Contextualizing Unconventional Beliefs And Ritual Activity: A Case Study Of Moderate Risk And Problem Slot Machine Gamblers

by

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A thesis submitted in conformity with the requirements for the degree of Doctor of Philosophy
Department of Sociology
University of Toronto

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Abstract

This dissertation examines gambling associated beliefs. To this point, research on these beliefs is found in the field of psychology, but provides little contextual insight to the gambling scenario. The dissertation uses theoretical insights from the field of sociology, and specifically the sociology of beliefs as well as religious and social movements, to examine beliefs through a sociocultural lens. In a bid to gain contextual insight informed by subjective understanding, the research draws on in-depth interviews. In total 43 moderate-risk and problem slot machine gamblers were interviewed along with a comparison group of 10 non-problem gamblers all from Toronto, Ontario. Four key findings emerge from this research. 1) Beliefs about the ability to determine or procure an outcome might be more accurately described as modern superstitions; the comparison group of non-problem gamblers has similar beliefs, thus supporting this suggestion. 2) The casino frames the experience of these particular problem gamblers, providing them with structure, supporting their beliefs, and allowing them to experience and enact strongly held values. 3) Their belief in one day securing a substantial win appears largely indestructible
as demonstrated by investigating its structure and validation logics or strategies. 4) Various dissonance management strategies are used to maintain this belief although the success of any one strategy depends on a host of social processes; similar strategies and processes are found among apocalyptic groups awaiting prophetic confirmation. In their entirety, these findings suggest that the beliefs of problem gamblers may not only be viewed as cognitive distortions. An alternative view is that they might also be understood as a problematic belief system that is as “normal” as any other belief system, only that these beliefs are non-rational instead of irrational and thereby resistant to disconfirmatory evidence.
I dedicate this dissertation to my mother, Ingrid B. Hahmann and oma, Margarete Hoffmann who together taught me the importance of empathy, compassion, and education. Wir sehen uns wieder.
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Chapter 1
Introduction

Without understanding their (the gamblers’) belief system, we do not understand their behavior (Henslin 1967:316).

1 Background

Although estimates from 2003 claim that as many as 4.8% of adults have moderate to severe gambling problems in Ontario (Williams and Wood 2007), the reasons for problem gambling\(^1\) are not well understood. Psychological research suggests problem gambling may be a disorder of thinking, as gamblers report unique and unusual beliefs\(^2\) about control, luck, prediction and chance (Ladouceur and Walker 1996). In addition, their distorted beliefs may maintain their behaviour (Walker 1992b). It is generally accepted that modifications to cognitive distortions can generate behavioural modifications (Ladouceur, Sylvain, Boutin, Lachance, Doucet, and Leblond 2001; Ladouceur, Sylvain, Boutin, and Doucet 2002; Sylvain et al. 1997). If “erroneous perceptions” cause or sustain gambling habits (Ladouceur 2004:557), cognitive treatment to cure or modify these habits may be applicable. This treatment type may be able to adjust gamblers’ biased understandings of odds based information and/or other irrational beliefs related to their ability to control or determine the outcome of a gambling event.

Exactly what are these beliefs? Irrational beliefs identified in heavy gamblers include attributional biases, illusion of control, selective recall, instrumental beliefs about luck, misinterpreting cues (internal and external), and misunderstanding probability (Toneatto 1999). These are all tied to a core belief in the ability to ascertain, forecast or control an outcome (Ladouceur and Walker 1996). Problem gamblers (PGs) are more likely to have these beliefs than social gamblers (Joukhador, Blaszczynski, and MacCallum 2004), and they are more convinced in their validity than are non-PGs (Ladouceur 2004). Additionally, serious gamblers, across gaming types, develop an “illusion of control” (Langer 1975; Gaboury and Ladouceur

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\(^1\) As per the current DSM-5, problem gambling is now termed disordered gambling. Both lexes are used throughout with a heavier reliance on the former term given its historical use in the literature.

\(^2\) The terms irrational beliefs, erroneous beliefs, and cognitive distortions are used interchangeably throughout. Similarly, the terms unusual and unconventional beliefs hold the same meaning throughout this document.
That is, they believe there is a greater probability of obtaining a chance-determined outcome than is actually the case. In other words, gamblers may make decisions based on biased interpretations of the probability of winning, believing they can beat the system (Walker 1992b).

Much of the empirical research on gamblers’ beliefs centres on slot machine gamblers, partly because the game is purely chance based. Walker (1992b) for instance, finds slot machine gamblers display irrational thinking while playing. When Ladouceur Gaboury, Bujold, LaChance, and Tremblay (1991) studied the verbal reports of cognitions, using the “think aloud” method, where gamblers are asked to say anything that goes through their mind, they found slot machine and video poker gamblers associated wins with skill and losses with situational issues outside of their control (e.g., environmental factors). Walker (1992b) says this method accurately accounts for many irrational beliefs.

Further to this, Walker (1992b) explains that gambling behaviour may be driven by monetary wins and losses; “irrational thinking” causes him/her to overestimate his/her ability to win, and this drives behaviour. Losses are attributed to external factors (i.e. fatalistic thinking) and wins to special insight, perpetuating “chasing,” a cyclical pattern where the gambler tries to recoup past losses (Walker 1992b). Others report that as the frequency of gambling progresses, strongly biased and distorted cognitive schemas appear, and these schemas shape beliefs about attribution, personal skill and control over outcome, biased evaluations, erroneous perceptions, superstitious thinking and probability theory (e.g., Griffiths 1995; Ladouceur and Walker 1996). Others report such beliefs, many of which are highlighted by Toneatto (1999, 2002), operate as justifications to sustain continued play. Czerny, Koenig and Turner (2008) note that the biases cited in Toneatto (1999, 2002), including representativeness heuristics, attributional biases, selective memory, hindsight bias, and learning from losses are used to justify gambling.

When we take a close look at previous studies, many are conducted with non-gamblers or non-problem gamblers and make generalizations based on heterogeneous samples (Ciarrocchi and Richardson, 1989; Raylu and Oei 2002; Toneatto et al. 2007). Furthermore, there is no agreed upon ideal method to research these beliefs. Researchers have used the Gambling Beliefs Questionnaire (GBQ) to assess the relationship between pathological gambling and distorted
cognitions (Joukhador, MacCallum, and Blaszczynski 2003; Joukhador, Blaszczynski, and MacCallum 2004), the Gambling Attitudes and Beliefs Scale (GABS) (Breen and Zuckerman 1999) and the Drake Beliefs and Chance Inventory (DBC) (Wood & Clapham, 2005). The “think aloud method” (TAM) has been used to record in the moment erroneous verbalizations while gambling (Gaboury and Ladouceur 1989; Walker 1992b; Delfabbro and Winefield 2000) and is considered a more qualitative method, although it assumes what is verbalized in those moments is thought rather than utterances devoid of significance. Furthermore, subjects, under researcher scrutiny, may cause subjects to change their behavior in the presence of expert monitors (i.e., the Hawthorne effect).

These methodologies have met with some criticism. For instance, the GABS and DBC assess gambling-related thoughts but are limited in that they only measure certain cognitions (Moodie 2007). Others report the GBQ does not measure the strength of beliefs (Delfabbro 2004) and rests on the a priori assumption that the items are correctly understood. TAM has been scrutinized because a researcher records in the moment thoughts over the course of 10 minutes in an artificial environment that lacks realistic stimuli (Fisher and Griffiths 1995; Coventry and Norman, 1998; Teed et al. 2006). Researchers also find it difficult to translate these utterances into coding schemes (Dickerson and Baron 2000; Coventry and Norman 1998; Coulombe, Ladouceur, Desharnais, and Jobin 1992). Finally, several researchers have critiqued the overwhelming emphasis on research in laboratory settings with the use of non-gambler samples (Bennis 2004; Lesieur 1984; Walker 1992a).

Qualitative methods are used far less frequently to investigate these beliefs, with most psychological researchers relying on reductionist techniques or methods. An exception is Toneatto, Blitz-Miller, Calderwood, Dragonetti, and Tsanos (1997) who use interview data to develop a list of cognitive distortions in a sample of heavy gamblers. They combined this information with other studies to create a categorization of gambling distortions that typify beliefs about the ability to predict or otherwise determine a win (Toneatto 1999). A more subjective interpretation of gambling beliefs and strategies existed before this particular empirical study, most of which are sociological in orientation (e.g., Henslin 1967; Hayano 1978; King 1990; Oldman 1974). But many of these early empirical studies focus on the attitudes and
lifestyles of players who are not necessarily problem level gamblers and Henslin’s (1967) study draws on behaviourist theory offering little in the way of social understanding. The application of ethnographic methods by most of the aforementioned studies has come under scrutiny, with some questioning both the validity and reliability of this approach (Wood and Griffiths 2007; Parke and Griffiths 2008).

The prevailing explanation for the choice to gamble and the development of problem level behaviour is linked to biased evaluations and irrational cognitions centred on the chance of winning and how best to acquire a win (Cornish 1978; Ladouceur 1993; Lesieur and Rosenthal 1991; Wagenaar 1988; Walker 1992b). Because of the mentalist presuppositions (Vasterling 2007) inherent in the above research, the mind is of central focus filtering out outer world experience and social context. We know, however, that ethno- or sociocultural factors influence gambling beliefs, decision making, and strategies (Bennis 2004; Tepperman, Kwan, Jones, and Falkowski-Ham 2004; Abt, McGurrin, and Smith 1985a; Lesieur 1984; Oldman 1974). That is, sociocultural and subcultural factors have an impact on such beliefs, helping to cultivate or reinforce them. Some research has investigated how strategies and beliefs about winning are influenced by the structure of the gambling environment (e.g. Abt, McGurrin, and Smith 1985a; Cornish 1978; Dickerson 1993; Eadington and Cornelius 1994). Abt and colleagues (1985a) explain how the structure allows an individual to re-enter the gambling arena numerous times; each entrance represents a new attempt at the casino. Dickerson (1993) asserts these irrational beliefs are proof of “stereotypic behaviour that has a life of its own” and is “driven by the machine”. To this, Cornish (1978) adds certain structural characteristics of gambling activities serve as positive reinforcements; needs are identified, information is presented (or misrepresented), and cognitions are influenced and distorted in these contexts. In a study of adolescent slot-machine gamblers Griffiths (1994) finds similar irrational verbalizations and says the design of the slot machine reinforces the belief of control over outcomes, with features such as “nudge” and “hold” buttons giving the illusion of control (Griffiths 1993).

The importance of using a sociocultural focus in an examination of gambling beliefs has been noted by a few researchers. For example, Reith (2002), a sociologist, advises against pathologizing these beliefs without a deeper sociocultural understanding. Joukhador and
colleagues (2004) agree with Reith, cautioning “‘irrationality’ is relative to the religious/cultural reference base of the observer” (p. 179). This cast some doubt on a psychopathological focus on the beliefs of problem gamblers without sociocultural sensitivity.

A sociological understanding of gambling beliefs is lacking with much of the existing research fairly dated. Few, if any, sociocultural studies of gambling beliefs have examined slot machine gamblers specifically and/or problem level gamblers generally. The field of psychology has made a convincing argument for the study of gambling beliefs, especially slot or electronic gaming machine gamblers, but this has not been adopted by sociologists. In fact, sociologists Goffman (1967) and Geertz (1973) minimized the significance of slot machine gambling as a “sociological entity” worthy of study, albeit many years before the proliferation of this form of gambling. Currently, slot machine gambling is both a normalized and popular activity. Increased expansion and availability (St. Pierre, Walker, Derevensky, and Gupta 2014), including problematic features of the slot machines (Schüll 2012) could make it the most harmful game type according to the Problem Gambling Institute of Ontario (2015). For this reason alone, more research on problem level slot machine gamblers is warranted. Research with a focus on beliefs is also important given the reported tie to problem gambling behaviour. These beliefs, however, need to be examined through a sociocultural lens to socially and culturally situate them, not simply assume they occur in the mind extraneously of the social world.

This study seeks a better sense of how sociocultural and historical factors impact beliefs and gambling activity. Building on the rich body of psychological literature, it takes a contextual look at the study of gambling beliefs, drawing on sociological theory and using qualitative methods. It borrows frameworks from the sociology of (unconventional) beliefs and the related field of new religious and social movements. The relevance of the frameworks is explored in the following chapters. Briefly stated, however, they helped me examine gambling beliefs and action in a new way, resulting in some novel insights and new knowledge.

Gambling beliefs are the focus of this dissertation, identified as two separate but interrelated sets of beliefs. I draw on the belief type conceptualization offered by Snow, Rochford, Worden, and Benford (1986) to differentiate between beliefs in 1) faith/conviction in
the probability of change (i.e., holding a strong belief in their chance of a significant win) and 2) the instrumentality of one’s own efforts. Some chapters focus on one or the other; others reference both.

Values and beliefs are intertwined and as such, they play a role in this dissertation. That is, beliefs are “ideational elements that cognitively support or impede action in pursuit of desired values” (Snow et al. 1986:469-470). Values are guiding principles that might influence gambling action along with beliefs. The importance of values as it relates to gambling action will be clarified in the forthcoming chapters.

2 Research Questions and Chapter Outline

This dissertation is organized into seven chapters with Chapters 3-7 being stand-alone papers. Chapter 2 describes the methods used in this study as a whole, with a sample composition and data analysis section incorporated into each following chapter. Chapters 3 and 5-7 use a consistent sample of 43 moderate risk and problem gamblers, while Chapter 4 reports on a comparison group of 10 non-problem gamblers. To avoid redundancy, one methods section outlines the study type, sample description, ethical considerations, and the data gathering and analysis method. Since each paper/chapter outlines a different theoretical framework, more specific comments on data analysis are included in each.

Each chapter seeks to answer a distinct research question but all research questions are interrelated. The following is a list of the research questions:

1. What is the nature of the irrational beliefs, implicated in problem gambling behaviour, of moderate risk and problem slot machine gamblers?
2. How do these beliefs differ from those of non-PGs?
3. How do these beliefs operate/function?
4. More specifically, how do gambling beliefs validate gambling action?
5. How do broader social and organizational processes allow these gamblers to sustain belief in winning despite failure?
The conclusion will piece together insight from all chapters reflecting on the complexity inherent in prevention and treatment initiatives in light of the findings.

Chapter 3 explores the nature of gambling beliefs as these are related to special insight or the ability to control the outcome of the game using Toneatto’s (1999) typology of gambling distortions. It will shed light on the nature of these beliefs, noting both culture and history as per Campbell’s (1996) theory of modern superstition. Chapter 4 examines the differences and/or similarities between the belief types, again using the gambling belief typology established by Toneatto (1999, 2002). Chapter 5 asks how the beliefs and values of PGs operate and function. To help answer this question, it uses Snow and colleagues’ (1986) frame alignment perspective to explore how the casino organizes and structures the experience for gamblers, thereby facilitating continued action. Here the subjective interpretation of gamblers is used to illuminate value and belief amplification in the casino context. Based on its findings, the chapter makes some recommendations for problem gambling prevention.

Chapter 6 explores how dissonance management strategies are supported by social and organizational processes that help problem gamblers sustain continued action despite repeated failure. This chapter suggests challenges for both prevention and treatment of PGs. Chapter 7 explores the validation structure of gambling beliefs using Borhek and Curtis’ (1975) general theory of beliefs, as explored by Snow and Machalek (1982). The chapter evaluates the indestructability of gambling beliefs and sheds light on the relationship between gambling beliefs in terms of how one validates the other. Some insights into the value of cognitive treatment are provided, based on findings. Finally, as noted above, the conclusion ties together the findings of all five papers/chapters, reflecting on possible preventative measures and the challenges posed to treatment in light of these findings.
Chapter 2
Methodology

1 Introduction

This work explores the subjective understanding of and meaning bestowed upon the gambling experience for a sample of 43 moderate risk and problem gamblers. A small comparison group of 10 non-PGs was also recruited and more details about this sample will be discussed. This particular chapter addresses the study type, sampling strategy, sample composition, and sample recruitment; procedures for data gathering; procedures for the protection of human subjects and the interview process; the method of data analysis; and, finally, study limitations.

2 Design

The purpose of the work and type of information required suggested the use of qualitative methods. The goal was to enter the gamblers’ field of perception to identify the meanings they attach to the gambling experience using social theory to better understand social and cultural reinforcements for their beliefs and behaviour. The assumption made here is that gamblers could speak lucidly about the experience and provide real insight just as other researchers have also assumed (e.g., Henslin 1967; King 1990; Lesieur 1984; Oldman 1974; Schüll 2012).

This study investigates a specific case of gamblers engaged in land based, slot machine gambling, in the Toronto, Ontario context. This case study comprises a sample of 43 moderate risk and problem gamblers. As a counter-point, a small sample of non-PGs was recruited to better understand the beliefs, including their social origin, of the focal group of gamblers.

3 Case Study Overview

This project uses the case study method with a descriptive case study design. The individual is the unit of analysis, but as Tellis (1997) notes, referencing Feagin, Orum and Sjoberg (1990), “the quintessential characteristic of case studies is that they strive towards a holistic understanding of cultural systems of action” (p. 5). These cultural systems are sets of interrelated activities engaged in by those sharing a common social situation. The key to the use
of a case study is the definition of a “case”. A “case” is typically a “bounded entity either person, organization, behavioural condition, event or other social phenomenon”, but the boundary between the case and its contextual conditions, both spatially and temporally, may be murky (Yin 2012:4). For this study, the case includes individuals who engage in casino-based slot machine gambling, at the problem level. Gummeson (2001) suggests using multiple cases, for case replication purposes, to make either specific or general conclusions about complex interpretations of social life. Following Gummeson, this study uses a sample of 43 PGs and a comparison group of 10 non-PGs.

The goal of the method is to gather qualitative data yielding rich, detailed and in-depth information on a contemporary and complex phenomenon, in this case, the beliefs and actions of slot machine problem gamblers (Yin 1994). When engaging in a case study, Creswell (1998) suggests the researcher embark on the quest to understand a problem by “entering the field of perception of participants; seeing how they experience, live, and display the phenomenon; and looking for the meaning of the participants’ experiences” (p. 31). Put simply, all qualitative research is an interpretive study of human experience with questions asked to better ascertain “how social experience is created and given meaning” (Denzin and Lincoln 2005:10). To this end, qualitative research examines human situations, events, meanings, and experiences (von Eckartsberg 1998:3) focusing on humanly known reality and inter-subjectivity (Prus 2004). The assumption here is that individuals are able to provide accounts of their experience that shed light on the meaning and motivation behind action (i.e., why do people believe or behave the way they do?) (Charmaz 2005; Denzin and Lincoln 2005; Patton 1996). These individual experiences can also be used to identify social and organizational processes that may reinforce activity (Becker 1973; Burawoy 1998; Geertz 1973; Glaser and Strauss 1967). Following Lesieur’s (1984) qualitative work on the life-world of gamblers, this study is one of “human knowing and acting” in the words of Prus (2004), drawing on the personal accounts of gamblers.

Researchers can also draw on theory to enrich understanding of possible sociocultural or historical forces that can bear upon the experiences of individuals (Burawoy 1998; Layder 1998). Layder notes the importance of analysis and theorizing throughout the research process, which was done here. This co-occurring process of analysis and theorizing brought many fields
of sociology and theoretical frameworks to the forefront. Although further discussed in the “data analysis method” section, the meaning tied to the activity, the nature and structure of beliefs, as well as the social and organizational processes guiding the activity made the sociology of religion an optimal field to inform theoretical understanding of this study’s findings.

Interviews were a source of information on both micro (individual) and meso (organization) level experiences. That is, gamblers spoke of themselves and their experiences as individual gamblers and as members of the casino subculture (Swanborn 2010; Prus 2004). To augment my understanding of the casino context and better appreciate the insights provided by participants, I conducted some observational research at the casino on a weekly basis from October 2012 to March 2013. I became a member of the casino organization by signing up with the “Winner’s Circle” which links casino patrons to the casino through a point allocation system (e.g., a card that monitors their activity), with rewards and other incentives awarded based on amount spent. It should be noted that participant observation was not an official source of data, but a way to better understand what was expressed in the interviews.

After completing my study of the focal group, I sought an additional set of “cases”. As the data collection proceeded for the main group of PGs, I became skeptical about the nature of these beliefs and their relationship to action as these are described in the literature. Yin (2012) calls this “rival thinking” (p. 12). Rival explanations provide a critical check and balance that increases the credibility of the research findings (Tobin 2010). This rival explanation can elucidate the causes, contexts, and consequences of the phenomenon under study (ibid). A rival explanation battles with the existing explanation enabling new insight according to Tobin (2010). In this case, existing research on gambling beliefs identifies them as pathological, distortions of the mind, involved in disordered gambling (Toneatto 1999; Joukhador, 3

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3 Interviews were guided by a critical realist understanding of ontological levels of reality. Given the preliminary nature of this research this general approach helped guide data collection venturing into new territories. Four levels of analysis that align with Bhaskar’s (1975) nested ontological domains, the Real, Actual and Empirical were taken into consideration in data collection, namely context, setting, situated activity, and self. In other words, the micro, meso, and macro levels are all important considerations in understanding a social phenomenon. To ascertain the macro level, the job of the social researcher is to extrapolate from the data drawing on theoretical insight.

4 I do not report on this information here, relying instead on detailed interview data.
Blaszczynski, and MacCallum 2004). Therefore, I began a deliberate search for “discrepant evidence” (Yin 2012:12) in a comparison group of non-PGs to compare superstitious beliefs and actions across groups.

It is important to note that any generalization of case study findings is limited to the case itself or types of cases. However, when undertaken carefully, case studies can provide general understanding about similar individuals or groups (Yin 1984). While the inability to practice generalization limits the use of case study method by those with a more positivist leaning, Yin (1984) argues theoretical generalization is to the domain of the case study what statistical generalization is to the true experiment. In the end, generalizations should be understood as analytic and not statistical. That is, the researcher makes a conceptual claim showing how her study’s finding have informed the relationship among a particular set of concepts, theoretical constructs, or sequence of events. My claims pertaining to the focal group of PGs are explored in chapters 3, and 5 through 7. The same theoretical propositions should be applied to other situations outside the completed case study, “where similar concepts, constructs, or sequences might be relevant” (Yin 2012:16). In this study, my use of a comparison group of non-PGs (see Chapter 4) helped reaffirm the theoretical propositions made about PGs in Chapter 3.

Yin (1994) says analysis for the descriptive case study hinges on the logical linking of the data to the propositions (i.e., theoretical framework) and explicating the criteria by which findings are to be interpreted. This requires outlining a descriptive theory which establishes the overall framework for the researcher to follow (Hancock and Algozzine 2006; Munhall 2007). Accordingly, I outline various frameworks in either the literature review or individual section in each Chapter 3 through 7.

4 Sampling Strategy and Sample Description

This study involved a focal and comparison group united by a single sampling strategy but with different sample descriptions. In the sampling strategy, to remain consistent with existing literature that maintains “irrational or erroneous” beliefs are most pronounced in PGs (Griffiths 1994; Ladouceur 2004), purposive sampling was used to recruit 43 gamblers who noted problems with their gambling actions. This study was further refined by looking at PGs with a
specific game type preference, namely, slot machine gambling. Slot machine PGs were targeted for four reasons. First, in Ontario, slot machines are growing in availability and popularity. In fact, an increase in slot machines—from roughly 15,000 in 2000 to over 50,000 in 2008 (Rutsey 2009) – is linked to an increase in gaming, resulting in revenues of $2,985 million\(^5\) in 2010 from slot machine gambling alone (Ontario Lottery and Gaming Commission 2011). More up to date data from 2013-2014 places total revenues at $1.96 billion from OLG slots and casinos. This is a decline from the previous fiscal year revenue due to the closure of OLG Slots at Fort Erie Race Track, OLG Slots at Hiawatha Horse Park and OLG Slots at Windsor Raceway. Despite these closures, expansion at the OLG Slots at Woodbine Race Track helped increase the overall revenue figure, with the addition of 415 more slots on average from the previous fiscal year (OLG 2014). Furthermore, net adjusted income shows gains from the previous fiscal year of $283.8 million due to the elimination of expenses related to Ontario’s horse racing industry. Undoubtedly, gambling popularity is increasing demonstrated by slot expansion\(^6\) where the bulk of gambling revenue is generated (Williams and Wood 2004). Second, slot machine gambling is a game of pure chance where gamblers have no control over the outcomes, making beliefs to the contrary an interesting point of study (Walker 1992\(^b\)). Third, a focus on specific game subtype\(^7\) (Raylu and Oei 2002) is important when drawing conclusions about PGs (Toneatto, Turner, Zack, Farvolden, and Bagby 2007). Fourth, false beliefs or irrational thinking are highly prevalent in slot machine gamblers (e.g., Walker 1992\(^b\)).

All participants were screened using the Lie-Bet quick screening instrument (Johnson, Hamer, Nora, Tan, Eisenstein, and Englehart 1988). At the end of each interview, the Problem Gambling Severity Index (PGSI), a more detailed screening tool used to measure the severity of gambling problems in the general population, was administered to confirm problem gambling behaviour. The PGSI, a reliable and valid tool, contains 9 questions on gambling behaviour (refer to Appendix 1). Each answer to a question is given a score from 0 to 3 (Never=0;

\(^5\) This figure includes revenue from slot facilities at race tracks, smaller casinos (operated by OLG primarily), and resort casinos.
\(^6\) Ontario’s new provincially regulated online gaming site launched in 2015 meaning that slot machine play has expanded to the online forum.
\(^7\) Within game subtypes, a distinction is made between games of chance (e.g., slot machine) and games of skill (e.g., poker).
Sometimes=1; Most of the time=2; Almost always=3). Scores for the 9 items are added and the results interpreted using the following guide:

0 = Non-problem gambling.

1-2 = Low level of problems with few or no identified negative consequences.

3-7 = Moderate level of problems leading to some negative consequences.

8+ = Problem gambling with negative consequences and a possible loss of control.

Purposive sampling was applied to recruit an equal proportion of male and female gamblers to avoid sampling bias. This was important, because women are more likely to engage in games of chance (Hraba and Lee 1996; Petry 2005; Toneatto et al. 2007).

To meet study recruitments all participants had to be older than 20 years of age, as this study was designed for a strictly adult sample of legal gamblers.

The sample demographics are outlined in Table 1. Although 45 participants were recruited, only 43 were confirmed by the PGSI as moderate-risk or problem gamblers. That is, 2 interviews were omitted from analysis after assessing the PGSI scores. Although problem level gamblers were sought, the gamblers recruited were either at the moderate (n=15) or high problem level\(^8\) (n=28). That is, the majority of the sample presented signs of problem gambling (65%), but a percentage of the sample scored below the problem level (35%). Those just below the problem level were moderate level gamblers; their problem caused them to experience some negative consequences whereas PGs experienced many negative consequences and possible loss of control. Those who fall in the moderate range, with a score range of 3 to 7, had a mean score of 5.27 with a standard deviation of 1.23 and median of 5.00. The implication here is that most moderate gamblers were on the higher end of the score average suggesting that the risk of developing a severe problem was there.

\(^8\) The Problem Gambling Institute of Ontario (2015) reporting on 2011 data suggests that approximately 1.2%-3.4% of Ontarians are affected by moderate to severe problem gambling.
Differences between the problem and moderate level groups are noted in Table 1. For instance, most problem gamblers were between 41 and 50 years of age (50%), whereas the sample’s moderate gamblers were older, between 51 and 60 years of age (40%). More men were at the problem level (57%) than women. More problem (18%) than moderate gamblers (20%) had never been married and similarly more moderate gamblers than problem gamblers were married. With respect to education level, more moderate gamblers had a university degree (40%) than those in the problem level group (14%). A greater percentage of moderate level gamblers (27%) fell into the lowest income bracket when compared with problem level gamblers (21%). At the opposite end, more moderate level gamblers held incomes in the $60,001 to $100,000 range (13%) versus problem gamblers (11%). When compared to moderate level gamblers (33%), more problem level gamblers (68%) were ethnically European or British while more moderate gamblers (27%) were South Asian when compared with problem level gamblers (4%). More of those in the problem level group are polygamblers\(^9\) (17.9%) when compared with those in the moderate group (7%). Finally, the average number of years spent gambling is higher for problem (19 years) versus moderate level gamblers (15 years) as was the monthly gambling expenditure, at $760.71 and $466.67 respectively.

The full sample, containing all moderate-risk and problem level gamblers, contained an equal distribution of male and females. Roughly two thirds of this sample (67%) was 41 years of age or older. Just under half the sample had never been married (42%) and roughly 21% were divorced, with the married category falling slightly under this percentage (19%). For the highest level of education attained, a large percentage possessed a college diploma (28%) with roughly one third (33%) having had at least some university experience, extending all the way to graduate or professional school training. Slightly less than one quarter of the sample had an annual personal income lower than $20,000, while the majority fell equally in either the $20,001 to $40,000 (33%) or the $40,001 to $60,000 (33%) income ranges. The multicultural city of Toronto, the area of recruitment, elicited an ethnically diverse sample with the majority from a European background, followed by the British Isles, although various parts of Asia (East

\(^9\) This term refers to gamblers who play more than one game type.
Southeast, West, and South) were well represented (26%) along with the Caribbean (14%). More than half of the sample (56%) was Canadian born\textsuperscript{10}.

Although purposive sampling was used to engage only slot machine gamblers 14% were polygamblers playing other games in addition to their preferred game type of slot machine gambling. A substantial portion of the lives of participants was spent gambling, with the average number of years being 18, although the standard deviation of 12.03 suggests that this figure is slightly, positively skewed. Since the majority of the sample is older than 41 years of age, bivariate analysis showed that those who were in this older group, and having had more years to gamble, made for the higher mean gambling history score\textsuperscript{11}. The average gambling expenditure at $650.00\textsuperscript{12} per month may help explain why the entire sample reported gambling as a source of financial difficulty\textsuperscript{13}.

Table 1. Sample Composition: Focal Group*  

<table>
<thead>
<tr>
<th>Variables</th>
<th>Full Sample</th>
<th>Moderate Risk Group</th>
<th>Problem Group</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N=43</td>
<td>N=15</td>
<td>N=28</td>
</tr>
<tr>
<td>Gender</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>46.5</td>
<td>53.3</td>
<td>42.9</td>
</tr>
<tr>
<td>Age:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>21-30 years</td>
<td>14</td>
<td>20</td>
<td>10.7</td>
</tr>
<tr>
<td>31-40 years</td>
<td>18.6</td>
<td>20</td>
<td>17.9</td>
</tr>
<tr>
<td>41-50 years</td>
<td>34.9</td>
<td>6.7</td>
<td>50</td>
</tr>
<tr>
<td>51-60 years</td>
<td>20.9</td>
<td>40</td>
<td>10.7</td>
</tr>
<tr>
<td>≥60 years</td>
<td>11.6</td>
<td>13.3</td>
<td>10.7</td>
</tr>
<tr>
<td>Marital Status:</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Never married</td>
<td>41.9</td>
<td>40</td>
<td>42.9</td>
</tr>
<tr>
<td>Married</td>
<td>18.6</td>
<td>20</td>
<td>17.9</td>
</tr>
<tr>
<td>Separated</td>
<td>4.7</td>
<td>6.7</td>
<td>3.6</td>
</tr>
<tr>
<td>Divorced</td>
<td>20.9</td>
<td>26.7</td>
<td>17.9</td>
</tr>
<tr>
<td>Widowed</td>
<td>2.3</td>
<td>6.7</td>
<td>3.6</td>
</tr>
<tr>
<td>Cohabiting</td>
<td>11.6</td>
<td>6.7</td>
<td>14.3</td>
</tr>
<tr>
<td>Education Level:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Secondary</td>
<td>25.6</td>
<td>20</td>
<td>28.6</td>
</tr>
<tr>
<td>Trade School</td>
<td>9.3</td>
<td>6.7</td>
<td>10.7</td>
</tr>
<tr>
<td>Some College</td>
<td>4.7</td>
<td>6.7</td>
<td>3.6</td>
</tr>
</tbody>
</table>

\textsuperscript{10} Please refer to Appendix 8, Table 9 for further information on the countries of origin for this sample.

\textsuperscript{11} Further analysis of the table shows what would be a linear relationship with mean gambling history score increasing with age, aside for the dip in mean score for the 51 to 60 age group. Please refer to Appendix 10, Table 13.

\textsuperscript{12} This figure is slightly positively skewed with a standard deviation of 400.00.

\textsuperscript{13} This question was asked as a part of the problem gambling severity index with all gamblers in the sample answering “yes” to this dichotomous outcome response variable. See Appendix 1 for the Problem Gambling Severity Index (PGSI).
| College Diploma | 27.9 | 20 | 32.1 |
| Some University | 9.3  | 6.7 | 10.7 |
| University Degree | 14   | 13.3 | 14.3 |
| Masters/Professional Degree | 9.3 | 26.7 | |

**Income Range:**

| Less than $20,000 | 23.3 | 26.7 | 21.4 |
| $20,001-$40,000 | 32.6 | 33.3 | 32.1 |
| $40,001-$60,000 | 32.6 | 26.7 | 35.7 |
| $60,001-$100,000 | 11.6 | 13.3 | 10.7 |

**Ethnic Background:**

| Aboriginal | 2.3 | 6.7 |
| British Isles | 18.6 | 13.3 | 21.4 |
| Caribbean | 14 | 20 | 10.7 |
| Eastern/Other European | 4.6 |  | 7.2 |
| Southern European | 25.6 | 20 | 28.6 |
| Western European | 7 |  | 10.7 |
| Latin/Central/South American | 2.3 |  | 3.6 |
| West and East/South East Asian | 14 | 13.4 | 14.2 |
| South Asian | 11.6 | 26.7 | 3.6 |

**Canadian Born:**

| Yes | 55.8 | 53.3 | 57.1 |
| No | 44.2 | 46.7 | 42.9 |

**Problem Gambling Severity Index Score:**

| Moderate Level | 34.9 |
| Severe Level | 65.1 |

**Slots Exclusively:**

| Yes | 86 | 93.3 | 82.1 |
| No | 14 | 6.7 | 17.9 |

| History of Gambling (total years) | 17.81 (12.03) | 15.40 (11.12) | 19.11 (12.50) |
| Median | 16.00 | 14.00 | 19.50 |

| Monthly Gambling Expenditure | $658.15 (609.39) | $466.67 (363.08) | $760.71 (691.40) |
| Median | $400.00 | $350.00 | $500.00 |

*Statistics are reported as means (SD) and percentages.

In the comparison group, 10 non-PGs were interviewed with the demographic composition highlighted in Table 2. The intention was to garner a sample that similarly honed in on adults above the age of 20, an equal percentage of both males and females, and some ethnic variability to allow a more effective comparison (Shadish and Clark 2004).

To summarize, the sample comprises an equal distribution of male and female participants, with the majority between 51 and 60 years of age. Income levels and marital status are fairly equally spread across categories, and most participants (60%) have some post-secondary education. More than half the sample is from European or British descent and the majority (70%) are Canadian born (see Appendix 8, Table 10 for data pertaining to the country
of origin for the sample). This suggests much less ethnic diversity in this sample when compared with the focal group.

Table 2. Sample Composition: Comparison Group*

<table>
<thead>
<tr>
<th>Variables</th>
<th>Full Sample</th>
</tr>
</thead>
<tbody>
<tr>
<td>N=10</td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>50</td>
</tr>
<tr>
<td>Age:</td>
<td></td>
</tr>
<tr>
<td>21-30 years</td>
<td>20</td>
</tr>
<tr>
<td>41-50 years</td>
<td>30</td>
</tr>
<tr>
<td>51-60 years</td>
<td>50</td>
</tr>
<tr>
<td>Marital Status:</td>
<td></td>
</tr>
<tr>
<td>Never married</td>
<td>30</td>
</tr>
<tr>
<td>Married</td>
<td>20</td>
</tr>
<tr>
<td>Separated</td>
<td>10</td>
</tr>
<tr>
<td>Divorced</td>
<td>20</td>
</tr>
<tr>
<td>Cohabitating</td>
<td>20</td>
</tr>
<tr>
<td>Education Level:</td>
<td></td>
</tr>
<tr>
<td>Secondary</td>
<td>30</td>
</tr>
<tr>
<td>Trade School</td>
<td>10</td>
</tr>
<tr>
<td>College Diploma</td>
<td>20</td>
</tr>
<tr>
<td>Some University</td>
<td>20</td>
</tr>
<tr>
<td>University Degree</td>
<td>10</td>
</tr>
<tr>
<td>Masters/Professional Degree</td>
<td>10</td>
</tr>
<tr>
<td>Income Range:</td>
<td></td>
</tr>
<tr>
<td>Less than 20,000</td>
<td>30</td>
</tr>
<tr>
<td>20,001-40,000</td>
<td>40</td>
</tr>
<tr>
<td>40,001-60,000</td>
<td>20</td>
</tr>
<tr>
<td>60,001-100,000</td>
<td>10</td>
</tr>
<tr>
<td>Ethnic Background:</td>
<td></td>
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<tr>
<td>Aboriginal</td>
<td>10</td>
</tr>
<tr>
<td>British Isles</td>
<td>20</td>
</tr>
<tr>
<td>Eastern European</td>
<td>30</td>
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<tr>
<td>Southern European</td>
<td>20</td>
</tr>
<tr>
<td>South Asian</td>
<td>10</td>
</tr>
<tr>
<td>Central Africa</td>
<td>10</td>
</tr>
<tr>
<td>Canadian Born:</td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>70</td>
</tr>
<tr>
<td>No</td>
<td>30</td>
</tr>
</tbody>
</table>

*Statistics are reported as percentages.

5 Procedures for Data Collection

Interviews were the central data source for this research project, with some informal participant observation after the initial data collection. Participant observation was conducted roughly 4 days a month over a 6 month period (October 2012 – March 2013) at an Ontario casino to gain a sense of the experience described by participants in the interviews. Although it is typical for
participant observation to be conducted first when other data collection methods are used, for this study interviews were found to be the central source of information regarding gambling associated beliefs and actions. Participant observation provided some additional contextual and experiential insight to bolster understanding derived from interviews\textsuperscript{14}. Interviews were conducted by the principal investigator between August 15, 2012, and November 30, 2012, and between February 01, 2013, and March 31, 2013. In the next subsection recruitment is discussed in further detail.

5.1 Recruitment

The following advertisement was placed on Kijiji and Craigslist, online forums for classified advertisement, at the start of recruitment:

SLOT MACHINE PLAYERS NEEDED FOR A STUDY. Do you have gambling strategies that you want to discuss with a researcher? If so, please call to see if you qualify.

After 2 weeks of recruitment, only 4 interviews were conducted, indicating a new strategy was required. At this point, an advertisement was placed in Metro, a free local newspaper. This advertisement ran for a 5 consecutive weekdays and resulted in 20 interviews. Following this, an advertisement was placed in 24 Hours, another free daily and local newspaper with a slightly more right-wing leaning than Metro. The advertisement’s 5 day consecutive run resulted in the final 22 interviews.

Interested potential participants called and were asked the following qualifying questions (refer to Appendix 2): 1) do you spend over $100.00 per month at the slots?; 2) do you consider slots your game of choice?; 3) are you 20 years of age or older?; 4) do you have particular strategies and beliefs about luck and chance that you are eager to talk about in an hour long interview? If the respondent answered yes to all four questions, s/he was asked if s/he would

\textsuperscript{14} As discussed later in this section, it was important for me, the researcher, to give primacy to the insights, experiences, and overall subjective understanding of participants. Participant observation served a secondary function, allowing me to further understand the setting and organizational activities described first by participants; experts of their experience.
like to continue. If respondents were still interested, they were screened for problem gambling using the Lie-Bet instrument (Johnson et al. 1988), a rapid screening tool consisting of two questions:

1. Have you ever felt the need to bet more and more money?
   
   Yes________ No________

2. Have you ever had to lie to people important to you about how much you gambled?
   
   Yes________ No________

If a participant said yes to both questions, s/he was invited to an interview at a location and time of her/his choosing. Most participants requested that I secure a space. Some interviews were conducted at the Department of Sociology, University of Toronto, in a private and secure office space; others were held in locations around the University of Toronto, St. George campus. To avoid coercion in recruitment, the $20.00 honorarium was not noted on the advertisement and not disclosed unless a qualifying participant asked about it on the phone.

The comparison group, of 10 non-PG participants, was exclusively recruited using 24 Hours, the free daily newspaper mentioned above. A 3 day run in the paper elicited the full sample of 10 participants from the population at large. The advertisement read as follows:

PARTICIPANTS NEEDED for a study on decision making. Please call to see if you qualify.

When potential participants called, I asked the following qualifying questions (refer to Appendix 3): 1) are you 20 years of age or older?; 2) do you have any non-religious/secular beliefs that are eager to talk about in an hour long interview?; 3) do you gamble? If the potential participant answered yes to the first two questions and no to the final question s/he was invited to participate in the study. Most said they did not gamble; those who said they gambled occasionally were asked how much they spent per month, in the last year, and if that exceeded $100.00. One of the ten participants said they gambled occasionally, but only $20.00 in the past
12 months. Next, they were screened using the Lie-Bet Instrument (see above) and had to answer “No” to both questions to qualify. Again, participants were invited to an interview at a location and time of their choosing. Most interviews were conducted at the Department of Sociology, University of Toronto, in a private and secure office space, and others around the University of Toronto, St. George campus.

6 Procedures for Protection of Human Subjects and the Interview Process

Research ethics approval was granted by the University of Toronto, Office of Research Ethics (reference # 27651) on May 4, 2012, before data collection began. Interviews were conducted in downtown Toronto, Ontario, near or on the University of Toronto, St. George campus. Unless the participant requested a particular space, interviews were conducted in a safe and secure space on campus. Roughly 95% of all interviews took place at the University of Toronto whereas 5% were conducted in public places outside the university at the request of these participants. Upon meeting with the researcher, the participant was given the information letter (refer to Appendix 4) and consent form (refer to Appendix 5) to read. Depending on the participant’s preference, the consent form was either read to him/her or summarized once s/he had a chance to read it; the goal was to ensure all participants understood their rights as participants. The general scope of the project and types of questions were described to each participant, and any questions they had were answered. Interviews lasted anywhere from 45 minutes to 2.5 hours. The length was contingent on the participant and his/her desire to elaborate, sometimes extensively, on questions listed on a semi-structured interview guides (refer to Appendix 6 and 7). The questions listed on the interview guide were only used as a rough guide, allowing participants to expand on questions and permitting the investigator to delve into areas of interest to both researcher and participant.

Demographic questions were asked at the end of the interview. These included basic demographic questions (i.e., age, annual gross income, and ethnicity) and questions regarding all game types played and monthly gambling spending. Following these questions, the Problem Gambling Severity Index (PGSI), a reliable and valid screening tool, used to assess gambling problems in the general population, was administered to participants of the focal group only.
According to Holtgraves (2009), the PGSI seems a viable alternative to the SOGS, a longer diagnostic tool, for assessing degrees of problem gambling severity in a non-clinical context.

All interviews were conducted taking into account power imbalances in the interview process, as explored by feminist epistemology (McCorkel and Myers 2003; Best 2003; Smith 1990). That is, as interviewer, I remained sensitive to possible power imbalances and maintained an empathetic, non-judgmental and conversational tone. Participants were asked to see themselves as the experts of their own lives and to treat the interview as a dialogue rather than an interview. This approach was perhaps most important when dealing with PGs, a vulnerable population given their problem behaviour and well documented consequences of it (e.g., poor mental health and economic outcomes).

I opened the interview dialogue with a brief overview of my own beliefs in astrology, numerology, and good luck charms. This approach is similar to Oakley (1981:31-37) who advocates a non-hierarchical dynamic and encourages sharing personal information with informants. Upon disclosure of my unusual beliefs, participants either remarked that they held similar beliefs or made it clear they did not share in these beliefs. Either way, the opening statement broke the ice that more generally forms when formal discussions of consent reinforce the roles of researcher and participant.

Throughout the interview, however, the roles of “expert” (participant) and “knowledge seeker” (interviewer/researcher) were reaffirmed, especially when participants referred to me as the expert. Many falsely assumed I was a therapist or a member of the Ontario Lottery and Gaming Corporation, even though I explained from the beginning that I was a researcher. These incorrect assumptions helped them to brand me an expert either in problem gambling treatment or in slot machine functionality. Whenever necessary, I refuted these assumptions and reinstated participants as “experts”. Using the following strategies, I attempted to reestablish the dynamic established at the beginning of the interview: I asserted they were the “experts of their own lives” while I was the “knowledge seeker”; I used an appreciative tone to tell them they were enlightening me on casino related activities and situations; I allowed them to explore areas not necessarily highlighted in the interview guide. The latter strategy caused the interview to move into interesting areas within the general research topic or gave participants a cathartic moment to
release emotions. A few participants remarked that the interview allowed them to share certain experiences, beliefs, opinions, sometimes eliciting emotional responses.

According to feminist epistemology, the researcher should reflect upon his/her background and how it relates to the researched. There is some debate about whether “insider” or “outsiders” should study a particular group phenomenon (Best 2003; Cotterill 1992; Collins 1991; Aguilar, 1981; Merton, 1972). For this particular research, I was an “outsider” to the lives and subcultural experiences of gamblers. This was a positive attribute, as my outsider status helped me enter the lives of gamblers with few preconceived notions and enabled Verstehen. That said, I had gained some understanding of gamblers before this study when I interviewed approximately 30 problem gamblers and several partners for a study on behaviour change in problem gamblers (Tepperman 2009). In addition, I had conducted some participant observation at an Ontario casino, but did so after interviews were completed. Overall, I was an outsider to the focal group and recognizing this allowed me to defer to participants as the true experts. In sum, interviews were conducted with feminist epistemology as a guide; I remained mindful of the goal to better understand the beliefs and actions of problem gamblers from their perspective.

Ethical considerations continued after interviews were completed. All participants were given a $20.00 honorarium irrespective of their full participation. Those from the focal group were also given information, with their honorarium, pertaining to sources of help if required. The note included with the honorarium read:

Thank you for your participation! For more information on problem gambling resources/services, please visit: http://www.rgrc.org/en/community-help or call the Ontario Problem Gambling Helpline 1-888-230-3505 toll-free, confidential, anonymous, open 24 hours.

In accordance with the University of Toronto ethics protocol, to ensure the anonymity and safety of participants, paper based documents were immediately de-identified except for consent forms which were placed in a locked filing cabinet and have since been destroyed. All audio and written documents were de-identified and either stored safely on an encrypted USB key or in a secure filing cabinet. Transcripts were audio taped, transcribed verbatim, and de-identified to
ensure anonymity in accordance with the University of Toronto ethics protocol. All names and other identifiers were removed, noted as “X” or changed to avoid possible identification. In what follows, participants are referred to by their participant number with some descriptive statistics provided for more demographic insight on each participant in Appendix 9, Table 11 (Focal Group) and Table 12 (Comparison Group). Since the majority of the sample is at the problem level and many of the moderate risk gamblers carry similar problems, the focal sample will be referred to as PGs in the forthcoming chapters.

7 Data Analysis Method

Data analysis followed a practical iterative framework, as the study delves into sociocultural mechanisms and their role in the formation and cultivation of gambling related beliefs and behaviour. The work began as a general study of how social context is involved in the beliefs and behaviour of PGs, and the open ended interview guide reflects this orientation. Instead of following an inductive analysis where patterns, themes and categories of analysis “emerge” on their own, as with true grounded theory (Glaser and Strauss 1967), the study assumes the data are driven by what the inquirer wants to know and how she is interpreting what the data are telling her “according to subscribed theoretical frameworks, subjective perspectives, ontological and epistemological positions, and intuitive field understandings” (Srivastava and Hopwood 2009:77).

Instead of developing generalizations or social laws from the data (Strauss and Corbin 1994; Guba and Lincoln 2004), this research seeks to develop a deeper socially layered understanding of the phenomena (Wuisman 2005). To this end, a pattern of examining and re-examining the data facilitates the emergence of additional questions and new connections between concepts and patterns, along with more complex formulations and a deepening understanding of the material. An iterative set of processes, not mechanical in their leaning but deeply reflexive, results in deep insight and meaning development. Reflexive iteration is a circular process of data analysis that allows the researcher to “get inside her head” to pinpoint emerging insights with the intent of refining focus and cultivating understanding. A reflexive approach also “recognizes that the categories, concepts, and theoretical level of an analysis emerge from the researcher’s interactions within the field and questions about the data”
That is, the researcher influences the entire research process; the concepts and categories often reflect what and how she thinks which, in turn, has an impact on the shaping and collecting of data (ibid).

