really makes that rider feel good. Mastery motivation was also described as having won the Australian Championship there is no more to achieve in Australia as this is the ultimate achievement. If one is successful at the national level, it is reasonable to assume that this rider is performing at a very high level.

#### **Performance**

Self-leadership is composed of five elements: personal goal setting, constructive thought patterns, designing natural rewards, self-monitoring and self-reinforcement. Within the personal goal setting, mental imagery involves mentally practising a task and imagining the successful performance of that task beforehand (McShane & Travaglione, 2005). All riders interviewed pre-rode the first lap in their heads to ensure confidence and to remember what a perfect lap is like. Pre-riding a lap may enable a rider to shave a tenth off here or a hundredth off there to make the lap times faster noted Gary, a semi-professional. Pre-riding the track mentally thus allows a rider to find where they can get that little bit extra to put them in front of their competitors. Constructive thought patterns are important as Gary believes that "if you are able to get yourself in the right mindset then half the job is done" because "this sport is more than 95% mental, it's really, really mental driven". Having noted that the intrinsic motivation to know and accomplish are relevant to riders, the Intrinsic Motivation to experience stimulation should also be relevant to a high speed sport.

### Fun

Intrinsic Motivation to experience stimulation occurs due to engagement to experience stimulating experiences be they sensory, for pleasure, for aesthetics or fun and excitement (Pelletier et al., 1995). This intrinsic motivation relates to flow and peak experiences. Clay, a privateer described a race as "it's such a thrill when you race around and you're in a group of 2 or 3 riders and you've got to battle with them the whole way round". The outcome of these battles on reflection is that it was so much fun. Fun is a positive emotional state with a social component requiring interaction with others as well as to "challenge and perceptions of personal achievement" (Jackson, 2000 p.139) linked with flow.

### **Peak Performance and Flow**

Flow is intrinsically rewarding while peak performance is optimal functioning (Privette & Bundrick, 1991) or flow describes a psychological state while peak performance is a standard of accomplishment (Jackson & Marsh, 1996). Relaxation, being calm and comfortable on the motorcycle and not trying to force the motorcycle when combined with a smooth, effortless lap with no mistakes are the keys to achieving both a personal best time as well as reaching a flow state and achieving the ultimate or peak performance. Mental skills for achieving flow include relaxation, non-negative thinking and emotional control and competition may act as either a facilitator or detractor of flow (Jackson, Thomas, Marsh, & Smethurst, 2001). When a person feels happy, flow is more likely to occur as these people are proactive and engaged (Ryan & Deci, 2000) so riders who ride bikes for fun are most likely to experience flow. The accomplishment of doing one's best was expressed as "doing a little song and dance, I'll be stoked" (Clay, a privateer) and "when you do a personal best around a circuit it really makes you feel good" (Harry, a privateer). Similarly, Gary felt that "it is amazing, I have been racing a few times and been lucky enough to feel that flow and what happens is amazing, magic happens".

Most riders commented that this state is elusive and they did not achieve this very enjoyable sensation often enough and were unable to repeat this sought after performance at will. The best a rider could do was to prepare himself the best that he can, go racing with the utmost confidence in what decisions have been made and to hope that it all falls into place. Flow results from the optimal fit between the participant's skill and the challenge of the task which results in enjoyment (Freischlag & Freischlag, 1993). Thus the achievement of the flow state (Jackson, 2000) with the outcome of peak performance (Maslow, 1967, 1968) are the theoretical underpinnings of these experiences.

It can be concluded that all three intrinsic motivations: to know, to accomplish and to experience stimulation are all present in riders surveyed and it can be assumed that these characteristics are also applicable to other riders competing at the national level in motorcycle road racing. In the self-determination continuum, lying between the intrinsic motivation and amotivation is extrinsic motivation.

### **Extrinsic motivation**

External regulation which occurs when behaviour is controlled by external sources such that material rewards such as pay or constraints are imposed by others as coercive forces (Deci & Ryan, 1985). The sport is performed for rewards such as praise or in order to avoid negative consequences such as criticism and not for the fun of participation. No rider interviewed mentioned either praise or criticism as a motivation for participation and hence external regulation appears unrelated to motivations for participation in motorcycle road racing.