Mauthner (2003) calls attention to the recent “reflexive turn” in data collection (e.g., Coffey 1999; Finlay and Gough 2003; Hopwood 2007) but discussions of analytical reflexivity are hard to find, likely because of the abstract process that it entails (p. 415). Given this gap, Srivastava and Hopwood (2009:78) offer a framework guided by Patton’s (2002) three questions for “triangulated reflexive inquiry”, to guide a researcher through the data analysis process with particular reference points. It stipulates three questions the researcher should ask herself during data analysis:

Q1) What are the data telling me? (Engaging with theoretical, subjective, ontological, epistemological, and field understandings)

Q2) What is it I want to know? (According to research objectives, questions, and theoretical points of interest)

Q3) What is the dialectical relationship between what the data are telling me and what I want to know? (Refining the focus and linking back to research questions)

Each question is accompanied by a description of the actions involved when asking it. First, the lenses need to be clarified (Q1). In my case, I investigated the topic over several years generally and over several months more specifically. Most existing research on gambling beliefs and their relationship to behaviour lies in the field of psychology where an understanding of problem gambling as pathological dominates. That is, the beliefs of gamblers are exaggerated or irrational thought patterns that perpetuate pathological states. Again, lacking from the dearth of literature is a better understanding of their nature and constancy reflecting on sociocultural reinforcements assuming instead that they occur in the mind. The epistemological focus in such research is positivistic with the application of reductionist techniques and an event based ontology focusing on the individual. Taking a positive approach means assuming the world consists of empirically observable events that a social scientist can measure (Hollis 1994). A
constant concurrence of events is taken as proof of their causal relationship, and these relations are hypothesized as causal laws (Guba and Lincoln 2004). Positivists test their laws by assessing whether they accurately predict future occurrences (or non-occurrences) of events (Hollis 2003). Following an event based ontology means positivists do not acknowledge an appearance/reality discrepancy and connect various events instead of explicating the forces behind these events. In other words, positivism can show us the event was to be expected, but does not show us why it happened (Keat 1971).

This particular research does not set out to produce universal laws but to produce deeper insights into certain sociocultural mechanisms. It uses a social ontology to acknowledge the importance of social context and a relativist epistemology to mark a concern for reflexivity and subjectivity. Although it follows a relativist epistemology, it is not anti-foundationalist in that it assumes reality does exist and a researcher can rationally explain reality with appropriately assessed theories (Potter and Lopez 2001:9).

In this study, before theoretical appropriation could begin, data were collected and coded for emerging themes. In addition, memos were written to facilitate subsequent analysis. NVivo data management software helped organize codes and memos. Open coding involves reading through the data-set and becoming familiar with it; data are coded based on chunks pertaining to general concepts or ideas (Glaser and Strauss 1967). At this stage of the present study, data appeared contradictory and confusing but also exciting. I had to ask myself what the data were telling me on a conceptual level. With the help of preliminary notes, abstract thinking and feedback from a committee of experts\textsuperscript{15}, it became clear that my initial research questions lacked focus. Analysis of the comparison group data along with the focal group helped formulate the following research question:

1) What is the nature of the reinforcing beliefs of (moderate and problem slot machine) gamblers and how do they differ from those of non-PGs?

\textsuperscript{15} This committee included experts in problem gambling, sociological theory, social policy, and clinical psychology.
I wanted to know more, and this led me to the second question (Q2) which encouraged me to find a closer link between data and theoretical conceptualization. After months of research into existing sociological literature on deviant beliefs and social movements, I discovered a niche for my data. This prompted in-depth discussions with an expert in the field of religious movements and the sociology of religion on the link between my data and theories and concepts in the aforementioned field. This exercise prompted another set of refined research questions:

2) How do these beliefs operate/function?

3) More specifically, how do these beliefs validate their gambling actions?

4) What broader social and organizational processes allow these gamblers to attain and sustain these beliefs despite failure?

5) Given the above, what are the implications for preventing and/or treating problem gambling?

Familiarization with the literature revealed concepts that could be used to illuminate my data findings. For example, I discovered gamblers survive their gambling failures quite well, which is due, in large part, to social and organizational processes described by Dawson (1999). In the end, this framework helped me to conceptualize my findings and articulate them efficiently and effectively, situating them in the existing knowledge. In other words, asking Q1 and Q2 allowed me to interweave data and theoretical positions and concepts to frame my findings. By balancing Q1 and Q2 I was then able to answer Q3 on the relationship between what I am finding and what I want to know. At this stage, I performed a more involved or focused coding to ascertain how my data aligned with analytically selected concepts and theoretical positions. Whereas open coding involves familiarization with the data and the assignment of codes pertaining to emerging concepts or ideas (Glaser and Strauss 1967), focused or axial coding involves a “coding paradigm” informed by existing and analytically selected frameworks (Strauss and Corbin 1990, 1998). Most “coding paradigms” include categories related to (1) the phenomenon under study, (2) the conditions related to that phenomenon (context conditions, intervening structural conditions or causal conditions), (3) the actions and interactional strategies directed at managing or handling the phenomenon, and (4) the consequences of the actions/interactions related to the phenomenon (ibid). The “coding
paradigms” or concepts and frameworks used for this work are discussed at greater length in each chapter’s theoretical and data analysis sections.

All quantitative data to do with demographic features of the sample were inputted and analyzed using SPSS. Analysis of PGSI scores followed the guidelines for that index in determining problem gambling severity\(^{16}\).

8 Study Limitations: Sample and Methods

This research has some limitations. To begin, the focal group consisted of 43 interviews of problem and moderate level slot machine gamblers. This is a small, non-representative sample drawn from the general population within a geographical area (i.e., Toronto, Ontario) where selection bias may have occurred. Furthermore, although participants were screened for problem gambling behaviour, they did self-select for participation. Non-random sampling, as used for this study, means generalizations cannot be made from these data and their findings. Not all participants were “problem gamblers” as defined by the PGSI, with approximately 35% falling in the moderate level of problem gambling behaviour. Future research would benefit from a solely problem gambling sample. Additionally, administering the PGSI at the end of the interview might raise the concern that the interview itself might sensitize some to their gambling behavior and thus influence their responses on this measure.

Although there was some variation in ethnic and racial composition, job status, and income level, a large percentage of the focal group sample (42%) had never been married. Whether never being married was reflective of the subpopulation is speculative, although Afifi, Cox, Martens, Sareen, and Enns (2010) found being never-married increased the odds of problem gambling for women whereas being separated, widowed, or divorced increased the odds for men. Furthermore, not all participants were exclusively slot machine gamblers (14%) and, although not unusual (Toneatto et al. 2007), it must be assumed that some of their experiences in other types of gambling may have been reflected in certain answers.

\(^{16}\) See the “sampling strategy and sampling comparison” section for the numeric values assigned to each question on the scale and refer to the Problem Gambling Severity Index script in Appendix 1.
It is conceivable participants managed their impression during the course of the interview, leading to masked answers to control my perception of them. Furthermore, recollections or interpretations are highly dependent on memory and perception, both of which are subjective. Indeed, value-free responses are not the point of qualitative research which seeks a deeper understanding of phenomena as was the case here. It is also possible that I, the researcher, may have imparted biases (i.e., based on my personal background and experiences, epistemological and ontological stances) despite attempts to limit this. Qualitative researcher Charmaz (2005) speaks to this bias inherent in all research for these reasons.

The comparison group suffers from certain limitations as well. Participants were selected from the population at large using non-random sampling. This small non-random sample may not be reflective of the larger population, thereby precluding the ability to make generalizations. Participants were screened for problem gambling behaviour using the Lie-Bet screening instrument, but whether they were reflective of the general population of non-PGs is unknown. As for the comparative value of this group, the small sample and differences in sample composition make for limitations.
Chapter 3
Conceptualizing the Beliefs of Moderate Risk and Problem Slot Machine Gamblers

1 Introduction

It is well documented that gamblers’ superstitions provide causal explanations in games of chance (Langer 1983; King 1990; Darke and Freedman 1997; Griffiths and Bingham 2005; Henslin 1967). In fact, Joukhador, Blaszczynski, and MacCallum (2004) found that problem gamblers (PGs) endorsed significantly more superstitious beliefs than non-PGs. Toneatto (1999) outlines an array of cognitive distortions known to occur in heavy gamblers, with superstitious beliefs included as one category in the typology. This typology provides a useful conceptualization of superstitious beliefs and related actions, but its construction relies on data from diverse studies with heterogeneous samples up to an over a decade old. Does this typology reflect the beliefs of all gamblers or should cognitive biases be evaluated by game type, especially for slot machine gamblers who hold many irrational beliefs (Walker 1992b)?

This study uses qualitative data to assess whether the Toneatto (1999, 2002) typology captures the beliefs of slot machine gamblers. It draws on a sample of adult gamblers who are either moderate or problem level gamblers (hereafter referred to as PGs). This distinction follows the recommendations of gambling researchers who suggest gambling subtypes be considered when making conclusions about problem gamblers (Ciarrocchi and Richardson 1989; Raylu and Oei 2002; Toneatto, Turner, Zack, Farvolden, and Bagby 2007). The study also reflects on the comments of PGs to unpack the nature of their beliefs.

2 Literature Review

Gamblers engage in a variety of behavioural superstitions (Darke and Freedman 1997; Griffiths and Bingham 2005; Henslin 1967; Reith 2002). A superstitious belief, as defined by Joukhador, Blaszczynski, and MacCallum (2004:171), is “a strong conviction based on the erroneous perception of a cause-effect association between two independent events.” Such beliefs are considered to play a contributing role in the maintenance of gambling behaviour (Toneatto 1999, 2002). Joukhador and colleagues (2004) have found that problem gamblers (PGs),
specifically electronic gaming machine gamblers, endorse significantly more superstitious beliefs than non-PGs and these beliefs are correlated with gambling intensity. Others report that as the frequency of gambling progresses, strong biased and distorted cognitive schemas appear, and these schemas shape beliefs about attribution, personal skill and control over outcome, biased evaluations, erroneous perceptions, probability theory and superstitious thinking (Ladouceur and Walker 1996; Toneatto 1999). From an extensive review of literature on gambling-related cognitions including his previous qualitative study of cognitive distortions (Toneatto, Blitz-Miller, Calderwood, Dragonetti, and Tsanos 1997), Toneatto (1999, 2002) has developed a typology to illustrate the vast array of distortion types (i.e., cognitive psychopathology), taking an idiosyncratic focus. Superstitions are a subset of a list of distortion types all contributing to the erroneous belief that it is possible to influence the outcome of a chance based game (Joukhador et al. 2004).

Research in this field has met with some criticism (e.g., Toneatto 1999), especially as many studies draw on samples of non-PGs, non-gamblers, university students or adolescents, thus risking the application of widespread generalizations to heterogeneous samples including those with a lack of game-type differentiation (Ciarrocchi and Richardson 1989; Raylu and Oei 2002; Toneatto, Turner, Zack, Farvolden, Bagby 2007). Nevertheless, the bulk of empirical research on gambling beliefs is anchored in a cognitive analysis with such samples (Corney and Cummings 1985; Coulombe, Ladouceur, Desharnais, and Jobin 1992; Gaboury and Ladouceur 1989; Kahnemann and Tversky 1982; Ladouceur, Gaboury, Bujold, LaChance, and Tremblay 1991).

A pathological focus on cognition infers a powerful relationship between beliefs and decision making leading to problem level behaviour. As Toneatto (1999) explains, gamblers make “decisions that can be powerfully influenced by cognitive biases, distortions in reasoning and errors in judgement” (p. 1594). That is, gamblers believe there is a way to predict, manipulate, or otherwise know the outcome of a future gambling event where such outcomes are unknown and impossible to decipher. Gamblers believe they possess special knowledge or can somehow acquire it. This belief has led some to surmise that PGs have a special or superior
view of self, indicative of specific character psychopathology (Blaszczynski and Steel 1998; Rosenthal 1992).

Although numerous cognitive distortions or beliefs types are outlined by others and summarized by Toneatto (1999, 2002), gamblers’ core cognitive distortion lies in the belief that they can or will predict or control gambling outcomes. This belief implies gambler have difficulty with the limits and validity of knowledge (Toneatto 1999, 2002). Treatment with the aim of changing behaviour then involves modifications to cognitive distortions, which includes helping PGs to understand they possess false beliefs not grounded in reality (Ladouceur and Walker 1998; Ladouceur, Boutin, Lachance, Doucet, and Leblond 2001; Ladouceur, 2004; Sylvain, Ladouceur, and Boisvert 1997).

The dearth of research originating in psychology makes three important assumptions: 1) beliefs/cognitive distortions are linked to pathological gambling behaviour (Sharpe and Tarrier 1993; Ladouceur and Walker 1996; Toneatto et al. 1997); 2) PGs believe their beliefs are valid and practices are efficacious (Langer 1983; Griffiths and Bingham 2005; Henslin 1967; King 1990; Toneatto 1999, 2002); and 3) only a subset of all beliefs is superstitious (Toneatto 1999, 2002; Joukhador et al. 2004).

Dwelling on the second point, the idea that gamblers infer a causal connection between events not logically connected is not a new one. In an early study by Henslin (1967), craps players were found to believe in their ability to influence the outcome of a game, so much so that “they also moved within the framework of a system of magical belief” (Henslin 1967:318). Henslin (1967) explains this does not mean these gamblers identified themselves as magicians or would admit to believing in magic; rather they held a “belief [in] and/or practice in the control over objects or events by verbal or non-verbal gestures (words or actions) where there [was] no empirical (natural or logical) connection between the gesture as cause and the object or event as effect” (Henslin 1967:318). That is, talking to or throwing the dice in a certain way in the game of craps could produce a certain outcome. Henslin (1967) uses operant conditioning to explain the maintenance of the belief in the ability to determine an outcome, actually contradicting Malinowski’s (1948) “theory of the gap” by explaining that the amount of danger in a culture does not correlate with the amount of magic in said culture. That is, intermittent
reinforcement from desired outcomes reinforces the behaviour, the key to operant conditioning. It should be noted that Skinner’s (1948) psychological theory of operant conditioning, on which Henslin (1967) draws, uses the term “superstition” to describe false causal connections observed in the behaviour of birds. Henslin (1967), in particular, suggests an overlap in the two terms, as both are meant to describe a belief in the ability to control an outcome that is uncontrollable.

Oldman (1974) criticizes Henslin (1967) for analyzing the scenario using a scientific mode of discourse, as the event cannot be influenced and is unpredictable. Such an approach to gambling analysis, Oldman says, does not allow one to explore the possibility that the game, for some gamblers, is something qualitatively different from the game as analyzed by scientific discourse. While Reith (2002:157) agrees PGs hold beliefs in magic, she finds problems with the decontextualized focus of “pathology” models that treat gambling belief as an individual disorder of cognition designed to “cope with an untenable situation”. Instead, it is important to keep in mind Malinowski’s (1948) finding that a magical worldview can exist alongside a rational worldview, with the former being drawn upon in contexts of uncertainty. For Reith (2002), relegating these beliefs to a superstitious or irrational category assumes a misunderstanding of the world by gamblers. These “magical beliefs” are not necessarily fully believed in, and she warns the emphasis should be on their overall pragmatic functioning in a specific context.

Reith’s (2002) point echoes Campbell (1996) who takes aim at psychological theories which equate certain beliefs to magic whilst failing to address their nature. Campbell’s (1996) theory of modern superstition, with its sociological focus, could be applied to PGs’ beliefs as it takes exception to theories which omit both culture and history. Defining superstition is a complex task, as the precise nature of these beliefs evolves over time, making them culturally and historically grounded (Campbell 1996:152). Campbell (1996) warns that attempts to define this phenomenon as irrational or erroneous lead to intense philosophical issues on which there is little agreement. At a basic level, most agree they are an “attitude or attitudes individually held by people that are not based upon empirical evidence nor incorporated within the institutionalized belief systems of a society as defined by leading representatives of those systems at any given time” (Jarvis 1980:288), but most psychological theories cannot be applied
to the study of modern superstition as they assume individuals truly believe in their superstitious practices (Campbell 1996).

Campbell (1996 cited in Gallagher and Kent 2001:2) goes on to describe modern superstitions as beliefs that are: “1) not integrated into the cultural customs and social institutions and consequently are highly individualistic; 2) unrelated to a system of belief and therefore lack a rationale; 3) usually denied by its practitioners as having any influence over the outcome of events”. To elaborate on point two, when those who practice such beliefs are asked, they are unable to explain why they take the form that they do and typically recognize them as unjustifiable (Campbell 1996:156). The final point speaks to the concept of half-beliefs, a term coined by McKellar (1952:320) meant to denote the act of “intellectually reject(ing) a superstition nevertheless allow(ing) it to influence thinking and actions”. Put differently, half-beliefs manifest the qualities of beliefs together with the qualities of disbeliefs (Garwood 1963 cited in Campbell 1996:158).

Superstition, then, serves as a ritual by becoming an instrumental act to affirm faith in instrumental activism, a value widely supported in the western world (Parsons 1965). In other words, it is deviant to give up in situations where you have little control; rather, you do something or assert agency, despite having little faith that the ritual act will lead to the desired end result (Campbell 1996:162).

Although only a subset of gambling beliefs has been identified as superstitions (Toneatto 1999, 2002), gambling beliefs and related practices may well benefit from a culturally or historically situated examination.

3 Current Study

This study applies the Toneatto (1999, 2002) framework (Table 3) to the beliefs of moderate and problem level gamblers to empirically validate the typology with moderate to problem level adult gamblers who subscribe to a specific game type (i.e., slot machine gambling) (n=43), a subtype found to hold many irrational beliefs (Walker 1992b). As many researchers have noted,
considering gambling subtypes is important when conducting research on problem gambling (Raylu and Oei 2002; Toneatto, Turner, Zack, Farvolden, and Bagby. 2007).

Assessing the validity of the Toneatto framework will help provide a definitive understanding of the characteristics of slot machine gamblers’ beliefs and, in turn, determine the nature of these beliefs. In what follows, Campbell’s (1996) definition of modern superstition is assessed against this typology to determine whether his theory can help explain the nature of these beliefs.

Table 3. Gambling-Related Cognitive Distortions

<table>
<thead>
<tr>
<th>COGNITIVE DISTORTION</th>
<th>DESCRIPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Magnified Gambling Skill</td>
<td>Overrated ability to win, exaggerated self-confidence despite persistent losing; efforts to acquire special knowledge and develop gambling systems.</td>
</tr>
<tr>
<td>Superstitious Beliefs</td>
<td></td>
</tr>
<tr>
<td>Talismanic Superstitions</td>
<td>Possession of certain objects increases the probability of winning by conferring good luck objects arrayed in ways believed to potentiate winning outcomes; lucky or preferred numbers.</td>
</tr>
<tr>
<td>Behavioural Superstitions</td>
<td>Certain actions or rituals can increase the probability of winning (e.g., seating preferences at bingo); verbal (e.g., verbal encouragement) and nonverbal (e.g., rubbing hands) behavior during actual play of a game (e.g., horse race) believed to modify the outcome.</td>
</tr>
<tr>
<td>Cognitive Superstitions</td>
<td>Mental states can influence probability of winning (e.g., prayer, hope); includes entrapment, the belief that one must continue to gamble or wager in the event that the winning outcome takes place.</td>
</tr>
<tr>
<td>Attribution Biases</td>
<td></td>
</tr>
<tr>
<td>Attribution Errors</td>
<td>Dispositional factors (e.g. skills, abilities) overestimated to explain wins and situational factors (e.g. luck, probability) underestimated.</td>
</tr>
<tr>
<td>Gambler’s Fallacy</td>
<td>Losses interpreted as an indication that a win is imminent and often resulting in chasing.</td>
</tr>
<tr>
<td>Anthropomorphism</td>
<td>Human characteristics attributed to gambling objects (e.g. slot machines) which may be credited with wins/blamed for losses.</td>
</tr>
<tr>
<td>Temporal Telescoping</td>
<td>Wins will occur in the short-term rather than the long-term despite the very low odds of winning at all; near wins taken as evidence that a win is temporally near.</td>
</tr>
</tbody>
</table>
Selective Memory
Wins, but not losses, selectively recalled, especially large wins; partly due to the availability of wins, which tend to be rare and salient, and the motivation to sustain the hope of winning.

Over-interpretation of cues
Over-interpreted ambiguous stimuli to guide decisions to gamble or to persist (e.g. bodily sensations, intuitions, omens, unusual events).

Control Over Luck

Aligning with Luck
Luck cannot be manipulated directly; strategy is to wait periods (‘streaks’) of good luck to wager and avoid betting during periods of ‘bad’ luck.

Luck as a Variable
Actively try to manipulate luck through superstitious behaviours.

Luck as a Trait
Lucky by nature with certain games and unlucky with others.

Luck as Contagion
Success in other areas of their life generalizes to success at gambling; consequently frequency of gambling or size of their wagers may increase; may also believe other gamblers bring either good or bad luck.

Probability Biases
Incorrect beliefs about randomness may lead to incorrect inferences about the likelihood of winning.

Illusory Correlation
Assign causality to salient features of the environment correlated with gambling outcomes contiguous with such wins even if such associations are non-contingent.


4 Methods
4.1 Sample

The sample demographics are outlined in Table 1. A total of 43 problem and moderate level gamblers were recruited for this study. Using the problem severity index, the majority of the sample is classified as problem level (65%) with a small subset being at the higher end of the moderate level bracket (35%). The sample comprised an equal distribution of male and females with the majority falling in the age range of 41 to 60. Just under half had never been married (42%); roughly 21% were divorced; the married category fell slightly under this percentage (19%). For the highest level of education attained, a large percentage possessed a college diploma (28%) with roughly one third (32.6%) having had at least some university experience extending all the way to graduate or professional school training. Slightly less than one quarter had an annual personal income lower than $20,000, while the majority fell equally in either the
$20,001 to $40,000 (32.6%) or the $40,001 to $60,000 (32.6%) income ranges. The multicultural city of Toronto, the area of recruitment, elicited an ethnically diverse sample with the majority tied to Europe, followed by the British Isles; various parts of Asia (East Southeast, West, and South) were well represented (25.6%) as was the Caribbean (14%). A substantial portion of their lives was devoted to gambling, with the sample reporting 18 as the average number of years spent gambling. Similarly, a fairly substantial portion of income was spent on gambling in the past year at a reported average of $650 per month.

4.2 Analysis

Interviews were audio taped, transcribed verbatim, de-identified to ensure anonymity, and coded for emergent themes using NVivo software. The analysis applied grounded theory techniques, namely open and axial coding. Open coding involves familiarization with the data and the assignment of codes pertaining to emerging concepts or ideas (Glaser and Strauss 1967). Axial coding is the process of relating categories to their subcategories. Data were organized into thematic categories informed by the Toneatto (1999, 2002) typology to assess applicability of this typology to the data on moderate and problem level gamblers. Memoing was done to prepare preliminary analytical notes throughout the process of analysis, identifying relationships between categories and gaps (Charmaz 2005). Negative or deviant cases, that is, examples of talk and/or beliefs running counter to the typology were coded separately. Both open and axial coding informed the understanding of the nature of the beliefs, identified as distortions in the typological formation posited by Toneatto (1999, 2002).

5 Findings

Using the Toneatto (2002) typological chart (Table 3.), the beliefs of gamblers were organized into categories and subcategories. All participants articulated at least one of the belief types described in Table 3, although the majority held several types.

The typology was able to account for most beliefs reported by participants; however, some categories were not relevant and some emergent belief types required the addition of (sub)categories and descriptors. In total, one category and six subcategories were created to
account for the findings; two descriptors were added to existing categories to accommodate the findings. Additionally, two categories and two subcategories were omitted from the typology. These additions and omissions are visible in Table 4 in highlighted sections with an edited version, including verbatim quotations, seen in Table 5.

“Karma” was added as a category with the category title chosen to reflect the sentiments of the gamblers. This category was created to capture beliefs referencing moral cause and effect as related to thoughts, states of mind, and actions. For example, if I think, feel, or do “X” then maybe I can produce a win.

In “Magnified Gambling Skill”, three subcategories were added to account for gambling skills or strategies that emerged as major themes through data collection. That is, “Magnified Gambling Skill” remains a catchment category with subcategories to account for those skills or strategies that were frequently specified by this sample of slot machine PGs. The subcategories were: a) “Hot Machine” to account for the belief that machines in constant play will pay out; b) “Bet Max” to account for the belief that placing a maximum bet on the machines will increase the chances of a win and assure the maximum payout in the event of a jackpot; c) “Higher Denomination Machines” to account for the belief that machines that take more money will pay out more often and in greater amounts. “Representative Bias” was added as a subcategory in “Attribution Biases” to house the belief that a machine that has just won will not pay out again immediately. One thematic category was found in “Illusionary Correlation”; specifically, “Spatial Correlation” was added to refer to areas of the casino where machines are prone to win.

Findings demanded the modification of existing descriptors as well. Under an existing subcategory “Luck as a Trait” a descriptor was added to make note of the fact that luck is not only related to game types, but machine types for slot machine PGs. Similarly, for the subcategory “Cognitive Superstition”, focus or positive mind state was added as a descriptor. For “Luck as a Variable”, manipulation of luck is not only through superstitious behaviors but also cognitions, another addition to the descriptor.
Several categories were omitted\(^{17}\) from the modified typology, namely two subcategories and two categories. The subcategories of “Attribution Errors” and “Temporal Telescoping” under the category of “Attribution Biases” were removed from the typology. With respect to “Attribution Errors”, this subcategory was slightly redundant and best accounted for under some of the other categories (e.g. “Magnified Gambling Skill and “Control over Luck”). Furthermore, participants did not amplify their skill and nullify thoughts on probability and luck in the same sentence or idea, rendering this category unnecessary for the data collected here. As for the latter subcategory, “Temporal Telescoping”, PGs explained that near wins were frustrating, but failed to convey that this meant a win was near\(^{18}\). The categories “Selective Memory” and “Probability Biases” were omitted for their redundancy. Most of the beliefs in the typology, in one way or another, disregard probability theory or involve the memory of select events.

Table 4. Gambling-Related Cognitive Distortions: A Modified Typology\(^{19}\)

<table>
<thead>
<tr>
<th>BELIEF TYPE</th>
<th>DESCRIPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Magnified Gambling Skill</td>
<td></td>
</tr>
<tr>
<td>a) Hot Machines</td>
<td>A machine being continuously played will eventually win.</td>
</tr>
<tr>
<td>b) Bet Max</td>
<td>To maximize potential for a win, and a big win, betting max is a good strategy.</td>
</tr>
<tr>
<td>c) Higher Denomination Machines</td>
<td>Target the higher denomination machines; the more you put in the more will be repaid.</td>
</tr>
<tr>
<td>Superstitious Beliefs</td>
<td></td>
</tr>
<tr>
<td>a) Talismanic Superstitions</td>
<td></td>
</tr>
<tr>
<td>b) Behavioural Superstitions</td>
<td></td>
</tr>
<tr>
<td>c) Cognitive Superstitions</td>
<td>Focus and positive mind states can help secure a win.</td>
</tr>
</tbody>
</table>

\(^{17}\) Please see highlighted section for modifications including the term N/A to denote categories that were not found to apply in the case of this data set.

\(^{18}\) It is conceivable; however, that these PGs merely failed to convey verbally what was implied through action. That is, near misses could be a powerful source of hope spurring gamblers on in their activity.

## Attribution Biases

<table>
<thead>
<tr>
<th>Attribution Errors</th>
<th>Attribution Errors</th>
</tr>
</thead>
<tbody>
<tr>
<td>N/A</td>
<td>N/A</td>
</tr>
</tbody>
</table>

### a) Attribution Errors

<table>
<thead>
<tr>
<th>Gambler's Fallacy</th>
<th>Gambler's Fallacy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chance is perceived as a self-correcting process in which a deviation in one direction induces a deviation in the opposite direction to restore the equilibrium. A machine that just won will not pay out again immediately.</td>
<td>Chance is perceived as a self-correcting process in which a deviation in one direction induces a deviation in the opposite direction to restore the equilibrium. A machine that just won will not pay out again immediately.</td>
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</table>

### b) Gambler's Fallacy

<table>
<thead>
<tr>
<th>Representative Bias</th>
<th>Representative Bias</th>
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<tbody>
<tr>
<td>Selective Memory</td>
<td>Over-interpretation of cues</td>
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### c) Representative Bias

<table>
<thead>
<tr>
<th>Control Over Luck</th>
<th>Control Over Luck</th>
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<tbody>
<tr>
<td>Aligning with Luck</td>
<td>N/A</td>
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</table>

### d) Control Over Luck

<table>
<thead>
<tr>
<th>Luck as a Variable</th>
<th>Luck as a Variable</th>
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</thead>
<tbody>
<tr>
<td>Actively try to manipulate like through superstitious behaviors (and cognitions).</td>
<td>Actively try to manipulate like through superstitious behaviors (and cognitions).</td>
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</table>

### e) Luck as a Variable

<table>
<thead>
<tr>
<th>Luck as a Trait</th>
<th>Luck as a Trait</th>
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</thead>
<tbody>
<tr>
<td>Luck as it relates to specific machine types.</td>
<td>Luck as it relates to specific machine types.</td>
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</table>

### Luck as Contagion

<table>
<thead>
<tr>
<th>Probability Biases</th>
<th>Probability Biases</th>
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<tbody>
<tr>
<td>N/A</td>
<td>N/A</td>
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## Illusory Correlation

<table>
<thead>
<tr>
<th>Spatial</th>
<th>Spatial</th>
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<tr>
<td>Certain areas of the casino should be focused on to maximize winning potential, while others should be avoided.</td>
<td>Certain areas of the casino should be focused on to maximize winning potential, while others should be avoided.</td>
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<table>
<thead>
<tr>
<th>Karma</th>
<th>Karma</th>
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<tbody>
<tr>
<td>The natural law of moral cause and effect. This relates to action and thought as well as overall state of mind.</td>
<td>The natural law of moral cause and effect. This relates to action and thought as well as overall state of mind.</td>
</tr>
</tbody>
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Although the typology outlined by Toneatto (1999, 2002) offers a number of categories and descriptions, it lacks illustrative examples. The diverse set of studies used to structure the typology may have prevented verbatim quotations, or this may simply have been beyond the scope of the work. In this study, interview data are crucial to understanding the nature of belief. Illustrative examples of the PGs comments are provided in Table 5. The similarity between certain quotations is visible within (sub)cATEGORIES, but the unique features of these beliefs
equally evident. Depending on the nuances within (sub)categories, in the table I provide two to five verbatim quotations in an attempt to give voice to all 43 participants. Some participants were better able than others to articulate their points succinctly, possibly making them more representative than others. It should be noted that it is difficult to demonstrate the personalized features of all the beliefs articulated to the interviewer, given the limits of typological classification.

Table 5. Gambling-Related Cognitive Distortions: A Modified Typology, Illustrative Examples

<table>
<thead>
<tr>
<th>BELIEF TYPE</th>
<th>ILLUSTRATIVE QUOTATIONS</th>
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<tbody>
<tr>
<td>Magnified Gambling Skill</td>
<td>P20: I just keep whatever money, and whatever like chips are in the machine, I don’t cash out those chips, and then put another $20 bill. They think that if they put a $20 bill in, like a new bill, then it’s like a new person. And then it’s reactivated the process, and maybe yeah.</td>
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<td></td>
<td>P3: I tend to go during less busy times as well, because I think the slots might be looser or programmed to pay out more at a certain time, when there is less people. Um, if possible, if I have time I’d rather go from Monday to Friday as opposed to a Saturday or Sunday.</td>
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<td></td>
<td>P32: Because those machines, I know they’re geared to go off at a certain time…. because that’s the system. Honestly, I know they, they got a timer on those machines…to go off at; maybe not a lot, but there may be pieces; bits and pieces, but I honestly think that’s the way it is, and you know what it is geared to; don’t put in $5, sometimes it’s geared for only a dollar-fifty or two.</td>
</tr>
<tr>
<td></td>
<td>P29: Me and my buddy were talking and we think that if you do play the dollar machines long enough, I think about 40% of the time it’s going to pay out. For some reason I don’t know why we came up with that number, but we did.</td>
</tr>
<tr>
<td>a) Hot Machines</td>
<td>P16: The machines are hot, so you can go and rub it (laughs). I: So have you found that you’re more successful? P16: I have been more successful, seriously. I: Really? So you have been more successful… P16: Three weeks ago, I won $400, you know what I mean, and I was there for an hour….. The heat is not going to generate. It might get a little warm but if you feel the machine like it’s piping like it’s like. It’s a lot hotter. It’s like okay, sometimes you know you have your computer on your laptop on and you don’t have cooling pad and then you have it on for a couple of hours. You feel that heat. It’s like that. It’s a strong heat. …Some people look and they say okay they stand there and they just watch, as soon as that</td>
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</table>
person gets up because they look or see how long they’ve been sitting on that machine and they’ll be like okay, as soon as he gets up I’m hitting that machine.

P11: In the machines they are, okay each machine is computerized and they have forgot, it’s some kind of binary numerical systematic code and it doesn’t, it turns over, it turns over when it’s being used a lot. It’s not warmed up, it’s like when it’s not warmed up, it won’t turn over a win.

P26: It was a quarter machine and I had staked it out. There was a lot of money being put into that machine. It was a really hot machine and then I went in and I put in, I think about $75 before it returned me with the $800.

b) Bet Max

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<tr>
<td>P23:</td>
<td>Well I always bet max. And if you don’t you’ll lose the money the maximum payout.</td>
</tr>
<tr>
<td>I:</td>
<td>Okay so it’s important to bet max?</td>
</tr>
<tr>
<td>P23:</td>
<td>Yes to me anyway.</td>
</tr>
<tr>
<td>I:</td>
<td>To you okay, and have you had success in betting max in the past?</td>
</tr>
<tr>
<td>P23:</td>
<td>Yup! I would say I would spend about 20 thousand a year. But I would win that much throughout the whole year, so I would always break even. Never ahead or never behind. Once in a year like in the whole year, I would calculate it after a year and figured out how much you lost and how much you won, that has always worked out even.</td>
</tr>
<tr>
<td>P10:</td>
<td>You won’t get a winning if you don’t play the maximum.</td>
</tr>
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</table>

P29: Me and my buddy were talking and we think that if you do play the dollar machines long enough, I think about 40% of the time it's going to pay out. For some reason I don't know why we came up with that number but we did.

I: You came up with that number...

P29: I don't know why but we did.

P3: Okay, I would say play the higher denomination machines. So don’t play the penny or nickle slots and play minimum a quarter. The higher the denomination the more the machine returns in the long run. So the dollar ones return higher than the 25 cent ones.

Superstitious Beliefs

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<tr>
<td>P32:</td>
<td>Yeah, I got my lucky charm that my friend gave me from Las Vegas.</td>
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<tr>
<td>I:</td>
<td>What is it?</td>
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<tr>
<td>P32:</td>
<td>It’s a little pink thing, a little girl (doll) I guess.</td>
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</table>

P33: Yeah. And I have this diamond ring that I’ll wear at the casino.

I: So why? What’s the significance of the diamond ring?

P33: I haven’t lost a rap battle wearing that ring. And when I won that money in Ontario I had that ring on. So since then I’ve just had that ring. My father (gave me the ring). Yeah, so I just wear that ring anytime I’m in
competition I suppose. For good luck, yeah. Battle in the casino or battle in another land, yeah.

P37: Well, I’d like to pick, I actually look at the numbers on the machines themselves. Yeah, the machines are numbered, so if I like the number then I’ll proceed-

I: So which numbers do you gravitate to?

P37: Numbers that I feel lucky, numbers that I like, that I prefer, birthdates, etcetera, that kind of thing. Family members, my birthday, people that I like birthdays and certain numbers that I just like. It’s weird, I just like certain numbers. And there’s no logic or reason to some of the numbers I like. It’s not a particular thing.

I: So there's certain numbers you gravitate to. So if a machine wasn’t available with a number that you like, would you still go to it, or?

P37: I would probably avert it.

### Behavioural Superstitions

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<tr>
<th>Behavioural Superstitions</th>
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<tr>
<td>P12: No. I don’t (have superstitions). You know what, I can tell you one thing. This is just the one little, little thing I do, is when I walk in there sometimes, say I've won for the night, right, so when I come in, like, you can either walk in left, you can then walk right or you can go on center. So, if I won, I'm thinking, which way did I walk in? That way, next time, I’ll try to follow my same footsteps, right. If I went to the right, I will start to walk that way and I had a winning night, I think the next time I come maybe I should do the same route. The same route. I'm just saying, right. Just that little, little thing, right. I'm just saying. Because when you get in there yes, it's bringing back memories, ideas. I won $250 here and I only bought $50. How did I do that? Well, I went this way so let's try that again.</td>
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<tr>
<td>P16: Sometimes, okay, I’ll be sitting there, you know people like press the button. And sometimes it stops like half way, I don’t know. Yes, and I will just like go start and I stop it twice, tap it twice. And then, you know, sometimes I win.</td>
</tr>
<tr>
<td>P18: Actually not before I go in but while I'm actually playing, I would always clap my hands and yell at the machine or very happily yell at the machine, and I would just say, “Win, win, win!” If it does not win, I will try again and I will just keep going.</td>
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### Cognitive Superstitions

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<th>Cognitive Superstitions</th>
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<td>P12: I used to hang around with a negative guy. I used to go to the casino with him, I don’t anymore and he’d be, “Oh yes, where are we going? We're just going to lose our money. Lose, lose, lose, lose, lose.” But I think the opposite. You know, you never know, you can win. I try to be positive. If you’re positive, sometimes it's just the vibe thing, now you’re going to win. If you think you’re going to win, you’re positive, (thinking) I'm going to win, I'm going to win, I'm going to win, win, win and you get like that then sometimes it does happen like that. But if you go right off the bat thinking, I'm wasting my time, wasting my money, I'm going in there, I'm</td>
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</table>
losing my money, I might as well just throw this $100 in the garbage can. If you have that negative attitude, I think it's a disadvantage for you.

P30: I usually pray when I’m playing because it would change a lot of things in my life.

P37: Like today for instance, I feel like lethargic, blasé. I wouldn’t go today.
I: You wouldn’t go and what would the harm be in going today?
P37: Well, because you lose discipline. I think it’s important to maintain that… More mistakes I don't know. It’s all a mistake, I guess, but you just have, I think, better control if you're feeling better and you're feeling sharp witted.

P43: To be quite honest with you, I probably can say the times I’ve gone in there (the casino) with my head held high, feeling really, really good about everything, those are the days I won. So I know it sounds weird, or maybe it is just the days I remember it and maybe that’s why I am thinking that.

<table>
<thead>
<tr>
<th>Attribution Biases</th>
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<tbody>
<tr>
<td><strong>a) Attribution Errors</strong></td>
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<tr>
<td><strong>b) Gambler's Fallacy</strong></td>
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<tr>
<td><strong>c) Representative Bias</strong></td>
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</table>
| d) Anthropomorphism | P26: And you don't go near that, that’s my, because it has already paid out.  
I: So you don't go on them because it’s already paid out.  
P26: That’s exactly my feelings.  

P45: Another thing that I do or like is that if somebody's been on a machine a long time and they left, then I’d go on that machine.  
I: So, why is it that that’s appealing to you?  
P45: It’s an old thing; that’s an old wives’ tale maybe that people have been losing so long, it's going to give out money…. That’s about it. I mean most of it is a fluke. There are a little bit of odds in your favor with certain things like that, and that’s about it. |
|---------------------|---|
| e) Temporal Telescoping | P32: When I am playing I feel good about that machine. But, then when I see it ain’t doing nothing, so I get mad. I go, “My goodness, I thought you’d give me something. What’s happening now?” I talk to it.  
P26: Pretty much, you know and we’re all going to try in some way with – we’re interacting with a machine to see if it’s my best friend and to see if it’s my enemy, to see if it can bring me some money or make me happy or something.  
P38: You feel in control because you are – it’s hard to explain, because sometimes you think that you can – you could fool the machine. Like if you just sit there and you try to mess up with the machine. You try it, okay. Instead of passing one, you will press this, dab, dab, dab. You will figure that if you – you will try to mess up its mind, but that doesn’t happen.  
P12: …I go for a feeling on a machine and stuff like that, like the vibe type of thing... You just get that feeling ... it's hard to say because it gets in your stomach like a little bit of adrenaline, I guess. It's just a sense, it's like a sixth sense almost type of thing. Well, you can't explain it. You just sense it, you feel it, the adrenaline is gone and you think you know, sometimes you’re right, mostly sometimes you’re wrong. It's just that feeling that you get because you just don’t want to go to any machine. You want to go where, you feel, you have a feel that you have a sense to win at; a better chance to win, I guess.  
P13: He (the astrologer) goes my luck is changing and another thing he said was my lucky number was four and my lucky number ever since I was a child was four… Well what he says right now I'm going through a bad streak and bad luck right? So, I kind of believe him. He says also that things will turn around for me and that something’s going to happen to me in the next few weeks. This is like a couple of weeks ago before I even... |
knew about this position. He says something’s going to happen to me in the beginning of the next month that’s going to turn my life around.

P9: You get to the bus station or you drive up there (to the casino) and there's no problems, or the weather is just perfect. I went to the casino one time in a blizzard. Yeah, I would do that. It was like, you know, we’re driving and we’re thinking, “This isn’t such a good idea.” Yeah, because it’s like, as silly as it sounds, if something is blocking you or something is just in your way, maybe you should just stay at home.

P36: Yes. It's kind of just like it's like have that like the fuel to it like some of them are beat-up. One thing now that you brought up, I often avoid the slot machines where I noticed someone is very upset and frustrated with it. I just… I leave that one alone. I feel like it's one of those like bad omen like in the sense like his frustration and just his negative energy from that is just lingering over it now.

Control Over Luck

### a) Aligning with Luck

| P1 | Three times a charm or it has to shift….your luck has to shift. Stuff like that. Well, it is just the way it goes. It can’t be the same winners all the time. That’s the way I look at it, you know. |
| P25 | I don't know. I think one time I won something at the casino made me think "Oh, maybe it'd be nice" especially if I feel lucky. Yeah, you think you're lucky. We'll see if luck runs in cycles or something, right? |
| P30 | Usually when I know it’s going to be my day, it’s when I start winning the first or second time. If I don’t win the first time, the second time I start winning, then I stay longer then I have a feeling it’s going to be my day, and I’m going to win some money today. I: So if you win the second time, it’s your day? P30: Yes. I play up to five times. If I see…sometimes I play up to five times just to see. But usually, it’s three times that I lost and then I leave. |

### b) Luck as a Variable

| P25 | Oh, I remember that time I lit a candle before I go. It was so crazy (laughing). At home. I: So you lit the candle at home. But this is interesting. So you lit it at home. And why did you light it? P25: I think it’s going to bring me some luck, I don't know. I: Okay. Is it a special candle? P25: Yeah, it just smells nice. I just thought I’d try to do something like a ritual (laughs). That’s crazy. |
| I: Okay. And why are you most eager to go on the weekends, do you think? P16: Because I don’t know it’s just – I’ve been always lucky….it’s a ritual and if it ain’t broke, don’t fix it. When I first went there, it was on Saturday. So you know what I mean, yes it was like 15 almost 20 years |
ago.

P19: I try to think about my mother as luck. I say a little prayer, you know? To tell her to help me, you know? Yes (at the machine), and she does. Yes, she does, you know.

P39: Yeah, you see the first bonus coming up and then what I do, because I don't want everyone to look, is when it starts to go before it stops, I always hide it. I don't want people to see. It’s just they're going to give you- I'm Italian. It’s called “the malocchio”, bad luck.

c) Luck as a Trait

P26: Well I’ll look at it, I’ll also go by the like of the print of the machine and I don't know. Something will come to me and say “okay I think you should go there”. It’s like a magnet trying to get you there or I've had friends tell me that they’ve had good luck on certain machines like the prince. My sister has had good luck with the mermaids. So, she tends to like that…. And I have a favorite now, the Grizzly Bear (machine). The Grizzly Bear machine has been lucky. And one of my sister’s girlfriends she got onto it and she won a $120.

I: So when did you start playing the Grizzly Bear, after the $120 that your sister’s friend won or was it before?

P26: Before. Before, I got her to start on the Grizzly Bear.

P24: Okay. I think I would choose the ones (machines), the Lucky 7 ones first. I don't know why, I guess maybe because I have kind of seen those in a lot in the movies, so... Yes, there is always some sort of Lucky 7, yes. I don’t know. Just like I guess – in the movies I guess you see that people win. That’s kind of hope. And I have always been drawn, because the Lucky 7 machines they have cherries I don’t know why. I don’t know. I don’t know. It’s just sweet. It’s (cherries) just something that I kind of feel lucky about.

d) Luck as Contagion

P16: You win a couple of card games then you know your luck is going. It’s starting…. I’m going to the casino! I’m going to take a trip up there and try to win some money.

P24: Yes. Like – there was something that happened the other day and I was like, man, I should have gone to the casino, but I think my name came up for something at work. Some like random draw. I didn’t win much. All I won was like a coffee mug, but still – And like, I was like, I should go to the casino or play lotto or something. I feel like it will be kind of like a lucky streak kind of thing.

P35: Yeah. And I really think sometimes it has to do with who you are with at the casino, you know, like if you go by the luck thing and all that sort of stuff.

Probability Biases

N/A
### Illusory Correlation

#### a) Spatial Correlations

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<td>P16: …And another thing I pick the machines in the corner. Because the ones in the corner too, if no one’s been playing those even if they are not hot, no one is really been playing it, right around like when you get…. You see when you go right around (at Casino X). And right near the snack bar. See there are not too many people on that side. So no one has won.</td>
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<tr>
<td>P3: So this is an aisle for example, and then so the aisle will continue all the way. And then you would have machines all the way till the end and the same of this side. So I avoid the machine…actually there’s a machine right at the end of the aisle sticking out and I tend to avoid that machine. If I am going to play in that set of machines I would play any one of those and avoid that one. The aisle machine (avoid it), yeah.</td>
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<tr>
<td>I: So why is it important to avoid that machine?</td>
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<tr>
<td>P3: It’s not. It’s just my superstition...</td>
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<tr>
<td>P5: Okay so what I’ve learned over the years and years of research is the highest paying machines, or the machines that pay a lot, are the ones by the doors and the ones that are away from the tables actually, just because I guess they gear the higher paying machines or the machines that payout a lot, to places where it’s visible, more visible. So you try and go to places that, like near the bathroom. Highest visibility… Areas where you first enter in into a casino yeah. The better machines are, yeah.</td>
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<tr>
<td>I: Okay so around the entrance points?</td>
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<tr>
<td>P5: Yeah or high visibility. Yeah the ones that are more visible, so if you’re coming out of the bathroom there’s more people congregated around the bathroom. You have a higher visibility, (so) that they’re going to see it. And then they’re going to want to go back and be like, “That guy just won $10,000, I’m going to go back and play it” type of thing.</td>
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### Karma

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<td>P9: I think that’s – there is a correlation if you’re good person, you do good things and you go to church and then you go to casino on Sundays you know. It will all add up.</td>
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<tr>
<td>P13: It’s a day when I'm not thinking about anything except just enjoying myself. I don't think about winning. I think about just enjoying myself so when I start thinking about winning some money that's when I never win. It’s karma like, they're saying, &quot;You're thinking you're going to win, you're not going to win.</td>
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<tr>
<td>P25: Because I go there calm. You know what's not good, you know what’s funny too, when I won, I wasn't wanting to win. It's not… that’s the thing too. It's kind of weird like you're not expecting to win. When you want to win too much, you can't win. And that's what I noticed now.</td>
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5.1 Redefining Gambling Beliefs

In their entirety, the beliefs reflect the properties found in the “superstitious beliefs” category in the Toneatto (1999, 2002) typology. Taking an idiosyncratic, psychological, approach, Joukhador and colleagues (2004:171) define the superstitious beliefs of PGs as “strong conviction(s) based on the erroneous perception of a cause effect association between two independent events”. Many of the beliefs of these particular PGs fit this definition, thus going outside the “superstitious beliefs” outlined by Toneatto (1999, 2002). In a more general definition, without a psychological underpinning, Jarvis (1980) identifies superstitious beliefs as those unsupported by mainstream institutions and lacking empirical evidence. With both definitions in mind, the majority of the beliefs found among the study’s PGs, even those outside the superstitious category, could be classified as superstitious. Further, the array of beliefs and actions found here seem to demonstrate features of modern superstitions described by Campbell (1996). That is, they were not integrated into social institutions or systems of beliefs (i.e., self-sustaining), unjustifiable, and only half-believed by PGs.

5.2 Individualized Beliefs: Lacking Social Prescription

As shown in Table 5, while the beliefs shared a root similarity, they were highly individualized: the PGs held diverse beliefs and engaged in diversified actions—with no two PGs holding the same set of beliefs or practicing the same set of actions. The beliefs and accompanying actions also lacked social prescription and did not appear to be a form of collective ritual action; thereby, sustaining themselves. The casino is a place where gamblers congregate and may share a common interest, but their beliefs and actions are not in line with the expectations of others and took place whether others observed or not. In fact, gamblers were often hesitant to discuss their personal beliefs with others, even those with whom they shared the activity:

P12: No. Because I think people, think you’re probably stupid to think like that or whatever but people do, right. A lot of people think that but they won't admit it and they won't say stuff, right. I don’t know. They probably, they just feel like shy or they just think that you’re going to tease them and laugh at them or something like that, right, whatever.
I: Yes. So, your brother doesn’t share any of his strategies...
P12: No. He doesn’t. If I said anything, he'll just turn around, he won't even listen to me and then and already think that I am losing it or something (laughs).

The same can be said for engaging in superstitious actions; many did not want to make their actions too apparent to others for a number of reasons, including fear of judgment. In the end, there was no social expectation behind these beliefs and practices, with gamblers making it clear that these beliefs were not socially expected of them nor were they always positively received by others.

5.3 Recognizing Beliefs as Unjustifiable

Beliefs and practices lacked a concrete rationale, leaving participants unable to give clear reasons for the specific form of their actions. PGs did not know why they partook in certain practices or believed certain things, often simply saying “I do not know”, “it is just my superstition” or diverting from the topic when probed. These participants admitted their beliefs lacked a rationale, but they needed to try “something”:

P2: Yeah, I normally play the same machine.
I: and why do you think that’s important to do?
P2: It’s because I have a feeling that….there’s a row…I will give you an example, there’s a row of machines, like ten machines and I have a strong belief that if you sit in the middle, you are not going to get anything like if you are at the end or the beginning machines. And it’s always been true.
I: So just sitting at the ends?
P2: Sitting at the ends, because they always pay off. And I’ve always seen that. I have noticed that. Yeah.
I: Just in other people or in your experience?
P2: Other people and myself too.
I: Okay, and why do you think that is?
P2: I don’t know, it’s just something. Yeah, I don’t know.

P4: I don’t know if it works (her superstition to select particular machines) or not, but … it’s something I guess… In the worst case if it does nothing, at least you’ve tried.

A close examination of Table 5., provides further evidence of this with the use of phrases such as “maybe”, “I think”, “I don’t know”, and “that’s crazy” when discussing their beliefs.

Calling into question the efficacy of these superstitions, the PGs spoke of their uncertainty about their ability to influence an outcome:
P7: I used to bring my puppy and a little stuffed beanie baby. Yes, and I used to make it push the button but then everybody looks at me, they looked at me like I was a crazy mo-fo.
I: Okay, so what was the significance of that stuffed beanie baby, like what was it?
P7: It’s just my kid's. It was just...It’s from my ex actually.
I: Okay. So you felt that it was lucky because it was tied to your ex.
P7: Yes, pretty much.
I: Okay. Did you have luck with it ever before, with the dog?
P7: No.

P9: I mean, for me, going to different machines has been really – you know, you are not going to be lucky every time obviously, but for the most part, yeah, if I go to different machines or I go someplace where somebody is pouring a lot of money, sometimes you just luck out and maybe I will be positive and having that positive energy. You know, I've heard people talk to their slot machines. I have done that too. I’d be, “Please, please, please, come on, come on, come on!” And maybe it works. I don’t know.

In short, gamblers seemed to possess half-beliefs, in that they allowed their beliefs to influence their actions but did not fully believe in their efficacy.

### 5.4 Half Beliefs

The PGs’ lack of faith in the efficacy of their actions was clear when they contradicted previous discussions of superstitions by admitting their ineffectiveness:

P2: They’re…the machine is just random. It has no guarantees. I don’t think there’s any control, no. No, I cannot predict the outcome. Nobody can. It says that right on the machine that it (the slot machine) does not predict the outcome.

P16: Yes, there is so many – everybody has different strategies, there is no strategy!

P15: This is what I mean. I am practical, so I know that it's a game of chance. Why I do it, that’s the question.

P38: Yes, but it doesn’t happen, because the machine is programmed to hit when it’s supposed to hit. It doesn’t matter whether you are on it, I am on it, whoever is on it. You know, it doesn’t mean it’s because “Debbie” is sitting at this machine it’s going to hit, you know.

P41: Random, the chip. Nobody knows. Even the casino owners or whatever, the money that... they don't know about it. It doesn't mean that the machine has been played many, many hours and days and nothing comes up like a jackpot. That when the player leaves...
there and you will enter into the picture, sit there, the machine will give you a jackpot. That's not true.

Although several of the PGs inferred this sentiment, one participant was lucid in their articulation of the nature of gamblers’ beliefs:

P37: No, few people really believe in their strategies.

Although the PGs seemed to allow superstitions to influence their thoughts and actions, they ultimately rejected them on an intellectual level, admitting that they were untenable:

P3: Not particularly. Sometimes I push the handle. There’s like a handle as well on the older machines, which I pull down. Sometimes it’s a superstition, like it will change the outcome if I…. I: So you push the handle… P3: Just to change up the process. I: And do you think there’s any difference in outcome based on that? P3: Honestly, no. But it just kind of makes feel like you have some kind of (control)….

These half-beliefs are interesting: the PGs both used and rejected them. In the end, half-beliefs demonstrate the PGs tenuous connection to gambling beliefs associated with the instrumentality of their own efforts to procure or determine an outcome.

6 Discussion

As suggested by several researchers (Ciarrocchi and Richardson 1989; Raylu and Oei 2002; Toneatto et al. 2007), a major flaw in problem gambling research is the tendency to make widespread generalizations across heterogeneous samples. The Toneatto (1999) typology itself was created using available research on cognitive distortions with heterogeneous samples so one objective of this study was to assess its applicability to a homogeneous sample of adults who identify as slot machine gamblers and engage in the activity at a moderate and problem level. To determine homogeneity among gamblers, it is important to focus on a specific game type because cognitive biases might vary across types (Czerny, Koenig, and Turner 2008), and slot machine gamblers report particularly biased evaluations of outcomes and irrational beliefs (Walker 1992b).
Overall, the typology seems applicable to my sample of PGs, but fitting the data required some modification, specifically, the addition of one category, five subcategories, and three descriptors, along with the omission of two categories and two subcategories. These modifications point to the need for empirical verification of the Toneatto typology and validate the need for homogeneous samples, not only in assessing problem behaviour but also in accounting for belief types.

The belief types of this sample were likely influenced by the specific game type under study here. For instance, I added several new categories to the “Magnified Gambling Skill” category to account for machine based beliefs, although the category itself remained to capture those skills not accounted for in the subcategories. With the modification of this category, the present findings note these PGs assigned skill to this game type whereas previous research found slot machine gamblers typically report their game was a matter of chance and not skill (Leary and Dickerson 1985; Walker 1988). Further modifications are likely reflective of the focus here on slot machine gambling. For instance, the addition of a descriptor under “Luck as a Trait”, references a game-type-specific belief that certain machines are luckier than others. Of specific relevance to casino based gamblers, “Illusionary Correlation” was found to house only one type of illusionary correlation for the study’s PGs, and this was related to spatial issues in the environment. Slot machine gambling is embedded in a particular context and is inherently chance based, both of which may explain why this specific form of illusionary correlation does not appear in Toneatto (1999, 2002). Findings here could reflect important differences in cognitive bias between those engaged in chance and skill based games as mentioned by Czerny Koenig, and Turner (2008).

Since slot machine gambling is a chance based game, the addition of the descriptor “focus” to cognitive superstition is interesting, although the idea of “positive mind states” does lend itself to a game type where there is no control over the outcome. A cognition oriented category also emerged from these data, labelled “Karma” to denote moral cause and effect. A common sentiment expressed by gamblers with regards to this category was that you should be modest in your desires, thereby controlling your “greed”. In the same vein, King’s (1990) bingo players believed wins would be awarded to those not expecting it. On a related note, the
“Karma” category might reflect a growing interest in Eastern philosophies in the West (McMahan 2004). By the same token, the descriptor “cognition” was added to the subcategory “Luck as a Variable” indicating a more thought oriented set of beliefs. This cognitive focus might reflect gamblers’ lack of control in games that are purely chance based.

The absence of “Representative Bias” from the original typology (Toneatto 1999, 2002) seems odd, given the discussion of this belief type in the literature. The gambler's fallacy is caused by the representativeness heuristic according to Tversky and Kahneman (1971) and Kahneman and Tversky (1972); this could mean “Representative Bias” and “Gambler’s Fallacy” were collapsed into one category. For this study, they were treated as two categories because although they both referenced the "self-correcting process in which a deviation in one direction induces a deviation in the opposite direction to restore the equilibrium" (Tversky and Kahneman 1974:1125), “Gambler’s Fallacy” had undertones of fairness (i.e., I am due for a win) and was linked to chasing behaviour whereas “Representative Bias” was focused on equilibrium restoration (i.e., a machine producing a jackpot requires time before it does so again).

The categories “Selective Memory” and “Probability Biases” were removed from this revised typology because of their redundancy. Most of the beliefs in the typology, in one way or another, disregard probability theory or involve the memory of select events; their presence might be a result of the psychological lens in which they were framed. In the same vein, these are most likely categories of importance in the therapeutic context.

An additional aim of this study was to better understand the nature of the beliefs of these gamblers. Using the definition of modern superstition provided by Campbell (1996), the study questions a pathological focus, as the gamblers’ beliefs appear indicative of modern superstitions. A psychological focus is equally suspect, as the beliefs appear to have at least partial grounding in culture. Campbell (1996:155-156) takes aim at psychological theories for their neglect of history and culture and insists an understanding of modern superstition cannot be seen through a psychological lens. First, modern superstitions do not occur as a result of some collective ritual action nor are they bound by a community of believers (Durkheim 1912). These slot machine PGs displayed a number of diverse ritual actions and were not bound to others in a covenantal way. They were more likely to coordinate their behaviour by “pledging
themselves to specific reciprocal activity without pledging to one another’s well-being” (Robbins and Bromley 1992:5). Second, these actions appeared unrelated to any belief system and, as such, lacked a concrete rationale. The slot machine PGs, for the most part, could not formulate concrete reasons why their actions took a particular form; if they did provide a legitimation, it was characteristically “not integrated into an institutional framework” (Campbell 1996:156). In other words, these PGs did not attempt to justify their actions by relating them to other beliefs and, for the most part, when asked, could not explain their origin. When further questioned about these beliefs, they readily admitted they were “unjustifiable”. Third, the PGs went so far as to deny the efficacy of their actions and the legitimacy of their beliefs.

The combination of these features casts serious doubt on the applicability of psychological theories to explain the beliefs and related behaviour of slot machine PGs. The most serious problem with psychological theory is the implication that people actually believe in their superstition, thus turning it into “magic” (Campbell 1996:156). As noted, most modern practitioners of superstition, including the study’s PGs, are not prepared to declare that they believe they have control or absolute insight. Indeed, the PGs were not staunch believers in the efficacy of their practices. In fact, they distanced themselves from their superstitions in several ways, for example, choosing words to suggest uncertainty or contradicting previous superstitious statements by denying their ability to control the outcome. This calls into question the relationship between beliefs and pathological behaviour; these particular half beliefs seem to drive ritualistic behaviour, not necessarily the problematic behaviour stipulated by psychologists. In particular, Walker’s (1992b) stipulation that gamblers believe in-the-moment irrational utterances that are recorded while engaged in the activity is debatable given the findings here.

The continued existence of superstition among gamblers directly contradicts the prediction that superstition would eventually disappear as a result of two features of capitalist society, secular rationalism and empiricism. Campbell (1996) explains the persistence of superstition in modern society is a consequence of the pervasiveness of the value of instrumental activism. That is, to “do something” in the face of uncertainty is to affirm faith in “optimistic and activistic” orientations (Campbell 1996:162) staunchly supported by the western world.
(Parsons 1965). Gallagher and Lewis (2001) find support for this theory in their exploration of superstitions in test taking, an activity where the outcome is crucial. Hayano (1978) also found that frequency and intensity of monetary loss for poker players initiated the use of control strategies. By the same token, PGs are risking a highly coveted and valuable commodity in an enterprise fraught with uncertainty. Moreover, it is well documented that PGs have very little of this commodity to begin with, whether tied to causation or selection (Hrabba and Lee 1996; Welte, Barnes, Wieczorek, Tidwell, and Parker 2004): they have much to lose by engaging in this activity. The value of continued superstitious practices rests in the reassurance they may provide to PGs engaging in a risky activity, especially one that is purely chance based, as in the case of the slot machine gamblers.

Reith (2002) says these beliefs, for gamblers, may play a pragmatic role in a very unusual context. To this end, she writes:

Within this context, far from being simply and prosaically ‘irrational’, the worldview of gamblers appears as a framework of thought uniquely adapted to the peculiar nature of their environment (P. 156).

Campbell (1996) unpacks the link between belief and action reflecting on cultural context more generally:

Perhaps individuals in modern society need not just the reassurance and comfort of the familiar, but a need to be active rather than to accept passivity; a need to protect a fundamental orientation to action which is internalized in their personality and characteristic of their culture (P. 160).

Campbell’s insight into belief and ritual activity with a cultural focus is highly relevant to the gambler. The need for security described above might be even more important to PGs, as this activistic orientation may be more pronounced in this sub-population. That is, a group displaying deviant behaviour may be more closely tied to this widely shared value. Abt and colleagues (1982 cited in Abt et al. 1985a) echoed this sentiment in describing gamblers as even more conventional and ritualistic than the non-gambler.

The cultural insights gleaned from this exploratory study provide a new understanding of gambling beliefs and related action. Of course, further research should be conducted to affirm
the findings. The study does suggest a cultural link to gambling belief and ritual action, and sheds light on “half-belief”. That is, these beliefs are likely non-rational, rather than irrational, and thusly just as “normal” as many other belief types. What remains uncertain is how do these half-beliefs and related actions connect to pathological behaviour? Furthermore, is there a possibility that such beliefs and ritual action may not be linked to problem behaviour at all? Indeed, Garcia-Montes, Alvarez-Perez, Sass, and Cangas (2008:235) remark that overemphasis on the “subjective or inner dimension” can lead to self-defeating behaviour and experience. This point might be valid in the case of the PG, but future research needs to disentangle the link between these half-beliefs, instrumental activism, and pathological behaviour. In the end, this study suggests new ways of understanding gamblers’ beliefs and opens up the possibility of rethinking current forms of therapy, especially cognition based treatment which aims to treat such beliefs.

7 Conclusion

This study suggests that need to focus on game types when researching not only problem gambling behaviour but also beliefs. Certain belief types are most likely a reflection of game types, especially when considering games of chance versus games of skill. They also seem linked to specific environments. Future studies could replicate this study with a larger representative sample of slot machine problem gamblers or focus on a different game type to make comparisons and reflect further on the nature of these beliefs. Finally, although this study offers a cultural explanation for the ritualistic behaviours of this sample of slot machine PGs, it does not provide insight into how these half-beliefs and ritual activity may lead to problem gambling behaviour. In trying to understand this link, future studies should make context a focus of the research, especially in the case of casino-based slot machine PGs.
Chapter 4  
Conceptualizing the Unconventional Beliefs of Non-Problem Gamblers: A Comparative Study

1 Introduction

The pervasiveness of irrational beliefs, especially superstition, presents a challenge for contemporary psychology and defies growing adherence to rationalism and empiricism (Vyse 2000). What defines superstitious beliefs remains murky, with different scholars identifying different components, but some form of supernatural causality seems consistent throughout. Secular, non-empirical beliefs like superstitions exist in a middle area between the two pillars of institutional knowledge, namely science and religion (Campbell and McIver 1987). What some scholars have inferred is that practitioners of superstition believe in their ability to control the outcome of events, thereby aligning superstition with magic (Malinowski 1948). Problem gamblers (PGs) are said to hold unusual beliefs, including a subset of superstitious beliefs (Toneatto 1999, 2002). Problem gamblers are said to hold cognitive distortions or irrational and erroneous beliefs (Gaboury and Ladouceur 1989; Toneatto 1999, 2002; Walker 1992b) and these are reported to influence their gambling behaviour. Campbell (1996) explains such beliefs have been decontextualized by psychological research and, as such, cannot be explained by psychological theory.

Using Campbell’s (1996) theory of modern superstition, this chapter compares the beliefs of non-PGs to those identified in Toneatto’s (1999, 2002) typological account of irrational gambling beliefs among PGs. Finding similarities and/or differences may shed light on what “causal conditions” (Strauss and Corbin 1998) allow for similar beliefs to present in both groups despite different outcomes (i.e., gambling problems versus no gambling problems).

2 Literature Review

For many thinkers, reason, secular rationalism and empiricism, the hallmarks of a modern capitalist world, were expected to extinguish superstition and related non-rational phenomena (Campbell 1996). Despite this prediction, superstition endures in the modern world. There are few surveys on the prevalence of socially shared superstitions, but Campbell (1996) cites a
Gallup poll from 1986 suggesting that one third of the U.K. population is superstitious. Frequently reported superstitious behaviours included avoiding walking under ladders, touching wood, and throwing salt over one’s shoulder (Campbell 1996). In another Gallup survey of a representative sample of 1,000, approximately 25% of the Americans sampled acknowledged they were very superstitious, with most reporting the superstitious rituals of knocking on wood, avoiding black cats crossing paths, walking under ladders, and being careful not to break mirrors (Moore 2000). In a more recent Gallup poll of American, roughly half admitted to being a little superstitious and 19% said they were very superstitious (CBS News cited in Vyse 2000).

An ongoing debate is what actually defines superstition with respect to belief and behaviour. The overlap between definitions of superstitious, paranormal and occult beliefs is well documented (Campbell and McIver 1987; Vyse 2000). Anthropologists are known to treat superstition, magic and the occult as interrelated categories (Campbell and McIver 1987:45). Jahoda (1971) notes that superstition is sometimes linked with the term “magic,” as superstition can cover many spheres, such as lucky or unlucky actions, events, numbers, and/or sayings, or a belief in astrology, the occult, the paranormal, or ghosts. In fact, Campbell and McIver (1987:44) argue Tiryakian’s (1972: 265) definition of the occult and Jarvis’ definition of superstition (1980:288) bear striking similarities in that both refer to attitudes or practices of individuals that relate “their existence to the general order of the cosmos” or draw on such forces in the cosmos that cannot be “measured by recognized instruments of modern science”. Further, these beliefs are “not incorporated within the institutionalized belief systems of a society as defined by leading representatives of those systems at any given time” (Campbell and McIver 1987:44).

As noted above, superstition rests in an ambiguous area between institutional sources of knowledge provided by science on one side and religion on the other (Campbell and McIver 1987). Perhaps a substantive link between superstition and other middle range knowledge is their perceived relationship to magical ideation or a belief in the ability to affect the outcome of events. Skinner (1948) and Malinowski (1948) write that individuals who practice superstition truly believe they can control events by their conduct (see Campbell 1996).
The steadfast belief in the ability to control outcomes may contribute to the vague boundary between superstition and mental disorders. Superstitious beliefs are a key factor in understanding the auditory hallucinations in psychotic patients and the beliefs of those with Obsessive Compulsive Disorder (hereafter OCD) (Garcia-Monte, Perez-Alvarez, Soto, Perona, and Cangas 2006). Bolton, Dearsley, Madronal-Luque, and Baron-Cohen (2002) explore the link between OCD and magical thinking in children and adolescents. Bleuler (1934) speaks of “omnipotence of thought” in schizophrenics and George and Neufeld (1987) discuss magical ideation in this same population, as does Roheim (1955) in his theory of “magical psychosis”. In fact, magical thinking is a feature of schizotypal personality disorder and a key indicator in assessing the risk of future schizophrenia. Although superstition bears a resemblance to both magical ideation of schizophrenia and the compulsions of OCD, however, it is not linked to mental illness in any established way (Vyse 2000).

Disordered thinking is linked to problem gambling, inferring magical thinking and accounting for gamblers’ superstitious beliefs. Accordingly, Toneatto’s (1999, 2002) classification of gambling distortions includes a subcategory of superstitious beliefs. Superstitious beliefs in problem gamblers (PGs), defined as a “strong conviction based on the erroneous perception of a cause effect association between two independent events” (Joukhador, Blaszczynski, and MacCallum 2004:171), are considered to perform a contributory role in the maintenance of gambling behaviour (Toneatto 1999, 2002). In other words, the assumption is that PGs hold a strong conviction or firm core belief (Toneatto 2002) in their ability to influence gambling outcomes with their actions, and this is reflected in their erratic behaviour. Treatment then involves modifications to cognitive distortions, including helping PGs understand they possess false beliefs not grounded in reality (Ladouceur, Sylvain, Letarte, and Giroux 1998; Ladouceur, Sylvain, Boutin, Lachance, Doucet, and Leblond 2001; Ladouceur, 2004; Sylvain, Ladouceur, and Boisvert, 1997).

Although these beliefs might be false, non-rational and lacking empirical grounding, their nature requires further contextual development. Campbell (1996:155-156) takes aim at those who define superstitious beliefs as a form of “evolutionary survival” or who use psychological theories, as they neglect history and culture. Campbell (1996) explains that pre-
modern and modern beliefs cannot be tied together; more importantly, most psychological theories cannot be applied to the study of modern superstition as they assume individuals truly believe in their superstitious practices. Campbell (1996 cited in Gallagher and Lewis 2001:2) goes on to describe modern superstitions as beliefs that are: “1) not integrated into the cultural customs and social institutions and consequently are highly individualistic; 2) unrelated to a system of belief and therefore lack a rationale; 3) usually denied by its practitioners as having any influence over the outcome of events”. To elaborate on point two, when those who practice such beliefs are asked, they are unable to explain why beliefs take the form they do, and they typically recognize these beliefs as unjustifiable (Campbell 1996:156). The final point speaks to the concept of half-beliefs, a term coined by Peter McKellar (1952:320) to denote the act of “intellectually reject(ing) a superstition [but] nevertheless allow(ing) it to influence thinking and actions”. Put differently, half-beliefs manifest the qualities of beliefs and of disbeliefs (Garwood 1963 cited in Campbell 1996:158). This contradicts psychological theory which suggests practitioners of superstition believe they can influence the outcome of events. Campbell (1996) acknowledges there are still pockets of people (e.g., dedicated magicians) in the modern world who practice superstition or magic, endorse it and are serious about their beliefs and practices (Luhrmann 1989). However, the vast majority of modern practitioners of superstition are half-believers and as McKeller (1952:320 cited in Campbell 1996) explains, this means they “intellectually reject a superstition nevertheless allow it to influence their thinking and actions”.

Campbell’s (1996) theory is useful to describe their persistence in modern society as a consequence of the pervasiveness of instrumental activism. That is, “doing something” in the face of uncertainty is to not resign in challenging times, but to affirm faith in “optimistic and activistic” (Campbell 1996:162) orientations supported throughout the western world (Parsons 1965). Culture and history are important factors to consider when evaluating the nature of beliefs as suggested by Campbell (1996) and implied by researchers taking a psychological approach to the study of gambling beliefs (Joukhador et al. 2004). Joukhador and colleagues (2004) explain it is difficult to disentangle “irrationality” from such beliefs, as “irrationality is relative to the religious/cultural reference base of the observer” (p. 179). A next step, they say, would be to “operationally define superstitious beliefs and differentiate these from legitimate beliefs held in the context of religious and cultural schemas” (p. 179). This is an important step
forward in gambling research and may also prove impactful for treatment focusing on gambling beliefs.

3 Current Study

This study seeks to identify whether a small, non-probability sample of non-PGs from Toronto, Canada, manifest beliefs that resemble those of PGs. To this end, this study will reconcile the typology constructed by Toneatto (2002) to categorize “cognitive distortions” in PGs against the unusual, non-institutional, beliefs of non-PGs to better understand where differences or similarities may lie.

The Toneatto (1999, 2002) typology, although designed for a psychological analysis of cognitive distortions, references many characteristics of superstitious beliefs and practices (see Jarvis 1980; Campbell 1996), questioning if and how the beliefs of non-PGs fit the classification. The conceptualization of beliefs is intended to help identify the nature of these beliefs, bearing in mind the definition of modern superstition advanced by Campbell (1996). This insight might lead to a better understanding of the beliefs of gamblers, the group for which the typology was created.

4 Methods

4.1 Sample

The study took place in Toronto, Canada, over a three month period. Potential participants were recruited via an advertisement asking for individuals interested in participating in a 60 minute interview on whether and how non-religious beliefs (i.e., unusual beliefs) were involved in their decision making. This sample acted as a comparison group to a larger sample of PGs; therefore, the Lie-Bet (Johnson Hamer, Nora, Tan, Eisenstein, and Englehart 1988) quick screening instrument was administered to screen out those with problem gambling behaviour. Purposive sampling was used to acquire a demographically similar sample to that of the problem gambling focal group. That is, an adult population with an equal distribution of men and women were recruited.
Participants were invited to an interview at a location and time of their choosing, with most interviews taking place in a private and secure office space at the University of Toronto. The research was approved by the University of Toronto, Office of Research Ethics (reference #27651).

Demographics of this sample are highlighted in Table 2. To summarize, the sample comprises an equal distribution of male and female participants, with the majority between 51 and 60 years of age. Income levels, ethnic background and marital status are fairly equally spread across categories. Most participants (60%) had some post-secondary education.

4.2 Analysis

This study draws on interview data of 10 non-PGs who were asked about their religious and non-religious or more “unusual” beliefs. Interviews were transcribed verbatim and de-identified to ensure anonymity. NVivo and SPSS software were used for the qualitative and quantitative data analysis, respectively. The former included analysis of 10 transcribed and de-identified interviews. The latter analyzed the 10 participants’ demographic data.

Because Toneatto’s (1999, 2002) typology encompasses a vast array of belief types, I used it to categorize superstition in my sample (see Table 3, embedded in Chapter 3). The analysis comprised two coding phases, namely open and axial. Open coding involved familiarization with the data and the assignment of codes for emerging concepts or ideas. Data were organized into thematic categories informed by the Toneatto (1999, 2002) typology to assess applicability; however, I modified the typology to eliminate the gambling focus in some areas (see Table 6). More specifically, the category “Magnified Gambling Skill” was changed to “Magnified Skill” and the description was changed to read “efforts to acquire special knowledge and develop superstitious systems”. “Gambler’s Fallacy”, a subcategory of “Attribution Biases”, was removed due to its gambling specificity. All other (sub)categories were modified in the description section of the table to eliminate a gambling focus on wins. That is, the term “winning” was changed to “favourable outcomes” in most areas of the description section of the chart.
I analyzed the belief types according to the Toneatto (1999, 2002) typology, placing quotations in either parent (belief type categories) or child nodes (belief sub-type categories). I coded negative cases, that is, examples of beliefs/behaviours running counter to the typology, separately. Memoing was used to make analytical notes throughout the process of analysis, identifying relationships between categories and gaps (Charmaz 2005). This, in addition to coding, pointed to the applicability to Campbell’s (1996) definition and theory of modern superstition.

Table 6. Unusual Beliefs: A Typology

<table>
<thead>
<tr>
<th>BELIEF TYPE</th>
<th>DESCRIPTION</th>
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<tbody>
<tr>
<td>Magnified Skill</td>
<td>Efforts to acquire special knowledge and develop superstitious systems.</td>
</tr>
<tr>
<td>Superstitious Beliefs</td>
<td></td>
</tr>
<tr>
<td>a) Talismanic Superstitions</td>
<td>Possession of certain objects confers good luck; lucky or preferred numbers.</td>
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<tr>
<td>b) Behavioural Superstitions</td>
<td>Certain actions or rituals can modify an outcome; verbal (e.g., verbal encouragement) and nonverbal (e.g., rubbing hands etc.) believed to modify an outcome.</td>
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<tr>
<td>c) Cognitive Superstitions</td>
<td>Mental states can influence outcome (e.g., prayer, hope).</td>
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<tr>
<td>Attribution Biases</td>
<td></td>
</tr>
<tr>
<td>a) Attribution Errors</td>
<td>Dispositional factors (e.g. skills, abilities) overestimated to explain favourable outcomes and situational factors (e.g. luck, probability) underestimated.</td>
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<tr>
<td>b) Anthropomorphism</td>
<td>Human characteristics attributed to inanimate objects which may be credited with (un)/favourable outcomes.</td>
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<tr>
<td>c) Temporal Telescoping</td>
<td>Favourable outcomes will be taken as evidence that a favourable outcome is near.</td>
</tr>
<tr>
<td>Selective Memory</td>
<td>Favourable outcomes, selectively recalled to sustain hope despite overall negative outcomes.</td>
</tr>
<tr>
<td>Over-interpretation of cues</td>
<td>Over-interpreted ambiguous stimuli to guide decisions (e.g. bodily sensations, intuitions, omens, unusual events).</td>
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Control Over Luck

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<tr>
<td><strong>a) Aligning with Luck</strong></td>
<td>Luck cannot be manipulated directly; strategy is to wait periods (‘streaks’) of good luck to act and avoid acting during periods of ‘bad’ luck.</td>
</tr>
<tr>
<td><strong>b) Luck as a Variable</strong></td>
<td>Actively try to manipulate luck through superstitious behaviours.</td>
</tr>
<tr>
<td><strong>c) Luck as a Trait</strong></td>
<td>Lucky by nature with certain things and unlucky with others.</td>
</tr>
<tr>
<td><strong>d) Luck as Contagion</strong></td>
<td>Success in other areas of their life generalizes to success in others; may also believe others bring either good or bad luck.</td>
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<tr>
<td><strong>Probability Biases</strong></td>
<td>Incorrect beliefs about randomness which may lead to incorrect inferences about the likelihood of a favourable outcome.</td>
</tr>
<tr>
<td><strong>Illusory Correlation</strong></td>
<td>Assign causality to salient features of the environment correlated with outcomes contiguous with such favourable outcomes even if such associations are non-contingent.</td>
</tr>
</tbody>
</table>

5 Findings

5.1 A Typology of Unusual Beliefs

The modified Toneatto (1999, 2002) typology was useful in categorizing the beliefs and related actions of non-PGs, but some modifications were required to account for differences between this sample of non-PGS and gamblers, for whom the typology was created. The changes are outlined in Table 7. (see highlighted sections). Adjustments include the following: the addition of one category; the addition of two descriptors for two separate sub-categories; and the removal of two categories and three sub-categories.

The category “Karma” was added to house beliefs with a focus on moral cause and effect, an emerging category from this data. The title of the category reflects the term used by participants in the course of interviews. Findings also called for the modification of two existing descriptors. A reference to positive mind states, in addition to hope and prayer, was added to the “Cognitive Superstition” category. Similarly, luck was manipulated not only through superstitious behaviours but also through cognitions, thus requiring revision to the existing descriptor “Luck as a Variable”.

Certain existing categories did not align with the data. “Probability Biases” was omitted as most of these beliefs were not “empirically valid”. Furthermore, this category has more
significance for clinical based psychologists who aim to treat this lack of insight. “Selective Memory” was another category that seemed to lack relevance for a non-PG sample as all individuals can be said to draw on memories selectively. The subcategories “Attribution Errors”, “Temporal Telescoping” and “Aligning with Luck” were removed as well. “Attribution Errors” was not relevant, as participants did not highlight a dispositional factor and underestimate a situational factor in the same train of thought. “Temporal Telescoping” did not present itself in the data, in that no participant felt a favourable outcome meant another was approaching, or at least this was not discussed during the interviews. As luck is a much more pervasive topic when discussing gambling outcomes, “Aligning with Luck” was understandably omitted as a subcategory, although luck did present itself in this sample, as seen in the other three subcategories in “Control Over Luck”.

Table 7. Unusual Beliefs: A Modified Typology

<table>
<thead>
<tr>
<th>BELIEF TYPE</th>
<th>DESCRIPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Magnified Skill</td>
<td>Efforts to acquire special knowledge and develop superstitious systems.</td>
</tr>
<tr>
<td>Superstitious Beliefs</td>
<td></td>
</tr>
<tr>
<td>a) Talismanic</td>
<td>Possession of certain objects confers good luck; lucky or preferred numbers.</td>
</tr>
<tr>
<td>Superstitions</td>
<td></td>
</tr>
<tr>
<td>b) Behavioural</td>
<td>Certain actions or rituals can modify an outcome; verbal (e.g., verbal encouragement) and nonverbal (e.g., rubbing hands etc.) believed to modify an outcome.</td>
</tr>
<tr>
<td>Superstitions</td>
<td></td>
</tr>
<tr>
<td>c) Cognitive</td>
<td>Mental states can influence outcome (e.g., prayer, hope). Also relates to positive mind states.</td>
</tr>
<tr>
<td>Superstitions</td>
<td></td>
</tr>
<tr>
<td>Attribution Biases</td>
<td></td>
</tr>
<tr>
<td>a) Attribution Errors</td>
<td>N/A</td>
</tr>
<tr>
<td>b) Anthropomorphism</td>
<td>Human characteristics attributed to inanimate objects which may be credited with (un)/favourable outcomes.</td>
</tr>
<tr>
<td>c) Temporal Telescoping</td>
<td>N/A</td>
</tr>
<tr>
<td>Selective Memory</td>
<td>N/A</td>
</tr>
<tr>
<td>Over-interpretation of cues</td>
<td>Over-interpreted ambiguous stimuli to guide decisions (e.g. bodily sensations, intuitions, omens, unusual events).</td>
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</tbody>
</table>
Control Over Luck

<table>
<thead>
<tr>
<th>BELIEF TYPE</th>
<th>VERBATIM QUOTATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>a) Aligning with Luck</td>
<td>N/A</td>
</tr>
<tr>
<td>b) Luck as a Variable</td>
<td>Actively try to manipulate luck through superstitious behaviours and cognitions.</td>
</tr>
<tr>
<td>c) Luck as a Trait</td>
<td>Lucky by nature with certain things and unlucky with others.</td>
</tr>
<tr>
<td>d) Luck as Contagion</td>
<td>Success in other areas of their life generalizes to success in others; may also believe others bring either good or bad luck.</td>
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</table>

Probability Biases

<table>
<thead>
<tr>
<th>BELIEF TYPE</th>
<th>VERBATIM QUOTATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Probability Biases</td>
<td>N/A</td>
</tr>
</tbody>
</table>

Illusory Correlation

Assign causality to salient features of the environment correlated with outcomes contiguous with such favourable outcomes even if such associations are non-contingent.

Karma

The natural law of moral cause and effect. This relates to action and thought as well as overall state of mind.

To better illustrate the belief types, verbatim quotations are provided in Table 8.

Roughly one to three were selected to “give voice to” each belief (sub)type. Quotations help illustrate the different types of beliefs. Admittedly, however, given the small sample size and the ability of some participants to better articulate their beliefs verbally, certain individuals are highlighted more than others in the typology provided below.

Table 8. Unusual Beliefs: A Modified Typology, Illustrative Examples

<table>
<thead>
<tr>
<th>BELIEF TYPE</th>
<th>VERBATIM QUOTATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Magnified Skill</td>
<td>P2: I do also say when I make a batch of balms that you’re healed and you’re loved and this is my way to give as much as I can others, you know a little bit of healing… Those people are not too aware of what makes them feel better you know…. So yes, I do know! I pick up herbs, some herbs myself (and make healing balms)... Yes, I took some herbal courses here with my shaman teacher and so on. And I dry them. I soak them in olive oil for days and days and then I make the balms. And they are for you know I cannot claim anything, so I shouldn’t because you know I have no power over like they are for eczema or for this, but I have a lot of testimonials.</td>
</tr>
<tr>
<td></td>
<td>P5: I do tarot. Only about four or five years (now). You can get any book that tells you about tarot and tarot cards and that kind of things and it’s easier to read it because if you go in and you’re paying someone to do it, a lot of times they’re not actually reading the cards. They’re reading the person. They’re looking at a person and...</td>
</tr>
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they’re saying okay this is about you, this is about you and they’re looking down at the cards, yeah sure. But a lot of times they’re not actually reading the cards. They’re telling someone what they want to hear. I actually read the cards.

<table>
<thead>
<tr>
<th>Superstitious Beliefs</th>
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</thead>
<tbody>
<tr>
<td><strong>a) Talismanic Superstitions</strong></td>
</tr>
<tr>
<td>P4: Yes. I think lucky seven for me.</td>
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<tr>
<td>I: Yes, sometimes we have numbers but it’s hard to describe why we like a certain number, right?</td>
</tr>
<tr>
<td>P4: Yes.</td>
</tr>
<tr>
<td>I: What number would you say?</td>
</tr>
<tr>
<td>P4: My number would have to be six and nine.</td>
</tr>
<tr>
<td>I: Is there any reason behind that?</td>
</tr>
<tr>
<td>P4: Yes. It’s my birthday, October 9th. Yes. To do with my birthday.</td>
</tr>
<tr>
<td>P6: I would have to agree that I for one, I am a superstitious person. That is, I have elephants in my home that have the tusks up. And that’s my superstition, that it keeps the devils out of my home.</td>
</tr>
<tr>
<td>P7: Yeah, like I said I don’t think there’s ever been a thing you know that I say, you know I keep this for luck. Or I keep this because it’s got some kind of energy. When I left that spot (where I lived for a while), my friend had found an eagle feather and had done this little beading work on the, whatever the part that sticks to the bird is. She had given it to me and said, “you know, I’m really sad that you’re leaving but maybe this will help with that”... And I remember when I had that for a while whenever I was feeling shitty or down and I remember taking that and just holding it (for the positive energy).</td>
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<tr>
<td><strong>b) Behavioural Superstitions</strong></td>
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<tr>
<td>P4: For me, one thing I believe in is when a black cat crosses the road. That is my belief. I don’t know why, that’s just me. When I see the cat going, I always make sure a person goes before I do, to break the spell.</td>
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<tr>
<td>I: Tell me, so you see the black cat and then you wait for someone else?</td>
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<tr>
<td>P4: Yes, I wait for the next person to go ahead of me.</td>
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<tr>
<td>P6: You know and sometimes people look at you and “why do you do that”? You know I come home late at night. I come home late at night, and this might make you laugh, this may make you think I am crazy. When I walk into my house and I open the door, I don’t walk in my house. If I come into my house after 12:00 o’clock at night, I walk into my house backwards... Because at that time of the night I believe that there are some bad spirits around…. At 12:00 at night the darkness is changing into light.</td>
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</tbody>
</table>
I: I see, so there is some transition going on there?
P6: There is some – that the bad spirits are going, superstition….
The bad spirits are running away. So by me walking backwards into my house… I am telling them that whatever negativity I am telling you to stay outside…. By walking backwards.
I: Okay. So you do think that these things will have a positive sort of impact?
P6: For me it does.

c) Cognitive Superstitions

P5: The whole thing with Tinkerbell was you had to clap and say you believed in her right, that sort of thing but you don’t clap for a fairy you just have to believe because it gives them power. Just like anything else you will truly believe in, it gives it power as well.
I: And then it has the power to emerge?
P5: Sort of. Fairies yes, because they take energy from somebody that actually believes in them and turns it into their own power and then is able to manifest but say like a spirit and that doesn’t need to take energy from somebody that believes in them. They’re just there.

P6: I left the house this morning after my prayers, after my shower, I had my tea. I stand in my living room. I have a very quiet little place. I stand there, I look at my Krishna, I look at my two elephants, I put my hands together. God, give me the strength to handle today, I am going to see. I hope you know if she gets to the place safely, guide my day. And I thank you for the sleep you gave me last night. I thank you for the tea. Please guide me today. I need you, like I needed you yesterday. And I am here. Is that a superstition? No. It’s part of my ritual. Do I believe it as to be superstitious? Yes. It is something that I have to do otherwise I am not comfortable in the day, because I didn’t give the higher power thanks for keeping me alive last night and waking me up this morning and showing me darkness and showing me light.
I: And what do you think the consequences of not doing that in the morning are?
P6: It kind of screws up my day. Maybe it’s just – I don’t know the word for it, maybe it’s just superstitious but... It screws up my day. I don’t feel as comfortable (if I don’t do it) as I feel like now because I gave my thanks, you know I gave my thanks, I feel great… I feel powerful.

P3: You know. But if you have a positive attitude, you have a better outlook on life. You’re bound to gain better friends, better jobs, and more money.
### b) Anthropomorphism

<table>
<thead>
<tr>
<th>P5: I believe in fairies. A fairy cloaks, you’ll see or- I think I’ve seen one once but that’s about it but I was really little.</th>
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</thead>
<tbody>
<tr>
<td>I: What does it look like?</td>
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<tr>
<td>P5: It was more like a glowing ball.</td>
</tr>
<tr>
<td>I: Oh okay so it wasn’t really something you saw the full outline for? It was something more ambiguous.</td>
</tr>
<tr>
<td>P5: Well, I know it wasn’t like a firefly because it was too big. It was way too big. It was like “that big”, I would say about three inches. And it’s sort of hovering and goes out and it’s light goes out and it’s gone…They like to cloak themselves and make themselves invisible to the human eye so when our cat starts randomly playing and trying to grab things out of thin air, we know what they’re playing with.</td>
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</table>

| P6: I have the most beautiful dog in the world. My dog is a very content dog. People look at him and said, “X you talk to your dog like a fucking human being”. And I said yes. Like there are times when I look at him and I go to a store. I’d say “wait for me, I’ll be right back.” People look at me and say “yes, all right”, because he is 120 pounds. He will sit there. He wouldn’t bark at another dog that goes by. And then I come out with bags, all he wants is to put a bag in his mouth. And he will carry one bag and we go home. |

### c) Temporal Telescoping

| N/A |

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<tr>
<th>Selective Memory</th>
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<tr>
<td>N/A</td>
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<tr>
<th>Over-interpretation of cues</th>
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</table>
| P8: I think that we can sometimes feel their spirit. I think they’re I don’t know, I mean it’s an energy. It’s not any kind of a form. But I think sometimes so that people can sort of feel and energy or they can feel it or something. And I really believe that they do. One time what happened was— oh my gosh, talking about that— My mother died when I was (young). Yeah, he had was in a(n) accident. So I’ve never known... well I don’t remember knowing him... I don’t know what was going on in my life. But I went to sleep and I was determined to talk to my mother, to try to talk to my mother. I have no idea why. I have no idea why, it was just something when praying that night. Honest to god I felt like I was being pulled into this world. It scared the heck out of me I had to snap myself out of it. It was like I was going into some kind of trance or something or being pulled into, I don’t know…. And I was lying in bed and I you know, I did my usual prayer, and then I was trying to communicate, not to communicate, talk to my mother kind of thing. Just quietly, just, yeah, I wasn’t speaking orally. I was thinking about my mother and trying to talk to my mother and I go this weirdest feeling that I was being pulled into something. It was the weirdest, weirdest feeling and I thought if I keep going with this going with this, I...
won’t come back. It just was, I don’t know what it was. It was so strange.

P3: Everyday (I read the horoscope). It influences me a lot (the horoscope) because there a lot of times I’m saying…let’s say at least 50% of the time I read my horoscope. Sometimes it’s like whatever, sometimes it’s dead on. It’s like, wow. You know like you’re going to get a job today and I actually got a job today.

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<tr>
<th>Control over Luck</th>
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<tbody>
<tr>
<td><strong>a) Aligning with Luck</strong></td>
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<tr>
<td><strong>b) Luck as a Variable</strong></td>
</tr>
<tr>
<td><strong>c) Luck as a Trait</strong></td>
</tr>
<tr>
<td><strong>d) Luck as Contagion</strong></td>
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<tr>
<td><strong>P4</strong></td>
</tr>
</tbody>
</table>
run the company or you know, or just the way they treat you. You know, it’s a... just a feeling. It just like there’s a... A negative energy. When you get a negative energy and you feel like, I want to get out of here.

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<thead>
<tr>
<th>Probability Biases</th>
<th>N/A</th>
</tr>
</thead>
<tbody>
<tr>
<td>Illusory Correlation</td>
<td>P10: So, there could be time displacement, you know, I can’t really tell you, I’m not a scientist. But, I just look at data and I come to conclusions. Based on my experience, what I’ve noticed, too, a lot of the (UFO) sightings were on these moon cycles.</td>
</tr>
<tr>
<td></td>
<td>P2: It was affecting energetically different things like I could, you know, affect the computer programs too. That they were you know I told so that how I affected. Yes, there was one incident. I was taking classes in university…. And I remember once I just – whenever I had the anxieties I did this uncontrolled sort of different things. And once I couldn’t manage to put my younger son to school on time, and I was really, really rushing and the computer room was tiny with no windows. And a lot of (these) old computers around them that people were just — and on the programs when I enter would impact the room. And I saw the programs start to, you know going away.</td>
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<tr>
<td></td>
<td>I: So what do you think what was it about your energy at that time that was off, like or what was it, how do you describe it?</td>
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<tr>
<td></td>
<td>P2: Anxiety and you know like you don’t know fear, anxiety don’t know what is going on with you and why it is going on with you.</td>
</tr>
<tr>
<td>Karma</td>
<td>P5: It’s the whole damnation in hell thing. I really don’t believe that if you’re not perfectly Christian, you’re going to go to hell or if you don’t believe in one thing you’re going to go to a fiery pit of despair. It’s all karma. If you’re doing something bad to someone, you’re going to have something bad happen to you, because you’re doing it.</td>
</tr>
<tr>
<td></td>
<td>P1: If you’re good, then you have good given back to you. Sort of like, if you smile then someone’s going to smile back at you. If you steal, you’re going to get caught and you’re going to go to jail. So, there are more real consequences than this imaginary heaven and hell thing.</td>
</tr>
</tbody>
</table>
|                   | P8: I don’t know. Because I guess, I was brought up Catholic, I feel like if— you know you pray for materialistic things, things that are... really have nothing to do with faith, I just feel like something bad is going to happen. Not bad. I mean not that I’m you know, going to get into a bad accident or something like that. But just that I’m not sincere and you know, and I think it’s no and it’s just... not being a good Catholic, I guess. I just think that my, just that my life will take a downturn. Like for being untrue to my faith is going to have the
opposite effect. Because honestly I feel that when I’m sincere and I really mean to pray and ask for guidance and so on and then I can feel it, my life does fall into place. I find that it does, like things happen for a reason and things fall into place.

Findings suggest the typology of gambling beliefs, even beyond the superstitious belief subset, is an appropriate classification for the unusual beliefs of non-PGs. In fact, many of the beliefs in the typology point to definitions of superstition especially as it relates to non-empirical, non-religious beliefs that assume supernatural causality. For example, over-interpreting cues assumes supernatural cause and effect as does cognitive superstition. The former often involves more sense making of unusual situations while the latter has to do with self-action, but there is usually a combination of the two in most categories.

Given the beliefs of non-PGs are housed quite effectively in the typology constructed for gambling beliefs or cognitive distortions, what does this say about the nature of these beliefs? The Campbell (1996) theoretical framework helps answer this question. The framework outlines the following three components of modern superstition: 1) they tend to lack social prescription and are highly individualized; 2) they lack justification; and 3) they are only half-believed.