Introjection occurs when the external source has been internalised but is not identified with or accepted as his or her own (Deci, Eghrari, Patrick, & Leone, 1994; Li & Harmer, 1996) and produces internal pressure such as guilt and anxiety (Pelletier et al., 1995). The athlete performs because he has to and not because he wants to, resulting in pressure and tension and anxiety (Ryan & Connell, 1989). Bill, a semi-professional, was the only rider to mention guilt as he felt guilty about the amount of money being spent on his racing career as the expense of the interest of his siblings. Bill is still

committed to his participation as a motorcycle racer and is working to raise the money to go motorcycle racing from sponsors.

# Personal goals and future expectations

Mid-level extrinsic motivation identified as identification relates to the individual valuing and judging the behaviour to be important and while the activity is entered voluntarily, it is performed for external rewards such as the achievement of personal goals. This involvement adds to personal growth and development (Pelletier et al., 1995). The achievement of personal goals is a fundamental concept for motorcycle road racers as each strives to reach his full potential and take his career as far as he can. This is exemplified by Evan, a semi-professional rider, who wants to win an Australian championship. This would result in the personal satisfaction of being able to be his best and achieve that goal he has set. Personal goals may not be related to winning a race as Clay, a privateer, believes that he wins if he chooses to set his personal best lap times. Other personal goals may be expressed as future goals and career paths through England, Europe or America towards MotoGP and/or World Superbikes.

Amotivation is at the opposite end of the continuum from intrinsic motivation and is similar to learned helplessness (Abramson, Seligman, & Teasdale, 1978) when participants experience feelings of incompetence and lack of control (Deci & Ryan, 1985). They are neither intrinsically nor extrinsically motivated and are no longer able to find any good reason for continuation. Amotivation is unintentional with athletes unable to regulate their behaviour to readily produce the desired outcomes (Li & Harmer, 1996) and represents a lack of motivation. No rider stated that they felt in a stage of amotivation and only injuries and a lack of money to participate would change their attitude.

Riders experience all three types of internal motivation as well as the highest level of self-determined behaviour in extrinsic motivation. These are the motivators that inspire riders and keep them participating in a very dangerous sport and provide them with benefits that exceed the consequences of participation. The other external motivatiors of external regulation and introjection were not mentioned as being relevant to motorcycle road racers participating at the Australian level.

### **Conclusion**

Motorcycle road racers are both intrinsically motivated to know, to accomplish and to experience sensations as well as being extrinsically motivated to attain personal growth and development. Strong intrinsic motivation is shown through greater task than ego-involvement in that riders are not competing to win at all costs but to gain satisfaction from performing at their best and beating their own personal best lap times and hence their focus is on mastery which should result in positive outcomes and continued engagement for the participants. Importantly, study results show that riders displayed positive deviance in that they sought to race regardless of pain and discomfort due to the sensations experienced from mastering a difficult sport as riders sought to improve their skills and race ability. Results also highlighted the fact that riders experienced peak performance and the flow state when they achieved their personal best lap times which resulted in most wanting to recapture the exhilarating feeling but being unable to tap into such a state on demand.

Study findings also highlight the fact that managers of motorcycle road racing competitions, and race event organisers more generally, need to be aware that riders do not engage in long-term participation in the sport for the allure of the prize money, which in most cases does not even cover the costs of entry. Rather it is because they gain significant benefits from their participation and direct competition with other riders on the track. These benefits are mainly personal in nature with growth and mastery of skills and learning how to handle, setup and ride the motorcycle as fast as they possible can, and to the best of their abilities, the important factors. Significantly, the "fun" element of competing must be considered fully as even riders at the international competition standard have stated that they still desire racing to be fun and enjoyable. However the personal costs to riders of competing must also be recognised as the financial costs are a key barrier which may prevent riders from engaging in the sport about which they feel so passionate, and in which they love to participate even if they are injured.