5.2 Persistence and Individualization of Superstition

Interviews with the participants unearthed a wide variety of superstitions. The more commonly known superstitions in the western world such as avoiding black cats, not walking under ladders, throwing salt over the shoulder, knocking on wood, not opening umbrellas indoors, and avoiding the number 13 were prominent. As one participant explained, she adhered to both the umbrella and ladder superstitions:

P8: I don’t allow an open umbrella inside a building. Ladders I take a double check. [laugh] I walk around it. I mean the common ones (superstitions). I suppose you know, like the umbrella and the ladders.

That said, superstitious beliefs and superstitions were much more nuanced and extended beyond those known to be typical, or socially shared beliefs, in the western world (see Table 9). That is, even for commonly known superstitions rooted in the social, participants seemed to generate
revised, personalized versions. This personalization was illustrated by two participants who described their version of the “crossing a black cat” superstition:

P1: The black cat, if you see the black cat, walk seven steps backwards and try and not let it pass by and… That’s what my mother or my grandmother do. If you see the black cat, walk seven steps back and then let it walk and then you can go. That one has been very popular in our family.

P4: For me, one thing I believe in is when a black cat crosses the road. That is my belief! I don’t know why, that’s just me. When I see the cat going, I always make sure a person goes before I do, to break the spell. Yes, I wait for the next person to go ahead of me (to break the spell).

Personalization did not stop at commonly held superstitions, as highlighted in Table 8. Participants held diverse beliefs and engaged in varied actions—with no two participants holding the same set of beliefs or practicing the same set of actions. Additionally, the beliefs and accompanying actions did not appear to be a form of collective ritual as they lacked social prescription. In other words, the superstitions were not in line with the expectations of others and took place with or without the observation of others. One participant described her mother’s specific superstition:

P1: I don’t know. Like my mom always has like the Mary charms and the Jesus charms but I’ve never adopted that sort of system of holding onto something for luck.
I: That’s interesting. So, she has the Mary and Jesus charms, would you say she’s religious?
P1: She is, yes.
I: So, have you ever seen her sort of like using them as a tool of some sort or just she just has it on her wrist or whatever?
P1: She has three crosses on her necklace and when she’s stressed or she’s thinking about something she’ll hold on to them and sort of like, reflects with them.
I: So, in reflect just sort of reflect on the situations?
P1: The situation and what would God or Jesus do.
I: So, three crosses, I have to ask, why three?
P1: She says because we’re family of three so one cross for each of us.

Although there might be an awareness of others’ superstitions, participants did not feel compelled to believe or engage in the same practices as others:

P3: Actually, I will say yes to that because a lot people, I mean, we all have our own opinion, right. Everybody is different, that’s what makes everybody not the same….
That’s like the same thing the other day I was walking with a friend to a Fort York and a black cat crossed our pass. He freaked, I was like, “Relax, it’s only a cat man!” Nothing bad happened, we didn’t get run over or nothing like that happened, but you know, like, to each his own.

That is, although there was an awareness of others’ superstitions, this did not necessarily influence participants’ personal superstitions.

5.3 Recognizing Beliefs as Unjustifiable

The individual nature of these beliefs reaffirmed that the practices were unrelated to any system of beliefs, thus devoid of a rationale. Practitioners even recognized their practices as unjustifiable. When asked why superstitions took the form they did, participants struggled to answer. Most made statements about the practices being “just their superstitions” with some adding “they did not know why” they performed certain rituals. One participant spoke of her lucky bracelet and tried to explain why she felt the need to have it on her person, especially during uncertain times:

P8: I have a bracelet which I’m not wearing. It’s a silver bracelet. And until recently if I didn’t wear it I was going to have a horrible day. I am not kidding you. I have this silver bracelet. And when I stopped— well I had gotten laid off, but I stopped working I just stopped wearing it. You know, I was just going to the corner store and this and that and I wouldn’t wear it. And it took a while and to this day I think, oh I should wear it. And this morning I was actually going to and I forgot, I was running out of time (before a job interview). I took it out of my jewelry box, but... But I’ve been thinking about it ever since (since I forgot to put it on this morning) [laugh]. I’d been thinking about going back... do I have time for that [laugh]? Yeah, it’s a silver bracelet and for some reason... I do not know why, it’s just... I always seem to have a good day when I’m wearing it.

When probed about her need to be in possession of the bracelet, she, as others, struggled to explain why her actions took the form they did, recognizing their unjustifiability:

P8: I have no idea. No. I don’t know if it makes me feel... I don’t know if secure is the right word. [it makes me feel] more confident and I don’t know why.

Another participant spoke of his lucky nickel, finding it difficult to justify his superstition:

I: So, what is the significance of that nickel?
P3: It’s the year I was born. I just feel it’s a good luck thing. I don’t know why.
He struggled to explain the rationale, saying that perhaps the date on the nickel matching his birth year might bestow some luck.

In the end, practitioners relied on their feelings to make sense of their tie to objects. Most had trouble explaining their superstitions, ultimately concluding they did not know why they took the forms they did. The struggle left practitioners uncomfortable, prompting them to discuss more generic socially shared superstitions, as discussed above.

5.4 Half Belief

In some cases, the followers of superstition can be described as “half-believers”. While they practiced a superstition, they intellectually rejected it. That is, they were not staunch believers and were not committed to the idea that the practices “worked”:

P1: No,…personally, do I believe? Not really. I read the horoscope type of thing but I don’t actually think that it’s going to happen to me. I wouldn’t think about it but if someone were to stab me in the back, I’d be like, “Oh my gosh the horoscope told me what’s going to happen and it happened.”

P3: It’s up to you whether or not you make your own good luck or you make your own bad luck.
I: So, what does that mean to you? How do you create your own luck or your own bad luck?
P3: I never thought of it really before. I guess it’s just the way you just carry yourself, like the way you plan your day or whatever, I guess. I don’t know. I never really thought of it, actually…. Because if you’re negative, you’re always going to be negative. You’re never going to have anything to look forward to. You’re always going to be like, I would say angry. You know. But if you have a positive attitude, you have a better outlook on life. You’re bound to gain better friends, better jobs, and more money.
I: Okay, so you’re going to attract that.
P3: Exactly, I think. I hope.

Another participant explained there is little efficacy in the practice of superstition:

P2: But many of those superstitious things are just only superstitious things.
I: So what do you mean?
P2: So they don’t have – I don’t feel the power under them…
Many said they held superstitions, but their belief in them was partial at best. A good example of a “half-belief” is the following discussion with a participant who both dismissed the validity of palmistry and sought out additional readings:

P3: I’ve always wanted to go get my palm read, but no. I just thought it was a crock of shit. They say, like I got a long lifeline. Really, so I’m going to be old and miserable? Actually, this one girl started to read mine and actually she sort of got freaked out by it. So, I think that’s another reason why I’d never really got it done.

I: Were you freaked out by the fact that she was freaked out?

P3: Yes. Yes, because she said, “This line is not supposed to cross that line like that.” “What are you talking about?” “I can’t say anymore.” So, I was like, “Hmm, why?” Actually, I’ve had a couple of people sort of look at my palm and one said, “Man, you’re going to live to be old.” I said, “I don’t want to be an old man.” I mean, I’m 51 now, I’ve already had enough.

In sum, many participants revealed their beliefs and rituals only to dismiss them, attempting to negate previous discussions. Nevertheless, despite rejecting them on an intellectual level, they continued to allow them to influence their actions.

5.5 Stigma and Unusual Beliefs

In this study, unearthing unusual beliefs was best achieved by avoiding labels. Most participants resisted labelling themselves “superstitious” even when discussing their beliefs with supernatural causality. Others admitted holding superstitions, being almost apologetic about it, and professing their allegiance to rational thought:

P5: A lot of things are logic (driven) for me, unfortunately, I do have superstitions (though).

Beyond this overt adherence to rational knowledge, participants said both rational and non-rational sources of insight played a role in their lives and decision making:

P1: No matter how much we try to say, “No, my mind is scientific,” there’s always something (non-scientific), whether we realize it or not, that’s playing an aspect in our lives.

P8: Because when you’re making a decision, a very important decision, of course, you draw on all the facts that you have in front of you. But the ultimate decision comes from something within you, yourself, whether it’s a superstition or something....
Some participants seemed to think non-rational beliefs somehow “marked” individuals, making them vulnerable to labels that were a precursor to stigma (Goffman 1963). One participant explained the fine line dividing unusual beliefs from irrational beliefs associated with mental illness:

P2: …you know because there is very fine line between recognizing somebody with a mental disorder and mystical beliefs…. And so with the mystical experience it is very, very hard. I believe that doctors, they, sometimes, either they make an incorrect judgment, or they have a hard time to, you know, recognize this difference between beliefs and mental disorders.

Despite the opaque boundaries between unusual beliefs and those associated with mental illness, participants were willing to discuss their beliefs in the interview context. In the end, the majority not only admitted to holding non-rational beliefs but also said these beliefs, along with rational beliefs, were sources of insight, even though they knew such an admission made them vulnerable to labelling.

6 Discussion

Although the Toneatto (1999, 2002) typology captures the beliefs of non-PGs, certain modifications are necessary if it is to be used in a critical context. In this case, I changed the wording of most categories to account for non-gambling related beliefs (i.e., “winning” was changed to “favourable outcome” for most descriptors). This also meant omitting the subcategory, “Gambler’s Fallacy”. In the same vein, the category “Magnified Gambling Skill” was changed to “Magnified Skill” to eliminate the gambling focus for this particular sample.

I added two descriptors to existing subcategories to reflect additional cognition based superstitions to do with positive mind states. The addition of “Karma” as a category accounted for moral cause and effect as they relate to thoughts, states of mind, and actions. The interesting finding of the mind based focus of many of the beliefs may point to an increasing interest in a cultural phenomenon labelled “The Secret” (Byrne 2006) and its focus on a superstitious law of attraction. The emerging interest in Eastern religious philosophies (McMahan 2004) may also be reflected in the emergence of the “Karma” category given the growing use of the term in everyday language.
I omitted the category “Probability Bias” and two sub-categories, “Attribution Errors” and “Temporal Telescoping”, given their lack of symmetry with the findings. For the most part, these categories are more relevant to psychologists seeking to treat pathological gamblers in a clinical setting. I also removed “Aligning with Luck”; the overemphasis on luck common among gamblers seems less common among non-PGs. That said, the non-PGs studied here held luck based beliefs, as indicated in the remaining subcategories for “Control Over Luck”.

Although the comparison group comprised a small non-representative sample, the similarities between the beliefs of gamblers and those of the non-problem gambling comparison group are striking. That is, the vast majority of the categories and subcategories in the gambling belief typology match those of the non-PG group. In other words, the gambling belief typology captures similar beliefs types for PGs and non-PGs. For example, although PGs speak of beliefs related to gambling activity, while these particular non-PGs did not, the latter spoke of using such beliefs when engaged in decision making with uncertain outcomes.

A close examination of the “Magnified Skill” category demonstrates participants’ skilled ability to manipulate herbs for healing or tarot cards for predictions, comparable to the skills highlighted by gamblers and described under this category in the gambling typology. Similarly, in the category “Over-interpretation of Cues” one participant described reading the horoscope to determine if she would get a job offer, thus speaking to the over-interpretation of an external source of input. Perhaps the most interesting similarity is one non-PG’s description of how she encouraged her mother to pat her head when buying a lottery ticket to secure a win. This, of course, aligns with the “Luck as a Variable” subcategory.

In the end, it seems a typology constructed for gambling beliefs accommodates the beliefs of non-PGs – at least the non-PGs of this sample – quite well across most categories. What does this finding tell us about these beliefs and, potentially, about the beliefs of problem gamblers?

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21 It should be noted that this particular respondent held beliefs about the healing properties of herbs that are perhaps more closely aligned with folk sciences and medicines (Snow and Machalek 1982) where beliefs are said to have higher empirical relevance. Even so, they still demonstrate supernatural causality.
Here, the Campbell (1996) definition and theory of modern superstition proves useful, as it can shed much needed light on the beliefs of this sample. Socially shared superstitions, such as avoiding ladders, knocking on wood, were prominent throughout the sample, a finding consistent with previous prevalence studies (Vyse 2000:19-22), but the majority of beliefs across categories were highly individualized. In fact, participants demonstrated their lack of social prescription by resisting the adoption of others’ personalized superstitions. Indeed, the beliefs outlined in Table 5 were not born out of collective ritual action nor were they followed by a community of believers (Durkheim 1912). That is, the beliefs were not socially prescribed or tied to other systems of belief, and participants recognized their lack of rationale. Admitting these beliefs were unjustifiable amounted to an intellectual rejection; yet the study’s participants allowed the beliefs to influence their actions. Campbell (1996) calls this phenomenon the paradox of instrumental activism. In addition, participants were not convinced their practices “worked”. Those holding “half beliefs” as defined by Peter McKellar (1952:320) may intellectually reject a superstition, but allow it to influence action (cited in Campbell 1996:158).

Superstitions seemed more prevalent in discussions centering on uncertain times, including divorce, unemployment and personal health crises. They also helped participants make sense of observations, feelings, or other sensations they did not understand. At the same time, superstitions seemed to inform mundane situations plagued with uncertainty like wearing a lucky charm during a job interview or entering a doorway in a certain way to avoid bringing negativity into the home. The need to act in situations, alleviating anxiety that comes from threats to instrumental activism, reflects the need to protect this central value orientation according to Campbell (1996). A gambler is engaged in a precarious activity that might elicit similar reactions, making Campbell’s (1996) theory suitable to an analysis of gambling-specific beliefs and related actions.

Unconventional beliefs fall into a murky area between science and religion, becoming unhinged from context. As Joukahedor and colleagues (2004) explain in their investigation of the beliefs of problem gamblers, it is difficult to decipher irrational beliefs from non-irrational ones. In their view, this difficulty is rooted in culture, because “irrationality is relative to the religious/cultural reference base of the observer” (Joukhador et al. 2004:179). Campbell (1996)
says culture and history must be considered if we are to understand the nature of unconventional beliefs. Following Campbell, the study’s participants held unconventional beliefs that led to ritualistic activity. Yet they did not fully believe they could control outcomes; nor did they have “strong convictions” (Joukhador et al. 2004) about their efficacy, unlike the findings of the literature on gambling beliefs. The similarities between the two sets of beliefs suggest both have links to instrumental activism (Campbell 1996) which means they do not occur solely in the mind devoid of context. This possibility may warrant further research on the beliefs of gamblers, with a context-focused analysis. Although the beliefs of gamblers are reportedly linked to pathological behaviour, whereas the beliefs cited by the study’s participants do not seem to have any negative repercussions, the possibility of similar causal conditions calls for further research.

7 Conclusion

The gambling belief typology (Toneatto 1999, 2012), with slight modifications, accounted for most of the unusual beliefs of the study’s non-PGs. At the very least, the typification used here seems to effectively classify beliefs that fall in between the knowledge pillars of science and religion, rendering it a useful tool for future research on beliefs of this kind. As it was crafted with the cognitive distortions of pathological gamblers in mind, the typology’s ability to accommodate the beliefs of non-PGs questions the nature of these beliefs. Here, Campbell’s (1996) definition of modern superstition is useful; it sheds light on the nature of these beliefs and their associated rituals. The persistence of superstition in the modern Western world, according to Campbell (1996), may include the eagerness of individuals to uphold the value of instrumental activism (Campbell 1996). Following Campbell, further research on gambling beliefs should take a more cultural and historical approach to unconventional beliefs. Although participants in this study discussed their superstitions, they were almost apologetic about holding non-rational beliefs, with some suggesting irrational beliefs have become pathologized (i.e., a sign of mental illness), thus separating them from cultural or historical understanding. The link between irrational beliefs and pathology is heightened by the erroneous assumption that individuals who hold such beliefs actually believe in them and the efficacy of their actions. This study questions the pathologization of such beliefs, although the fact that gambling beliefs are linked to pathological behaviour means that more research should be conducted on gamblers
to make any conclusions about the beliefs of this group including whether they possess half-beliefs.
Chapter 5
Frame Amplification and Casino-Based Slot Machine Gambling

1 Introduction

In Ontario, slot machine gambling enjoys great popularity, generating 1.8 billion dollars annually, with 60% of these revenues coming from problem gamblers according to a 2003 estimate (Williams and Wood 2007). The revenue for this form of gambling is greater than for all other types of gambling in Ontario (ibid). Although increased availability and accessibility (St. Pierre, Walker, Derevensky, and Gupta 2014) might be one factor in its growing popularity (Rutsey 2009), other factors play a role in the growing appeal. To date, most research has focused on the individual pathology of gambling; gambling behaviour is explained by individual level factors such as impulsivity, poor coping ability, and susceptibility to depression (e.g. Nower, Derevensky, and Gupta 2004) with little consideration of gamblers’ perceptions of the benefits of gambling. What are the benefits of participation, how are these factors perceived, and what role does the casino play in providing them? The individual level factors that may be linked to disordered gambling are well explored in the existing literature, but rarer is a focus on the positive motivators for continued involvement although the importance of which is articulated in the new religious/social movement literature (e.g. Dawson 2009).

Contextual factors are an important complement to the experiential and ideational elements that create meaning for PGs in the casino context. Snow, Rochford, Worden and Benford (1986) unite subjective/interpretive considerations with structural/organizational factors to explain positive motivators of continued participation in social movement organizations (SMOs), especially frame alignment. The assumption is that frame alignment is a necessary condition for organizational participation (Snow et al. 1986). This theory can be extended to gambling. More specifically, the micro-mobilization efforts of the casino may organize the gambling experience and guide action in a seemingly meaningful way. This has not been considered in gambling research, but such analysis may yield a more comprehensive understanding of problem gambling, enabling the development of preventative strategies to avoid problem level behaviour.
2 Literature Review

Scant gambling literature speaks to the activities, perspectives, life-worlds, or relationships that accompany deviant behaviour. Most modern research on gambling behaviour is driven by the positivist paradigm or, in other words, a broad range of theoretical traditions that understand human behaviour to be the product of “forces, factors, or structures (internal or external) that act on people to generate particular outcomes” (Prus 1996:4). Exceptions are rare, but a few ethnographic accounts delve into the subjective understandings of and rationales for gambling (Hayano 1978; Hayano 1982; Henslin 1967; Oldman 1974; Lesieur 1984). Of particular importance is Lesieur’s ground-breaking work “The Chase”. This seminal work on the career of the gambler resists the notion that gambling behaviour is indicative of pathology. Grills (2004) says the concept of the “chase” frames gambling behaviour in “relational, action-based…terms”. That is, Lesieur’s research is driven by the perspective that behaviour occurs in a social context thereby empowering the meaning imbued upon the activity. Lesieur (1977 cited in Grills 2004) also argues a gambling activity can be interpreted in many ways, including as a form of entertainment, quick and easy money, a problem or anything in between. These multiple orientations may be held by various participants in the same setting and individuals may vary over the course of their gambling career (Lesieur 1977:18). For some, gambling participation may not move beyond entertainment oriented considerations whereas for others, participation may evolve. The level of commitment will be influenced by preparatory activities, activity-related competencies, identities tied to the activity, relationships and other emotional attachments to the enterprise (Grills 2004). Gambling activity may simultaneously be understood as many things; it may be “an integrated part of a larger and more developed gambling strategy, intriguing, worrisome, problematic or fascinating” (Grills 2004:6).

In the end, Lesieur (1984) contributes to a richer understanding of gambling behaviour situated in a community, activity-based frame. His work illuminated the value in understanding the social world of the gambler from his or her point of view. This means the gambler’s constructions of meaning take precedence over the morally or medically charged conceptualizations of researchers (Lesieur 1984 cited in Grills 2004).
Many psychological and anthropological researchers have articulated the importance of the gambling context (i.e., structure, dynamics, and machine design) on activity (see Dickerson 1990, 1993; Cornish 1978; Eadington and Cornelius 1994; Griffiths 1993; Schüll 2012; Strickland and Grote 1967). Machine-based gambling requires the player to be in a particular context, with ongoing machine-based interaction (e.g. Schüll 2012).

In this psycho-structural interaction, the player is actively involved in making constant decisions in reaction to the machine’s functionality and design features (Cornish 1978; Schüll 2012). Various features of machines such as “nudge”, “hold”, and “gamble” buttons reinforce a feeling of skill and, thus the perceived ability to control the outcome (Griffiths 1993). Stop buttons also have the ability to infer control when there is none; the outcome is determined prior to the stop button activation (Problem Gambling Institute of Ontario 2015). Max betting buttons are found readily in multi-line games where players can choose to play many credits over many lines, encouraged by the machines to do so (Problem Gambling Institute of Ontario 2015). However, larger bet size does not affect the outcome of any spin, it only increases the chance for a bonus round or progressive win (i.e., a percentage of each bet is added to a pot that someone wins).

Cornish (1978) explains that features of the machines themselves, including the rapidity of the payout interval, event frequency, and the variable ratio schedules, spur continuous play. The rapid event frequency means the period of loss is brief, and this does not allow for pause to consider the financial costs. Similarly, Dickerson (1990) finds small wins can increase the rate of play for machine-based gamblers. Strickland and Grote (1967 cited in Griffiths 1993) uncover a design feature that produces a greater “near miss” perception. Fruit machines are programmed to show winning symbols early in the result sequence. Strickland and Grote (1967 cited in Griffiths 1993) find that presenting players with frequent winning symbols early in the fruit machine’s result sequence leads to significantly longer play. The gaming industry understands this concept; it acknowledges the need to pay out winnings as quickly as possible to encourage continued gambling (Cornish 1978).

22 “Mechanical slots either pay nothing on a spin or significantly more than the amount of the initial bet, multi-liners pay something frequently but usually for less than the amount of the initial bet” (Schüll 2012:121).
Modern slot machines have more reels than older machines; each reel has several physical stops, and each stop is equally spaced, giving the impression of equal probability which is not the case (Harrigan 2008). The random number generator in most modern slots and complementary computer technology determines a winning outcome and which symbols will be displayed. Together they provide misleading information involving near misses and unrepresentative outcome distributions (Harrigan 2008). Modern machines fabricate the near miss scenario by assigning the outcomes of the virtual reel to physical stops above or below a major jackpot symbol (Turner and Horbay 2004). Weighted reels mean that machines are weighted in favour of lower paying outcomes (i.e., a greater frequency of low paying symbols come up versus jackpot symbols) (Schüll 2012:269).

The reinforcing features of gambling machines will never be fully understood without more information from machine manufacturers, and little information is made public, including probabilities (see Harrigan and Dixon 2009) including the payout percentage (i.e. return to player, beyond theoretical payout) and hold percentage (i.e., the house advantage)\textsuperscript{23}. The sparse information available from the machine manufacturers suggests the temporal characteristics such as the duration of the reel spin in addition to the frequency of large and small payouts have been designed with the intention of increased machine play and persistence of play (Daley 1987). False wins, another feature of modern, video slots, celebrates the win when in fact the gambler sustained a loss. Like false wins, small wins, the experience of frequent small wins, might suggest to the player that they are doing better than they in fact are (Problem Gambling Institute of Ontario 2015).

Machine characteristics alongside other environmental cues (i.e., the sights, sounds and feel of the environment) have a reported impact on player involvement and frequency of gambling (Dickerson 1993; Schüll 2012). Tremendous thought goes into casino design and layout from ceiling height to machine placement (Schüll 2012:35-51). Creating a “cocoon” of insulation and security, the casino design, “disorients space and time”, and allows for “privacy, protection, concentration, and control” even disallowing an explicit connection with others

\textsuperscript{23} It is next to impossible for gamblers to track a machine’s hold percentage on their own. A manufacturer can increase a game’s hold by five times without consumers noticing as discussed by Schüll (2012:268).
according to Schüll (2012:36, 41-43). In the same vein, Abt, McGurin, and Smith (1985a) asserted that the casino environment excludes the gambler from the outside and outward demands, although they do acknowledge the importance of interpersonal ties in the casino context. That is, gamblers’ beliefs and practices cannot be completely impervious to what is selectively available to them within this particular physical environment (Abt et al. 1985a, Abt, Smith, and McGurin 1985b).

Another reinforcing factor discussed by sociological researchers is the impact of the casino’s ability to fit easily into the values of Western culture (Abt and Smith 1981). Herman (1967:102 cited in Abt et al. 1985b:66) claims the casino culture makes conventional values part of the gaming experience. The casino’s “cultural devices” allow the cultivation of a “sense of belonging, of independence, of self-determination and the exercise of mental skills and rational powers” (ibid). This suggests the gambling experience is congruent with conventional societal values (Abt and Smith 1982). In fact, Abt and colleagues (1985b:67) say the casino, a socially constructed, regulated and conventional form of gambling, normalizes human behaviour through “social structures and cultural integration”. Social structures include the roles, rules, actions, and physical layout of the environment (ibid). Much of gambling behaviour, then, can be explained by seeing casino environments as containing social constructions that link the outside world to the casino (ibid). With this linkage, the casino context is seen to contain mechanisms for maintaining interest and a constant, steady level of gambling activity (Abt et al. 1985b:67).

Thus far, gambling activity and commitment have been described in terms of ideational elements, environmental cues, and the casino’s use of societal values to frame the activity. All three are important in understanding gambling activity. Of growing importance in the social movement literature is the link between social psychological and structural/organizational factors in support for and participation in social movement organizations (SMOs). Snow and colleagues (1986) extend Goffman’s (1974) frame analytic perspective, uniting it with resource mobilization. More specifically, they elaborate on the various frame alignment processes that movements employ to mobilize movement participation. Frame alignment is defined as the “linkage of individual and social movement interpretive orientations” (Snow et al. 1986:464). In
other words, frame alignment is the fusion of an array of individual interests, values or beliefs with a SMO’s goals or ideology (ibid).

Frame alignment is imperative for movement participation. SMOs employ micro mobilization, a set of interactive processes which affect frame alignment (Snow et al. 1986:464). Frames are “schemata of interpretation” (Goffman 1974:21 cited in Snow et al. 1986:464) which decree events meaningful and help individuals or groups “organize experience and guide action” (Snow et al. 1986:464), something particularly impactful for vulnerable groups. Interpretation is a complex phenomenon that can leave actors confused about what is going on and why. This is not to say they lack “interpretive capacity”; rather, they could be impacted by “intentional deception” or “incomplete information” (Goffman 1974 cited in Snow et al. 1986:466). This conceptual channel helps link ideational and structural or group level factors; it can be used to align ideational elements to those interactive and communicative processes that frame the world in which gamblers act (ibid).

3 Theoretical Framework: A Brief Summary and Links to Gambling Research

Historically, psycho-functional and resource mobilization perspectives have dominated the SMO literature. Unfortunately, both “neglect the process of grievance interpretation; they suggest a static view of participation; and they tend to over-generalize participation related processes” (Snow et al. 1986:465). First, they assume an automatic link between intensely felt injustices and vulnerability to movement participation. In the same vein, they tend to reify organizational or macro-mobilization factors. Both assumptions ignore subjective/interpretive considerations and other ideational elements. Second, participation is considered a “static”, “time-bound, rational decision” (Snow et al. 1986:467). The psycho-functional and related rational calculus perspectives ignore the situational and activity oriented nature of movement participation (ibid). In other words, individuals rarely make a full commitment to movements from the onset; dedication is a slow process during which they contribute more of themselves, both time and money, over time (Lofland and Jamison 1984; Snow et al. 1980 cited in Snow et al. 1986). Furthermore, participation is an ongoing process of reassessment and renegotiation done individually and with others. This “sense making or account-construction” is not a rational
calculus according to Snow and colleagues (1986:467); rather, decisions for participation are socially influenced and continually negotiated. This is particularly important given the third shortcoming of existing SMO research, namely, its tendency to overgeneralize participant related processes; this is especially troubling when there are variations in objectives, organizational structure and opposition. Relevant to discussions of participation related processes is the fact that network recruitment (Snow et al. 1980; Stark and Bainbridge 1980), mobilization of pre-existing preference structures or sentiment pools (McCarthy and Zald 1977) and conversion (Snow and Machalek 1983, 1984) cannot account for all movement activities (cited in Snow et al. 1986:467).

These shortcomings speak to several gaps in gambling literature. For one, the current psychological lens used to conceptualize problem gambling neglects the meaning inherent in the activity for problem gamblers, emphasizing the dysfunctional behaviour without better understanding the payoffs of involvement beyond it tempering adverse under arousal states (Ste-Marie, Gupta, and Derevensky 2011; Blaszczynski and McConaghy 1989; Blaszczynski, McConaghy, Frankova 1990). That is, the overemphasis on a rational calculus perspective that dominates the literature on social movement organizations does not currently have the same presence in the gambling literature, assuming instead that gambling is irrational devoid of rational reckoning. The majority of gambling research views the topic through a psychological lens with few exceptions (see Abt et al. 1985a; Lesieur 1984). This lens emphasizes pathological, compulsive, behaviour driven by cognitive flaws (Coulombe, Ladouceur, Desharnais, and Jobin 1992; Gaboury and Ladouceur 1989; Ladouceur, Gaboury, Bujold, LaChance, and Tremblay 1991; Toneatto 1999, 2002). The social factors influencing gambling behaviour are underestimated including the changing orientation to, or significance of, this activity across the gamblers’ career (Lesieur 1984). In line with these arguments, the religious movement literature emphasizes the importance of positive motivations in accounting for the appeal of involvement; advocating against approaches that are too reductive (Dawson 2009). That is, many individual level factors could help explain the gambling population, but many of these same characteristics might be present in non-gamblers. In the end an important question remains; what factors keep gamblers heavily engaged in the activity?
Aware of the deficits in SMO research, Snow and colleagues (1986) unite frame alignment processes and micro mobilization tasks and processes. The theory makes two assumptions: 1) frames provide meaning and guide action and 2) frame alignment is a necessary condition for movement participation, irrespective of its nature and intensity. Snow and colleagues (1986) posit four frame alignment processes: 1) frame bridging, 2) frame amplification, 3) frame extension, and 4) frame transformation (p. 467). Three are beyond the scope of this paper, but frame amplification is relevant. Frame amplification is described as the “clarification and invigoration of an interpretive frame that bears on a particular issue, problem or set of events” (Snow et al. 1986:469). Since the meaning of events and how they connect to one’s life situation are often unclear and cloaked in “ambiguity or uncertainty” (Goffman 1974 cited in Snow et al. 1986:469), involvement in and support for movement based activities tends to rest on the movement’s ability to elucidate and energize an interpretive frame.

Snow and colleagues outline two forms of frame amplification: value and belief amplification. Values pertain to “mode of conduct or states of existence that are thought to be worthy of protection and promotion” (Turner and Killian 1972 cited in Snow et al. 1986:469). Individuals hold an array of values, some of which are more strongly held and easier to attain. The amplification of values by a social movement organization involves the “identification, idealization, and elevation” of commonly held value(s) that have not inspired collective action. The lack of collective action might be tied to the values being weakened, abandoned, or suppressed (Snow et al. 1986), or the values may lack an organizational outlet, thus becoming “taken for granted or clichéd, insufficiently challenged or threatened, or their relevance to a particular event or issue may be ambiguous” (Snow et al. 1986:469).

In short, SMOs must facilitate the elucidation, emphasis, and elevation of values tied to any promoted event or issue. Core values of justice, cooperation, perseverance, equality, liberty and sanctity of human life are amplified for certain SMOs. They organize their image around the notion of acting in the best interests of the masses, in part, by breathing life into a weakened value. Abt and colleagues (1985b) apply this to gambling, commenting on how the casino guides gamblers’ behaviour through the use of social structure and cultural integration. They use the work of Herman (1967 cited in Abt et al. 1985b:66) to emphasize the work of Abt and Smith
(1982 cited in Abt et al. 1985b) who outline the values promoted by casinos: sense of belonging, self-determination, independence, self-reliance, and decision making. Pleasure, self-interest and/or psychic survival and perseverance are additional values inherent in the gambling experience that align with societal values and virtues making them particularly familiar and appealing to gamblers (Abt et al. 1985a).

Although beliefs differ from values, they are linked. Like values, beliefs are amplified by SMOs. Beliefs are a state or habit of mind in which trust or confidence is placed in some-one or thing and may or may not imply conviction of the believer. Values are larger goals, whereas beliefs are “ideational elements that cognitively support or impede action in pursuit of desired values” (Snow et al. 1986:469-470). Snow and colleagues (1986) suggest five beliefs are used in SMOs’ mobilization and participation processes. For the purposes of this paper, two beliefs, faith in the probability of change (Klandermans 1984; Oberschall 1980; Olson 1965; Piven and Cloward 1977 cited in Snow et al. 1986) and the instrumentality of one’s own efforts (Fireman and Gamson 1979; Oliver 1984; Piven and Cloward 1977 cited in Snow et al. 1986) are most relevant (see Snow et al. 1986:470 for more detail about the remaining three beliefs). The relevance of these particular beliefs is discussed above in the sections on environmental and cultural reinforcements.

Briefly stated, beliefs in the ability to win are driven by the experience created by the casino where probabilities are unknown and machines are designed to misguide gamblers and provide a false sense of control (e.g. Dickerson 1993).

4 Current Study

The study seeks to identify value and belief amplification in a small sample of problem and moderate level slot machine gamblers to understand how micro mobilization efforts organize experience and guide action. The gambling literature points to both belief and value amplification, but does not identify them in a sample of gamblers nor does it draw a direct link between ideational elements and structural/organizational factors. Snow and colleagues’ (1986) extension of Goffman’s (1974) frame analytic perspective provides a conceptual framework linking ideational elements to casino micro mobilization. Of particular importance is frame
amplification, related by the gambling literature to the casino’s interactive and communicative processes. The chapter focuses on ideational elements and is guided by the theoretical assumption that frame alignment is a necessary condition for movement participation.

5 Methods

5.1 Sample

The sample demographics are outlined in Table 1. A total of 43 problem and moderate level gamblers were recruited for this study. Using the problem severity index, the majority of the sample is classified as problem level (65%) with a small subset being at the higher end of the moderate level bracket (35%). The sample comprised an equal distribution of male and females with the majority falling in the age range of 41 to 60. Just under half had never been married (42%); roughly 21% were divorced; the married category fell slightly under this percentage (19%). For the highest level of education attained, a large percentage possessed a college diploma (28%) with roughly one third (32.6%) having had at least some university experience extending all the way to graduate or professional school training. Slightly less than one quarter had an annual personal income lower than $20,000, while the majority fell equally in either the $20,001 to $40,000 (32.6%) or the $40,001 to $60,000 (32.6%) income ranges. The multicultural city of Toronto, the area of recruitment, elicited an ethnically diverse sample with the majority tied to Europe, followed by the British Isles; various parts of Asia (East Southeast, West, and South) were well represented (25.6%) as was the Caribbean (14%). A substantial portion of their lives was devoted to gambling, with the sample reporting 18 as the average number of years spent gambling. Similarly, a fairly substantial portion of income was spent on gambling in the past year at a reported average of $650 per month.

5.2 Analysis

Interviews were audio taped, transcribed verbatim, de-identified to ensure anonymity, and coded for emergent themes using NVivo software. The analysis applied grounded theory techniques, namely, open and axial coding. Open coding involved familiarization with the data and the assignment of codes pertaining to emerging concepts or ideas (Glaser and Strauss 1967). These
emerging concepts and ideas pointed to frames that seemed to organize experience and guide ongoing participation in casino-based gambling activities. The Snow et al. (1986) conceptual framework identified micro mobilization by linking ideational frames with frame alignment. A more focused coding reflected on frame amplification, given the values and beliefs uncovered during open coding. Memoing helped prepare preliminary analytical notes throughout the process of analysis, prompting an assessment of literature; it then confirmed the possible amplification of both values and beliefs. In the end, all values and beliefs were derived from the data through the process of analysis and are noted in the next section.

6 Findings

The problem gamblers in this study seemed confused about their attachment to gambling. Echoing the words of Goffman (1974 cited in Snow et al 1986), to them the meaning of events and their connection to their life situation were often blanketed in “ambiguity or uncertainty”. This confusion was particularly apparent when interview questions provoked on-the-spot reflection. Some said they had reflected on their gambling many times without being able to make sense of their attachment:

P15: Yes. Like, why – this like – I don’t drink, I don’t smoke, I am addicted to nothing, so I am like why the slot machines?
I: Why do you think?
P15: I don’t know. That’s a good question. I would ask myself over and over and I don’t know because I don’t even buy lottery tickets, isn’t that bizarre?

Though these PGs were left struggling to find an all-encompassing answer, several provided piecemeal replies to help explain their commitment to casino-based gambling. One said the following:

P43: I don’t know why [I gamble], but it makes me happy.
Many had not engaged in any in-depth thinking about their commitment, but when probed, most PGs noted the positive aspects of their gambling experience. By and large, gambling seemed to offer the following seven values as per this study’s participants: 1) belonging, 2) equality/free-market, 3) justice/fairness, 4) pleasure/psychic survival, 5) perseverance, 6) competition, 7) self-determination. The PGs also had faith in two general belief types described by Snow and colleagues (1986:471): 1) the probability of change and 2) their ability to facilitate it “through the instrumentality of their own efforts” with the nuances surrounding this further unpacked in the forthcoming section on beliefs.

6.1 Values

6.1.1 Belonging

A sense of belonging is a powerful value invoked by the casino. The casino makes it a point to “maximize every relationship” in order to sustain profits making (Schüll 2012:153). The casino provides a sense of belonging through its welcoming sensibility, membership which includes free give-aways, as well as social interaction and perceived social cohesion. One PG summarized his reasons for going to the casino as the following:

P23: …but there’s always someone around [at the casino]. You know, there are people going around and drinks are free and there are other perks.

The casino was described by the PGs as a warm place to go; it was open 24 hours, making everyone welcome at all times:

P44: I could sit and have good coffee…and be in a comfortable place when you’re by yourself in the winter.

P4: Like when you get bored of everything else…so when everything else is closed at least the casino is always open.

Research has shown that the “space-time” accessibility warrants further investigation into the onset of disordered gambling (St. Pierre, Walker, Derevensky, and Gupta 2014). Hours of

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24 Gamblers understand what their experiences are and how it enriches their lives, but it is through the process of data analysis that these experiences can be given theoretical framing, drawing a link between ideational elements and structural and organizational factors.
operation and proximity to gamblers can play a role in participation and even on problem gambling behaviour (ibid).

These gamblers also referenced the free non-alcoholic beverages contributing to an overall feeling of being cared for by the casino:

P41: And the drinks, water, you can go there and coffee is being served. For free. You can get anything, you can go to different counters, you can ask for water or coffee.

The giveaways did not stop at drinks for those with a membership card. With points on their cards awarded by amount spent, gamblers could claim free meals, concert tickets, and hotel rooms:

P40: If they have room. I say, if I have this Gold card they give me the room over there in Casino X, maybe one time a month or two times a month free. But if they have higher card they can get there like say each week they can give you a room. Each week you can choose and book a room there. I spend money because you know they have this hotel for me, the food for me, or these other things…because they [the casino] gave me the food, the meal, every month $100. Sometimes they give me $200. Sometimes they give me $300.

Signing up for a membership card instigated a relationship with the casino. Equipped with contact information, the casino was free to reach out to PGs to remind them of upcoming events, special bonus days and giveaways. Membership undoubtedly facilitated a communal feeling for gamblers. Customer tracking technologies imparted by the loyalty cards is meant to enable “bonding” as described by Schüll (2012:152). Significantly, it made those whose lives were socially un-integrated feel welcome:

P30: Of course, I want to have a family of my own but right now, I’m not able to afford it. I can basically survive on my own, paying the rent, bills and so on. That will be the most proudest achievement to me. Of course to obtain a good paying job and the job that you’re capable of doing. But also the proudest moment would be to have a family of my own because living alone, of course, you have all the freedom you want. However, you feel isolated, alone. That’s hard. That’s what also keeps me going to the casino.

P13: Well, it’s like I said, I think it’s because too I was coming off the divorce. I was very lonely and I didn’t have people around for a while. Going through back and forth – all I was doing, before that, for the last six months was just going to Family Court, Family Court…
P27: Some people go to meet friends, get friends, they’re lonely. Some people don’t have friends so they figure it they go to the casino they meet people, they can talk to them, socialize, you know. And then on the other hand, some people they just want to go just to get out of the house.

As suggested by the above, the PGs were drawn to the casino for interpersonal contact. For some PGs simply sharing a communal space and activity was sufficient. The familiar faces of likeminded individuals provided a sense of fellowship:

P36: So it's like… it's like you're in whole different like…like universe and just like when you…when you see this people you just… you can kind of just understand them. Everyone is collective… So after a while when you start to walk by them, you notice them and stuff like that just watching. You just… you get a feel for it. It's just… It just comes like from…from going to the casino often.

Others benefitted from more direct contact with fellow gamblers. Conversations or the camaraderie of supportive actions or words were forms of contact that attracted some PGs:

P45: I just like the whole atmosphere and going there, like I have my friends there — I mean the whole picture.
I: That’s interesting so you have friends there you said?
P45: Oh yeah. When I go there I know, I wouldn’t say a lot of people, but I do know people that are there. So, we kind of feed off each other.
I: So, you didn’t meet them at the casino then?
P45: A couple I have, yes. Like I’ve been there enough times that I actually know regulars.
I: Like, what types of conversations would you have with the individuals there? Would you talk about the slot machines themselves? What would you talk to them about?
P45: We talk about the latest people who won, and in general, we talk about sports; what’s going on in our lives.

P30: Of course, when you lose money, it’s not a good feeling but I still like talking to people, spending time with the crowd because I don’t like to stand in the corner by myself, feel isolated at all… I like to socialize with people. Some people ask me to give them their tickets. Sometimes [when] I win, they want me to give them the tickets so they can go cash in the money. If I’m in a good mood, if I’m winning, then I would give them something because it happened to me…. Some people are nice, they give it to me.

P37: Yes, very solemn [the smoking area of the casino]. It’s just where a communal group is, right? But yes, that seems to be definitely an area for talking and support. Yeah, everybody is equally unhappy… No it’s a result of the activities there, a definite
consequence of the money they lost. It’s remorse, regret, why did I come? I shouldn’t have come, what a disaster.

For those who felt like outsiders, this contact with likeminded individuals, free of judgement, was particularly important:

P36: It's basically like going in another world. It's relatable to say like how some people like you know those social outcasts where they don't have friends? They're having to make do and then they go home and they play a renowned game called World of Warcraft. They are someone else in a different world. Like it is like you're in a state of mind where you're…I'm a casino player enjoying myself in that nightlife. I particularly… I kind of have a thing for that.

P43: And that high…you don’t really get that around town anymore, right. It’s really hard to get that. Well, pretty much no, you can't. You can’t get it anywhere without being judged. The machine doesn’t judge us. The machine gets judged and you get a high and the only thing is that you mind your own business. Well, put it this way, I am not 26 years old anymore to being going to those bars. Now at 46 years old, I am also not ready to go to the 60 year old bar. So I can go to the bar, but do I want to be with 22 year old gals, no I don’t. Can I adapt? Yeah, but what am I going to be called…a cougar. I don’t want to…Cougar, yes. That’s just the way it is. Stereotyping, right? So if I am not in their age group. Like they are not even married yet. You know, like, you don’t want to be different.

P22: Well you know for me, it’s an entertainment and not only that, but it takes me out too like from everyday life. It’s like a different nature. You’re in a room were the rest of world is out there and you’re in your little world you know, when you walk into the casino. And you’re with a group of crowd that’s doing the same thing and it’s like you feel a part of something. And see part of this is I suffer from mood disorder and depression. And I feel like I am out of place all the time. In the natural world, so when I go in there and I see people doing the same thing as me, I get that feeling that I am more (connected). Yes, even though I don’t speak to them, I am doing the same thing as them and I feel like accepted, you know I get this inner peace. It’s like – it’s sort of like a spiritual thing, but it’s not a god, you know?
I: That’s really interesting. Can you tell me more about that?
P22: Well it’s like I said, like even now I feel out of place [here at the interview]-- nothing to do with you, it’s just within me. It’s my depression and I’m seeing a doctor tomorrow, they’ve got to up my meds, I know that but I feel like I don’t belong, like I don’t connect with people like I am different. But when I am in there doing the same thing as everybody else I feel connected because of doing the same thing and it’s like I get that sense of belonging but it’s a not a strong sense.
I: Do you get that sense of belonging anywhere else other than the casino?
P22: Yes, sports, if I go to a hockey game. Because I’m connected again, we’re all doing the same thing anything…You’re included there (at the casino), that’s the word.
Participant 22 quite powerfully explains the psychic importance of belonging and how this feeling is tied to the shared activity of gambling. The casino is a safe refuge for this gambler and many others. The sense of connectedness is fortified through weak ties, but a sense of togetherness prevails providing a pseudo community of sorts where the joys of community can be felt without “the discomfort of being bound” (Bauman 2001:69).

6.1.2 Equality/Free Market

The casino provides a space where all are welcomed. It does not assess age, race, class, or gender when awarding winners. Gamblers felt that the casino environment, including the slot machines, passed no judgement on who you were or where you came from, placing everyone on equal footing:

P28: It goes like this [the selection of a winner]… whoever gets it, gets it. And I’ve seen people hit it with ripped jeans, dressed like bums. It doesn’t matter who you are.

P31: But you know as with a machine anybody, a 95-year old woman can come in and pull the handle and I always told everybody to stay away from them, but then I think I tried it a couple of times when I was in “area X” there and I got lucky at one and I guess when you win, you go back. I just figure I could put another $20 in and then I always try to put another $20 in.

Another factor that rendered the playing field neutral, as on PG described it, was the unskilled nature of the game:

P36: I tend to just go more often just because of the fact that things start to ease down a bit and it just feels like it's one of those things I like to just do to kind of just have fun but at the same time subconsciously try to like… to like win. Like it's to me … like playing in the casino it's kind of like it's…it's kind of like it's just luck-oriented and like maybe sometimes just the mood you're in that like – It's not like a sport where you necessary need a skill to pursue it. So just like winning, a game where it requires luck, it kind of feels like neutral playing field where everyone is there… So it's a neutral field when you're playing amongst everyone else. Everyone… everyone else is just the same person there except maybe the guys that played poker and like Blackjack who like know exactly what they're doing.

As participant 36 explained, the gambling environment is a level playing field, where skill, social status and other personal characteristics have no bearing on the ability to win. In other words, whereas the outside, free-market world promises equality, the casino delivers it. These
gamblers conveyed their struggles related to economic fairness, many struggling to make ends meet and others on a never ending quest to keep up with others.

Cosgrave (2008) offers an explanation that may help explain the need to find equality in the casino realm. The growth of gambling has been deemed a response to risk in a globalizing world wrought with “social, political and economic uncertainty” (Cosgrave 2008:87). The lack of gainful employment is one aspect of the new risk society (Beck Bonss, Lau 2003:6 cited in Cosgrave 2008:86) and closely linked to the growth of neo-liberalism. For many social theorists (Baker and Simon 2002; Bauman 2001; Beck 1992; Giddens 1990, 1991) the uncertainties generated by globalization have produced a diminished welfare-state, where societies have cut public expenditure for social services and ventured away from the “common good”, downloading all risks onto the individual (Cosgrave 2008; Schüll 2012). Cosgrave (2008) states,

the relation of hard work to merit and reward has less power to shape actors’ orientations if access to, and stability of gainful employment, and the rewards derived from it, are more difficult (P. 86).

The idea of seeking out risk taking and chance, disconnected from a hard work orientation, situates itself as a more sensible social orientation. Although not all gamblers were acutely aware of the link between their private problem and public matters, they articulated a frustration with the inability to “get ahead” despite legitimate attempts to do so. That is, education, work experience, and networks of support proved futile in their quests for advancement. Gambling may have acted as a mitigating strategy to offset the negative effects that have been downloaded onto them and other individuals of the modern world.

6.1.3 Justice/Fairness

Many PGs felt that gambling was an act of reclaiming justice. This act included the gambler losing money at the casino and making attempts to retrieve what was lost, so as to reclaim justice. On another plane, this was a symbolic act where by participating in gambling, they were waiting for the big win that would correct previous wrongs. These previous wrongs occurred in two realms; the casino with frequently occurring losses without gains and the outside world
where hardships were experienced without reversals in fairness. The former was noted by many PGs who thought they deserved repayment for their monetary losses at the casino:

I: So do you ever feel that, that you are due for a win?
P38: I think that I am due since the moment I got there. I probably put in about 5 grand – 5 or 10 grand in all the years I have been there.
I: So all the years you have been there, okay.
P38: Yes.
I: So you are due for win because you put some money…
P38: I think so. I think everybody is due, but does it happen? I don’t know.