### References

- Abramson, L. Y., Seligman, M. E. P., & Teasdale, J. D. (1978). Learned helplessness in humans:critique and reformulation. *Journal of abnormal psychology*, 87, 49-74.
- Anshel, M. H. (1994). *Sport psychology: from theory to practice* (2 ed.). Scottsdale, Arizona: Gorusch Scarisbrick, Publishers.
- Bouter, L. M., Knipschild, P. G., Feij, J. A., & Volvics, A. (1988). Sensation seeking and injury risk in downhill skiing. *Journal of Personality and Individual Differences*, 9(3), 667-673.
- Brannigan, A., & McDougall, A. A. (1983). Peril and pleasure in the maintenance of a high risk sport: a study of hang gliding. *Journal of Sport Behavior*, 6(1), 37-51.
- Cronin, C. (1991). Sensation seeking among mountain climbers. *Personality and Individual Differences*, 12, 653-654.
- Deci, E. L., Eghrari, H., Patrick, B. C., & Leone, D. R. (1994). Facilitating internalization: the self-determination theory. *Journal of Personality*, 62(1), 119-142.
- Deci, E. L., & Ryan, R. M. (1985). *Intrinsic motivation and self-determination in human behavior*. New York: Plenum.
- Diehm, R., & Armatas, C. (2004). Surfing: an avenue for socially acceptable risk-taking, satisfying needs for sensation seeking and experience seeking. *Personality and Individual Differences*, 36(3), 663-677.
- Duda, J. L. (1989). Goal perspectives and bahavior in sport and exercise settings. In C. Ames & M. Maehr (Eds.), *Advances in motivation and achievement* (Vol. 6, pp. 81-115). Greenwich, CT: JAI Press.
- Ewert, A. W. (1985). Why people climb: the relationship of participant motives and experience level to mountaineering. *Journal of leisure research*, 17(3), 241-250.
- Formula Xtreme. (2005a). YMF Loan Australian Superbike Championship: 2005 ASC Series and/or round entry form. Retrieved 04/04/, 2005, from <a href="http://www.aus-superbikes.com.au">http://www.aus-superbikes.com.au</a>
- Formula Xtreme. (2005b). *YMF Loan Australian Superbike Championship: 2005 Supplementary Regulations*. Retrieved 04/04/, 2005, from <a href="http://www.aussuperbikes.com.au">http://www.aussuperbikes.com.au</a>