P40: Sometimes they [the machines] pay so much. Sometimes they don't pay. And you will try to figure out, “How come I spend so much money? They should have paid!”

P43: I think when you are an avid casino player like myself, I think it’s only that you are trying to get back something that you’ve lost there. So you are always looking to get back. The casino has – the casino has cost me thousands of dollars.

Some of the PGs made it clear a win was deserved after reconciling the amount of money invested with what was paid back. That is, after losing vast amount of money, for fairness sake, remuneration was owed.

For some, it was less a financial issue and more a temporal one. After suffering losses over a long period of time, several PGs felt that a win should be awarded. One remarked:

P25: I am due for a win. I haven't won for so long.

Some were quite specific about the extent of loss that should be sustained before a win:

P42: I think as I said, everybody always says, I am due for a win.
I: Have you said that to yourself too? I'm due for a win?
P42: Sure.
I: And why are you due for a win, why you specifically?
P42: Let’s say out of the last six times I've been there I've lost every single time… If I've lost the last six times, I would say yes, I’m due for a win.

P1: Well, no. It’s just basically, um, when you walk into a casino you always think that I lost that last two times, so, this time, it has to be it.

Why the latter two PGs were very specific about the amount of losses that should ensue before a win occurred was unclear.
In the end, the study’s PGs felt they deserved to reclaim losses, but the meaning behind this could be more nuanced. Part of the reason for this desperate need for compensation, demonstrated by steadfast chasing of the primary goal, could lie in a reluctance to face the possibility of inadequacy even in the realm of the casino:

P33: Well, it’s chasing. When you get to that point you’re chasing your loss. It’s you can’t swallow your pride and say yeah, OK I lost 300, OK I lost 800, time to go home. Now it’s more of like, man I lost 800 dollars, nah, that can’t happen. I can get it back, I can get it back and then you don’t get it back…. To me personally it’s like, OK. Something’s got to give. I’ve been going downhill for this amount of time. OK. Something’s got to give now. And good luck’s got to come to my side—I can’t continue to be a loser.

Naturally, the fact that losses prevail makes it difficult to deflect thoughts of inadequacy:

P36: [When I don’t win] I'm like “something out there really doesn't want me to win.” That's why sometimes I have to tell myself at the end of the night I just… it's kind of like something I just laugh off. I'm like, my God. I couldn't just…could not just get that third one.

I: So what goes through your mind definitely when you say you laugh it off like what is...what are you really thinking at that point where you're like “I just couldn't get that one.”

P36: I just think my God. I'm really unlucky. It's crazy like how sometimes you just so close and [still] so far.

Interestingly, the persistence of loss makes PGs adept at deflecting these thoughts to continue their gambling activity.

The study’s PGs seemed to feel that external injustices could perhaps be reversed inside the casino. That is, the casino might be able to undo reversals in fortune outside the casino:

P6: I had a very rough upbringing, a rough life, so I am due for…I'd like to win some money so I can be financially stable. I am tired of living from cheque to cheque to cheque every month.

P38: …I just see all the other people they are living better than me. My parents were poor. I want to become like that, wealthy. I can handle wealth better than most. I don’t want to become like somebody that has less than me; somebody who is on the street, no, obviously. I want to cater to a different crowd. I want to – do you know what I mean? …But some are born with it and you wonder why. Why? Like what do they have that I don’t, you know what I mean? But it doesn’t make them– it doesn’t make them a better
person and that’s what I have come to realize is that money – it’s not everything but to some people [like me] it is…

P36: So like when I'm there I often go there when I feel like I've been beaten the crap out of like through my work week or my… my personal life. So--You know I feel like I've been beaten down so I go there to kind of I guess you could say be like “Okay. I've taken the hit. I've taken all that. I'm going to come here and hopefully get the return back from all that (at the casino).” And then sometimes when I'm there it just feels like it's I guess you could say like an exchange like my personal life being coming down on me and all the stuff there that was bothering me like in the real world.

Not only did they feel they should win because of hardships or disadvantages in their lives, but the topic of character also came up. That is, those who were “good” should win versus those who were not:

P26: I would give it to the good person (the big win) because if the bad person has gotten in trouble with the law, has a record, this and that, I would want to see the good person who's worked hard for their money, who hasn’t stolen or hit anybody for it, deserve to win. The hard working person should get it.

P30: If you are a good person, not just to yourself and kind to others, I think you should have more chance and give some – not priority but give some, feeling more that you should win.

Many PGs resisted labelling themselves as being of “good character” and, as such, worthy of a win, perhaps trying to exemplify their good character through humility. Only a few were direct in their claims on their own personal character:

P21: Yeah you know I always feed the birds you know. I feed the squirrels and I am so nice and so I feel like I’m entitled!

P32: The good one should win [versus a bad person]. Because the good one is going to do good. I honestly believe that… Because those bad people they seemed to be so selfish and self-centered, they don’t want to give nobody anything. I see it happen always… . And I’m not a greedy person, honestly.

Some PGs found it difficult to assert that they deserved to win over others, although believing this was the case. A few explained their good character made them worthy of a win.

The PGs did not stop at assessing their own worth; they also reflected on deservedness of other gamblers:
P45: Like I know somebody won three million, to tell you the truth, my partner works with him, and he’s still there at work.
I: No way.
P45: Yes, he won two and a half million. You know what he does not realize that that is like a once in a lifetime opportunity, but he won it. So, I think if he can win, anybody can. I know this guy, he’s a regular guy and he won it.
I: Do you think he deserved to win?
P45: Deserved? Yes, I do. He's a nice guy, I like him. I think sometimes people deserve to win, if they win. He’s a good guy and he was going through some bad times so, that’s good for him.
I: Do you feel that you’re due for a win and you deserve to win?
P45: Do I deserve it?
I: Yes and why do you deserve it over somebody else?
P45: I don’t think I deserve it as much as he did. He was like down and out, he had nothing. Like, I’m not quite there. I am not in that predicament. So, yes maybe he did deserve it more than me and he did get it. Now, he’s way above me, before he was way below me now he’s way above me. Things changed like money wise.

The PGs felt they could assess whether others deserved a win based on their character. The financial hardships suffered by this particular PG’s co-worker made him especially deserving.

6.1.4 Psychic Survival/Pleasure

At the casino, the PGs were seeking psychic survival and pleasure. According to Abt and colleagues (1985a):

self-interest, formerly a rational pursuit of gain and the accumulation of wealth, has become a search for pleasure and psychic survival (P. 84).

Western values propagated through general socialization center on living in the moment and seeking out pleasure by way of wealth consumption. To understand the mounting desire for pleasure, it is important to first turn our attention to the concept of psychic survival. Psychic survival, a term used by Abt and colleagues (1985a) to denote an inward retreat, focused on self-concern, in light of an increasingly unstable world. That is, social problems such as long-term economic decline, rising crime and terrorism, environmental deterioration have caused individuals to retreat from responsibilities that help shoulder a secure and orderly world according to Lasch (1985). Conversely, Giddens asserts (1990),
A concern for self-fulfillment...is not just a narcissistic defense against an externally threatening world, over which individuals have little control, but also in part a positive appropriation of circumstances in which globalised influences impinge upon every-day life (P. 124).

That is, Giddens (1990) claims that the modern preoccupation with the self is not necessarily a withdrawal of interest from the outside world but a self-reflexive process that may reflect integration into the outside world. He continues that this integration might be by way of “eclectic assemblage” (cited in Dawson 2009). Extrapolating from this, many social theorists have described the uncertainties of late modernity and the response of institutions (e.g., Beck 1992; Bauman 2001; Giddens 1990) to which Cosgrave (2008) also adds casinos. A feeling of insecurity and uncertainty was well articulated by the study’s gamblers perhaps using the casino and gambling to cope with ontological insecurity (Giddens 1990). Study participants provided anecdotes about their struggles with (but not limited to) uncertainty in work, family, and day to day living. One participant linked personal struggle with the general state of society:

P35: Well, I hate to admit but I've been kind of frantic lately. Like, just frantic and worried.
I: And again, lately will be how long?
P35: I would say in the past half a year.
I: Half a year. And why? What has happened in the past half year?
P35: It's just there's no security. I just don't have a sense of security about anything around me... I'm not saying Toronto specifically. It's just the fact that everything is Internet-based. It's just morals, ethical situations. I mean it's just there's no – to me it's getting more and more like an empty shell.... And you can't - I mean nothing is provable anymore. For example, even that poor case about the girl that got bullied. I mean no – how can you prove that somebody incited her to do that? I mean you're going to get... I mean it's all intangible, you know. And it's the internet that has done that because even people going on the net and they've... you know they fabricate identities and all kinds of things. I mean it's just totally immoral as far as I'm concerned... So I think the Internet has played a really big part in that and they should have stopped it a long time ago. A lot of the – but nobody knew quite how to do it. For example, just all the graphic news stories and this and that. We should know the news but we don't need to see death right in our face. It's way out of control. Yeah, it's like... it's – I don't even want to touch it anymore. I mean I don't even want to think about it anymore... I was accused once of sticking my head in the ground like an ostrich. Do you know what I thought? Hey, no I'm not really doing that but if I want to do that then that's exactly what I'll do. Because even on Facebook or wherever it was, there's a lot of – Internet has caused... it is causing wars.
This participant, unlike most, made an insightful connection between private and public level problems (Mills 1959).

Discussions of instability and uncertainty permeated the interviews, especially in relation to the absence of employment benefits ensuring future securities:

P9: Right, everybody has I know I mean with my – I might be doing such and such role but a lot of people I know have two jobs and they’ve got and they are in school and they sleep like three hours at night and they don’t do – their whole life is – they are like a drone... You know and can you take time off, come and see a movie? No, I can't, I have to work or I have to catch some sleep or you know and I think I remember had so much fun like not that long ago I was like we could take time up and now so like everybody is trying to catch up, and then all of a sudden you’re worried about retirement and thinking, god that’s like 30 years from now. What are you worried about that for? We’ll just share some cat’s food or something. We’re going to be eating cat food, you might well get used to it. You might as well learn how to prepare it now... It was I think again with the economy like everything kind of went south and it was clear that it wasn’t going to get better. It has been like this since maybe 2008. It just felt, but I was one of the – probably one of the most optimistic people even though because you think it has to pass, it has to – that cycle is like your bad luck streak. It has to pass, something has to get better, but then after four or five years it doesn’t feel like it is.
I: Yes, people were like it’s going to get better.
P9: It has to.
I: It has to get better?
P9: Yes. And now the fear is that even if it does get better, how long does that going to last? Until the next dip like and this is not like you know my mother will say this is not. She doesn’t think it’s temporary. She says this generation, this is going to be [the state of] their working lives. It’s always going to be up and down. It will never have any stability. And things are never really going to get to that nice comfortable. So I hate people from my mother’s generation talking about how tough things were and you know it’s like yes, whatever you had a job for 40 years. You had you know benefits so. You had pensions... Yes [at the casino, gamblers], they are hoping that you know because everybody wants that win for security. Money is such a – god, it’s like a curse and a blessing and you need it, you have to have it, you have to work for it, you can't live without it and it’s sucking 95% of everybody’s energy. Would anybody do this, like you know would anybody put up with what you have to put up with if it wasn’t for money? But it’s like they are hoping if you go to the casino if you had just walk, even if you don’t win million dollars, if you just won like 10 grand.
For some gamblers, the casino is a forum for ontological insecurity\textsuperscript{25} despite outward realities. The casino represents the valorization of risk taking in a society ever more aware and concerned with safety and security (Cosgrave 2006:1-24). In the end, risk taking in a protective space proved enjoyable for these gamblers.

The overarching sense of instability well described by social theorists (e.g. Beck 1992; Giddens 1990), was again articulated by gamblers as they came to describe the casino as a place where they could retreat from worries. That is, they could unwind, relax and enjoy leisure time:

P4: I think I’ve tried to use it for, like when you’re really stressed out, just going letting loose a little bit, getting rid of your tension. And then you find yourself walking out even more stressed out, if you lose. Like a bad day at work, bad day at home. Or just having a crazy, hectic day, too much pressure… Whereas the slots takes your mind off of it, and at least for a short time you forget everything else even exists. Like it almost puts you into a whole different world type of thing. It’s like while you’re sitting there watching TV, your mind’s still wandering. It’s hard to … especially when you’ve had a really bad day, it’s hard to sit there and really get into a TV show. It's a lot easier to go there… It just uplifts you, especially if you’re having a bad day.

P35: I find it kind of relaxing to… to an extent like it's… it releases my stress… Well, you just… you put aside some time which is leisure time and put aside some money that's leisure money…

The PGs said the money they set aside for gambling was for well-deserved leisure time or a reward from the daily grind:

P14: Well, I'm the one who I think has a bit more control but he [my husband] is like “I work so hard during the week and now I just finished the vacuuming and I did the gardening, come on let’s go.” It’s like a little reward for him. He becomes like a little boy, “Come on, come on let’s go, let’s go,” then if I say “No.” He kind of sulks and I can’t handle that. I know it sounds strange but...

P36: When… I'm upset and the stress of life comes in, that's like subconsciously is into my instinctive reaction. It's like go to the alcohol or go to the slot or things like that. So I try to link like going and doing these things to somewhat of a reward/positive experience… So like I said, I go once a month so it's kind of like a treat for life stress… You feel better (when you go to the casino). Well, it's kind of like a controlled

\textsuperscript{25}Ontological security is a stable mental state derived from a sense of continuity in regard to one’s life events (Giddens 1991). Other gambling researchers have discussed this possible need in gamblers (Cosgrave 2008).
atmosphere for myself so I don't freefall and it's just like okay. Here we go slots. There we go. Just... just like you go brain dead and just play.

The notion of rewarding oneself by playing the slots is taken up by Ontario casinos with the catch phrase “Reward Your Play” prominently displayed on “Winner’s Circle” membership cards (OLG 2014).

For these PGs, gambling was well worth the financial cost. Like the following gambler, many said it was a form of release from life’s challenges and despite monetary losses payoffs prevailed:

P35: ...I feel like I've... I've had a... It's been worth my loss—even though I've lost.

Abt and colleagues (1985) say the ease with which the gambler parts with money signifies the greater emphasis on pleasure over the accumulation of wealth. Many PGs spoke of the symbiotic relationship between pleasure and money, especially relevant to gambling activity:

P43: That would just be more on a fun basis...going to Vegas. Right? But going to win another million—that is not going to happen. Um, go in there and just have fun and enjoy life for a little bit. I am going there to have fun and enjoy my life just a little and relax. Money always goes with money. I don't care who you are, but money always goes after money—to have fun you need money. I would go to Vegas, I’d enjoy the sights and the stores. If I wanted to go play $1000 on the slots then that is my baby.

The pursuit of pleasure, although costly, was necessary for enjoyment. Pleasure’s triumph over wealth was perhaps best articulated by PGs when asked if they would return to the casino after either a significant win or inheriting a large sum of money:

I: And if you won a large sum, would you go back? So let's say a million bucks, would you still go back to the casino?
P22: Yes. I would take a part of it [to gamble].
I: So how much would you use for the casino?
P22: I would probably take – with a million, probably I would put a million into something where I am getting money back.
I: Okay, on investments?
P22: Yes. And maybe a $1,000 a month.
I: Okay, so a $1,000 a month for gambling.
P22: Because if you’ve invested in the right situation, you could probably get what, at best, $3,500 a month depending on your investment, right?
I: Okay. So why go back to the casino, why go back if you’ve got that?
P22: Why not? It’s fun. It’s a lot of fun.
I: Okay. So there is something more to it than money essentially?
P22: Yes. And it’s a natural – it’s a high, I have to admit.

I: So, you talk about money being an important motivator, I guess this begs the question, if you were given let's say a very large inheritance like $1 million, would you still go back to gamble?
P14: Probably.
I: Why? What is it about it that you'd want to go back to?
P14: Again, because it's something to do. It's fun when you're there. Then I would probably enjoy it more because I know that even if I lost about $1,000 that night I could still go home and sleep. Yes. It's funny, sometimes my friends they laugh. They go, “I know if you had $200, instead of going out and buying yourself clothes, and perfume, and stuff like that...” They know what I'd do. They laugh and go, “Yes.” I go, “You got it.” I would take that money and go give it to the casino.

This question was posed to all participants; 40 of the 43 PGs said they would return to the casino despite their new found wealth.

In fact, some suggested the entire concept of “money” changed in the gambling context. PGs suggested the casino transformed attitudes towards money and facilitated ease in consumption:

P37:…I had the funds but you know what, I’d go and pick up two, three thousand or five thousand and I felt like James Bond. You know? I go out to a bar, I didn’t really care. I’d spend it. It wouldn't matter and it really wouldn't matter but I guess one of the other allures of the thing is you could completely lose, the concept of money and that kind of appealed to me. Everybody is just like struggling for that dollar and saving for this, for that, for the mortgage for the house. And it’s a real rat race. In here, you go into that environment you just dispense with all of that. It’s a completely different world and that kind of appealed to me. Again, when you're on the winning side. On the losing side it gets dangerous but when you're winning, it’s a lot of fun because you just don't care.

P36: The casino life is type of life where it's just like it's carefree. It's just you're taking money that everyone else sees as like a lifeline and you're using it as...as pleasure. So it's like it's something that you... the money that you make in the real world that's such an asset you're taking it in this world and, it's like, it's pleasure. So it's just taking into going to that world and to kind of just be able to do that once in a while. It feels that's where I guess you could say for me the joy kind of comes in where it's like --
I: That's interesting. So you said you're taking it from sort of the world where it's seen as an asset and you're putting it in another world and it's seen as pleasure. So you've converting money from asset to pleasure?
P36: Yeah, that's what it is. Then like I said, with all those… with the walls I made for myself subconsciously and internally it makes it so that I can… I can… I know that I can do this in a controlled thing...controlled like mental frame basically.

P41: Because it's easy money. And also easy go, easy come, easy go. Easy go. You don't— it's not a blood money, it's not a “hard earned” money, and then that's why. Yeah. It's like you are using, like, a Mickey Mouse [kind of] money… It's like a “play money”, that's what you feel there. You don't— you don't become stingy.

I: Right. So the stinginess, the frugalness goes away.

P41: It goes away. You are— and you will notice also and I noticed it in my family, in my friends, that once they get there in the casino, their personality, their behaviour [towards money] totally changes.

The PGs reframed the meaning of money to be able to spend this hard earned and limited commodity on pleasure in a laissez faire manner. Reframing attempts were undoubtedly aided by way of slot machines designed to turn money into credits with membership cards reinforcing this conversion.

6.1.5 Perseverance

PGs were steadfast in their pursuit of wins despite gambling losses. They were not going to allow obstacles or delays to prevent them from continuing their quest:

P31: Yes, and in fact, you know sometimes I empty my pocket then I’m trying to get my – what I am really trying to do is get my money back. Yes and then I am sort of persistent!

P32: She is winning like crazy, and then they were the little mum on the other side, she was winning too, and I go, “What’s going on here? Everybody is winning and not me? I am depositing, but no withdrawals.

I: So, why are you due for a win?

P32: Because I think that I put a lot into it. And I’m not cashing anything, so I think in; honestly I would say, the other day I go, “Listen I’m due for a win Lottery Corporation.” I called them and I asked them, “Who won that jackpot last night and where was it won,” before I look at my ticket; “oh Western Canada.” Oh, my goodness I said, “Okay, I got to try again then”

I: You actually called?

P32: Yeah, I called them up, 1-800-387-0090, that’s the number.

I: So, you’re waiting for your big jackpot, you’re due?

P32: It’s coming.

Optimism was a necessary component, allowing PGs to rise again after losses:
I: So, you feel you’re due for a win?
P44: Yes, every time I go [I feel that]. Because I haven’t won.
I: So, it’s because you haven’t won at this point you feel you are due.
P44: Yes. You always feel you’re going to win when you go in first. You’ve got that optimism and you think, “Oh, I'm going to take it again, that would be wonderful.” I think until you throw your first $20 down and nothing happens and you think, “Oh my God, here we go again.”

For some, optimism was fortified by a perception of previous rewards for determination:

P29: I must've played for 10 years before I finally won a jackpot. That was at a quarter machine. I won a thousand that was great. Because that's the whole purpose is to win the jackpot. So I kind of said, “Okay, now I can take a breather. I won the jackpot.” You can always go back but I mean...
I: So you feel like you're due for a win because it hasn't been...?
P29: It's been awhile, yes.

One PG talked about great joy in the ability to test fortitude after repeated losses:

P36: It's…it's kind of like a – For me, I'm kind of one of those people that like… I'm that kind of guy that loves to challenge himself in a way where it's just like I know I'm going to get beat and I love that feeling of getting knocked down and go back into it. So like when I play slots and it's like I feel like I get that one draw where I get money and it's like I feel like I just need to keep going because once I… once I build ahead, if…it's like my allowance, extending my allowance to do more to just… to keep pushing it to get more.

This PG described a ritual performance much like the archetypal role of “the comeback kid”. In other words, this practice of doing something despite difficulty or delay in achieving success was an act of allegiance to the value of perseverance.

6.1.6 Competition

Many PGs explained gambling was a catalyst that enabled competitiveness:

P36: It's just like some of this when you feel like you've… you've I guess you could say you’re your head into it and kind of… like sometimes I try to get strategic where you're just like “My God” like I put in so much strategic thought to it. There's so much like I guess you could say there's so much build up and so much I guess you could say like there's like I'm going so competitive with it.
Although slot machine gambling is a game of no-skill, the PGs said they were able to challenge themselves. They described direct combat with machines, feeling a great sense of accomplishment when victorious over the machine:

P16: So it’s you against the machine and you’re just like okay, I’m going to beat this machine.
I: And what does it mean to beat the machine when you do, like what is that?
P16: Like okay, well if you won like $1,000, you’re like yes, I beat you. While I’m playing I’m like you know I’m going to beat this bitch [the slot machine], I’m just concentrating… Yes. And another thing I pick the machines in the corner…. See there are not too many people on that side. So no one has won.
I: Okay, so those are good machines then?
P16: Amazing. Well for me, I don’t know, people say it’s stupid but I’ve never beaten that machine yet, so I practically won off a lot of machines in there except for the one. There is four of them in there I haven't played but I haven't won on them either.
I: So the ones at the back?
P16: Yes, because that’s where I am going now, like. Yes, I want to beat those ones in the back.

P3: So it is almost like it isn’t about the money anymore, you know beat the slots kind of an attitude…

As suggested by this participant, money was a secondary concern, with the ability to challenge the machine taking priority.

Despite the lack of skill required, PGs felt uniquely challenged while engaging with the slot machines. Several stated they would only give up gambling when they found another equally challenging activity:

P13: I think the way I could stop is if I find something that challenges me the same way.

Slot machine play uniquely fulfilled many of the PGs unlike any other activity.

Whether they were able to “beat” the machine or not, the competitive spirit was an essential part of gambling. Several PGs felt they were using strategic thought that fueled competitiveness:

P36: I really feel bad [when I lose to the slots] and I'm like, my God, I've been getting killed here. I keep getting two and I missed that one it's like… it's like it's taunting me. I need to get that one [is what I say]. It's like you know sometimes they all go through and
I like… I keep getting like the same two [symbols on the machine] and I get one off and I'm like, look I need to get that one. After missing it so often it's just like I get it. It's just like…I guess you could say your head is into it and kind of … like sometimes I try to get strategic where you're just like, my God, like I put in so much strategic thought into it. There's so much, like, I guess you could say there's so much build up and…there's like I'm getting so competitive with it…

Interestingly, the infrequency of gambling successes fueled the competitive spirit:

P5: Because it doesn't happen very often I guess, so coming out a winner. Knowing like what I know about casinos, is that you don’t win all the time, house always wins. So then when you come up you’re like, “I beat them” I guess.
I: So what, what is so important about that? Like feeling like you want to beat the house?
P5: I don’t know, it’s [a] competition right? It’s like beating somebody and somebody that’s been known to win all the time.
I: Is there ever another time in your life where that, that was something that you sort of aspired to do, to beat the competition or whatever?
P5: Yeah with sports and anything you do I guess in life is always a competition, right?

Similarly, knowing the odds were stacked heavily against them spurred action:

I: So let's say the machine had a very low probability of winning on it… Would that influence your gambling…knowing the odds before you start with that machine?
P29: No. I'd want to play just to see if I can beat the odds.
I: So you'd still challenge it?
P29: Sure, why not? You want to beat the house.

Competition was at the centre of this desire to beat the house, fueling gambling action for many PGs. Knowing the slots were a formidable opponent, with few losses, meant PGs could be fully challenged while playing. In other words, the casino environment allowed them to participate in a competitive activity that provided mental stimulation and the possibility of being, against all odds, a winner.

6.1.7 Self-determination

PGs wanted to control their own gambling, without help, and uncontrolled by the machine. It was important for them to participate in an activity of their own choosing, free from the constraints of external agents. As many PGs noted, gambling was a personal choice. They even likened it to a chosen hobby:
P4: I think it just turned into a hobby, like there was always that thrill of wanting to go. And then my first time I ended up enjoying it, and it’s just turned into one of those.

P16: You know what I mean, we put money aside, but like I said that little $200 I had, that’s for myself. I don’t buy no shoes, I don’t buy no clothes, my clothes fit me perfectly, I’m fine. That’s for me. That’s my thing you know what I mean. I have beer for the week, I save it all. Like I have everything planned you know what I mean. Straight good, so that’s what for me is mine. And what I do with mine, you know what I mean. I’m not smoking drugs, like I said I’m not selling drugs, I’m not killing nobody, I’m not doing nothing wrong.

Involvement in an activity of their own choosing was crucial to the study’s PGs. Anyone who protested the choice of gambling or did not share an interest in this activity was often cut out of the gamblers’ lives entirely:

P38: Well, there is, yes, unless they gamble too. See, a lot of people they don’t gamble. So when I told them that I do, it’s like they are kind of, there is nothing in common there. There is no common ground there. You know what I mean? You know, like my husband one thing, because he is my husband, but if I am going to go with somebody and I am interested in one thing and you are not. Because I am not going to change my way and you are not going to change their way, so why don’t we just go our separate ways.

Instead of changing gamblers’ behaviour, the disapproval of friends or relatives could lead to the severing of ties, as the PGs insisted on their right to decide.

Self-determination, however, required participating in the action without compulsion. When asked if they felt in or out of control when gambling, most of the PGs said they were firmly in control of their actions:

I: Yeah. Like do you ever feel like out of control when you’re in the mode? Like when you’re gambling.
P27: No. I would say I could be in control because I can control myself.

P30: I stay up to an hour. If I see I’m beginning to lose quite a bit of money, I tell myself to leave--it’s not a lucky day today. Just leave, come back another time. I’m not that addicted that I have to stay all day and try to win at all costs. I know I have a feeling it’s not going to be my day. In my case, I’m in control. I’m not that addicted. I know the time when it’s the right time to leave.
Most were adamant about their control, although some of this confidence dissipated when probed. Some admitted they were “addicted” to or at the mercy of this activity, but admissions like the following were rare:

P41: Oh, I'm thinking of myself, like when I did some soul searching, you know. And I told myself this is not good. I'm going to hell, I'm going to the drain. And sooner or later if I will continue this I would be desolate and miserable, right? So your religious beliefs come into the picture. You see? And of course belief in a supreme being, you will know it by yourself. There's something like a conscience telling you, like an invisible voice telling you “stop it”.
I: Okay. Don't do it anymore.
P41: Don't do it, control yourself. Control your addiction or whatever… You know gambling is like the root of all evils. Gambling will erode your moral values. Okay. Of course it depends on how you perceive it, how you take it. If you are doing it for fun like a diversion or hobby or like a therapy, that's fine. But you must be able to maintain your limit. Now your moral conviction, your religious beliefs, will affect how much it will be able to regulate your addiction.

In the view of this gambler, a strong moral foundation can help in regaining self-control.

To validate their control, many PGs provided examples of others who lacked control:

P32: I’m sorry, but I tell her [an older acquaintance] upfront, and I said, “You weren’t taking care of your tablets, you were supposed to take your tablets. You have high blood pressure”, blah, blah, blah, I was scared too…
I: Oh, she was not taking care of herself.
P32: …and I said, “You were too busy going down there [to the casino] every night.” So, that is, “God speaks to people in many ways”, I said to her, and she agreed too, but people got to learn to control themselves…
P32: Yeah, but you got to need to control yourself. And I am good at that. When my friends win, you know what I do? I take half their money from them.
I: Oh, do you?
P32: Yeah, and put in an envelope.
I: And what do they say when you do that?
P32: Nothing. I say, “You take a 100, but don’t take…”
I: …you try to regulate them too, so that…
P32: Yeah, you have to, because some people just don’t have control. I am good at that. I have control. If I had a thousand dollars I’ll bring home 900. Believe me, and I can stay there and play 100. I got very good control.
I: You feel in control.
P32: Because, I look at it this way that you have to control your own gambling.
P41: It doesn't matter, whether— I may play, I may not. I'm not like obsessed with the playing, if I go there I don’t need to play. But lots of people... so many people I would say 70, 80, 90 percent they will not go to the casino if they will not gamble. Not me.

By referencing the out of control behaviour of others they were able to highlight their ability to regulate themselves.

The importance of self-determination became increasingly apparent as the PGs described using gambling as a way to test control. For many, the casino provided an arena to exercise a ritual of self-determination, with each visit permitting a new test:

P36: Gambling is challenging my faith. By playing I am challenging my faith. Faith is there to put you in line when it comes to addiction so you don’t overdo something. [If my parents knew I was gambling] they would scold me on the dangers of gambling, but they don’t understand how or why I do it—to challenge myself. It is like being in a box of control. Gambling is challenging faith—or my ability to control myself. Faith is there to keep you in line with vices. Now I am ready for moments where I lose control to test putting myself back into control. You can’t prepare for moments when you are out of control, so this allows me to prepare for that. Like not getting the job you want or other opportunities.

In the end, gambling challenged faith, but self-determination fortified by faith could bring the PG back into the realm of controlled behaviour:

P41: You know gambling is like the root of all evils. Gambling will erode your moral values. OK. Of course it depends on how you perceive it, how you take it. If you are doing it for fun, like a diversion or hobby or like a therapy, that's fine. But you must be able to maintain your limit. Now your moral conviction, your religious beliefs, will affect how much it will be able to regulate your addiction.

For some, entering the casino offered a chance to test their capacity to remain self-regulated:

P28: Deep down I think you have to do it on your own [regulate your gambling behaviour]. And I’ll tell you something too. I’ve gone a few times to Casino X. I didn’t spend a dollar. I don’t know what that was all about? I just went – maybe it was because I wanted to see the machines, maybe like a week ago I played that machine and I put so much. And I wanted to see but like you said you don’t know, so I was just watching it. I: So you watched the machine that you played on.
P28: For two hours sometimes. That’s like a waste of my time and I went there and I didn’t play.
I: So what was the purpose of that visit?
P28: I have no idea.
I: But you have to know, you went, there has to be some motivation, what did you want to see or do?
P28: I just wanted to see if I could not play.
I: So you’re testing yourself?
P28: I was probably testing myself. Yes, that was I couldn’t – and I’ve done it a couple of times actually.
I: Okay. So you were trying to test to see whether or not you can resist play and you did resist?
P28: I did resist.

As these PGs felt regulation fell to them, no other person, professional or otherwise, could facilitate change in their gambling activity:

P22: Well like it’s got to be within me [the desire to change], right? It was within me that made the transformation. It’s like when I quit the Proline. I just gave it up. I don’t know what inspired me or how, it’s just a mindset, just stop playing it.

I: Okay, so if you wanted to quit gambling, what do you think the best way to do it would be? What could you do to facilitate that, you decided today that you didn’t want to do it anymore. Like could someone help you or would it have to be something you do on your own?
P26: I would do it on my own. I'm very headstrong so if I said to myself okay, today I’ll quit smoking, I would probably do it cold turkey or use the chewing gum but with gambling I would say okay you know what I'm not going there anymore and that would be it. I wouldn’t go and take money out and budget. So this money that’s allocated would go maybe on the trip or maybe for something else. So I would probably do it cold turkey and I think that would work.

Change had to come from within and would not be effective unless there was a desire to change.

For those who decided to regulate their behaviour, successes were noted to validate their ability:

P10: I did [change my behaviour], I changed my mind set.
I: So…re-framing the way you’re thinking about it [gambling]?
P10: Absolutely.
I: Okay.
P10: So you have to frame the mind.

Although fairly certain that they were the best persons to change their behaviour, when probed, some respondents said PGs might benefit from family intervention or Gambler’s Anonymous.
Outside interventions aside, before behaviour change could be an option a desire to change was required. In this study, the vast majority of PGs expressed a fervent unwillingness to change:

I: And if you did want to change your gambling behavior, let’s say you decided to you know what I don’t want to gamble anymore. How best could you do that like how best could you stop gambling? Could somebody help you? Would it be something you had to do?
P23: That would be up to me.
I: It will be up to you?
P23: Yeah!
I: No one could help you?
P23: No. They can try. But I still like to play.

I: So if you want to change your behavior, let’s say you decided you want to stop. How could you best facilitate that? How could best do that or could someone help you with it?
P24: Like gambling? I don’t want to stop.

As discussed in the first part of this subsection, the study’s PGs maintained gambling was a recreational activity that was their concern alone. They were adamant about making their own decisions and determining their own actions. Only they could facilitate behaviour change, and most remained steadfast in their desire to continue playing. The Ontario Lottery and Gaming Corporation’s slogan “Know Your Limit. Play Within It” was referred to both indirectly (cited above) and more directly with many gamblers referring to the campaign. It was used by the PGs to affirm the importance of self-regulation:

P25: Yeah, I’d take $40 bucks and then I ended up with like $150. But I was like those people that aren't really gamblers. Do you know what I mean? I'm sort of wise like okay let's do the first race and then skip a couple and then do another one. Let's see what happens to people if they win something, they going to spend it all back. So let's say I won $100. I'm just like yeah, I'll just pocket the $80 and use the $20. Do you know what? So that's not a real gambler-gambler. I was like a – what do you call it? Shrewd. A shrewd! They wouldn't call me a gambler. Like shrewd gambler; that's not a gambler. Yeah, I’d pocket it, yeah. I am really trying to like monitor myself. I try not to spend too much…know your limit.

P23: Like, know your limit and stick to it, is what I say… I set a limit.

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26 Please refer to http://www.knowyourlimit.ca/ for additional information on this campaign.
6.2 Beliefs

According to Bem (1970:4 cited in Snow et al. 1986:469) beliefs are the “presumed relationship between two things or between some thing and a characteristic of it”. They are related to values in that they are “ideational elements that cognitively support or impede action in pursuit of desired values” (Snow et al. 1986:469-470). The study’s PGs believed both in the likelihood of change and the importance of taking action to facilitate change as outlined by Snow and colleagues (1986). These two distinct but united beliefs spurred actions to achieve a desired outcome, namely a win.

By seizing the opportunity, entering the casino, this study’s PGs were acknowledging the potential for change:

P24: Because I think everybody gets one chance, you know, and if you don’t go out and try to get your chance, it’s not going to happen, you know. Things aren’t given to you. You have to like, go and get them. Even if you – like I said it’s about the risk thing, so even if you don’t you are never going to know, alright. So I chose not to go to casino today, I am not going to know tomorrow, if you know, if it was a good idea or not… I am taking a risk. You know, like the stock market. You are just taking your risk and you never know if you might win anything.

P4: I guess you could never have enough so, and you can’t get it if you don’t play.

They demonstrated their faith in the prospect of change by continued play. Gambling, perhaps unlike anything else, gave them a real possibility of living the life they envisioned for themselves. Indeed, well-articulated by the Ontario Lottery and Gaming Corporation, through promotional material (e.g., “Just imagine what a win could do for you” or “Set for Life”), is the suggestion that gambling offers the best chance of a better life something gamblers bared agreement with.

These PGs believed that to facilitate change they had to take action, but not only through the act of chance taking each time they entered the casino. By practising ritualistic actions, they maintained a type of instrumental activism, whereby the machine mechanisms and other features gave them a sense of control. Some PGs felt slot machines gave them more control than other game types:
P17: I think you can control more at slots, when you're on your own whereas if you're at a table game, you don't get to control the flow, I guess. You know what I mean? You don't get to decide… but on slots they can press the button as slowly as they want or as frequently as they want.

The unique features of slot machines (i.e. buttons) seemed to stimulate a unique feeling of control:

P3: You start pressing the buttons. And then sometimes you feel like if you wait a little longer to press the button or if you press it very fast it may make a difference in the result.
I: So there’s sort of a feeling like you have control with the button?
P3: Somewhat, yeah.

When a win occurred after the performance of a ritual, the feeling of control was reinforced and cultivated:

P9: Sometimes you're like, “wow! It really works”. Sometimes only.
P16: Yes, and I will just like go start and I stop it twice, tap it twice. And then you know sometimes I win.
P33: …Play max bet, that’s all I can really say. Because you got three buttons in front of you. You know what I mean? And you only have to press one, which is repeat bet, that max, right. The other two buttons is nothing, really. Credits and spin, you know what I mean, so… There’s only so much you can do. There are slot machines that you can stop the screen from spinning, like while it’s spinning you could stop it. I’ll do that sometimes but I do that when I get angry, that the slot’s not, like I’m not hitting anything. So like I’ll spin it and I won’t hit anything again, so I’ll spin it and I’ll stop the screen and I’ll stop the…
I: So what does that do for you by doing that?
P33: I don’t know, I guess sometimes it works— I guess to me it feels like sometimes it works, you can get like the bonus games that way sometimes. But maybe for me it would be like, OK you want my money, hurry up and take it, hurry up take it, just take it then.

As suggested above, the inconsistent reinforcement schedules of machine wins may have encouraged such beliefs (e.g., Skinner 1948; Henslin 1967). The infrequency of their rituals producing desired results may have facilitated heightened feelings of empowerment when they were efficacious. Schüll (2012:230) suggest that the machine play, “a repetitious toggle of switches”, produced a feeling of control over the eventual outcome; win or lose.
When asked for their strategies, many PGs were willing to discuss them. Paradoxically, however, they also shared their confusion about the machines’ functionality:

P28: The machines confuse me with the lines going across.

P37: There are all kinds of gimmicks that go off on these machines as well like, you know what? Honestly I hope this is being helpful but honestly some of them I don't even understand or want to understand. They come up with all these ridiculous lines, 20 lines and 30 lines and these things go jaggedy and zig-zag. The payouts are … they will always pay something but below the level of what you're putting in but it feels like I guess that you're winning something I guess because that's the strategy behind them… They're getting very complicated. I try to stick with the simpler ones but I'll play the other ones too and some of them I don't even understand. There are all kinds of lines and noises.

P40: No, it's like – I think you know after many years you go gambling on the slot machine. I go there. I don't play the cards. I like the slot machine because you don't use your head. You just go punch the things.

I: You just punch the button.

P40: Yeah, punch the buttons. Yeah. So I just punch them, you know. And they tell “Oh, you get a bonus.” Then you go – the bonus will run and run.

I: Spins again.

P40: Yeah, yeah. All these things. But then my problem is sometimes the machine, right, sometimes the machines, they pay, but sometimes they don't pay. It’s confusing.

P10: The slots…I don’t even know how to play. I just go blindly. It’s like okay, just keep pushing… You know, a lot of people have a vision of that-those regular slot (older, simplistic, versions). Those are done. A lot of them are like buttons and mechanical. And I don’t even know how to play those, so I just play them anyway and I just push buttons. Which is silly but that’s how I play.

One participant described how the amount of money spent on a turn became unclear once the bet was increased. When asked if someone at the casino could help, the gambler explained that even the staff lacked basic understanding of the machines:

P31: But it really gets expensive, that’s what happens too. And that’s another thing that happens is you increase your bet, and you don’t realize how much you’re betting and you know let's say a five cent machine and the next thing you can end up betting $10 or something like that. Well you get 20 lines and then so it’s five times five and then. So it’s $0.05 for each line plus yeah, I think then you go for three you can go from one, to two and three and you can go up to so many dollars and each time three or four dollars each time you press that button.

I: So before you started, did you read sort of the instructions to figure that out or…?
P31: You know most of the machines and I asked what does that mean, nobody knows even the guy working there, I said what does that mean and he said “I don’t know.” Nobody knows.

Possibly the complexity and ambiguity of these machines created a greater sense of uncertainty that fueled the ritual of instrumental activism. That is, their belief in facilitating change, but increasing frustration with the lack of control over the outcome, may have spurred ritual behaviour to maintain a firm grasp of the coveted value. Interestingly, uncertainty seemed to be a key factor in the thrill of the activity:

P43: That’s what it does for me [gambling]. It’s concentration. I get the thrill of not knowing what is going to happen next. With the machines you don’t know what can happen. How much is it going to pay you and what is it that you have to get. I would do that. I want to know what is behind the controls. So if I could get a job evaluating, rating slot machines, I would do it.

Even when aware of the casino’s manipulative tactics, the PGs wanted to uncover the “secrets” of the machine:

P14: Yes. That's another way for the casinos to make you spend more. I've had many people say to me “You're only playing one, you're not going to win anything.” Now, with all those numbers they know, like even beside me I see people playing, even on the $0.05 machine, for example, they're playing 60 credits every time they hit that button. Now, 60 credits times $0.05 as you know is $3. Some people beside me were playing 120 credits because they think, “If I play more, then the chance of a jackpot coming are more.” You know what? It's true because of all the jackpots I've seen lately it's always the people that are playing more credits. That gives the impression to people, “I just can't play one, I have to play more because look at that lady there. She got a jackpot. Yes, but she was also playing a lot more, so I have to play more.”

This gambler was not alone in trying to understand the workings of the slot machine, with most PGs equally invigorated by their complexity and hopeful that they could make sense of them. A few were so intrigued by the machine’s functionality that they mentioned the possibility of pursuing full-time work at a casino.

The unknown workings of the machine fueled a continued desire among these PGs to “crack the code”. Periodic wins gave them a sense that perhaps, with the use of a particular strategy, they had uncovered a secret to winning. The uncertainty fueled by the lack of information on the machines left room for a host of interpretations. Although ambiguity or
uncertainty was created by the machines, this was cradled in an environment providing both structure and guidance with frame alignment (see Goffman 1974).

In the end, both belief types, aligned with the micro-mobilization efforts of the casino, spurred this study’s gamblers in their winning pursuits.

7 Discussion

Goffman (1974) says the meaning of events and how they connect to one’s life situation are often cloaked in ambiguity and uncertainty. This seems especially relevant to the PGs’ experience. The casino met a need, with most PGs indicating they found the activity enjoyable and fulfilling. Although research has discussed gambling as a coping strategy to alleviate stress or negative emotional states (Ste-Marie, Gupta, and Derevensky 2008; Wood and Griffiths 2010), little is said about perceived benefits of participation and how the casino facilitates this. The study discussed here shows how the casino experience is interpreted by PGs and sheds light on what propels continued action despite negative ramifications (see e.g., Ladouceur, Boisvert, Pepin, Loranger, and Sylvain 1994; Lesieur 1998; Wheeler, Rigby, and Huriwai 2006; Tepperman 2009; Shaffer and Korn 1999, 2002).

The values and beliefs of the study’s PGs accord with Snow and colleagues’ (1986) theory of frame alignment and micro-mobilization. Values are “modes of conduct or states of existence” (Turner and Killian 1972 cited in Snow et al. 1986:469) worthy of protection and promotion. To this sample of problem gamblers, the casino stressed the importance of specific values, such as belonging and equality/free market relations, enveloping them in an environment promoting these values. A sense of belonging and equality was lacking in the lives of these PGs, but at the casino, they experienced both togetherness and fairness. Abt and colleagues (1985b) find the casino fosters togetherness, however, Schüll (2012) explains that the casinos design, in line with the desires of Americans, actually allows for individuals to be “separate yet together” united simply in the “shared zone of experience” (p. 23, 36). The connection, in the end, does not suppose a deep level of social cohesion but instead these are weak ties, here today and gone tomorrow, as described by sociologist Zygmunt Bauman (2001). For gamblers in this study, however, these ties were interpreted as a form of togetherness that should not be minimized.
Belonging was facilitated by the casino’s use of membership, rewards, and shared activity, and by the bonding actions of the PGs. Findings here demonstrate a sense of meaningful bonding tied to both interpersonal relationships amongst fellow gamblers and with the establishment itself.

The casino did not overtly market itself as an egalitarian entity, but given the unskilled nature of the gambling activity (slot machine gambling), the PGs got the sense that this organization adhered to this value. Abt and colleagues (1985b) find something similar in their analysis of casino gamblers, in that gamblers escape the status hierarchies outside the casino while inside it. This was particularly important for gamblers in light of neo-liberalist policies and their impact on the ability to procure gainful employment (Cosgrave 2008). That is, to work hard and do right by societal standards did not equate to justly rewards outside the casino.

The same can be said for the related categories of pleasure and psychic survival. These PGs found great satisfaction when participating in gambling. The casino was a place of fun and excitement, as indicated by slogans like “Bet You’ll Have Fun” (OLG 2014). PGs spoke of converting the meaning of money to allow unrestrained use, with reckless consumption providing great pleasure. For them, the gambling environment provided an alternate cultural system of meaning, following Abt and McGurrin (1992), especially the meaning attached to money. The casino allowed gamblers to consume their wealth for the purposes of pleasure. They could also unwind from the stress of their outside lives. Abt and McGurrin (1992:415) note machine based gambling “serves to provide a means of managing anxiety and gives a sense of relative control over the uncertainty of the future”. Instead of grappling with overarching risk and the uncertainty of daily life, risk is faced in the structured confines of the casino created by man-made technology (Abt and McGurrin 1992). In other words, risk is converted to a managed form of risk in the insulated gambling arena using a man-made instrument. These findings affirm Snow and colleagues’ (1986) call for more focus on “interpretive considerations” instead of reifying “organizational and micro-mobilization factors” (p. 466, 467).

As for the values of justice/fairness, perseverance, competition, and self-determination, the PGs appeared to engage in a ritualistic enacting of these values, thereby honouring and empowering them. The value of justice and fairness, for example, involved a ritual dance of
playing to recoup losses. Wins, despite their rarity, appeared to validate justice and fairness. The development of faith in the justice and fairness of the casino spurred the hope that someday the casino could undo gamblers’ hardships by giving them a sizable win. This hope could be augmented if PGs knew themselves to be persons of good character.

The casino reinforced perseverance with infrequent wins. Wins were seen as the result of perseverance which situated gamblers in the role of “comeback kid”. They could take great satisfaction in triumphing against all odds. A common saying in the Western world is “it does not matter how many times you get knocked down, but how many times you get up”. This and related assertions affirmed their perseverance. Of course, commitment alone was thought to warrant reward. This may speak to Abt and McGurrin’s (1992:415) likening of gambling to religion, an alternate cultural system of meaning and ritual where one must prove faith to be rewarded. Indeed, commitment was necessary as the odds are against the gambler.

Despite slot machine gambling requiring no skill, these PGs felt challenged. The rarity of wins fueled this competitive spirit as did the secrets of the slot machine which kept gamblers mentally occupied trying to crack its code. Herman (1967:102 cited in Abt et al. 1985b:66) refers to the casino as a unique “cultural device” allowing the cultivation and “exercise of mental skills and rational powers”. Indeed, these PGs felt no other activity matched this type of gambling in its ability to mentally fulfill them and evoke their competitive spirit. Although Geertz (1967) undermined the significance of machine play, the symbolic interaction of randomness and competition in the cockfight might be relevant here too between gambler and machine.

For these PGs, self-determination was crucial and included the freedom to decide whether and how to participate in gambling. Herman (1967) says this understanding is nurtured at the casino. Many of the PGs were adamant about regulating their own gambling behaviour and not allowing others to influence their participation in their chosen hobby. Furthermore, gambling was used as a way to test their self-control, with each visit to the casino reinvigorating the value of self-determination.
The value of instrumental activism is revealed when examining the beliefs of these gamblers. Parsons (1965) is perhaps the best known advocate of instrumental activism as a value (cited in Campbell 1996:160). Deviant status is ascribed to those who deny the basic value of instrumental activism whereby individuals are “in charge” of their lives (ibid). In this case, gamblers engaged in rituals of instrumental activism as discussed by Campbell (1996) in his theory of modern superstition. Minimal knowledge or insight into the slot machine’s functionality (see Griffiths 1993) likely facilitated a feeling of control which may have fueled action. Many PGs expressed confusion over how the machines worked and this seemed to make them eager to uncover hidden insights, suggesting that they understood their deficits in knowledge and found some fulfillment in trying to “decode” the machines. Indeed, Daley (1987) explains the casino restricts information to fuel play. In addition, misleading design features (Cornish 1978; Turner and Horbay 2004) reinforce increased and persistent machine play (Harrigan 2008; Strickland and Grote 1967 cited in Griffiths 1993). These PGs said they felt in control when engaged in the activity; at the same time, however, they revealed a lack of insight into the machine’s functionality. This calls into question the amount of control they actually felt while gambling. This along with the micro-mobilization efforts of the casino through frame amplification further questions the perceived irrationality of such beliefs (e.g., Walker 1992b). Indeed, gamblers’ beliefs about the potential for gambling activity to facilitate positive life change through individual action or effort are fostered through frame amplification.

This limited understanding of the machine’s functionality, along with initiatives such as rewards based on amount spent, emerged as important issues for problem gambling prevention. That is, features of the machine that deceptively promote a sense of control could be a key area to address in reducing or avoiding problem gambling behaviour. Furthermore, incentives based on amount spent should be carefully rethought given the additional motivation propagated by membership. This specific feature could prove harmful to both new recruits and those who are at the problem level. Harm reduction strategies should include clear and transparent machine guidelines, knowledgeable staff who can answer pertinent machine based questions, and the discontinuation of incentives tied to the amount spent. With a clearer understanding of the machine’s functionality, including the odds, PGs might be able to make more informed decisions. Moreover, fewer rewards for amount spent might dissuade reckless gambling activity.
Finally, the “Know Your Limit. Play Within It” campaign seems to have the unintended consequence of propagating the notion that PGs must take sole responsibility for their own actions, especially their moderation. The problems associated with these campaigns are well described by Schüll (2012) who sheds light on the morality, motivations by industry, and potential inefficacy of these “codes of conduct” aimed at players (p. 265). Further research to determine the consequences of this type of discourse on help seeking is needed, especially as treatment retention is low and few gamblers ever seek treatment (Cunningham 2005; Suurvali, Hodgins, Toneatto, Cunningham 2008; Tavares, Martins, Zilberman, and Guebaly 2002; Toneatto 2005).

In many ways, for these particular gamblers, the casino environment allowed the “clarification and invigoration of an interpretive frame” and its amplification (Snow et al. 1986:469). Furthermore, in the structured environment of the casino they could comfortably experience and enact ritual action. From a theoretical perspective, Snow and colleagues’ (1986:464) framework explains the casino’s ability to motivate or influence participation by organizing experience and guiding action through frame amplification. The findings of this study provide insight into the values and beliefs that frame PGs’ experience in such a way as to fulfill them and encourage participation. The study extends Campbell’s (1996) theory of modern superstition by noting that gambling activity allows the enactment of rituals that honour both instrumental activism and certain additional values. Furthermore, Goffman’s (1961) description of gambling as a bounded arena where gamblers could enact the structure of life “by immersing [themselves] in a demonstration of its possibilities” (p. 34) has significance here. The framing provided by the casino allowed these gamblers to experience or enact coveted values, no longer readily experienced or practised outside its walls. In other words, the casino, just as social movement organizations, breathed life into weakened values thereby mobilizing participants.

27 Schüll (2012) highlights the strong moral logic behind industry promotion of individual responsibility or self-regulation especially when recognizing the industry’s motivation (i.e., financial incentives) and focus (i.e., through casino and machine design) on gambling promotion. Moreover, when gambling and its risks are said, by some (e.g., Shaffer 2005 cited in Schüll 2012:267), to offer individuals a valuable opportunity to cultivate and practice responsibility the moral undertones inherent in the growing personal risk management stance are hard to ignore. Reith (2008 cited in Schüll 2012:375) notes that “broader political and fiscal policies that focus on choices, freedoms, preferences and habits of individual consumers” “rather than product design, supply or availability” (Schüll 2012:375) are at the forefront of the personal responsibility perspective. The negative implications linked to this idiosyncratic stance on responsibility described here and elsewhere warrants further research.
8 Conclusion

This chapter suggests the need to unite organizational and ideational elements to understand gambling. Following Snow and colleagues (1986), it shows how PGs interpret their gambling experience, providing insight into how the casino elucidates and enlivens an interpretive frame. Existing research suggests several values are cultivated in the casino context (e.g., Herman 1967; Abt and Smith 1981, 1985b) and certain beliefs may be reinforced by environmental cues (Dickerson 1993). For the study’s PGs, the casino environment helped organize the gambling experience and appeared to influence action. For them, the casino facilitated the experience of belonging and a sense of equality, while ensuring pleasure and psychic survival. Within the casino, these PGs were able to find structure and guidance while enjoying the additional benefits including the ability to engage in ritual activity giving reverence to socially shared values. Indeed, how this ritual activity, linked to commonly held values, may be involved in problem gambling behaviour requires more investigation. What is evident from this research is the casino allows for the engagement in ritual activity, to some extent encouraging it, with these PGs finding a sense of fulfillment in the process motivating further participation.
Chapter 6
The Processes of Dissonance Management in Moderate Risk and Problem Slot Machine Gamblers: A Study of the Persistence of Unusual Beliefs

1 Introduction

Problem gamblers (PGs) contend with consistent and persistent loss. Each session starts with the hope of winning, but usually ends with anywhere from modest to extensive monetary loss. It would seem PGs face mental stress resulting from the inevitable discrepancy between their belief and the persistent reality of failure. Festinger’s (1957) well-known and widely used theory of cognitive dissonance suggests that when beliefs and attitudes are imbalanced or dissonant with an individual’s actions, s/he will attempt to resolve the imbalance, possibly by altering or modifying the beliefs and attitudes or by changing subsequent behaviour. It can be presumed that gamblers, at the problem level, well-entrenched in the activity, are resistant to altering their general pattern of gambling behaviour to resolve dissonance. The psychological theory of cognitive dissonance would then suggest that when faced with evidence contradicting a strongly held belief, PGs find a means to discount the evidence rather than surrender their beliefs or commitments (Festinger 1957). In the end, they resolve cognitive tension and related anxiety by changing their perception of the world, in line with their expectations, rather than abandon strongly held convictions (Dawson 2012).

PGs are said to use an array of heuristics and interpretive biases to justify their gambling, including representativeness heuristics, attributional biases, selective memory, hindsight bias, and learning from losses (Toneatto 1999 cited in Czerny, Koenig, and Turner 2008). An idiosyncratic focus on problem gambling, according to Abt, McGurrin, and Smith (1985a), undermines the importance of social context in a gambler’s motivations to return to the casino after failure. In their view, the casino structure and culture play a pivotal role in helping PGs balance cognitive dissonance. A growing body of research in the sociological field, with a specific focus on religious movements, has shed light on the importance of social processes and their effect on how groups survive the failure of prophecy. Given the similarity between the prophetic pursuits of both PGs and members of religious movements and their socially situated
behaviours, insight from this field could further understanding of gambling commitment. This could be pivotal for gambling prevention and treatment that continues to see gambling as an individual level problem. That is, can the social processes involved in the preservation of movement commitment help explain what maintains PG involvement in the casino subculture? As Prus (2004) states, “One cannot understand gambling or any other form of meaningful human behavior except within the context of group life” (p. 7).

2 Literature Review

There are two main approaches to the study of cognitive dissonance in gamblers, one with a psychological focus and another with a more social-psychological leaning. The former will begin this section, followed by the latter. The section will end by attempting to harness the idiosyncratic focus with the social.

Psychological research asserts that gamblers justify their continued behaviour despite losses by employing a plethora of cognitive biases, or systematic deviations from a standard of rationality or good judgment. In fact, Czerny and colleagues (2008) explain that many of the cognitive distortions identified by Toneatto (1999, 2002) in his study of heavy gamblers are, in fact, justifications of continued play. Heavy gamblers are reported to hold an array of typologized belief types, including representativeness heuristics, attributional biases, selective memory, hindsight bias, and learning from losses (Toneatto 1999; Wagenaar 1988). The belief-types, also known as cognitive biases, are outlined in great detail by Toneatto (1999, 2002) in his review of pertinent literature on the topic with the core distortion said to mean the gambler’s ability to somehow predict or determine the outcome of a future event which is randomly determined. Toneatto (1999, 2002) reviews the research into gamblers engaging in both skill and chance-based games. That is, chance-based gamblers are reported to feel that luck plays a pivotal role in their gambling wins and losses (Gaboury and Ladouceur 1989; Griffiths 1995; Walker 1988).

This understanding of the gambling situation is constructed in rational/economic terms in most of the psychological literature, where the motives of gamblers are rendered suspect since the odds of winning are against the gambler. Gamblers are said to have difficulty with the
limits and validity of knowledge, believing they are able to predict or determine the outcome of a game (Toneatto 2002). They claim or appear to act in a way that suggests they are equipped with knowledge they cannot possibly possess. That is, gamblers possess and maintain irrational or distorted perceptions or reasoning. These beliefs are of particular interest given their suggested link to problem level behaviour (Ladouceur, Sylvain, Letarte, and Giroux 1998; Ladouceur and Walker 1998; Ladouceur, Sylvain, Boutin, Lachance, Doucet, and Leblond 2001; Ladouceur 2004; Sylvain, Ladouceur, and Boisvert 1997; Toneatto, Blitz-Miller, Calderwood, and Dragonetti 1997). These beliefs often become the target of cognitive based treatment that seeks to weaken their validity by challenging them during in-depth discussions with PGs in the therapeutic context. This technique is particularly important because, according to Toneatto (2002), these beliefs are rarely discussed with others and, thus, not naturally corrected in discourse.

Although gambling is seen as an idiosyncratic activity by many, others challenge this understanding. As Prus (2004) suggests, failing to examine gambling as a “community enabled, situated…fascinated, and emotionally-engaged [activity] is to inhibit understanding of socially meaningful behaviour” (p. 6). For their part, Abt and colleagues (1985a) probe the importance of social context when examining a gambler’s motivations to return to the casino after failure, taking a social-psychological approach. The casino structure and culture help a gambler to balance cognitive dissonance; more specifically, gambling behaviour is not solely managed by internal attempts, because “distinctive external social controls exert themselves and become increasingly internalized psychologically by the gambler in the form of cognitive rules” which define and direct gambling behaviour (Abt et al. 1985a:84). Each gambler has his/her own set of cognitive rules, and the reconciliation between these rules and the gambler’s actions can result in either perceived consistency or dissonance (Abt et al. 1985a). To resolve imbalance, gamblers may modify their beliefs, attitudes or behaviour. Following Festinger’s theory of cognitive dissonance (1957), Abt and colleagues (1985a) assume gamblers strive to behave in a way consistent with their views of themselves and others. The outcome of the gambling act and the judgment of others forces gamblers to compare their existing behaviour to their cognitive rules. That is, if they lose within the boundaries of perceived acceptability, their loss may be balanced by a favourable “presentation of self to others” (Abt et al. 1985a:86).
Abt and colleagues (1985a:86) refer to Festinger (1957) when they say: “The principle of consonance vs. dissonance is the dynamic key in the process which determines whether the gambler will remain in the situation or not.” For instance, dissonance is inevitable if a gambler’s perception of feedback is inconsistent with his/her current cognitive rules and self-image. To relieve the psychological dissonance, gamblers can do one of three things (Abt et al. 1985a:86): “1) change their own cognitive rules; 2) change their own betting behaviour; or 3) leave the situation”. Two additional alternatives can help the gambler resolve dissonance and facilitate continued participation (ibid). For example, the game is set up in such a way that the gambler has new opportunities to re-enter and re-test the gambling situation with the ever-evolving possibilities of achieving a new outcome. Additionally, the isolated environment of a casino helps to keep the gambler from leaving the gambling situation after any particular wager; this environment also shields him/her from distractions that may jolt him/her out of the gambling activity. Finally, the support of fellow gamblers plays an important role in pulling gamblers back after setbacks, for example, by offering “cognitively consonant explanations for temporary setbacks” (Abt et al. 1985a:87).

Abt and colleagues (1985a) have proposed a model in which the gambler is “quite sensitive to situational and social signals [and] capable of adaptive control over his actions within a general conventional context of meaning” (p. 83). To assert gamblers are trapped in their activity is to overlook their ability to orient their behaviour and process social signals (Abt et al. 1985a:83). Reith (2002) concurs, explaining gamblers do not lack agency and, in fact, reject probability theory for a more meaningful (even sacred) understanding of the experience.

Although previous research has pointed to the various heuristic and interpretive biases used to justify behaviour (see Toneatto 1999, 2002), an idiosyncratic focus overlooks the complex involvement of social context in sustaining activity after repeat and sustained loss. Abt and colleagues’ (1985a) social psychological focus highlights individual, social structural and cultural factors that allow a gambler to resolve cognitive dissonance but situate their analysis in their concern over the presentation of self. Although this is important, their analysis requires a deeper exploration into how social processes factor into dissonance resolution.
Both purely psychological and social-psychological research, above, accept the theory of cognitive dissonance, as stipulated by Festinger (1957), to the extent that they argue gamblers will experience dissonance and try to resolve it. In recent years, however, researchers of the cognitive dissonance phenomenon have called for a reorientation away from the specifics of cognitive dissonance theory to more generic processes of dissonance management in groups (e.g. Dawson 1999). Three central researchers in the area of religious movements (Zygmunt 1972; Melton 1985; Dawson 1999) have uncovered three primary strategies used to manage dissonance caused by prophetic failure, namely rationalization, reaffirmation, and proselytization. Dawson (1999:64) indicates it is “successful rationalization that is perhaps the most important contributing factor to the maintenance of beliefs and the survival of the group”. The success, however, of any of these dissonance management strategies is contingent on four social processes: the degree to which members are socialized to the prophetic process and expectations; the nature and extent of preparatory activities; the nature, speed and thoroughness of leadership response to failed prophecy; the level of social support available for those who remain faithful to a prophecy. These factors are a part of a middle range theory developed by Dawson (1999, 2012) and traceable to Festinger, Riecken, and Schacter (1956) which argues groups do indeed survive the failure of prophecy. Again, adherents to the theory call for a reorientation away from the specifics of cognitive dissonance theory to the study of more generic processes of dissonance management that occur in group formations (e.g. Dawson 1999). The factors involved in this survival of prophetic failure, as Dein and Dawson (2008) explain, are far more complex than expressed in Festinger and colleagues’ (1956) seminal work “When Prophecy Fails”. Even so, Dein and Dawson (2008) assert they are not “too complex or idiosyncratic to defy systematic analysis” (p. 164).

Continued involvement in gambling when the social and financial costs appear to outweigh the benefits underlines the complexity of this activity. To date, the dearth of research has focused on the individual rather than the social factors involved in the maintenance of the gambling activity. However, many PGs, especially slot machine gamblers, are engaged in a socially situated activity as described by Prus (2004) and others (Abt et al. 1985a; Hayano 1982; Lesieur 1984). This suggests that more focus should be placed on social processes in gambling activity as in research on religious movement activity. Accordingly, this paper considers how a
group of casino-based PGs, who survive prophetic failure as well as those in new religious movements\textsuperscript{28}, manage dissonance. To illuminate social processes that help maintain and sustain continued belief and action, the assumption made here and throughout is that gambler’s strong faith in securing a substantial win and experiences of predictive failure are similar to the faith and failure experienced by apocalyptic group members. From the religious movement field, the paper borrows Dawson’s (1999, 2012) middle-range theory identifying dissonance management strategies conditioned by social processes. Dawson’s (1999) theory is applied to the interview data of 43 moderate and problem level slot machine gamblers offering a conceptual comparison of apocalyptic groups and casino-based PGs. Before turning to the analysis, however, I offer a brief overview of the Dawson (1999) framework in the next section.

3 When Prophecy Fails: Case Study Findings and a New Theory

In the classic study \textit{When Prophecy Fails}, Festinger and colleagues (1956) drew attention to how individuals survive failed prophetic predictions, introducing the psychological theory of cognitive dissonance to explain the phenomenon. That is, the failure of prophecies to come true contradicts a strongly held belief, causing cognitive discord. Rather than relinquish their beliefs and commitments, individuals attempt to ease discord by changing the way they perceive the world. To this Festinger and colleagues (1956) add that these individuals will try to convince others of the legitimacy of their beliefs, with their ability to persuade others fueling the continued worth of their beliefs. In other words, the successful conversion of others or even the quieting of critics helps reduce the dissonance resulting from failed prophecy. The findings of Festinger et al. (1956) are based on a case study of a small religious group with the pseudonym, the Seekers. The leader of the group predicted the demise of most of the United States in a great flood, with only the faithful being rescued by alien spaceships. Through covert participant

\textsuperscript{28} This term “new religious movements” (NRM) is used to describe groups that “have been assigned to the fringe of the dominant religious culture and secondarily by elements within the secular culture, and hence are a set of religious groups/movements that exist in a relatively contested space within society as a whole” (Melton, 2009:16). For the purposes of this paper, the term NRM is used interchangeably with apocalyptic, millennial and prophetic groups/movements given the focus, here, on groups that are awaiting prophetic fulfillment. For examples of several prophetic movements see Dawson (1999).
observation, Festinger and his colleagues (1956:3-4) found five conditions under which “increased fervor” could follow prophetic disconfirmation:

1) a belief must be held with “deep conviction” and have an impact on people’s behavior; 2) the conviction must lead to important actions that are “difficult to undo”; 3) the belief must be “sufficiently specific” so that “events may unequivocally refute [it]”; 4) this “disconfirmatory evidence must occur and must be recognized”; 5) the believer must have the “social support” of fellow believers (cited in Dawson 2012:8).

The first and second belief, according to Festinger and colleagues (1956), render a belief resistant to change. The third and fourth place clear pressure on the members of a group to abandon their beliefs. The fifth condition is the one Festinger and colleagues thought most determined whether a belief is abandoned or maintained with new fervor (cited in Dawson 2012:8).

Testing these conditions in naturalistic settings is rarely achieved in a manner that is equivalent to the requirements of experimentation typical of psychology. Furthermore, the information gathered in such situations is typically not appropriate to determining the nature and depth of people’s beliefs, so it is very difficult to proclaim whether the people involved in the prophecy thought they were being confronted with evidence disconfirming the prophecy that was irrefutable (Dawson 2012:9).

Overall, as Dawson points out (2012), the basic premise of the theory of cognitive dissonance has been fully verified by experimental research (Harmon-Jones and Mills 1999; Cooper 2007). But the many attempts made to apply the theory to case studies of other religious groups has simply resulted in more evidence that groups do tend to survive the failure of prophecies, with a few exceptions, without comprehensively explaining why. More systematic comparative analysis, however, consistently indicates that a more social and sociological approach is required (e.g., Zygmunt 1972; Melton 1985; Dawson 1999; Stone 2000). Turning back to Festinger et al. (1956) Dawson points to the strong correlation between preparatory work and ongoing commitment to a seemingly failed prophecy noted in Festinger’s second
condition, and the stress they lay on the fifth condition correlating the amount of in-group social support and the level of ongoing commitment.

More recently, spurred by research on two contemporary case studies of failed prophecy, Dawson (2012) has expanded on these two conditions stipulated by Festinger and colleagues (1956). The findings from the Church Universal and Triumphant (Dawson and Whitsel 2005) and Lubavitch Hasidim (Dein and Dawson 2008) case studies led Dawson (2012) to extend the two conditions into four social processes. As Dawson (2012) explains, these case studies did not specifically consider Festinger et al.’s (1956) conditions, but the resulting symmetry is important to reflect on. In the end, he now argues, the successful management of dissonance resulting from failed prophecy is contingent on the following four processes: 1) prior processes of socialization to the “prophetic milieu” (Wallis 1979); 2) prior preparatory processes; 3) leadership response processes; 4) social support processes.

This leads to the other component of this alternative theoretical perspective. Imbedded in these social processes are specific strategies used to manage dissonance. Almost 60 years ago, Festinger and colleagues (1956) explained that groups experience cognitive dissonance which may be resolved by re-interpretation and intensified proselytization. Dawson (2012) now says scholars, albeit in different ways, have identified three primary strategies used to manage the dissonance resulting from prophetic failure: rationalization, reaffirmation, and proselytization. Of particular concern for this work are rationalization and reaffirmation. These are the primary methods for coping with a failed prophecy and Dawson’s research has shown that the proselytization strategy Festinger and colleagues (1956) emphasized is actually rarely used by groups coping with prophetic failure (Dawson 2012).

Dawson (1999) argues that an examination of the many case studies reveals that there are four main types of rationalizations used: 1) spiritualization; 2) test of faith; 3) human error; 4) blaming others. Spiritualization involves the reinterpretation of the prophesized event “in such a way that what was supposed to have been a visible, verifiable occurrence is seen to have been in reality an invisible, spiritual occurrence” (Melton 1985 cited in Dawson 1999:65). In other words, the event happened, but on another spiritual plane. The test of faith refers to members of a group reinterpreting a failed prophecy as a success by saying their continued faith
in the face of seeming failure is proof of their worthiness to some higher power or to the world. Members may rationalize failure as a misunderstanding or misinterpretation (i.e., failing to read the signs correctly) or it might mean the group did not merit the prophecy coming true yet. Human error refers to the “misunderstanding, miscalculation, or moral inadequacy of followers” (Dawson 1999:67). For groups coming from a traditional religious background (e.g., the Lubavitch), this is a commonly used rationalization (see Dein and Dawson 2008). The fourth strategy is linked to the third, in that the two are often combined. In defense of criticism, many suggest human error is a factor in failed prophecy. Directing blame at others, leaders may suggest that the human error of followers is the main factor in prophetic failure. For instance, the Unarians explained that the collective frequency was too low to receive the expected UFOs (Tumminia 1998 cited in Dawson 1999). However, the group may also or alternatively blame outside forces as being responsible for the failure. The failure may be the result of the work of some opposed alien or supernatural force or group. In the same vein, some groups will say those lacking an insider’s understanding of the movement’s philosophies and reasoning can misinterpret the entire puzzle of prophecy, failing to understand there is no “absolute” prophecy at all. Again, the success of any of these strategies hinges on a complex set of interdependent social variables, ranging from the size of the group or its organizational structure to the relative hostility of the surrounding society and its reaction to the prophetic failure.

The second main strategy, reaffirmation, is tied to rationalization, and the two strategies often occur in tandem (Dawson, 2012). Rationalization is a crucial first step in managing dissonance, with reaffirmation being a further key process of dissonance management. The whole process involves the “social and ideological reinforcement of beliefs and a restructuring of expectations” (Zygmunt 1972:259 cited in Dawson 2012:13). Reaffirmation can be distilled to a transformative process affecting a group’s identity or organizational structure (Dawson, 1999). This reaffirmation usually occurs with some form of ritual designed to mark a new order, in a way that allows the group to realign itself with the prophetic goal (Melton 1985). Types of reaffirmation can range from the mundane to the extreme. The Lubavitch, for instance, provide an example of the latter. They remained intact after the seeming disconfirmation of the messianic status of their Rebbe (their spiritual leader), with a quick leadership response reaffirming the identity and goals of the group prior to disconfirmation. Within days of the
Rebbe’s unexpected death, the leaders held a day long “teach-in” to affirm the group’s commitment and encourage continued proselytization (Dein and Dawson 2008). Another group, a Baha’i sect founded in 1960, provides an example of a much less extreme reaction to failed prophecy. This group suffered numerous failed prophecies over a 15 year span, with 18 taking place in the 1990s alone (Balch et al. 1997). The group used dissonance-management tactics to deal with the failure, becoming more and more attached to day to day group rituals and routines, downplaying the role of prophecies. A reorganization of the group’s goals also helped to alleviate any dissonance felt as a result of continued prophetic failure (ibid). That is, the leaders eventually began to make predictions about relatively minor events instead of a global catastrophe and demanded fewer commitments to their predictions (Balch et al. 1997).

While sparse, the case study literature broadly confirms the expectations of cognitive dissonance theory that most groups will persist in the face of the seeming failure. The research has centered on testing the psychological theory of cognitive dissonance, with verifications validating the core of the theory. But in the end, as Dawson (2012: 5) explains, the theory “provides a necessary but not sufficient explanation of this phenomenon”, and the theory of cognitive dissonance is too narrowly framed to capture all relevant variables determining whether a group can or will survive the failure of a prophecy. As indicated, it is a more pervasive and complex set of social factors and processes that accounts for why most individuals remain faithfully committed to failed prophecies.

Dawson’s (2012) emphasis on social-structural processes involved in dissonance management makes this framework useful in extending our understanding of how casino based slot machine gamblers contend with consistent and constant prophetic disconfirmation. Like the new religious movement literature, PG research needs to move beyond a narrowly defined cognitive dissonance theory to offer a comprehensive understanding of the factors at play in maintaining gambling action.

4 Current Study

This study applies Dawson’s (1999, 2012) conceptual framework centering on generic processes of dissonance management in religious and other social groups. Borrowing this framework from
the religious movement field and applying it to a sample of moderate and problem level slot machine gamblers (n=43) may help to identify and understand social processes involved in sustained gambling behaviour. More specifically, the study assesses how four social processes (socialization into the prophetic milieu, prior preparatory processes, leadership response processes, and social support processes) condition whether the adaptational strategies will work, and to what degree. It will hone in on the social processes outlined in the aforementioned section, along with two of the three adaptational strategies, rationalization (i.e., spiritualization, test of faith, human error, blaming others) and reaffirmation. The third strategy, proselytization, has less applicability to this particular area of research, as it is largely tied to the religious movement literature. Although the framework has its origins in new religious movements, slot machine gamblers form a social core with all members playing in a specific context (i.e. the casino) making Dawson’s (1999) framework highly applicable to this social group.

5 Methods

5.1 Sample

The sample demographics are outlined in Table 1. A total of 43 problem and moderate level gamblers were recruited for this study. Using the problem severity index, the majority of the sample is classified as problem level (65%) with a small subset being at the higher end of the moderate level bracket (35%). The sample comprised an equal distribution of male and females with the majority falling in the age range of 41 to 60. Just under half had never been married (42%); roughly 21% were divorced; the married category fell slightly under this percentage (19%). For the highest level of education attained, a large percentage possessed a college diploma (28%) with roughly one third (32.6%) having had at least some university experience extending all the way to graduate or professional school training. Slightly less than one quarter had an annual personal income lower than $20,000, while the majority fell equally in either the $20,001 to $40,000 (32.6%) or the $40,001 to $60,000 (32.6%) income ranges. The multicultural city of Toronto, the area of recruitment, elicited an ethnically diverse sample with the majority tied to Europe, followed by the British Isles; various parts of Asia (East Southeast, West, and South) were well represented (25.6%) as was the Caribbean (14%). A substantial portion of their lives was devoted to gambling, with the sample reporting 18 as the average
number of years spent gambling. Similarly, a fairly substantial portion of income was spent on gambling in the past year at a reported average of $650 per month.

5.2 Analysis

Interviews were audio taped, transcribed verbatim, de-identified to ensure anonymity, and coded for emergent themes using NVivo software. The analysis applied grounded theory techniques, namely open and axial coding. Open coding involved familiarization with the data and the assignment of codes pertaining to emerging concepts or ideas (Glaser and Strauss 1967). Axial coding is the process of relating categories to their subcategories. Data were organized into thematic categories informed by the Dawson (1999, 2012) framework to organize concepts pertaining to social processes of dissonance management and their ability to influence the effective use of adaptational strategies. Analysis was conducted with enough flexibility so that if the framework did not match the data in some way, this was noted in the form of codes or memos. Memoing was done to prepare preliminary analytical notes throughout the process of analysis, identifying relationships between categories and gaps (Charmaz 2005).

6 Findings

6.1 Adaptational Strategies: Rationalization and Reaffirmation

6.1.1 Rationalization

The study’s moderate and problem slot machine gamblers rationalized their losses to maintain continued play. These rationalizations can be defined by the Dawson (1999, 2012) categorization as explained in the previous section. Specifically, in most instances, a failure at the casino was reinterpreted by the PGs as 1) intangible fulfillment (i.e. spiritualization); 2) a test of faith; 3) a result of their own human error; 4) a result of the shortcomings of others. These are ideal types and may occur in a united fashion (Dawson 2012). For instance, an individual may assert that a failed prophecy may be characterized as a test of faith and may stem from human error. Rationalizations are said to be the most important adaptational strategy, contributing to the maintenance of beliefs and continued dedication (Melton 1985).
Rationalizations represent the first step in the reaffirmation process, described in more detail below.

**Spiritualization**: The present use of “spiritualization” comes from Melton (1985):

The prophesied event is reinterpreted in such a way that what was supposed to have been a visible, verifiable occurrence is seen to have been in reality an invisible, spiritual occurrence. The event occurred as predicted, only on a spiritual level. (P. 21)

In other words, prophetic confirmation occurs in an intangible manner or on a higher plain of existence. Many successful new religious movements have thwarted disintegration following prophetic failure using this type of rationalization. This is said to be the strongest form of rationalization in protecting such groups. For instance, a New Age group, the Institute for Applied Metaphysics, scattered in three spots in Canada, “more or less spontaneously transformed a prediction of the end of the world ‘as we know it’ into a subtle shift in consciousness” (Dawson 1999:66). Although the “end of the world” had not transpired, many members remarked that something spiritual had happened, thus transforming the client cult into a full-blown cult movement (Palmer and Finn 1992). On another occasion, an extreme messianic fraction of the Lubavitch came up with diverse spiritualized rationalizations to explain the Rebbe’s death (i.e. a more reverential form of a Rabbi and later defined by the group as the Messiah) (see Dein and Dawson 2008:168-169).

PGs differ from members of religious movements in their spiritualized rationalization. For example, the study’s PGs were less extreme in their spiritualization of prophetic expectations, but they did demonstrate openness to spiritualization. These PGs were not convinced that luck or chance is part of the gambling process. For them, gambling had a deeper significance which can be difficult to explain. This may suggest implicit learning, where schemas or theories of the world may not have been fully discerned despite it guiding behaviour. However, it might also imply that there is something intangible about the gambling experience that defies verbalization. Many struggled to provide an adequate description although some elucidated a connection between gambling and spirituality:

P5: …it’s kind of like your luck or however the Gods prey on you. Kind of like it’s spiritual I guess, I don’t know.
P22: …you know I get this inner peace… It’s like – it’s sort of like a spiritual thing, but it’s not a god, you know.

For members of religious movements, participation in the movement provided spiritual fulfillment and meaning. So too, some gamblers explained just how valued an activity gambling was for them, not being able to imagine their life without it:

P4: I think it (would) just feel like a void (if I had to stop gambling), like it’s just turned into a routine for so many years of going to play. It’s almost like an addiction I guess. Like you feel like you need it.

P45: I think I’d be mad at first and then depressed second. I need something to fill that void, right? I think it would be hard. Yes, I think it would be difficult. I'd have to find another hobby that excites me.

Although it was difficult for the study’s PGs to explain this void or how gambling filled it, they were fulfilled and excited by the activity. Drug use has been described as filling an intra-psychic void (Peele 1985), and producing intense euphoria for some. Some of the PGs found the drug use analogy appropriate:

P22: And that’s what – yes, it is the chase, it’s like a person on drugs, right. They want that high when they are smoking or whatever they do. They just go over and over again even though they hit the crash.

P37: Yeah, there's that euphoria, you do hit. You do win (in some way), I guess. It’s something that maybe only a doctor can explain. I don't understand the process but I've heard that there's certain, I guess, endorphins that are released. I'm sure of it. I believe it. But yeah, there's definitely, you know, euphoria akin to probably some kind of drugs. And as I said, I mentioned that I've seen players with that crack addicted look... Well, I guess the hope of winning. That’s basically what I think is the driving force, but I think it could be more than that. I think there's some kind of euphoria attached to it as well, to the process.

Equating the experience to drug use helped the study’s PGs to understand and explain the profound effect of gambling. Three described their euphoria while playing the slots at the casino as the following:

P25: Yes, it's exciting with all that noise and the flashy machines. Yeah hearing all that noise. Yeah, it's all the lights. I don't know what it is but it is hypnotizing. That's crazy.
P9: You're just focused and, the noise, the bells, I don’t know. The last couple of years, all the casinos, they’ve invested in these like huge arcade machines. They're very noisy, bright lights and I'm just – I don’t know why, but it’s just fun…It just pulls you right in, you know and they all have – they're not just boring slot machines anymore. They're all very high tech or maybe they're not high tech, I don’t know. But they have like a video game attached so after a certain number of spins you get to play a game which you can win more points, where you can win more money… Yeah, so it’s not boring slot machines where you just hit a button anymore. Some of the machines, they all light up, some of them vibrate.

P35: And then the noise of machines is quite – the droning of it is quite hypnotic. So that is an appeal…

These experiences are reminiscent of what members of religious movements might describe when united under the guidance or “spell” of a charismatic leader. In fact, slot machines seem to perform a role similar to a charismatic religious leader, exerting a powerful effect on these PGs who called them hypnotic.

Perhaps due to the interactive features of the machine, many of the PGs built personalized relationships with machines, with many encouraging machines through communicative or tactile interaction. Some seemed to anthropomorphize their machines, inferring human-like qualities, including emotions and intellects. It became clear that many held animist perceptions of slot machines. Slot machines emerged as divine objects with an otherworldly essence; they sometimes struggled to put into words:

P35: …because it's not…it's not… it's not scientific or technical. I don't know how to explain it (the slot machine).

P5: Kind of like it’s spiritual I guess (playing the slots), I don’t know.

P9: …They (gamblers) are trying to summon it, luck, with the slots.

Giving these machines special significance, PGs seemed to project onto the machine the ability to solve their problem likening them to dispensers of unpredictable wealth and potential happiness:

P26: Pretty much, you know and we’re all going to try in some way with – we’re interacting with a machine to see if it’s my best friend and to see if it's my enemy, to see if it can bring me some money or make me happy or something. And yes, you know that
could be good with the pot of luck, gold. Well, because you never know the machine could work with you to be your best friend and say okay, “here I am going to help you win some money and go home” and it could be like a magical machine, or it could turn into a devil and say you know what, “I ain’t going to be helping you today, because I want all of your money. So just give it to me… and I am going to make you miserable for the night.”

The vivid audio-visual components of the machine with its ability to determine winners helped the study’s gamblers envision it as god-like:

P33: It (the slot machine) decides. It’s going to pay you if it wants to.

P36: I really feel bad and I'm like playing (and saying) my God, I've been like I've been getting killed here. I keep getting two (symbols on the machine) and I missed that one it's like… it's like it's taunting me.

Although they wanted to “beat the machine”, as many PGs expressed, they did not equate the machine to someone of equivalent standing. The machine was a superior being with an authority beyond that of mechanical device. Schüll (2012) in her study makes a similar observation when describing slot machines as “vehicles of enchantment” (p. 77, 95).

Interestingly enough, the chip inside the machine, the “random number generator” (RNG), is known to some in the casino industry as the “really new god”, because “people act like its casting a spell” one machine designer told Schüll (2012:84).

Additionally, larger forces were responsible for a win, transcending the power of the machine:

P10: If it’s in my cards to win that day, I’ll win. If it isn’t, I’m not going to. It doesn’t matter what machine I’m playing on.
I: So it’s like, if it’s pre-destined type of thing.
P10: I feel that way. I really do. Fate.

The PGs spoke of fate to describe undesirable outcomes at the casino, demonstrating a deeper connection to the game than simply drawing on chance to describe a loss. These secular amorphous beliefs were underpinned by euphoric states, helping these gamblers maintain a belief in prophecy.
Test of Faith: Depending on the group’s beliefs, histories, and circumstances (Dawson 1999), the test of faith rationalization can have varied representations. As discussed in the new religious movement literature, despite prophetic failure, members of groups continue to believe that prophetic realization is imminent. In effect, the groups decide to persevere in the face of adversity (Dawson 1999), holding onto faith in some moral order that will lead them to prophetic confirmation.

Similarly, the study’s PGs seemed to possess intuitive faith in and the need for some moral order. Their allegiance to the prophecy, by way of ongoing and persistent involvement in the activity despite predictive failure, had special significance. The PGs firmly believed in the need to demonstrate their worth as a gambler through persistence and ongoing work towards their goal. To stop gambling was to doubt that you would be rewarded by the powers-that-be. This belief is remarkably similar to Calvinism and its understanding of “God’s commandment to work for His divine glory” (Desfor Edles and Appelrouth 2009:168). The relevance of such beliefs should not be underestimated even in the modern Western world where increasing secularization is said to be a reality (e.g., Wilson 1988). Some argue Protestant beliefs about wealth and investment formed the basis of capitalism, and there is a kind of perverse and inverse analog to the Protestant work ethic and the spirit of capitalism (Weber [1904-1905] 1958) in the beliefs of PGs. Before returning to the study, then, a brief overview of certain aspects of Protestantism is in order.

Protestant reformers led by Martin Luther (1483-1546) insisted on living a moral and righteous life in their everyday activities; by doing so, they were showing their devotion to the glorification of God (Desfor Edles and Appelrouth 2009). However, Luther’s emphasis on submission and faith promoted an economic ethic that disparaged any labouring and profit seeking transcending that established by custom. Workers and merchants alike were encouraged to maintain their level of productivity and standards of living in accordance with their particular vocation. But submission and faith no longer provided the necessary confidence in salvation traditionally supplied by Catholicism, as the Protestant churches stripped away the rituals and the priesthood that mediated between sinners and God. The meaning of one’s calling in life was transformed by Calvin (1509-64) and Baxter (1615-91) who interpreted it as “God’s
commandment to *work* for His divine glory* (Desfor Edles & Appelrouth 2009:168). Calvin’s doctrine of predestination still claimed that individuals could not earn their way into heaven as it was predestined by God. However, individuals were expected to keep busy, remain pious, and steadfast in their belief that they would be saved (even though they might be damned). The faithful should have blind faith in having selected the right path to salvation with Baxter insisting that one “labour to be rich for God, though not for the flesh and sin” (Weber 1904-05[1958]:162). One was encouraged to labour and economic pursuits but through methodical and rational planning, but success itself did not signal a person as God’s elect. But how would one know he was fulfilling his calling and thus might be one of His elect?

Previously, people were required to have blind faith in having selected the right path to salvation, with only God knowing who would be saved. But the lack of certainty over “one’s state of grace” in the face of this view was difficult to bear, Weber speculated, and the anxiety people experienced was soon tempered by illicitly interpreting success and profit in world affairs as sign of God’s grace and salvation. Now salvation was determined by success in the conduct of work, and this went straight to the heart of the believer’s existence (Desfor Edles and Appelrouth 2009). Not only success determined “God’s elect” but how success was achieved (Desfor Edles and Appelrouth 2009:169). Wealth confirmed salvation but only if it did not lead to idleness or the aesthetic consumption of luxuries. Furthermore, economic pursuits should be done methodically and with rational planning to save and invest one’s wealth, a view which became the “spiritual foundation for the spread of capitalism” (ibid).

Interestingly, much of this thinking can be transferred to gambling. Many of the study’s PGs felt their persistence would be rewarded with wins, thus equating winning to salvation. Further, to stop gambling was to doubt eventual reward from an external power or to doubt ever being saved. In this way, as stipulated by Weber, the Calvinist doctrine of predestination explaining that one should pursue work and success was again reimagined to mean that success was a sign of salvation. To be “God’s elect” was to secure success and profit with a casino win. Some even suggested they would invest the monetary windfall, only spending a small amount on frivolities:
P26: A large win? I'm going to say anything between…over a thousand to three thousand, four thousand. If it ever happens I would be happy with that.
I: What would you do with it? How would you allocate that money?
P26: I would definitely pay the bills, at least a quarter of it, pay the bills like food. And then I would allocate a quarter of it, like if I won four thousand, a thousand of it to come back on different occasions for the month and see.
I: Gamble?
P26: If that can turn into another good return.
I: Okay so you would take some of it to go back and some of it you would put towards bills. So let’s think high now. Let’s think $500,000. If it exists or not, you got a slot machine that gave you $500,000 what would you do with that? How would you allocate that money?
P26: Half a million dollars? Wow, I would buy a house.
I: So you'd buy a house first.
P26: Something a little, not a half a million, but maybe a condo for $200,000 or something. I would definitely ask my parents if they needed anything. I’d ask them if they needed some help with anything first of all, because they’ve given me quite a bit in my lifetime. If they said no, I would also invest a chunk of it too, to get a better return, money.
I: So you'd invest in something?
P26: Like a mutual, maybe or a GIC, something a little risky, medium risky.
I: Right so there would be a little more return on your investment.
P26: Like the world market GICs where you can put in your money and in five years, you don't know what you're going to get returned because if you bought the GIC at a lower rate. I've done that and then after the five years they do the calculations and there's a 25% return higher than, yeah.
I: Okay is there more risk in doing that one though?
P26: Yeah, because if you've bought it at a certain rate and then after the five years it’s lower than that, your zero return is, but your money, your principle will still come back to you.
I: Oh so you'll still get the principle?
P26: Yeah, I like that type of investment where your principle will come back but taking a risk to see if your money can double or return. Possibly (buy) a car, because I use the TTC (public transportation). Possibly and maybe second hand, nothing brand new.

While many PGs suggested they would spend their new wealth, this was tempered by claims that they would make sound, rational decisions with the remaining money. The ethical imperative of Protestantism to save and invest one’s wealth seemed to be a consideration for these gamblers alongside the religiously derived compulsion to increase their wealth.

Returning to the former point on the “test of faith”, for these PGs, this meant remaining steadfast in the belief that they were worthy of being rewarded. Accordingly, they persisted despite failure, believing they were due for a win:
P23: Oh yeah! That’s what I feel right now, I am due. Because I haven’t been for a while and I am due for a win. And the last time I went when I had money it was like that, I haven’t won so now I feel it’s.
I: So you feel like…
P23: The next time I go I’m gonna win. Not big but I’m going to win something.

P34: Yeah, sooner or later it’s gonna click. Paid my dues, yeah. Well, I mean hopefully, that I am gonna win. So one of these days.

The faith of the gamblers was driven, in part, by their longing to know they had a right to win. This calls to mind Weber’s comments about the fundamental need for religious legitimacy of their good fortune. As Weber explains in his essay on the “Social Psychology of World Religions” (1915 [1958]):

[The privileged man] wants to be convinced that he “deserves it”, and above all, that he deserves it in comparison with others. He wishes to believe that the less fortunate also merely experience their due. Good fortune thus wants to be a “legitimate” fortune. If the general term “fortune” covers all the “good” of honor, power, possession, and pleasure, it is the most general formula for the service of legitimation, which religion has had to accomplish for the external and the inner interests of all ruling men, the propertied, the victorious, and the healthy (P. 183).

For the study’s PGs, having a “win” meant a higher power had chosen them, above all others. The PGs wanted to be “special” and knew strong faith meant proving to the powers-that-be, that they were indeed special.

The notion of being “due for a win” is well cited in the gambling literature especially as it relates to chasing behavior, but its layered meaning remains unexplored. To be “due for a win” is a complicated concept when the meaning behind it is unpacked. These PGs explained they should not expect or try to coerce a win, nor should they abandon self-control when engaged in gambling activity. This notion of controlled gambling and tempered avidity as it relates to moral inadequacy is further unpacked under “human error”.

Human Error: Human error is how some members of NRMs rationalize prophetic failure. More specifically, error is attributed to misunderstandings, miscalculations, or moral inadequacy (Dawson 1999). For the study’s PGs, this was a common rationalization. For one,
they faulted their lack of focused play, referring to frantic moves as a mistake. Prophetic failure resulted from erratic and scattered play:

P33: Well I’ll go to the slots like later on in the night. It’s weird because I feel like I’d rather control my money than allow the machine to control my money or allow the computer to. But then it gets to the point where I will go to the slots as a desperation move. And then I’ll play the slots and even though it feels like, Okay, I’m winning something, in the long run I’m not, with all the bells and whistles like (it) distract(s) you. And eventually by the time you know, it’s gone, right… but…

A calculated and controlled gambler has the best chance of securing a win:

P13: Calm. Yes. Everything's going at the pace it’s supposed to go. That’s when I find the days for me are the best. If I get into an uncontrollable urge and stuff like that and I want to do this so fast and I'm not sort of going to let time run by it-self, I just don't have good days. I just don't have good days in gambling – gambling on paper or on-line, whatever the case, in a casino. I just don’t have a good day. Sometimes I sit, right, and I won’t’ be concentrating. I won't be playing the game. My mind will be somewhere else.

In effect, controlled gambling seems attached to worthiness. A “worthy gambler,” then, is focused, self-controlled, and not disoriented by a preoccupation with winning:

P13: Yes. When I'm not focused it's going to be a bad day. It’s a day when I'm not thinking about anything except just enjoying myself (that I win). I don't think about winning, I think about just enjoying myself so when I start thinking about winning some money that's when I never win.

To elaborate on the latter point, a worthy gambler does not engage in uncontrolled play which these PGs appeared to equate with “greedy” play. This overly eager play leads to “human error”:

P14: People are naturally greedy. You can see that because if you go to a casino, you see people and they’re up already $500, you can see the credits they have but they keep playing. They don’t stop and say, “I have $500. I think I’ll go home now.” No, because everyone that goes there, they get greedy. Say you've won $100, instead of going home you think, "Now, I've won $100, let’s see if I can win another $100 more."... That’s when you lose.

P19: I was going to say, I went to that Sex in the City machine, right? I put in five dollar and I was winning. I went up to $23, but I got greedy. I said, "I won $23, I can win more maybe up to a $100." Guess what? It went down, (and) then I lost it all. From $5, I won $23.
According to the PGs, erratic play driven by greed was not the only way an individual could inhibit a potential win; high expectations could be equally problematic:

P7: And plus if you really hope to win, you don’t get it.
I: Okay.
P7: That's my logic on it.
I: So you have to hope to win in order to get it?
P7: No, don’t hope to win.
I: Don’t hope to win?
P7: Don't expect it. Like expect the unexpected sort of thing.
I: Okay, so when you don’t expect that then...
P7: It just comes.

These PGs seemed to think they were connected to an amorphous higher order which took account of behaviour both in and outside the casino. Being of good character amplified the moral worth of the gambler and, consequently, the chances of winning:

P30: If you are a good person, not just to yourself and kind to others, I think you should have more chance and give some – not priority but give some, feeling more that you should win. But I never had that thought.
I: You’ve never had that feeling?
P30: Not really. If I had, I would feel like a greedy person… I would say $50,000, $150,000 you’re asking too much (in a win). Fifty thousand would be right.
I: Why are you asking too much with $150,000?
P30: Well of course, I don’t want to be or sound too greedy. I will be happy with $50,000.

P21: Yeah you know I always feed the birds you know. I feed the squirrels and I am so nice and so I feel like I’m entitled (to win)!

Protestant beliefs upheld the need to be productive in one’s vocation and to live modestly. In the gambling context, the study’s PGs seemed to think that to secure a win they had to be productive gamblers and exhibit faith in their “calling”. Like those adhering to the tenets of Protestantism, they also attempted to be moral and righteous in their daily activities (Weber [1904] 1958). In other words, winning in the casino or reaching salvation both require modest desires, faith, and moral worth.

In sum, a gambler who is self-controlled and has modest expectations shows the moral worth of a winner. These findings point to a gambling process that for many PGs is anchored in
an intuitive faith in, and need for, a higher moral order. The similarity between gambling and religious movements is noteworthy. Indeed, gambling itself could be interpreted as a form of religious expression and experience.

Blame Others: Prophetic failure, according to some, might be the result of a combination of individual-level shortcomings, group-level flaws, and missteps by outsiders. In order to manage dissonance, the study’s PGs did attribute fault to others. Typically, these rationalizations presented themselves in two ways. First, the PGs blamed other patrons for transmitting their negative energy, resulting in bad luck or an unfavorable outcome:

P5: Usually when people around you are, even if they’re not winning, they at least have an upbeat attitude. Then people are laughing, and people are joking, then that’s good. When it’s a down table, when people are like at their lowest, then you don’t want to kind of go there type of thing. I don’t want to be part of that energy and lose. I feel that that’s the reason for a loss potentially (negative energy of other patrons).