- Frederick, C. M., & Ryan, R., M. (1995). Self-determined motivation in sport: a review using cognitive evaluation theory. *International Journal of Sport Psychology*, 26(1), 5-20.
- Freischlag, J., & Freischlag, T. (1993). Selected psycho-social, physical, and technical factors among rock climbers: a test of the flow paradigm. *Applied Research in Coaching and Athletics Annual*, pp. 109-122.
- Glaser, B. G. (1978). Advances in the methodology of grounded theory: theoretical sensitivity. Mill Valley: Sociology Press.
- Glaser, B. G., & Strauss, A. L. (1967). *The discovery of grounded theory*. London: Weindenfeld and Nicholson.
- Herzberg, F. (1966). Work and the nature of man. New York: Thomas T. Crowell.
- Jackson, S. A. (2000). Joy, fun and flow state in sport. In Y. Hanin (Ed.), *Emotions in sport*. Champaign, ILL: Human Kinetics.
- Jackson, S. A., & Marsh, H. W. (1996). Development and validation of a scale to measure optimal experience: The flow state scale. *Journal of Sport and Exercise Psychology*, 18, 17-35.
- Jackson, S. A., Thomas, P. R., Marsh, H. W., & Smethurst, C. J. (2001). Relationships between flow, self-concept, psychological skills, and performance. *Journal of Applied Sport Psychology*, 13(2), 129-153.
- Lewis, J. (2003). The engagement of volunteer officials of the Queensland Flag Marshals League Inc. as participants in serious leisure. Paper presented at the Women in Research 2003, Discovery: Discovering Research, Discovering Teaching & Learning, Discovering Self., Rockhampton.
- Lewis, J. (2004). Career volunteers in serious leisure: Queensland motorcycle racing officials. *Australian Journal of Volunteering*, 9(2), 56-66.
- Li, F., & Harmer, P. H. (1996). Testing the simplex assumption underlying the sport motivation scale: a structural equation modeling analysis. *Research Quarterly for Exercise and Sport*, 67(4), 396-405.
- Lipscombe, N. (1999). The relevance of the peak experience to continued skydiving participation: a qualitative approach to assessing motivations. *Leisure studies*, 18(4), 267-288.
- Lyng, S., & Snow, D. A. (1986). Vocabularies of motive and high risk behaviour: the case of skydiving. In J. Lawlea (Ed.), *Advances in group processes* (Vol. 3, pp. 157-179). Greenwich, Conn.: JAI.
- Martens, M. P., & Webber, S. N. (2002). Psychometric properties of the Sport Motivation Scale: an evaluation with College varsity athletes from the U. S. *Journal of Sport and Exercise Psychology*, 24(3), 254-270.
- Maslow, A. (1967). Lessons from the peak experience. *The Journal of Humanistic Psychology*, 2(Spring), 9-18.
- Maslow, A. (1968). Towards a psychology of being. New York: Van Nostrand.
- May, J. R., & Slanger, E. (2000). *The psychology of high level sport: is it extreme?*, from http://www.unicaen.fr/unicaen/sfps/pdf/congres2000-symp9.pdf
- McShane, S., & Travaglione, T. (2005). *Organisational behaviour on the Pacific rim: Enhanced Edition*. North Ryde, NSW: McGraw-Hill Irwin.
- Mitchell, R. G. (1983). *Mountain experience: the psychology and sociology of adventure*. Chicago, ILL: The University of Chicago press.
- Motorcycling Australia. (2005). 2005 manual of motorcycle sport. Melbourne: Motorcycling Australia.
- Murnighan, J. K. (1981). Group decision makingwhat strategies should you use. *Management Review, February*.

- Pelletier, L. G., Fortier, M. S., Briere, N. M., Vallerand, R. J., Tuson, K. M., & Blais, M. R. (1995). Toward a new measure of intrinsic motivation, extrinsic motivation, and amotivation in sports: the sport motivation scale (SMS). *Journal of Sport and Exercise Psychology*, 17(1), 35-53.
- Privette, G., & Bundrick, C. M. (1991). Peak experience, peak performance, and flow: personal descriptions and theoretical constructs. *Journal of Social Behavior and Personality*, 6, 169-188.
- Robbins, S. P., Millett, B., Cacioppe, R., & Waters-Marsh, T. (2001). *Organisational behaviour: leading and managing in Australia* (3rd ed.). Frenchs Forest, NSW: Pearson Education Australia.
- Rossi, B., & Cereatti, L. (1993). The sensation seeking in mountain athletes as assessed by Zuckerman's Sensation Seeking Scale. *International Journal of Sport Psychology*, 24, 417-431.
- Ryan, R., M., & Connell, J. P. (1989). Perceived locus of causality and internalization: examining reasons for acting in two domains. *Journal of personality and social psychology*, *57*, 749-761.
- Ryan, R., M., & Deci, E. L. (2000). Self-determination theory and the facilitation of intrinsic motivation, social development, and well-being. *American Psychologist*, 55(1), 68-78.
- Slovenko, R., & Knight, J. A. (Eds.). (1967). *Motivations in play, games and sports*. Springfield, Ill: Charles C Thomas.
- Vallerand, R. J., Deci, E. L., & Ryan, R., M. (1987). Intrinsic motivation in sport. *Exercise and sport sciences review*, 15, 289-425.
- Vallerand, R. J., & Losier, G. F. (1999). An integrative analysis of intrinsic and extrinsic motivation in sport. *Journal of Applied Sport Psychology*, 11, 142-169.
- Wagner, A. M., & Houlihan, D. D. (1994). Sensation seeking and trait anxiety in hangglider pilots and golfers. *Personality and Individual Differences*, 16(6), 975-977.