Blame was spread between individuals about whom they knew little, namely fellow patrons, and those with which they had closer ties. Family, friends and significant others were not immune from blame for prophetic failure:

P24: Like I would rather just say, oh, after like a few minutes, oh, this is how much I won kind of thing. So it’s kind of like, if he’s (her negative friend) around sometimes I feel like it’s bad luck. I don’t know. I think if somebody is like looking at you while you are doing it (gambling), it’s kind of like jinxing you.
I: And have you found that it is something that happened to you before?
P24: Yes.

This PG identified the friend’s watchful gaze as a form of negative energy, ultimately causing her to perform poorly, a commonly used rationalization by the other PGs as well. As Hayano (1978) remarked about poker players, wins are often attributed to their own performance while others were held responsible for losses.

Second, the casino establishment was blamed for its underhanded way of controlling the flow of wins:

P28: Because sometimes there is like a myth like they are watching you up there (the casino management). Like I’ve seen people and myself include that you put money in, it
doesn’t give. Soon as you take that like a breather and somebody else comes, the first $20 bucks already a hit, like they get a spin maybe $500. And they didn’t give you nothing, and after being on that game for about an hour or half an hour.

I: So then you’re thinking that someone is watching and sort of monitoring?
P28: Yes.

I: And why do you think that is though?
P28: Well because I think at one point one person told me that at the door opening and then at one time for me personally it happened. I was mad, one time I was putting a lot of money (in the machine). I said, so I called the guy (casino worker) over because I was really mad. And I said, check this machine, better open it up, and tell the buddies upstairs, like I was really mad... And so the supervisor came over. And he was nice, he was friendly with me. He said “we’ll check the machine. Everything is fine” he said. But they were just saying that because after they checked it, why did it keep giving spins left and right after, so that’s why I was curious about that one. (The spins were) More frequent after I told them to check it. Yes, I’m always on it (the one machine). I was mad. I took a break because people were watching and people (casino workers) are freaking out (because) like this guy put a lot of money (into the machine) and he is not winning. Nothing is happening. Of course they are trying to cover themselves (the casino establishment).

P35: And it was terrible. It was really bad (no payouts)... Yeah. Well, I think, yeah. I think... I think management must have done something. I think management probably programmed the slots to be like that. Yeah, there were not many people in the slots. Yeah. I lost. I lost. It's not... it's not scientific. I don't know how to explain it. That was the wrong word. It's...it's technical like it... they're set up a certain way – I really do believe that. I don't think that you can beat the house kind of thing with the slots. Well, I'm sure that they (the casino establishment), they've got cameras that you, that they know who you are right away when you sit down because you're using your identification card. They're assessing how much you spent. Possibly. I'm not saying for sure but...

P43: I find they actually say that these are random machines that randomly go off, but that’s bullshit. The reason I am going to tell you that is when the new machines come in to the place, those machines pay all the time for like about a week.

I: So what are your thoughts on that and that’s an interesting point, so these new machines are coming in.
P43: They absolutely lie and they (the casino establishment) tell you that they have no control but they do.

I: Okay.
P43: They have control over – how much the machine is going to be paying. Like the denominator for instance, if that machine over the last few days is climbing to $2,500 and it’s a two cent machine, that machine will probably pay out $400.

For the study’s PGs, human error was a frequent rationalization, with the errors of others being especially popular. As previously suggested, they often applied several rationalizations,
including focusing on personal “human error,” simultaneously. PGs who blamed others for prophetic failure typically centered on those in close proximity at the casino: anyone from a fellow patron to a significant other could be designated the cause of prophetic failure.

As noted above, rationalizations are the first part of the process of dissonance management. Ritualization, the act of enacting rituals to affirm continued commitment to the prophecy, is an important part of re-affirming commitment.

6.1.2 Reaffirmation

Reaffirmation is another adaptive strategy to defend against dissonance. Like rationalization, it responds to failed prophecy. These strategies usually take place in tandem but are conceptually distinct. Dawson (2012) contends:

The formulation and communication of a rationalization for the failure is crucial to the survival of a group, but it is only the first step in a process of reaffirmation that involves “the social and ideological reinforcement of beliefs” and a “restructuring of expectations” (Zygmunt 1972:259) and “sometimes organizational structures as well.” (P. 13)

Actions may be taken at this moment to reaffirm the group’s cohesion and commitment, including special rituals, ceremonies, and educational events to preclude dissonance (Melton 1985). In certain cases, reaffirmation cannot remedy group disintegration following prophetic failure (see Dawson and Whitsel 2005). Forms of successful reaffirmation vary from the extreme to the mundane. On the one hand, the Lubavitch, an extreme messianic religious group, use a more intense reaffirmation; on the other end, groups like the sect Baha’is Under the Provisions of the Covenantare’s process of reaffirmation was more mundane.

The Lubavitch remained intact after prophetic disconfirmation due to the leadership’s prompt response to the Rebbe’s (i.e. a more reverential form of a Rabbi and later defined by the group as the Messiah) death (Dein and Dawson 2008). They made an immediate and repeated call to members to use their grief to re-dedicate themselves to their proselytizing mission. Furthermore, a week after the death, they had a day-long “teach-in” with several speakers
promoting the missionary core of the Lubavitch. Here, leaders reaffirmed who the group was before the failure and encouraged all followers to continue on the path.

The Baha’i sect, founded in 1960, sustained 20 prophetic failures from 1979 to 1995, with 18 taking place in the 1990s alone. Most predictions were small-scale disasters, with some more radical upheavals predicted to transpire in the 1980s. For this group, reaffirmation involved anchoring rationalizations in a return to basic beliefs and the benefits of belonging. Members learned to rationalize losses quickly, not dwelling on them; they went back to the daily rituals and routines, with prophetic failure having little consequence. More specifically, the trends between 1980 and 1995 illustrate the process of goal displacement (from the failure to the quotidian), which helped to affirm commitment. Thus, the organization’s original goals were supplanted by more achievable ends. Group members “retreat(ed) from the initial program to a more moderate and conservative program in the interest of maintaining the strength of the organization” (Blau and Scott 1962:229 cited in Balch et al. 1997:88). Balch and colleagues (1997:88) note: “In goal displacement the means of achieving organizational goals become ends in themselves as members focus their attention on mundane administrative jobs, and the group’s original ideals become increasingly irrelevant to members’ everyday lives.” A re-organization of the group’s goals also helped to alleviate any dissonance felt by continued prophetic failure (Balch et al. 1997). That is, the leaders eventually began to make predictions about relatively minor events instead of global catastrophes, and they demanded fewer commitments to their predictions (Balch et al. 1997). A series of failed predictions did not lead to group disintegration, although for a time, disillusioned members stopped proselytizing altogether. By the mid-1990s, members had returned to their daily routine, minimizing the relevance of prophecies and emphasizing the other benefits of participation (Balch et al. 1997).

The study’s PGs come closer to the Baha’i in reaffirmation. These gamblers rationalized prophetic disconfirmation quite successfully and, like the Baha’i, became almost desensitized to prophetic failure given its frequency. Although the Baha’i replaced emphasis on the prophecy with an emphasis on the benefits of participation, the PGs remained dedicated to the prophecy, although they too held the benefits of group life in high regard.
Reaffirmation had slightly less impact for PGs after prophetic disconfirmation. The casino itself did not need to act quickly as leaders did to ensure commitment to the group after disconfirmation. Gamblers were able to change their own outlook after prophetic failure using rationalizations. This, however, was aided by the structure of the gambling situation itself. The PGs were allowed to re-enter the situation time after time with a fresh outlook, a point echoed in the work of Abt and colleagues (1985a). Furthermore, they could choose to visit another casino or try a new machine.

Reaffirmation presented itself in two ways, namely in the changing of slot machines by the casino establishment or the changing of rituals. The casino changed slot machines periodically, replacing older models or designs for newer ones:

P10: The slots can … they (the casino) change(s) them. …I don’t know when the last time you’ve been in a casino, but a lot of them have changed… I would try the new ones because they keep changing them all the time. They’ll add new ones and I don’t even know their names … Sometimes, you might be drawn to machine because it looks pretty. The colors are nice. You know, they might have like, uh, cartoon characters or something.

P43: There are always new machines coming in… You don’t know those machines though hun. You don’t know how many of them are new as it’s open 24/7. You have no clue what those machines would be. If you did you are going to play then every single day.

New slot machines marked a new order in the casino, perhaps allowing PGs to reaffirm commitment to the prophecy:

P9: It just pulls you right in, you know and they all have – they're not just boring slot machines anymore. They're all very high tech or maybe they're not high tech, I don’t know. But they have like a video game attached so after a certain number of spins, you get to play a game which you can win more points, where you can win more money. The free spin thing is a big incentive, right? You're more like, I'm more likely to go to the game where I can hopefully get more bang for the buck. Yeah, so it’s not boring slot machines where you just hit a button anymore. Some of the machines, they all light up, some of them vibrate.

P14: Well, I tell you what changed, not only from the coins to the tickets but also all the machines are now different. They’re more for entertainment. They’ve got videos. They’ve got sounds. They’ve got these bonus features where when they come on it gets
you all excited because there is even more chances to win whereas back then it was more — simple spots like three lines, then all three had to match. Now, it’s totally different…

The new slots, with their improved features, allowed these PGs to feel a fresh sense of hope. They could try existing superstitious rituals on a new machine or recast new superstitious rituals:

P4: And then if it’s not paying off (a particular machine), I’ll switch a machine or switch a strategy to something else just to change it up.

P16: An old lady told me this. She told me that trick and, I was like wow I gotta try that (next time)…

This act of altering a ritual seems closely aligned with reaffirmation.

As with members of religious movements after prophetic disconfirmation, these particular PGs found a way to rationalize a loss, thus allowing them to continue their prophetic quest. Disconfirmation may have jolted their confidence momentarily, but the overall structure of the casino gave them the means to restart their prophetic journey with renewed hope and vigour. For these PGs, rationalizations seemed sufficient in and of themselves, but their ongoing commitment was facilitated by the addition of new slot machines allowing them to retry existing superstitious rituals or to recast rituals.

6.2 Social Processes

When considering the effectiveness of dissonance management strategies, as discussed above, current literature suggests taking a deeper look at several social processes. Dawson (2012) specifies four that shape the responses of new religious movements to prophetic failure: 1) the degree to which members are socialized to the prophetic process and expectations; 2) the degree to which members are motivated or compelled to engage in costly preparations; 3) the degree to which leaders response swiftly and thoroughly to apparent failures; and 4) the degree of ingroup social support present in the group (Dawson 2012:15). With a high degree of any or all four processes, groups will likely survive prophetic failure. The forthcoming analysis will touch on all four factors, but given the differences between new religious movements and the PGs studied here, the analysis will use the four types as a rough guide rather than an exact blueprint.
6.2.1 Socialization

Socialization into a prophetic milieu refers to the “scope and sophistication” of the ideological system of the group and how well individuals of the group are “socialized into the larger worldview and lifestyle of the group” (Dawson 1999:72). When prophecies are linked to a broader and more intricate set of beliefs that “frame a fairly comprehensive worldview, sense of mission, and collective identity,” the likelihood that disconfirmation dissolves the group’s mindset and structure are slim (ibid). The better the socialization into the group’s ideology, the more impenetrable its beliefs are when confronted with criticisms of their plausibility. In other words, socialization makes predicted events or rationalizations seem plausible. When prophetic failure occurs, the members are insulated, given their strong mental and physical alignment to the group and its ideologies.

The ideology of a group may be distinct and nuanced, giving it an orientation quite different from that outside the group. Research suggests the success of the group might be tied to the group’s ideological orientation to the rest of society, with groups that align more closely with the outside world faring better in the long run (Dawson 2012). For instance, groups meeting organized opposition and negative public attention may experience greater difficulty in maintaining themselves. This, of course, is of little consequence to gambling groups, who for the most part, are engaging in a widely accepted activity. In Ontario, for instance, gambling expansion is in full swing with increases in the number of slot machines and now with the introduction of online slot machine gambling. Revenues for the 2013-2014 fiscal year totalled $1.96 billion and are apt to rise with continued availability and popularity (OLG 2014).

The prophetic milieu of the casino as it relates to wealth accumulation and pleasure seeking through this pursuit is inextricably linked to the larger worldview and lifestyles of Western society (see Abt 1985a). The casino’s ideological system has widespread appeal, making it easier for PGs to draw on plausible rationalizations to maintain their allegiance to the prophecy. Similarly, the lack of opposition to this activity, including the normalization of gambling activity as a legitimate way to spend leisure time, helps PGs continue their activity despite mounting personal costs.
Indeed, gamblers are socialized into this alternate world view very early on. For the PGs in this study, socialization into the prophetic milieu seemed to begin before they ever entered a casino. Many shared vivid memories of arcade carnivals or annual exhibitions. The casino seemed to remind them of these places. Both were equated with fun and excitement and the pursuit of a prize. One participant described the connection between early visits to the annual exhibition and the current casino experience as the following:

P12: I go there and that's where all the excitement is (the casino), all the ding, ding, ding, and all the people as the excitement, so I wanted to get that feeling of excitement, the night out of town type of thing. I don’t want to just go to blackjack table and just quietly you know, and serious and stuff like that. I want to go, you want that where it is all lit up and ding, ding, the lights and all that stuff with people. It's like going to the (national) exhibition you know. You haven’t been for a long time and you went this year first time, you go there and it's like all the lights, the games and everything, “Oh, I remember as a kid here.” It's excitement. The same thing with the slot machines, to me it's excitement. It is like that. But I think so because my mom used to bring me and my brother to the exhibition and (I remember) Crown and Anchor. They still have Crown and Anchor and stuff like that. But (at the national exhibition) that's just trying to win quarters and that, but I think that's a good point because you go to exhibition you hear, people “doggy, buffalo, bam, wanna win a stuffed animal?” All these things and you smell the food and the rides and the games and everything. The excitement, it's like an adrenaline thing. It's like I get so excited. You know, I went there two weeks ago and it brought out the kid in me all over again. It did. Yes. I met my brother and I went there before him, and I was so excited. My mom used to bring us, right, because I haven’t been there for like 30 years at this point. But I get the same feeling, well relating it back to the slot machines. I guess it's the same thing, yes. It's just the excitement.

Socialization into the prophetic milieu has its roots in a more general socialization process common to Western society. Echoing Geertz (1973), Abt and McGurrin (1992) state:

It's the play of the game according to cultural rules that gives gambling its meaning. Culture is an assemblage of texts explicating, among other things, that it is worth taking risks. The gambling ritual symbolically affirms that society and life are built on cycles of despair and triumph. (P. 417)

Early exposure was not restricted to carnivals and fairs: many PGs discussed the early introduction, by family members, to more concrete forms of gambling:

P4: Yeah when we were younger, like anytime we’d go to (a specific casino) and we would just kind of sit outside with one of the parents, while the other would go in. I: And how long would you wait outside for the parent to (come back)…?
P4: Like 10 minutes. I think it was just the thrill of like not knowing…
I: Okay and what does your parents talk about, when they talked about going to the casino? Did they say anything when they would come out of the casino?
P4: It was more about if they had won. Or so much they had won. I don’t think they ever really told us what goes on inside.

P13: I probably grew up just watching him (my dad) gambling. I think it began because, I was told that when I was small, my mom would drop me off with my dad, (and) I'd stay with my dad. My dad would go to the casino, or to the clubs, play cards, while I was running around the club at two-three years old; and my mom was out working…. Maybe that kind of affected me...

P16: Yes, my dad would like – I remember him taking me and my brother, my older brother and I think we were 12 or 13, and he said pick a horse and if the horse – so they got a trip-actor. ..If we won and the horse came in, he’d give us 50 bucks. So that’s when my brother got into the track, like “come on, come on”…. Yes, they had an arcade, because they knew people, people are bring their kids there, so because there is lot of “gamble-holics” so, a lot of kids are sitting there outside watching the horse, like, “look at the horse”…

Interestingly, when delving into their childhood memories of gambling, very few of these particular PGs tied their current gambling to early exposure. How these early experiences played a role in their later gambling problems is unknown. However, they undoubtedly oriented the PGs to the gambling worldview where the pursuit of money and the eventuality of loss became engrained. They were socialized to see gambling as a part of their identity, part of their familial history and an appropriate activity, despite the drawbacks. One PG explained his familial link to gambling:

P16: They worked hard. My dad worked two jobs and my mom worked you know my mom was a secretary, my dad worked in a factory.
I: So they worked very hard. So you saw that growing up?
P16: I saw that growing up.
I: Lot of working and not a lot of fun?
P16: No fun, just a routine. It was a daily routine, every day. Work, come home, sleep, shit, bang, go to bed. You know what I mean?
I: Yes, like very, very regimented.
P16: Yes. I can’t, nah. I mean I have my routine, I go to work, I come home from work, because I do work at night, right.
I: Okay. So that’s why maybe you have a shift sort of work, so it’s easier to go the casino at night.
P16: That too, right. Plus I work another job at night.
I: Okay, that makes sense. So growing up you saw a lot of sort of regiments and routines and you don’t want that, you want some money for yourself for fun?
P16: Yes, it’s like something I could call “for myself” like okay I work for this, so at least I can hold this. I still pay my bills and everything already you know. But this (gambling) is mine. I don’t have to give this to you or give it to anybody else. If I win, I win. And if I usually win, I will always, I put my $200 I won and then I put the rest back into it. So you know my wife will get something extra or whatever you know…. if you’re going to do something big, go big. My dad always told me than when I was small.

I: Did he?
P16: Yes, he said if you’re going to – one thing is always eat, if you’re going to smoke cigarettes smoke the best cigarettes, if you’re going to drink beer, drink the best beer, if you’re going to gamble, gamble big, there is no sense of gambling $5 and losing it and keep on gambling $5 at one spot, when you could sit there and gamble spend $200 and spread out whole set of $5 all over the place and have a better chance of winning.
I: So he said that to you?
P16: Yes, because you know what, he used to go to slots. He was the one who told me that too.

I: He used to go to slots too or he?
P16: He used to go to the track. So he wouldn’t sit there and buy one horse, he would buy like for 20 horses.
I: I see. So he had that the philosophy, go big or go home?
P16: Yes. That’s him.
I: And you were saying that they were – you saw a lot of routine in their life and very little fun….
P16: That was his gambling things, his track.
I: So that was his fun?
P16: Yes, he went to the track and he’d buy the Lotto tickets too. You know what I mean so. That was his little fun thing.

Gambling for this PG, as for others in the study, was part of his family’s identity. Beyond this, it was a lifestyle choice that allowed him to break from the routine and add some excitement to an otherwise tedious life. Whether money resulted from the activity became secondary to the other benefits. This type of socialization is not unlike what happens when individuals are socialized in a religious family. For instance, an individual socialized into a Jehovah’s Witness family might be more susceptible to talks of apocalyptic scenarios just as gamblers become familiar with the talk of gambling losses. Two of the study’s PGs commented on this:

P1: Well, it is just the way it goes. It can’t be the same winners all the time.
P24: So if I go to casino and I lose then who cares, like I know that I went and I tried it out...

While early socialization plays a pivotal role in ongoing commitment to the prophecy, later socialization into the subculture and its benefits intensifies it, even after disconfirmation. This indicates the attachment of PGs to not just the prophetic goal, but to the overall lifestyle and subculture. The auxiliary rewards prevail even when the prophecy fails. Discounting failure becomes even more important so that the larger set of rewards can be perpetuated. For these particular PGs, the rewards included: the thrill and excitement while in the environment engaging in the activity; the ability to escape the tedium of life and related challenges; and a sense of elevated status and importance.

A major appeal of the lifestyle was the hyperrealist environment of the casino where they became enveloped in a fantasy world. The PGs often tied the environment, including sights and sounds, to their excitement:

P39: You feel like you're in Vegas. I love all the bells going off, lights flashing… I thought everyone was winning. They just do that to make you feel excited.
I: So how did you find out about that?
P39: Walking around before I got on a machine and one time my bell rang and I'm like ‘oh my god!’ so you walk around the whole place, the bells go off. It’s just to get people like-excited, maybe, yeah. And then the loud music and then they come around with the free coffee. That’s nice, coffee and pop.

P2: It’s the adrenaline and the excitement. You see all these red lights going off. That’s the first time I went there, you see all these lights coming on and it’s all well lit up and the air is so fresh. So it’s an excitement thing.

The casino atmosphere, for many PGs, was filled with excitement and wonder, making it a dream-like experience:

P41: You know the casinos, is a glittering paradise. (At the casino) you're living in a world of fantasy.

The proliferation of gambling advertisements may play a pivotal role in associating the casino with a fantasy world:
P9: The gambling people (casino staff), the government (does a good job), yes. I think they do an unfortunately good job of...getting people, yes.... There was one ad with the girl walking the horse in the field that she is wearing like a fairies dress and walking often to the sunset. It could have been like that scene you know like except with the horse. And the girl has like a wand in her had. The ads are very simple actually, but they pick something fantasy like they’ll take a picture of the clouds in the sky and the lake and it’s like yes, that’s where I want to be. With my $60 million stuffed in my socks, I don’t care. I don’t know how they do it. I don’t know who is behind it, whoever that guy is, must be making a million bucks. Because if you look at it, then you’re drawn in.

These PGs wanted to be in a fantasy world, and the casino allowed them that, along with a temporary escape from a world filled with myriad stressors:

P32: So, I like, I like going to the casino. To be honest when I go to the casino I don’t remember any problems. Even if I’m down for that day, it’s like I am going to go.
I: So, it basically makes you feel like...?
P32: Relaxed...
I: Okay.
P32: ...honestly. Most people would tell you they feel that way.
I: So, it’s a relaxing feeling that you feel?
P32: Yes, a relaxation, because you don’t think about your problems you just think about winning.

P35: I find it kind of relaxing to... to an extent like it's... it releases my stress... like (gambling acts) as an escape mechanism for me.

Another PG described how the environment helped cultivate an escapist sensation:

P31: I think that’s why they have all the lights and the bells and everything going because it takes your mind off everything else and you just keep playing and I guess that’s why people keep going, if they had too much time to think about it then they might not do it. Yes, and you get distracted and you lose track of time and everything.
I: Yes, do you feel that?
P31: Yes.
I: Okay, and so then the atmosphere you think creates that in some ways?
P31: Yes.
I: So what is it, is it?
P31: So that’s why the casinos are built that way to.
I: To make you lose track...
P31: Yes.
I: So is it sort of the –just the bells and the whistles, is there anything else to it that makes you lose track of the time?
P31: Lights and everything. Yes, I don’t know I hear, in Vegas they pump oxygen into the air.
I: I’ve heard that too and do you think it’s true?
P31: I think it’s true, sure.
I: Do you think that they do that here as well?
P31: I don’t know.
I: Okay.
P31: But yes, I think a lot of people just maybe they get away from everything else and you shut your mind down.

Adding to the escapist quality, the casino allowed these gamblers to temporarily discard their position in the outside world and to take on an elevated status or feeling of importance, especially when they won:

P33: When I won that $1,600 bucks, I already had the $600 in my pocket from the night before, right. So I won that $1,600, I ended up having $2,400 dollars cash in my pocket. I walked out of the casino with it in my hand, not in my pocket. I wanted everybody to know, “hey look what I just did”, you know what I mean? I think that’s what it is. The fact of being able to have like a big stack of cash on you, and be like yeah, this is mine, I just won that… Importance I guess….. The high roller feeling I suppose.

P3: Um, first thing is the money and also part of it is knowing that you won and knowing that you beat that machine. Yeah, and the fact that you can tell other people that, “oh, I won this much” or you can boast about it. It just gives you a feeling of satisfaction and fulfillment. Yeah. Um, it’s kind of like to get attention in a positive way. I don’t think it’s a bad thing. Yeah. (for people to) notice, yeah. Um, I can’t really answer that definitively. But just to kind of get people to kind of focus on you for those few moments.

This was particularly enticing for the PGs who were caught up in the entertainment version of a gambler’s life. Of course, there was also the lure of potential importance:

P4: So I think now if I was to ever win, being that centre of attention and everyone’s focus, it would kinda feel nice. ‘Cause I’ve, I don’t think I’ve ever felt that way...like a winner... The thrill of having to call everybody and telling them “I’ve just won”…

Added to this, the casino introduced a reward card, a tiered system whereby points accumulated according to money spent. These cards and the perks awarded, seemed to cultivate an elevated sense of importance:

P38: And all the casinos know me. I have got all the cards from everywhere, so…
I: So they are paying you back now essentially…
P38: Kind of, but initially you are still paying for it in some way, because when you go there it’s not like, okay, you are going to get free meal. You might get the show, but then you are going to play too.
I: Right.
P38: They know that. You see, they know that you are going to fork out anyway. So, but it’s nice to get something back. It is nice. I go free, for me (it’s free).
I: Oh, okay.
P38: I go frequently. I have gone last week. This week, I am going because I am going to see a show. I am going next week again, yes, like going back to back. I mean, honestly, I am booked for the next three months.

P12: …I got a friend who goes there all the time, they give him free hotel. They can stay there or they (the casino) pay(s) for his gas. Or if there are concerts out there, I’ve gotten free ticket concerts front row type of tickets...

This heightened sense of importance was even more pronounced in those with higher tiered cards²⁹:

P40: Ten thousand seven hundred-something dollars for a win bottle. I saw that on the menu (in the casino hotel provided for points accumulated)... Ten thousand seven hundred something dollars for that bottle!
I: That’s incredible.
P40: Okay? So I’ve seen all those things. But if you want to go, I would have taken you there, treat you there. And I will tell you don’t bring too much money unless you can afford it. Okay? I will tell you that. You can go there. I would have taken you up there, to the hotel or the show. You know sometimes they got shows.
I: They got shows, yeah.
P40: Shows I would get a ticket for you to go there to see that because lots of the shows I’ve seen already. So I would treat you to that. Before, I had Platinum card. They have special lunch. They have lunch, dinner any time you want to eat you can go there.
I: For free?
P40: Yeah, that’s for the private area (reserved for good clients of the casino). Then I will take you there and treat you because I have that card. It doesn’t cost me anything.

The sense of importance cultivated by the casino’s awards system was in itself a great attractor for the study’s PGs.

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²⁹ Please refer to the following site for card membership information, https://www.fallsviewcasinoresort.com/players-club/benefits. It is imperative to note that casinos vary in their card hierarchy or tier system levels of card names. For example, Woodbine casino has three levels as does Fallsview casino, but the tiers are termed differently: Winner’s Circle Rewards (lowest), Winner’s Circle Rewards Silver, Winner’s Circle Gold (highest).
In the end, the casino provided a subcultural lifestyle which PGs were not willing to discard, making them less willing to admit to prophetic disconfirmation. The rewards and lifestyle of the casino were a distinct pull for PGs, quite apart from achieving the prophetic goal. PGs were socialized into the prophetic milieu early in life, with continued reinforcement when they became gamblers in the casino subculture. The PGs were fervent in their desire to continue gambling, with continuous disconfirmation having little impact. Indeed, to admit to prophetic disconfirmation would mean relinquishing the other benefits of involvement, something these PGs did not want to do. This likely strengthened the pursuit of the goal and led to greater attachment to rationalizations despite disconfirmation.

6.2.2 Preparatory Activities

As Dawson (2012) makes clear, the amount of preparatory activities engaged in and the level of involvement is positively correlated with the level of commitment to the prophecy. In turn, a heightened commitment to the prophecy is related to important actions that are difficult to undo. For some members of religious groups, who have relinquished all worldly possessions and distanced themselves from others outside the group, the overall significance of the prophetic moment is heightened, rendering their commitment vulnerable to prophetic failure. Furthermore, if people are experiencing burnout, due to heavy investment, the ridicule of those outside the group may “demoralize the group and hasten disintegration” (Dawson 1999:74). In fact, Festinger (1956) says the fewer commitments made before the prediction, the less the dissonance there is when a prophecy fails. Here, social support or leadership intervention may help prevent group disintegration by emphasizing their heavy investment and persuading members to hold true despite prophetic failure. The hostility of others, however, coupled with the lack of other real options, may trigger stronger ties to the group and its goals. In the end, the more preparation and investment, the more likely to survive the failure and hold to the beliefs and lifestyle; but it is a question of hitting the right level and balance, because the very intensity of the preparation heightens the significance of the prophecy and its failure.

Some of this holds for gambling. Although the PGs appeared to be invested heavily enough to warrant commitment to the prophecy, they lacked the intensity that would cause them to leave the group and give up the activity. They were able to determine the extent and level of
investment. Although the study’s participants were generally deemed problem level gamblers, the majority of the sample asserted there were limits to their investment. One PG said:

P45: You know what? Everything in moderation they say, but I'm a little bit beyond a normal gambler, I think. But I don’t go out there. I’m not like “go for broke.” I don’t do that in anything I do. I’m a bit cautious but my friends who have gone for broke, like I said they’ve lost everything or they’ve died. So, and I’ve seen it and I've learned from it.

Sacrificing everything had deleterious consequences. As suggested above, those who did so were gamblers who lost everything, in some cases, even their lives. Gamblers who had invested too heavily eventually broke from the activity/group, as was the case for members of new religious movements.

The study’s PGs did, however, invest more than what they could typically afford for the sake of the prophetic goal, thereby solidifying a commitment to the prophecy. The financial hardships caused by their gambling activity were recounted by many:

P1: Oh, the debt of gambling. I owed like money mart. You know those places? I went to all those places in the city to get loans.

P15: Well, I have to be honest with you, since the year started I already lost $7,000, so I am like that’s it. I need to stop going, so that’s why, last time I went was August I think and I lost about maybe $300, $400…

P14: The sick feeling is if you go there and you take money out of your credit card, let's say you take $500 hoping that maybe you can win more, and you lose that, then you go home knowing that you’re $500 more in debt on your card. We (me and my spouse) went Saturday night and we took more out. So basically it was an expensive weekend like over a thousand dollars just gone and that makes you feel really sick. My husband and I we're two people out of many who have declared bankruptcy. My whole life I have been good with money, as soon as I went to casino I became stupid…

Costly preparations were negatively interpreted by loved ones, placing the close relationships of PGs in jeopardy or worse:

I: Did you tell your wife about the $20,000 (loss)?
P28: That one, I did. Well yes, she gets mad because she wants it now after all those years back. Yes, so she is always bringing back that topic, “where is that money?” …It (gambling) has caused problems…
P14: We’ve been together for going on 30 years. Well, the congratulations should come for the fact that we haven’t broken up yet over this. We came close after filing for bankruptcy (for gambling debt) but...
I: Did you change your behavior at all after the bankruptcy, like did you guys go less or...?
P14: At the beginning. I would say within six months, things started to slowly... Old habits started to come back... Although, at times I said “no more” and then I found out that he went behind my back.

P31: Yes, I guess it hurts relationships, especially if the woman doesn’t like gambling. Like it does!
I: Did that ever happen to you?
P31: Yes.... I’m not with my partner anymore.

As this comment suggests, the PGs were aware of the ruinous effect of gambling on relationships, but did not want to reduce or give up their current involvement in gambling.

These PGs faced ridicule, and as suggested by the religious movement research, it demoralized them. PGs, however, found ways to manage ridicule. For example, they either limited the information they gave to unsupportive individuals or isolated themselves from those who were overly critical:

P6: Gambling is something that I kept from them (partners). I just didn't want to get into a confrontation with them over it, because then they'd be questioning me, "Where is this money? Where is this money?" So I just kept it to myself. I just didn't. I just didn't tell them.
I: Okay. And so what was your rationale behind that like you were just... you were worried that they would... they would --
P6: -- lash out at me, yes. Because they may be saying I'm gambling my money and give me a big lecture and I didn't need it, right?

P7: I'm not with my ex anymore. He was – yes, he was – "no that’s enough" type of person when it came to my gambling.... I didn’t like that about him.

P1: Yeah. Yeah, there was like people that would criticize me (about my gambling) in front of other people and I don’t agree with that. Well, my aunt said, you know, “look at P1, he’s at the casino” and she said it in front of a bunch of people. You know, you don’t say those things in front of strangers too… And then I just got mad and left. I don’t bother...I don’t. I talk to my mother and my sister but my other in-laws, I don’t bother with them.
Most of the PGs opted to withhold information to preserve their relationships. They practiced discretion or told lies. It is important to note that the PGs seemed involved in an ongoing process of convincing themselves, and others, of their well-controlled behaviour as discussed in the “human error” section. Indeed, what “controlled gambling” meant to the PGs was a matter of interpretation, but they went to great lengths to explain to themselves and others that they were prudent gamblers. Although the PGSI used to qualify participants for this study may suggest they were uncontrolled gamblers, these PGs were still able to afford the activity and had not invested so much that they had sacrificed all their worldly possessions. As per the religious movement literature, this suggests they had not yet overextended themselves to the point of being overburdened or burnt out, both of which lead to participation withdrawal.

To outsiders it may appear their preparatory activities were excessive, but they seemed, in some ways, to moderate their level of investment. The proof of this lies in the fact that they were still gambling. The gambling industry is heavily dependent on this group who steadily contribute their income to casinos without reaching a point where they cannot support their activity. In fact, the 4.8% of PGs contribute 36% of gambling revenues (Williams and Wood 2007). According to Williams and Wood (2004), PGs account for 60% of the annual $1.8 billion slot machine revenue generated in Ontario.

6.2.3 Leadership

The third social process in Dawson’s (1999) framework is leadership. More specifically, Dawson (1999) refers to the quick and thorough response of leaders to apparent prophetic failure. Their swift rationalization can balance possible dissonance. Of course, a key factor in the growth of movements is the charismatic disposition of leaders, but the swiftness of a leader’s response is perhaps equally important. Hesitant and ambiguous responses may cause members to leave, as was the case for the Ichigen no Miya under the leader Motoki Isamu (Takaaki 1979 cited in Dawson 1999). Research suggests groups effectively negotiate disconfirmation when leaders are fast and confident in formulating their rationalization and communicate it thoroughly (Balch et al. 1983; Palmer and Finn 1992; Dawson 1999). In short, charismatic and effective leadership is a key ingredient in the survival of a group following disconfirmation, especially in the early stages of the “crisis” (Dawson 1999).
The role of leadership takes a different form in the gambling context. That is, a lead figure who rationalizes prophetic failure and finds ways to facilitate reaffirmation does not exist in the form explained by Dawson (2012). However, the casino establishment, including casino staff, seemed to play a pivotal role in pulling at-risk defectors back into the casino after prophetic failure, performing a role analogous to leaders in new religious movements.

The slot machines themselves proved a powerful tool of leadership. As discussed in the “spiritualization” sub-section, to many of the study’s PGs, the machine seemed to represent a sub-deity. Its dynamic features and self-directed ability to “determine a winner” added to its stature. The machine was a powerful lure for PGs who returned to the temple of luck and faith to revisit the sub-deity, but some wondered if it was controlled by a larger set of forces as suggested by this participant:

P25: I'm wondering. You know, one time my machine was doing really good. It all of a sudden it just got stuck. They had to call a guy to come over. It was doing good. All of a sudden it just got stuck. I know that never happens. It just got stuck. The light just went out. I don't know. I was thinking "What is this? Voodoo?"… And all of a sudden it broke. I have no idea (what happened). That was weird. It never happened again. It powered out. That's the only machine that did it. Isn't that strange? Well, they had to call the guy and take whatever money it was. They pushed the button so it went back up. That's weird because they had to reset it. Do you see what I mean? Isn't that funny? They could have the control of the machine. They can have somewhere where they switch something.

A co-occurring thought was that machines were controlled by another source of power, individuals with a unique connection to the deity:

P11: Yeah it’s done by a master computer right, and the master computer is programmed by their people (casino staff) to spit out who’s going to be the winner.

P23: Well I do know that some of them (the slot machines) have different odds. And only the manager knows that. The technician only programs them, but the odds in it--you never know what the odds are. So you can look for that machine in the casino which has the highest pay off, biggest odds for pay off.
The people with the unique connection to the machine were the casino staff, thought to be in possession of valuable insight. Reinforcing these theories of the “behind the scenes” operations of the casino were television programs of a conspiratorial kind:

P25: I'm wondering. I always keep thinking: is there someone in the back somewhere in charge of these machines and making them payout? I don't know how they do it. I'm curious.
I: Yeah. I don't know. What do you think?
P25: I'm not sure. I remember seeing something on TV years ago, Discovery or Learning Channel or something, and it talked about all the casinos. I don't know if you've seen that.

Thinking casino staff might possess special insight into slot machines, the PGs eagerly consumed their advice:

P12: Sometimes they’re (the casino workers) too busy, they don’t want to talk and they shrug you off. Or some of them, if they’re bored, they'll talk or if they have a character, they'll just say, “This area over here has been really hot, I see lot of people play.” Usually, they’re pretty friendly and they'll talk like that if they’re not too busy but it's all entertainment, right and you’re a customer so, they want to treat you here like customers too, right.

P41: Been there like five times and I talked to the manager who has been there working like for so many, many years. He said “sir, you know it's at random but it's just a matter of luck, you know that when you're playing. But you can take our advice or not, but still nobody knows when the jackpot will come out. Okay. So maybe if you come early in the morning, like 2 or 3 or 4 am, so that's the best time.” But it's just a suggestion. Then another suggestion is if you have notice somebody has been playing that machine for a long, long time gets stuck there and he or she did not get the jackpot, when she gets up that's the time that you have to sit there. Because he said that, there are few of them, he said it's already full and something like, but there is no guarantee. There's no guarantee.

The conversations with workers were not always instigated by PGs searching for insight. A few spoke of a specific moment of intense frustration over a series of losses, with managerial figures offering some insight to amend a losing streak:

P7: The third bet, times three is always better. The manager told me so. The manager of (Casino X). I asked him, because the night before that morning, early morning. I must have lost like $500 bucks. I brought like two grand because it was a vacation. And then also early morning I had that urge and like its 5 o’clock I can't sleep, I’m so going right now. I don't care and there is nobody there which is better for me. The last night it was so crowded that I lost $500 bucks whatever, I am going to – I didn't tell myself that I am
going to take it back. I just basically went there and whatever. So I went there and spent my first $200 bucks. And by the time I was done, I think I must have cashed out like three grand. But during the breaks, like if I am getting pissy and it is going down, I usually take a smoke break. I go into a neutral zone and breathe in and out, right. And I happened to see the manager of (casino X) and he didn't have any smokes. So he asked me for a smoke. So I got, I had a chat with him (the manager). So I asked him. I said listen, last night I lost $500 bucks, what the heck is up with this now? So basically he told me, okay I’ll tell you a little secret. We have a payout time. You know slot machines have payout times, casinos have payout times.

I: So then like what did he say exactly?
P7: The payout times are between 5:00 in the morning at (casino X) to 8:00 in the morning. At those times, if you play your machine, right, it will spit money out. Yes, and then he said the best way to go is not max bet; number three, times three. Max bet would usually be like times 10 or times 5. So it’s less money.

P28: But then obviously the guy I remember, he was a young guy (the manager) and I remember always what he told me, he goes “I’ll tell you what I tell my mom.” So I am looking at this guy, “he said gambling, you don’t always win.” So he said that to me, well yes, I know. He goes “the machine is the machine, nobody did anything” and he said, I forgot what he said about his mom. He brought up his mom (at one point) and he told me something about – he was showing me a diagram on two different machines and he goes, I forgot how he said it…he goes, “the way these odds are it’s better to play that machine.” But this machine like for example if you win a jackpot some machines pay, this one pays. I guess he is trying to say in the overall picture, this one pays $100,000. for three stripes (and) this one pays $125 for three stripes. So he goes there is a different thing so he is trying to say, he is trying to compare what he is telling his mom. I don’t know why he said that… probably because he probably knew that I was mad. This was the supervisor. The guys with the suit and ties.

I: So why did he tell you about his mom?
P28: I have no idea. Maybe he is trying to like calm me down and or (maybe he was) buttering me up that’s what I was thinking.

The PGs exposed their vulnerability during these tense times; managerial staff helped get them back on track by counseling them on new ways to reach “salvation”. In effect, the advice of casino staff, including managers, held particular weight and served as a form of guidance.

Unlocking the mystery of the slot machine would allow the realization of the prophetic goal. In the minds of the PGs, the casino staff and/or the machine itself were intermediaries between them and prophetic confirmation. More specifically, the PGs had a dependency on an external authority with a special connection to and control over the ultimate reward which is reminiscent of followers of apocalyptic religious groups.
The casino, as an organization, also made rather transparent attempts to reach out to widely dispersed members. In a consistently timely fashion, the casino prompted gamblers to use various incentives to try their luck again at the casino. That is, special games (i.e., featured games like the Price is Right) or events like car or trip giveaways were advertised to awaken the winning spirit and summon gamblers back to the casino. These messages, in effect, appealed to the “test of faith” rationalization imploring them to be strong in their faith marked by further attempts to achieve their goal. The use of prompt and effectively communicated rationalizations by leadership to apocalyptic groups is said to be key to managing damage from disconfirmation. Similarly, the casino establishment made a special point to reach out to gamblers for whom they had contact information. Communication attempts by the casino establishment, including their form and additional function, will be further explored in the next section.

### 6.2.4 Social Support

Social support is the final social process in the Dawson (1999, 2011) framework. Case studies of various new religious movements suggest the move to rationalize or reaffirm prophetic failure will be made easier if there is shared commitment (see Festinger et al. 1956; Hardyck and Braden 1962; Dein 1997). The size and the social cohesion of a group seem to help lessen upheaval after prophetic failures. A larger size can combat the loss of members after disconfirmation. Perhaps of greater importance is the solidarity or cohesion facilitated by the increased intra-group social interaction in smaller groups (Dawson 1999). Inter-connectedness can be attempted in larger groups by uniting them in one location (Hardyck and Braden 1962).

If this is not possible, other means can be used. For instance, the Lubavitch (Dein 1997) made use of technology in the form of pagers to keep the group abreast of developments. The movement also used the internet to disseminate updates and keep members informed, especially those in other parts of the world. In fact, new religious movements such as the Ichigen no Miya and the Mission de L’Esprit Saint were barely able to or even unable to survive the failure of prophecy because of weak solidarity facilitated by poor lines of communication amongst the dispersed members (Dawson 1999).

PGs congregate in the same sacred space at times, but casinos are geographically dispersed and, generally, the contact between gamblers is sporadic. Despite these limitations,
and as discussed in the “socialization” subsection, the study’s PGs seemed to view themselves as a group of like-minded individuals, engaging in the same activity and united in a common goal. In many ways, they created what Anderson (1983:15) calls “imagined communities,” with “an image of their communion” in their minds. Among the study’s participants, communion was facilitated by two concrete types of social support. First, the casino facilitated interconnectedness with the dissemination of point-related updates, promotions, and events through mail and email. This type of communication went a long way to keeping members informed and connected to the casino and the prophetic quest.

Second, to gain rewards for playing and for ease in monetary interactions with the machine, gamblers signed up for a membership card\(^{30}\) (discussed above), making them part of the “Winner’s Circle” in exchange for contact information (i.e., email, address). Based on the amount spent, gamblers received points towards items ranging from gambling vouchers to concert tickets:

P17: Yes, not always in a line but pretty generally close to the point where you can talk and you can accumulate points or whatever. I know in Niagara there are player cards, so you put the card in and it accumulates points for how much you play as well, so you get stuff like free parking, concert tickets, and food and stuff like that.

The reward card was a way of engaging with the PGs, connecting them to an organization that appreciated their patronage and made them feel special:

P38: …even the Winner’s Circle contacts me. You know, again, I haven’t gone for three months so they are offering me a $20 Slot play. They are offering me dinner. Like it’s – I mean, it’s somewhere to go. It’s nice, and nice of them. I do enjoy it…

As suggested by the above participant, even when PGs spent time away from the casino, they were tempted to return because of this membership contact. The contact could be interpreted as a form of social support; of course, all awards involved a visit to the casino. Promotions were tied to the amount spent, giving an additional incentive to build more points for future rewards:

\(^{30}\) Several gamblers from this study brought with them, to the interview, their membership/points cards as well as pamphlets, and promotional items. These items appeared to hold special significance to these PGs; eagerly discussing the story behind each item.
P19: Well, my other friend... her strategy is, they send her something through the mail. They send her something like a $10 or $20 voucher. She's like a horse, she runs there. Yes, exactly. That she can bet and she might win big. Actually they have not sent me anything (yet). I've asked them but you know how it works, they send you stuff if you play your (membership points) card. There's a card they give you and you have to put into the slot machine and the points you get, the more points you get the more stuff they send you. I’ve got to play more.

P26: Most of the times usually with my mom or sometimes with my dad. Like when they have their birthdays we go in, sometimes they get an email that there's something for them. Like they have a promotion and we are going to go this weekend. If you go in, in between October 1st to the 31st you get $10 to play and if you go before the 15th, you get $15. So it’s incentive to get you in. Yeah, (I) got that through the emails, because we’re with the winner’s circle. Winner circle is a point system where you get a card and each time you play you accumulate points with your card and move into different levels like platinum and gold and silver is on the bottom. So the more you play the more points you accumulate and then you can transport your points into gift cards if you wanted to or incentives, stuff like that. Gift cards for, I think they had music, I think iTunes stuff, $20 in iTunes music. I'm not into the gift cards. I just let my points accumulate. So for $5 you get five points, for $10 you get 10 points. A friend of my mom’s best friend has got over $200 worth of points but she plays a lot. Like she’ll go in with at least $200, $250 and she’ll stay and she’ll go up and down and win and lose and this and that whereas usually with us it’s no more than $100 sometimes $50, $75. Sometimes we’ll play with the incentive they give us…

Some promotions were in the form of vouchers that had to be placed in a ballot box on site. The ostensible reason for a return trip to the casino might have been to submit a ballot, but many PGs were pulled into another round on the slot machines:

P21: Yeah when they send me all these gimmicks. I’ll be like aahhhh.
I: What does that mean? What do you get?
P21: Well I get, I want to go, I want to win you know! And they keep fooling you with all these...you know they ask you to put this voucher in and you win a million. Vouchers (the send me) which I mean you can put in the draw (at the casino).
I: Oh I see. But the contact you through how, through the mail I mean?
P21: Yeah, through the mail! They do.
I: Okay so that’s something like gets you excited to go?
P21: Exactly.

P34: …There is a promo to qualify for $1 million that you get in the mail. And they took like 25 qualifiers – you are qualifying ballot in the big drum. Yes, there is a big drum there and if you qualify they take 25 people, you go down to Windsor for the thing you win up to 1 million. Well, I think the first prize was $250,000 or something. They take you down there and fly you up to Windsor and they have a big party and –
I: So did you qualify?
P34: No.
I: Okay. Did you put your ballot in?
P34: I went to (the casino to) put ballots in, yes.
I: Okay.
P34: It’s really hard to qualify. Yeah.

Slot machine tournaments also took place, and members were contacted about special events. These tournaments were a way to facilitate contact with and among members as individuals gathered in a specific area to play the machines and eat a complimentary breakfast. PGs were made to feel as though they were members of a group with a common interest, and in the end, they were awarded a participatory t-shirt:

P34: But I won in some tournaments last year, I think you had to be up for 9 o’clock. 9 o’clock to register. I mean you can pre-register but then you got to be there for 9 o’clock, and they will give you a little breakfast and then the tournament starts around 11 or 12. It’s like a slots tournament, so you have to just keep pushing. There’s like 25 or maybe more people.
I: Are you playing – are you putting money in it?
P34: No. There are certain machine assigned. And whoever gets the highest amount on that machine, but the thing is all you have to do just keep pressing –
I: Like vigorously.
P34: Right. Sometimes machine is not cycling, so it depends on if you get a good machine. (You get) a little breakfast, yes. It (the tournament) runs two or three hours. They have – like maybe one, first cycle’s, second set, third set. So, well, the first set goes, and you can watch them – I mean, then you have to wait till everyone is done and then you see whoever has the most money. And then that person won first, second, or third prize. I think I made the top 10. It was $1,500 dollars for the top prize. It was $25 dollars originally (entrance fee). I went twice. I did $25 one day, then I went up the next day.
I: Did you win anything?
P34: No. It’s okay. Well, you get the breakfast, you get the t-shirt. “Slots tournament” t-shirt.

Contacting members about tournaments kept a supportive cord between gamblers and casino. The casino was seen as offering more winning opportunities; at the very least, they got breakfast and a consolatory gift.
In addition to direct contact, the Ontario Lottery and Gaming Corporation places kiosks around the city during special events. The PGs who came across these stands were given incentives to return to the casino:

P26: Actually (OLG) they had a kiosk on pride (the pride parade), the Jazz Festival. And what happens is you do a spin the wheel and that happened this summer, and I got three, and also my friends were there too, up at the Yonge-Dundas Square. (At) City Hall they had a kiosk. So either you get a large prize, a small prize or a medium prize. And we ended up getting a large prize and they were beautiful duffel bags. You go over there, you redeem at the front desk of the Winner’s Circle.
I: At the casino? You have to go to the casino to collect your prize?
P26: At the casino. They swipe your card, show ID and then she goes and gets your prize. I won the duffel bag. It had OLG (on it), of course.

This type of promotion was particularly effective in establishing links with gamblers through membership cards, which they had to scan at the casino to retrieve their prizes. As this example shows, membership helped cultivate a connection between gambler and casino. The casino establishment had the means to reach out to PGs when they were away, reminding them of their prophetic goal and supporting it with various incentives.

Slot machine gamblers were supported by fellow gamblers, both existing contacts and those met at the casino. As for the former, the PGs shared their casino time with friends and family, often making it a central feature of the relationship. Social support for the prophetic goal manifested in shared strategies and words of encouragement after failed prophetic attempts. Sharing in the activity and the prophetic pursuit was a strong form of symbolic support for many:

P17: Yes, mostly friends. Well my brother, I guess who comes to the casino with me most frequently as well.

P10: It would always vary (who I go to the casino with,) but usually I go with my mother and then a friend.

P14: Well, my husband and I went Saturday night. Then the next day, my husband and I went again but we brought my mom. For the past ten years, yes, definitely I’ve been going with my husband.
Sometimes the shared activity perpetuated a routine, with one or both expecting the shared time to take place in the casino environment:

P18: At least once every two weeks (we go to the casino), I guess we want our mother-daughter time, and that is where we have decided that we would go (to the casino), instead of eating out or what have you, we use a different form of entertainment.

P15: I don’t have any vices, but a few years ago my best friend said let’s go to the casino. And so we started going you know for fun 20 bucks, 40 bucks, next thing you know it's like way out of control.

P34: My buddy, he keeps bugging me to go (to the casino)…

P44: I have one friend and occasionally I will phone up and say, “You want to ring the bells?” And she’ll come with me…

P9: I mean…at Christmas time, yeah, it’s hard not to go out there for a few hours with a few people (family members). What are you going to do? After you’ve had Christmas dinner, and the dishes are in the sink, you want to go somewhere… People don’t go to the casino on Christmas day? Yes, they do. It’s our family tradition, we always do it. Thanksgiving too.

In the same vein, PGs offered each other hopeful words of support with “next time will be better” sentiments that helped renew faith in their commitment to the goal:

P26: …We don’t talk about (wins or losses) with like people around us. We usually talk in the car and will say, okay, how was your luck tonight? “Oh, I lost or I won” or this and that and then we just keep it as that. I usually say okay, next time we come (to the casino), it’s going to be a better night…. Sometimes she (my aunt) said to just take it easy for a while (when I lose). And then you know re-strategize, and then when you go up again, you know, and win.

This type of support was most common between individuals with stronger ties, but supportive words of encouragement amongst fellow gamblers were not uncommon.

For more casual acquaintances, the fact that the majority of the PGs were long time “members”, with 17 years being the average, undoubtedly aided in the cultivation of loosely connected ties that varied from glances of recognition to conversations over shared meal breaks:

P40: Sometimes, sometimes (you talk to people). Just sometimes they sit beside you or they come to talk to you or sometimes they bump into you at the restaurant or something
like that. They talk to you. And I met one person, he’s (in a similar line of work)…. Yeah. And we talked about these things. But then sometimes I call him, he doesn't call me, but I call him. I say "I'm going there. Are you going there?" Sometimes he doesn't go but sometimes I just go there and I bump into him. So I see him there. And then sometimes we just go to lunch or somewhere, you know. It is not really a friendship. Well, he's married. I just talk to him there. Well, I enjoy talking to him. We don't talk too long. ..He's busy playing the machine as well and I'm busy playing my machine, right? So we just… just once in a while I met him there. Then he'll say "Have you eaten?" I'll say "I haven't eaten." "Okay, let's eat." We meet somewhere then we go eat.

P28: The regulars (I talk to), not to strangers. Regulars (are the ones) you see them all the time. How we start the conversation is… well the first part will be probably how the game is going, if they’ve been there before you. They would say “this machine hit about an hour ago”, and so they are trying to give a breakdown. And that’s part of the gambling part. In terms of how is everything, I ask them how is life, and then you get to the second part. Yes, then it fades out. But sometimes there are regulars that you don’t see now. Those are just gone. That’s why I am surprised too like there is this one particular lady I always saw. And now she disappeared—I wonder what happened to her.

In practice, playing the slots is an individual activity, but being surrounded by others in a shared space created a feeling of interconnectedness for many:

P2: Well, it is a social thing. I think gambling is social…because especially in a casino environment. Even if I don’t…even if my friends aren’t next to my machine, I am talking to the person who is playing. I mean it is like a social thing.

These PGs were united by shared space and activity, not to mention their mutual goal. Gamblers tended to share insights that could maximize wins. This sharing was a form of social support that united gamblers and bolstered faith in their common goal:

P16: So if you notice at the slots, they (gamblers) put the chair up, close to the slot machine. Some of them lean over like this. They are feeling the machine, okay. When there are sitting up close, so okay I’ve been sitting here for about 20 minutes or so and now okay…. People just think they are holding it. I used to think they were holding it, but they are feeling it to see how hot they are and the hotter they are the better the chance of winning. An old lady told me this. She told me that trick and, I was like wow I gotta try that… You don’t notice, but there are tricks to know too, right?

P1: Oh yeah. Or if I were to just walk into the casino a person would say, “don’t play that machine right there because it, uh, paid out three thousand dollars an hour ago”. So, like, there are people who help people like that. Cause if you sit there and it just paid out it isn’t going to pay out if it paid out a thousand dollars an hour ago.
I: So it’s like people are sort of warning each other….? Do you give people a heads up or?
P1: Oh yeah. I have a few times too.

In short, although this type of gambling is a solitary activity involving human and machine, the activity did not occur in a vacuum. The gamblers were united by shared activity, space and goals, making the communion more powerful than perhaps was evident on the surface.

To sum up, the casino establishment tried to provide a sense of membership by issuing casino reward cards. Membership allowed the casino to reach out to regular gamblers through both mail and email, encouraging continued gambling activity. This has clear parallels with the efforts made to maintain contact with often far-flung members of religious communities. The PGs interpreted this contact as a form of support especially since they were invited to the casino to redeem rewards and participate in promotional events. For these gamblers, social support did not stop at the institutional level, with PGs experiencing various levels of in-group support, again evocative of the situation within religious communities.

7 Discussion

By looking at a specific group of gamblers, this work highlights the importance of social context in understanding how PGs in general manage cognitive dissonance. Although previous research has pointed to the various heuristic and interpretive biases used to justify behaviour (see Czerny et al. 2008), it overlooks the complex involvement of social context in sustaining activity after loss. Abt and colleagues (1985a) note that social structural and cultural factors, including the casino structure and fellow gamblers, are involved in gamblers’ management of dissonance. As Prus (2004) and Lesieur (1984) explain, gamblers are part of a subculture. This is especially true for the casino-based, slot machine gamblers, the focus of this study. Although this subculture displays dispersed networks and weak ties (i.e. between fellow gamblers and casino workers), this can be said of many social groups, not just gamblers; Anderson (1983) calls these “imagined communities.”

Dawson’s (1999) middle-range theory, with its focus on social groups, provides an ideal framework to explore how and to what degree social processes condition whether adaptational
strategies work to help gamblers manage the dissonance resulting from prophetic failure. Like findings in the field of religious movements (see Dawson 1999), this study’s findings suggest gamblers are not jolted by prophetic failure, but deal with it quite well. Perhaps even more than religious group members, these particular PGs contended with frequent and persistent failure, making them an interesting study of dissonance management.

The study’s PGs engaged in several rationalizations articulated in Dawson’s (1999) theory: spiritualization, test of faith, human error, and blaming others. Although these rationalizations differ in many respects from those of religious group members, there are overarching similarities. A central difference is the lack of leader based involvement to facilitate certain rationalizations, such as spiritualization. Leaders of religious groups may provide a nuanced set of spiritualized rationalizations, as discussed by Dein and Dawson (2008) in their study of the Lubavitch. For instance, a leader might say a prophecy expected to happen in this world actually happened on a higher plain of existence – something impossible to empirically prove but offering hope to followers. This, of course, did not occur in the same form for the study’s PGs, although we do find a number of spiritualized rationalizations. For example, many PGs felt euphoria akin to what members of new religious movements might describe when in the group and in front of a charismatic leader. These PGs were particularly mesmerized by the slot machines, almost equating them to deities a similar finding to Hayano (1978) whose poker players equated human opponents to “whimsical forces” and/or non-human, “spiritual beings” (p. 486).

Reith (2002) says gamblers can assimilate animistic ideas. Knowledge, she says, is socially constructed and “adapted to meet the requirements of particular situations”, and in this sense, gamblers “reject the knowledge provided by probability theory, adopting instead another type, more relevant to the environment of chance” (Reith 2002:156). Although on the surface, gamblers’ worldviews seem tied to their individual powers and efficacy, the data reveal notions of moral and metaphysical properties. The otherworldly state that machines bring gamblers into, namely the zone, is something well described by Schüll (2012:191). In fact, some PGs even noted a divine authority, thereby rejecting probability theory for an alternate and sacred order of belief, an impression, in part, shared by Reith (2002) in her theoretical text. This finding offers
critical insight into the problem gamblers’ alternate perception of their activity. Although the relationship between PG and gambling is thought irrational by many (e.g. Walker 1992b), the “systematic arrangement” may be considered rational by the gambler (Weber 1915 [1958]:191). Weber reminds us that the meanings underling “rationalism”, a reliance on reason as a guide for belief and action, can vary by group. That is, if the slot machine gambler’s practical ethics are systematically oriented to the fixed goal of salvation, which this study found some support for, then the arrangement between gambler and machine manipulation could also be interpreted as “rational” (ibid). He notes, that “a thing is never irrational in itself, but only from a particular rational point of view” (Weber 1864-1920 [1958]:194). Furthermore, the beliefs discussed throughout this chapter could also be considered non-rational like any other set of beliefs not centered on rational empiricism.

The gambling experience described by the study’s participants seemed to edge towards religious expression and experience, especially given their persistent and unwavering intuitive faith and need for a higher moral order. The “gambler’s fallacy” (Kahnemann and Tversky 1982) evolved into the sense that they were due for a win. Further, being due for a win was tied to moral worth. PGs rationalized a win as something that occurs for a gambler who shows moral worth, as expressed by tempered avidity, controlled game play and good character. Naturally, the final rationalization was that others could be responsible for poor gambling outcomes; turning the blame elsewhere is a rationalization shared by millennial or religious groups. For example, the Unarians explained the UFO would not land because of the “negative energy” (Tumminia 1998) produced by human beings. This rationalization parallels those used by the study’s PGs to rationalize a loss.

The rationalizations confirm that the justifications sited by Czerny and colleagues (2008) using the work of Toneatto (1999, 2002) are much more nuanced than previously suggested. Toneatto’s (1999) typology of cognitive distortions, an array of beliefs suggesting the ability to determine a gambling outcome, was used to reframe various beliefs as justifications by Czerny and colleagues (2008). Although many of these beliefs may be the root of various justifications that allow gamblers to convince themselves to continue gambling, they lack a more meaning driven and contextual exploration. That is, heuristic and interpretive biases may be used to
justify the repeated behaviour after continued losses (Czerny et al. 2008), but how does the gambler make sense of the failure? The rationalizations outlined here were unpacked, with a deeper exploration into their layered meaning and significance. More specifically findings revealed that although the rationalization of human failure may point to some level of personal control, the overwhelming sense was that ultimate control rests outside themselves and in a higher power. Indeed, considering social context may have lent to a more nuanced understanding of what this study refers to as rationalizations.

Reaffirmation, the final step in the rationalization process as described by Dawson (1999), was pivotal for many religious groups but not as important for PGs whose rationalizations propelled them forward after disconfirmation. The actual structure of the gambling activity did indeed help gambler’s re-enter the gambling arena to make a fresh attempt after loss. As per Abt and colleagues (1985a) the structure of the activity was pivotal in reducing dissonance for gamblers as each new situation provided the opportunity for a new outcome. However, the definition of reaffirmation required an organizational change or event/activity to mark a change in the group (Melton 1985). For PGs, this could be construed as the changing conditions fostered by new slot machines and the ability to use existing ritual superstitions or recast new ones.

Unlike previous research evaluating cognitive dissonance in PGs, by drawing on research into religious movements, this empirical study has uncovered evidence of certain social processes involved in dissonance management. The four social processes described here helped the PGs rationalize and reaffirm their commitment. First, the PGs were socialized into the prophetic process early. Second, they were invested in the gambling process, but not to the point of burn out. Third, leaders did not emerge in the same way for PGs as they did for members of new religious movements, but the slot machines themselves and casino staff helped the PGs manage dissonance felt by loss. Finally, in-group support from other casino goers and the establishment itself through online connectivity helped propel gamblers back to the casino after prophetic failure.

Casino availability and popularity are at an all-time high, with casinos reaching out through advertisements, through email and regular mail to sustain support. It is important to
note, however, that the casino engages in a pattern of communication that is neither too frequent nor personal. That is, casinos seem to offer a satisfactory balance between self-determined involvement and commitment while allowing members to benefit from the experiential rewards and networks of support. As Stark (1987) asserts, weak network structure and more leniencies in the level of commitment demanded of members make for more successful groups. This self-determined commitment is said to correlate with low levels of tension with society and the negative consequences of a prophecy failing (Bader 1999), both of which positively impact the staying power of such groups.

In the end, for the study’s gamblers, the casino seemed to provide a sense of spiritualization in combination with communal bonds. Robbins (1988) has an interesting explanation for the growing interest in millennial groups that can be extrapolated to increased gambling involvement: their “unrequited need” points to some “acute and distinctively modern dislocation” which is “producing some mode of alienation, anomie or deprivation to which [people] are responding by searching for new structures of meaning and community” (p. 60). In other words, the casino, like the religious group, fills a need for deeper (and even sacred) meaning and kinship of those in need. The study suggests that social processes are an important factor to consider in examining how PGs handle dissonance caused by gambling loss (i.e. prophetic failure). Therefore, social factors should be a central focus of future gambling research.

8 Conclusion

The Dawson (1999, 2012) framework illustrates how a complex set of independent social variables play a role in the successful implementation of dissonance management strategies (i.e., rationalization and reaffirmation) for this sample of slot machine PGs. Although coming from research on the new religious movement, the framework sheds light on the complex set of social processes involved in dissonance management in this social group. As this study used a small sample of moderate and problem level slot machine gamblers situated in a specific geographical context, its findings are not generalizable to the larger population. That said, the findings have important implications for similar dissonance management strategies in other social groups with unusual beliefs. Furthermore, this insight provides details on the social processes that facilitate
continued belief, signifying the importance of social context, including subcultural dynamics, in making sense of gambling belief and action.
Chapter 7
The Logic Structure of Gambling Beliefs: An Examination of their Presumed Vulnerability

1 Introduction

Gambling beliefs have long been the focus of research given their unconventionality and reported tie to gambling behaviour (Oldman 1974; Henslin 1967; Gaboury and Ladouceur 1989; Ladouceur and Walker 1996; Ladouceur 2004; Toneatto 1999, 2002; Joukhador, Blaszczynski, and MacCallum 2004). In general, the prevailing view is that unconventional beliefs are highly vulnerable to everyday experiences that may expose their weaknesses. With this presumed fragility comes the sense that believers are continuously confronted with the problem of salvaging their beliefs in the face of disconfirming evidence. The discrepancy between belief and experience is assumed to foster cognitive dissonance that must be settled if belief is to persist. Research in both psychology and sociology assume gamblers’ unconventional beliefs are vulnerable to dissonance. The former assumes justifications of beliefs can reduce dissonance (Czerny, Koenig, and Turner 2008), while the latter assumes the structure and plausibility structure (e.g., networks) of a casino can help gamblers avoid cognitive dissonance (Abt, McGurrin, and Smith 1985a).

Researchers in the area of religious movements are also concerned with unconventional beliefs, and they too note the possibility of dissonance caused by a mismatch of beliefs and reality. Some consider unconventional beliefs to be highly vulnerable to empirical disinformation (Bainbridge and Stark 1980; Bittner 1963; Festinger, Riecken, and Schacter 1956; Prus 1976; Wallis 1977), for example, when a prophecy fails to come true, especially without strong plausibility structures at the organizational level. Others such as Dawson (1999, 2012) say individuals are not terribly shocked or shaken by disconfirmation, sometimes becoming more strongly attached to their prophetic beliefs. Dawson (1999) points to dissonance management strategies aided by social processes and notes their role in allowing religious groups to continue on a prophetic quest. Snow and Machalek (1982) argue religious beliefs are fairly invulnerable to disconfirmation, but this has to do with their characteristics and built in validation logics.
Drawing on both strands of the literature (i.e., gambling and religious movements), this chapter considers the characteristics of gambling beliefs and their validation logics to assess their vulnerability to external evidence that proves them wrong. Insight into the structure of gambling beliefs is imperative for a more comprehensive understanding of problem gambling, especially as it relates to research and treatment. For example, cognitive therapy targets these beliefs with the goal of reducing problem gambling behaviour. Is this, in fact, an effective approach?

2 Literature Review

As noted, researchers commonly consider unconventional beliefs are highly vulnerable to everyday experiences. When reality does not match a belief, the resulting discrepancy fosters cognitive dissonance that must be settled if the belief is to persist. An additional assumption “is that the viability of unconventional beliefs and their organizational carriers is contingent on the existence of elaborate plausibility structures and strategies” (Bainbridge and Stark, 1980; Bittner 1963; Festinger et al. 1956; Prus, 1976; Wallis 1977 cited Snow and Machalek 1982:16).

Looking specifically at gambling, Abt and colleagues (1985) and Abt, Smith, and McGurrin (1985b) explain the importance of structural and cultural factors in determining the meaning and outcome of gambling behaviour. Becoming socialized into the gambling subculture is a slow process with its roles, norms, and values becoming gradually internalized. Cognitive rules are established as gamblers reconcile their actions with those of fellow gamblers. By the same token, gamblers resolve dissonance by assessing their actions against those of other gamblers who maintain similar actions. For instance, social support within the casino culture could convince a gambler that a loss is a temporary setback, promoting continued action (Abt et al. 1985a). That is, the gambling reference group helps maintain the plausibility structure for gamblers.

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31 Plausibility structures are the sociocultural contexts for systems of meaning within which these meanings make sense, or are made plausible. Beliefs and meanings held by individuals and groups are supported by, and embedded in, sociocultural institutions and processes (Berger and Luckmann 1966:154-155).
Abt and colleagues (1985a) also say the structure of the gambling institution can help the gambler reduce dissonance. For instance, each renewed attempt at the casino affords the gambler a new possibility to achieve a more favourable outcome than the last time. In addition, the casino is cut off from the outside world, shielding gamblers from demands that could constrain their activity (Abt et al. 1985a). Echoing Abt and colleagues (1985), Bainbridge and Stark (1980:128 cited in Snow and Machalek 1982:17) note the importance of complex and sophisticated organizational strategies in the survival of unconventional beliefs, which are “highly subject to empirical disconfirmation”.

The susceptibility to empirical disconfirmation is well articulated by the psychologically-situated literature on problem gambling. Researchers say problem gamblers (PGs) experience dissonance and use justifications to sustain their behaviour. These justifications include various interpretive biases: representativeness heuristic, attribution biases, gambler’s fallacy and learning from losses (Toneatto 1999 cited in Czerny, Koenig, and Turner 2008). These biases centre on overvaluing gambling skills, abilities or strategies (Gaboury and Ladouceur 1989). Gamblers may also use luck or idiosyncratic events to explain failure (Toneatto 1999, 2002). In short, interpretive efforts help gamblers make sense of losses and facilitate continued gambling (Joukhador, Blaszczynski, and MacCallum 2004; Ladouceur and Walker, 1996; Sharpe and Tarrier, 1993; Sylvain, Ladouceur, and Boisvert 1997; Toneatto 1999, 2002).

Some consider these beliefs to be justifications of actions, while others see them as cognitive distortions that resonate in a core belief in the ability to forecast or otherwise ascertain gambling outcomes (Joukhador et al. 2004; Ladouceur and Walker, 1996; Sharpe and Tarrier 1993; Sylvain et al. 1997; Toneatto 1999, 2002). Cognitive treatment of gambling behaviour is aimed at altering such beliefs. The “difficulty is primarily an epistemological one,” in Toneatto’s (2002) view, and cognitive therapy can “challenge, restructure, and counter maladaptive beliefs” with the goal of behaviour change (p. 194).

The gambler is said to not share his/her beliefs with others, thus avoiding the natural correction that such discourse would generate. The gambler may “simply assume that (or behave as if) intense hope, prayer, superstitious behavior, system, or any other attitude or behavior is
effective” (Toneatto 2002:196). Scrutiny in the process of therapeutic inquiry may help the gambler reflect on the nature of the beliefs. This inquiry is hoped to challenge the beliefs held about gambling by evaluating the truth of their utterance. As Toneatto (2002) asserts, “inevitably, such inquiry will lead to logical absurdities or fantastic suppositions that can generate feelings of doubt as to their validity or possibility” (p. 196). That is, cognitive therapy targets the core beliefs which Ladouceur and Walker (1996) define as “the ability to predict or control the outcome of a future event” (cited in Toneatto 2002:192).

Ladouceur, Sylvain, Letarte, and Giroux (1998) successfully applied a cognitive therapeutic approach to five pathological gamblers, targeting their erroneous perceptions. They did so by instructing patients on the concept of randomness and shedding light on their increasing inaccurate perceptions while gambling with the think aloud method (TAM). This technique plays back the in-the-moment verbalizations of gamblers to show errors in thinking (Griffiths 1993).

Some therapeutic aims are more focused on the concept of randomness. McCown and Chamberlain (2000) identify two main errors in thinking: the belief in random units exhibiting a positive pattern, and the opposite cognitive pattern where past events are interpreted as not being independent. Cognitive focused treatment then involves proving there is no reliably detectable pattern and aims to reduce “self-referential truths” (McCown and Chamberlain 2000:142). The latter is done by elucidating “how chance operates to distort cognitions and acquisitions of beliefs” (McCown and Chamberlain 2000:143). In sum, cognitive based therapy is used as a way to change behaviour (Gaboury and Ladouceur 1989) by altering dysfunctional beliefs that centre on the PG’s ability to determine or procure a win. Problem gambling prevention, in the form of informational remedies, follows the same line of reasoning, attempting to appeal to the gambler’s rationality. Self-awareness, to self-manage gambling risk, is advocated with the provision of informational material hoping to better inform and teach gamblers about odds of winning and other unclear aspects of machine design. For instance, many gamblers are said to be unaware of the cumulative nature of the machine’s hold in that
when you bet over and over again you have no chance of winning\(^{32}\) (i.e., the churn effect) (Turner 2011 cited in Schüll 2012:112). Enhanced awareness and understanding can be facilitated through onscreen modules\(^{33}\) that provide information on randomness and probability especially as it relates to winning. Advocates of this approach insist that informed choice is necessary a necessary component in targeting faulty cognitions (Błaszczyński, Ladouceur, Nower, and Schaffer 2008).

Although unconventional beliefs, such as those held by PGs, are thought to be vulnerable to empirical disconfirmation, this view would be challenged by those whose research considers members of new religious movements (NRM)s. Dawson (1999, 2012) says such believers are rarely shocked and bewildered when a prophecy does not come true. Disconfirmation, in fact, is handled quite well and can even intensify commitment (Dawson, 2012) with social and organizational dissonance management processes helping to maintain belief. Snow and Machalek (1982), however, explain the plausibility structure or dissonance-reducing strategies, so often said to maintain unconventional beliefs (e.g., Bainbridge and Stark 1980; Bittner 1963; Festinger et al. 1956; Prus 1976; Wallis 1977 cited in Snow and Machalek 1982:16) might play a secondary role to the belief system’s logic. Structures, tactics and strategies merely operate to “enhance what is logically self-perpetuating” (Snow and Machalek 1982:22). That is, the belief system’s logic meets the requirements for its existence and persistence (Snow and Machalek 1982).

As Snow and Machalek (1982), Bem (1970) and others have argued, cognitive dissonance might be more of a problem for scientists than for believers. In fact, research on unconventional beliefs suggests they are not as fragile as once thought. As noted above, Dawson (1999) finds the beliefs of members of several new religious movements remain intact despite prophetic disconfirmation (e.g., Dein 1997; Zygmunt 1970). In the same vein, Benassi, Singer,

\(^{32}\) Schüll (2012) writes that “a 90% payback percentage does not mean that a player who starts off with $100 is likely to lose only $10 by the end of a given session; it means that she is likely to lose 10% of her funds every time she makes a bet, resulting in the “churn effect”…whereby her funds are gradually reduced to zero” (p. 268).

\(^{33}\) Roger Horbay, the designer of Safe@Play educational software for gamblers, says this information should be added to slot machines as a form of risk management (cited in Schüll 2012:269). Graphically denoted stop configurations, for each reel, would be available with a touchscreen link in addition to other educational/informational items.
and Reynolds (1980 cited in Snow and Machalek 1982) discovered that despite disconfirming evidence, their study’s subjects continued to attribute psychic powers to magicians. Information to disprove these psychic powers, some of which was produced by the believer themselves, failed to devalue such beliefs (ibid). Subjects, according to Benassi and colleagues (1980:347 cited in Snow and Machalek 1982) failed to experience dissonance because they “simply failed to absorb the fact that these beliefs were being challenged” (p. 23). In other words, they blatantly ignored input rather than resisted it, a finding echoed by other researchers.

This point is affirmed by Simmons (1964:252) whose research examined why a group of mystics, the Espers, held a “crazy belief system”. Simmons (1964) concludes all belief systems are arbitrary and similar mechanisms are involved in maintaining them. Bruner (1958) adds we only select parts of the total influx that are consistent with our expectations. That is, “most situations are only semi-structured, so that the individual has some degrees of freedom in structuring them to come true” (Simmons 1964:252). Kuhn (lecture notes cited in Simmons 1964:253) makes a similar observation: all situations are to some extent flexible so actors have freedom or control of their definition. Beliefs are premised on a self-fulfilling prophecy; points validating perception are stored in a memory bank (Thomas 1957). Many find it hard to understand how some fail to perceive contrary evidence, allowing their beliefs to persist despite contradictory evidence (Simmons 1964). What these individuals fail to grasp is that “common sense” varies “rather arbitrarily from group to group” (Simmons 1964:253). To this Snow and Machalek (1982) add:

Unlike beliefs in science, many belief systems do not require consistent and frequent confirmatory evidence. Beliefs may withstand the pressure of disconfirming events not because of the effectiveness of dissonance-reducing strategies, but because disconfirming evidence may go unacknowledged (P. 23).

Unlike those within the plausibility structure of academia holding deductive beliefs, the majority of believers do not wait for or trust in disconfirmation.

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34 Simmons (1964) also found that in-group socialization (i.e., learning the processes for arriving at a right decision) plays a role in belief maintenance.
To examine the fragility (or lack of fragility) of gambling beliefs, this chapter uses the Snow and Machalek (1982) framework building on Borhek and Curtis’ (1975) general theory of beliefs. Their characteristics and built-in validation logics are assessed to ascertain their vulnerability to disconfirmation, with both concepts described in more detail in the next section.

3 Theoretical Framework

Borhek and Curtis (1975) cite two characteristics of belief systems that are important in accounting for their resilience: “degree of system” and “empirical relevance” (cited in Snow and Machalek, 1982:19). The first references the “logical interrelatedness of a belief system’s substantive components” while the second refers to the system’s “testability” (ibid). Using Borhek and Curtis’s (1975), general theory, Snow and Machalek (1982 cited in Borhek and Curtis 1975:112-113) explain how belief systems endure the “pressure of events” or “challenges of the real world”. Snow and Machalek (1982:20) visually depict the variability in both characteristics, as shown in Figure 1. As the Y-axis indicates, belief characteristics can range from a “tightly integrated (high system)” to a “loosely integrated (low system)” (Snow and Machalek 1982:19). And as the X-axis shows, belief systems can range from being “empirically pertinent (high empirical relevance)” to systems where “empirical evidence is almost totally irrelevant (low empirical relevance)” (ibid).

The cross classification of the two components results in four quadrants each representing a different belief system as shown in Figure 1. Snow and Machalek (1982:20) delineate four quadrants that reflect differential vulnerability “to challenge from within and disconfirmation from without” (Snow and Machalek 1982:19). The most vulnerable of the belief systems are in quadrant 1; these beliefs are highly logical and empirically significant. Snow and Machalek (1982) identify deductive scientific theory as the best example of this quadrant. Deductive theory is intended to find a theory logically fallible: the scientist hopes to falsify a theory, consequently modifying or abandoning it. Empirical validation “subjects it [the theory] to the pressure of events” (Snow and Machalek 1982:19). Diagonal quadrant 4 is the antithesis of quadrant 1, housing belief systems devoid of both empirical relevance and internal logical consistency. These beliefs are impervious to falsification, primarily because they resist making “precise claims about the empirical world” (Snow and Machalek 1982:19). In essence, they are
shielded from empirical disconfirmation. The loose integration of the belief system is an additional factor in creating impermeability to empirical events. These beliefs systems are usually ambiguous, general and inconsistently integrated, leading to a plethora of interpretations buffering them from “empirical events and text book logic” (Borhek and Curtis 1975:114 cited in Snow and Machalek 1982:20). Despite any efforts to prove the system wrong, the internal contradictions and failure to commit to claims about the empirical world leave the system bulletproof.

As depicted in Figure 1, quadrants 1 (“vulnerable to logical inconsistency and to external evidence”) and 4 (“low vulnerability to internal contradictions and external evidence”) are at opposite extremes, just as quadrants 2 (“vulnerable to external evidence”) and 3 (“vulnerable to internal contradiction schism”) are oppositional (Snow and Machalek 1982:19-20). Quadrant 2 contains loosely integrated belief systems vulnerable to empirical evidence; by contrast, quadrant 3 has tightly integrated belief systems insulated from empirical disconfirmation. Snow and Machalek (1982:20) cite superstitions, folk science, witchcraft, and traditional medicines as illustrative of belief systems in quadrant 2. Communism and Catholicism are typical of quadrant 3 (i.e., beliefs that are tightly integrated and maintain low empirical relevance). Certain contemporary NRMs, such as the Nichiren Shoshu (Snow 1976) or Lubavitch Hasidim (Dein and Dawson 2008), are said to occupy either quadrant 3 or 4, with the latter quadrant housing beliefs that are loosely integrated and empirically irrelevant (cited in Snow and Machalek 1982).

Beliefs have a “self-validating nature” as discussed above, and Borhek and Curtis (1975 cited in Snow and Machalek, 1982:21) expand on this understanding. They say all belief systems have

“built into them various validation logics or strategies that also provide immunity from the pressure of events. These validation logics often take the form of invoking a belief from one end of the empirical relevance continuum in order to protect a belief or claim at the other end called into question” (Borhek and Curtis 1982:126-133 cited in Snow and Machalek 1982:21).

Two validation logics are thought to have particular weight in safeguarding and sustaining unusual beliefs. In the first, individuals employ “an empirically non-relevant belief to protect an empirically relevant belief” (Borhek and Curtis 1975:127 cited in Snow and Machalek 1982:21).
This type of claim is used to safeguard claims that have been challenged. In the religious context, a typical response to this type of questioning is a restatement of imminent prophetic confirmation. Asserting that a prophecy will materialize at some point is, by rule, an unfalsifiable claim and, as such, shielded from empirical disconfirmation. When believers remain steadfast in their belief that results are empirically evident, this becomes an interpretive strategy. In the view of Snow and Machalek (1982), both Christianity and modern millennial movements utilize this strategy. How can we challenge a claim that the benefits of a religion will eventually materialize? For instance, in Scientology, a supreme mental functioning known as “clear” is promised to adherents, but evidence that such a state has ever been achieved remains absent. Furthermore, if a follower does not achieve this state, this does not lead to prophetic disconfirmation, but leaves members believing they simply have yet to attain it (Snow and Machalek 1982). Scientologists would claim, however, that a clear can be assessed by the level of engrams on the E-Meter\textsuperscript{35}, an alternate source of evidence than that demanded by the scientific community.

In the second validation logic, the individual uses “a falsifiable belief to support an unfalsifiable one” (Borhek and Curtis 1975:129 cited in Snow and Machalek 1982:22). In other words, “empirically relevant beliefs are used to validate empirically non-relevant ones” (ibid). As is the case for the first validation logic, Snow and Machalek (1982) say this strategy is used by many NRMs. For one, followers of such belief systems seem to consistently find “empirical evidence” to validate their “claims and prophecies” (Snow and Machalek, 1982:22). Of course, the definition of and requirements for evidence are different from the scientific world. Rigour, a key component in the gathering of valid data, is of little concern to the believer. Snow and Machalek (1982) cite doomsday prophecies proposed by many millenarian movements as examples of this second validation logic for validating beliefs (e.g., Festinger et al. 1956). There are many “examples” of signs that prophetic confirmation is imminent, given globally prevailing problems, whether social, economic, or environmental. It is important to note that the effectiveness of this strategy is boosted by social discourse; again, however, the logic structure of the belief system meets the necessary prerequisites for its continued existence (Snow and

\textsuperscript{35} The E-meter is a device used by auditors within Scientology to measure engrams which are a complete recording of all perception present in a moment of fractional or complete “unconsciousness” (Scientology 2015).
Machalek 1982). In sum, plausibility structures fortify what is “logically self-perpetuating” (Snow and Machalek 1982:22).

Figure 1. Classification of Belief Systems According to Degree of Interrelatedness, Extent of Empirical Relevance and Vulnerability to Challenge


4 Current Study

This chapter’s purpose is to ascertain the vulnerability of gambling beliefs to challenge. More specifically, where do gambling beliefs fall in the classification of belief systems when it comes to belief system integration and level of empirical relevance? In what follows, I borrow the belief conceptualization from Snow, Rochford, Worden, and Benford (1986) to differentiate beliefs in 1) the probability/chance of change and 2) the instrumentality of one’s own efforts.
Here, the core belief is taken to mean the probability for change typically found in the beliefs of prophetic groups, not the core belief/distortion outlined in the psychological literature which Ladouceur and Walker (1996) define as “the ability to predict or control the outcome of a future event” (cited in Toneatto 2002:192). The latter belief on the instrumentality of personal efforts encompasses an array of belief types (see Toneatto 2002) all of which are tied to the ability to determine or facilitate a favourable outcome. As Czerny and colleagues (2008) claim, many of the beliefs in the typology may be interpreted as justifications for continued behaviour.

To assess the impenetrability of the validation structure of gambling beliefs, I examine two “validation logics or strategies”: 1) the use of an empirically non-relevant belief to protect an empirically relevant belief and 2) an empirically relevant belief used to validate an empirically non-relevant belief (Borhek and Curtis, 1975:127, 129 cited in Snow and Machalek, 1982:21-22). The overall goal is to assess the structure of gambling beliefs and determine if they are impenetrable to disconfirmation.

5 Methods
5.1 Sample

The sample demographics are outlined in Table 1. A total of 43 problem and moderate level gamblers were recruited for this study. Using the problem severity index, the majority of the sample is classified as problem level (65%) with a small subset being at the higher end of the moderate level bracket (35%). The sample comprised an equal distribution of male and females with the majority falling in the age range of 41 to 60. Just under half had never been married (42%); roughly 21% were divorced; the married category fell slightly under this percentage (19%). For the highest level of education attained, a large percentage possessed a college diploma (28%) with roughly one third (32.6%) having had at least some university experience extending all the way to graduate or professional school training. Slightly less than one quarter had an annual personal income lower than $20,000, while the majority fell equally in either the $20,001 to $40,000 (32.6%) or the $40,001 to $60,000 (32.6%) income ranges. The multicultural city of Toronto, the area of recruitment, elicited an ethnically diverse sample with the majority tied to Europe, followed by the British Isles; various parts of Asia (East Southeast,
West, and South) were well represented (25.6%) as was the Caribbean (14%). A substantial portion of their lives was devoted to gambling, with the sample reporting 18 as the average number of years spent gambling. Similarly, a fairly substantial portion of income was spent on gambling in the past year at a reported average of $650 per month.

5.2 Analysis

Interviews were audio taped, transcribed verbatim, de-identified to ensure anonymity, and coded for emergent themes using NVivo software. The analysis applied grounded theory techniques, namely, open and axial coding. Open coding involved familiarization with the data and the assignment of codes pertaining to emerging concepts or ideas (Glaser and Strauss 1967). These emerging concepts and ideas were then further organized against the Snow and Machalek (1982) framework guided by Borhek and Curtis (1975). First, the general theory of belief posited by Borhek and Curtis (1975) assessed the vulnerability of gambling beliefs to empirical challenge. More specifically, where do gambling beliefs fall in Snow and Machalek’s (1982:20) classification of belief systems when it comes to two characteristics noted in Figure 1: 1) degree of system (Y-axis) and 2) empirical relevance (X-axis)? Two “validation logics or strategies” were examined to further assess the impenetrability of the validation structure of gambling beliefs: 1) the use of an unfalsifiable claim is used to protect a falsifiable claim/an empirically non-relevant belief to protect an empirically relevant belief and 2) a falsifiable claim is used to support an unfalsifiable claim/empirically relevant belief used to validate an empirically non-relevant belief (Borhek and Curtis 1975:127, 129 cited in Snow and Machalek 1982:21-22).

Ultimately, gambling beliefs are unfalsifiable in principle and, as such, both scenarios fit. The use of memoing helped prepare preliminary analytical notes throughout the process of analysis, prompting an assessment of the literature against emerging findings.

6 Findings

The discussion of the findings will start with gambling belief classifications as per the general theory of beliefs (Borhek and Curtis 1975 cited in Snow and Machalek 1982). This will be followed by an analysis of the relevance of external information and a discussion of built-in validation structures that buffer external evidence.
6.1 Classification of Gambling Beliefs: Degree of Interrelatedness and Extent of Empirical Relevance

In Borhek and Curtis’ (1975) general theory of beliefs, belief vulnerability can be assessed by examining their level of integration and the empirical relevance. The former refers to the overall logical interrelatedness of a belief system’s substantive components. As Snow and Machalek (1982) state,

> It is evident enough that beliefs systems which fail to make precise claims about the empirical world are unlikely to be disconfirmed by empirical events. It is less clear that the very ambiguity, generality, and even inconsistency of poorly systematized belief systems help protect their integrity (P. 19).

This type of belief system allows a multitude of possible interpretations with very few necessary connections between beliefs as “neither empirical events nor textbook logic can contradict the system itself” (Borhek and Curtis 1975:114). In other words, these types of beliefs are the least vulnerable to falsification.

Gambling beliefs include the gambler’s core belief in his/her chance/probability of winning and the additional set of beliefs surrounding the ability to determine or procure a win. An array of the latter set of beliefs is outlined by Toneatto (1999, 2002). While all gamblers share the core belief, the adoption of other beliefs outlined by Toneatto (1999, 2002) depends on the individual gambler. Such beliefs have no link to a consistent internal logic, unlike beliefs related to deductive reasoning. That is, much like traditional superstition, witchcraft and new religious movement beliefs, gambling beliefs are loosely integrated with the “logical interrelatedness of the belief system’s substantive components” being insecurely coupled (Snow and Machalek 1982:19).

Both sets of beliefs seem impervious to empirical disconfirmation. It is hard to disprove a system of beliefs where the potential for countless subjective interpretations are plausible. More concretely, gamblers appear disinterested in external evidence given continued gambling behaviour despite repeated loss, or failure of strategy based beliefs to materialize consistently positive outcomes (Toneatto 1999, 2002). Just as members of new religious movements continue to believe in a prophecy that fails to realize, gamblers continue to believe despite
consistent and continuous loss. These gambling-related beliefs would seem to situate themselves in where loose integration and low empirical relevance meet alongside other beliefs that are immune to disconfirmatory evidence. Additional validation logics or strategies are used by PGs to preclude disconfirmation, as the next section will explore.

6.2 Validation Logics or Strategies to Further Buffer External Evidence

In addition to the self-validating nature of gambling beliefs, Borhek and Curtis (1975) say all belief systems have various validation logics or strategies that protect them from external evidence proving them wrong. These validation logics often invoke a belief from “one end of the empirical relevance continuum in order to protect a belief or claim from the other end called into question” (Borhek and Curtis 1975:126 cited in Snow and Machalek 1982:21). They go on to state that no matter where a belief system is situated on the continuum, even if at the extremes, when it comes to integration or evidence, “it is never totally one sided. All belief systems contain beliefs from the subordinate of the two dichotomies” (Snow and Machalek 1982:21). Snow and Machalek (1982) explain two validation logics play a role in protecting and sustaining unconventional beliefs: “the use of an empirically non-relevant belief to protect an empirically relevant belief” and “the use of an “empirically relevant belief to validate” an empirically non-relevant belief (Borhek and Curtis, 1975:127, 129 cited in Snow and Machalek 1982:21-22). Both validation logic tactics appeared relevant to the study’s PGs.

This sample of PGs used an empirically non-relevant belief to protect an empirically relevant belief (i.e., an unfalsifiable claim was used to support a falsifiable claim) when prophetic claims were called into question. A typical response to questioning was to assert that the prophecy could very well occur – an unfalsifiable claim, in principle. Snow and Machalek (1982) say, “[t]he very indeterminate nature of the supportive claim thus immunizes the challenged claim from empirical disconfirmation” (p. 21). This “interpretive strategy” (Snow and Machalek 1982:21) is commonly used by both Christian groups and millennial movements, and is at least partially responsible for the persistence of their beliefs. Similarly, when these PGs suffered a loss, or failed to achieve their prophetic goal, it did not mean the prophecy was disconfirmed. Instead, they used unfalsifiable claims to maintain their faith in the potential for a
substantial win. These claims echo those outlined in Toneatto’s (1999) typology of gambling beliefs, later defined by Czerny and colleagues (2008) as justifications. That is, failure to achieve prophetic confirmation did not mean disconfirmation; it was simply not the right time for one reason or another. For example, one participant explained her partner’s negative energy prevented a win:

P7: My boyfriend was negative energy…. He was my bad luck charm, so I didn’t win when I was with him.

Thus, an unfalsifiable belief ends up protecting a belief that is empirically identifiable, namely prophetic failure. Indeed, to challenge the believers’ claim that prophetic confirmation could happen, even if it has not yet occurred, presents a challenge. Gamblers oftentimes, in interview, claimed that the potential or chance of claiming the jackpot would remain a possibility despite it failing to yet manifest. That is, the majority of participants from this study proclaimed, in slightly different ways, “there’s always a chance”:

P10: (I continue to gamble) Because there is always that chance, that’s why. If it happened once it can happen again, right? If it can happen to you, it can happen to me…. It’s the unknown. And why not me?

The second validation logic used by those with unconventional beliefs is an empirically relevant claim to protect an empirically non-relevant claim. Snow and Machalek (1982) explain this tactic is prevalent among many new religious movements. That is, many members of NRM are laden with “empirical evidence” to support their claims and prophecies. This tactic was exercised by the study’s PGs who also used “empirical evidence” to support their unusual beliefs. Snow and Machalek (1982) provide real world examples used by NRM to help bolster non-empirical beliefs, such as doomsday prophecies. These supportive data, however, were not selected using the rigorous data collection methods employed by scientists. In the case of the PGs, many selected pieces of “empirical evidence” to substantiate their behaviour. These included success stories, whether their own or the more profound successes of other more successful gamblers. The claims of gamblers, however, unlike those of contemporary religious groups may carry more empirical weight, as they reflect the actual occurrence of prophetic fulfillment. Meanwhile, new religious movements rely on signs that may reflect prophetic realization.
The study’s PGs were fueled by their own successes at the casino, with wins or near win deemed an exemplification of potential success:

P1: I was just thinking I was watching everyone else get these big wins…and I thought, well, I haven’t had one of these for quite a while. And I think that this is going to be my turn coming up. And it happened. I won close to $9000.00 and then two weeks later or two months…$17,000.00….

P23: I was down to $8 and I hit the jackpot. I got $2,000 for that machine.
I: So what did you come out with that night then?
P23: Well I only had. I only played $100. I was trying to get to [destination X], but I was tired. I just wanted to take a coffee break. And then I just decided to stop at the machine and put $100 dollars in and got down to $8 and I said, I am not going to win and then the banging went off. Bells and everything! Exciting! You just go, “oh man”, and you’re just thinking about what you are going to do with that money and enjoy myself you know whatever.

P27: The most I ever won was $2,500.
I: Oh, wow. And how long ago was that?
P27: Hmm, 2005.
I: OK. Can you take me through that win? Like what machine were you on? And what was going on?
P27: A quarter machine. And it was snowing and I felt bored you know. So I said, “I'll go you know, and see what happens.” I was off from work and I won. And I only spent just forty dollars and I got that…. One time I almost won the jackpot.

The wins of close relations held empirical significance as well, proving that you can win:

P32: Because my friend’s always winning on it. My friend, last time my card would not work, so he said to me, “Go, move over to the next one,” and I was determined to stay on this one, because I felt something, it’s just a superstition. But then he sat on it and he won almost $300 bucks...

P5: It’s your time to win and play, so yeah. I saw a guy actually, a friend of mine actually, won [the jackpot] just by sitting there and just like by accident putting in a coin into a slot.

The wins of family members, used as evidence, did not have to be tied to slot machine gambling exclusively:

P13: I know when I was a child my mom gambled a lot. I'd seen my mom win – I don't know if you remember – the provincial. There used to be a ticket called the provincial. It
was a $5 ticket. It was in an envelope and you open it up, and there would be a price. You can win up to $10,000 I think it was, automatically.

I: What did your mom win?
P13: Ten thousand dollars.

I: She won $10,000. How old were you when that happened?
P13: This was when I was maybe in my early teens? That was big money back then. Over 25 years ago.

P24: But one time my dad played the Heart and Stroke lottery thing. And he won a TV. He won a TV, wow. I mean, they still have the TV today.

I: Okay. How many years ago was it?
P24: Probably like 12-13 years ago.

For the latter participant, a win that occurred roughly 13 years ago remained firmly rooted in their memory, showing the staying power of such evidence.

Win based evidence remained relevant even when it involved acquaintances, including fellow gamblers:

P13: It's that adrenaline that you might win big. I'd seen people win huge. I'd seen one person; she won almost $80,000 at one time on the slots. I was just standing there, watching her throwing a quarter and win. All that money coming out, it's that…it's just like your life can change in one moment. Not really [with that amount of $80,000] but if you won a couple of million dollars, then you're set for life.

I: When did you see this woman win the...
P13: Maybe six or seven years ago… I’ve seen and I’ve heard people winning millions of dollars on that thing [slot machine] for a quarter or a dime. It’s a big turnaround when you put in a dime and you win a million dollars, that’s a pretty big deal...

P14: I think it was a Friday night and it was in the middle of the night, I saw these three young boys. Young like 20, 21, something like that and I heard one of them go, “You know what I’m just going to try $5, what the heck, because it was a $5 machine, right?” He put in $5, he hit that button and do you know what he won $10,000 because the symbols came up, right? Well, that guy almost fell off the floor.

P24: Like I’ve seen one lady and her husband, they were old. They just hit the machine once and then they won like $7,000.

In short, evidence that supported their gambling was relevant to these PGs, no matter who claimed the prize. Anecdotes of big winners shared between gamblers gained momentum, in the end becoming legendary tales or key pieces of evidence. PGs kept these examples on hand to
show evidence of winning potential. One PG explained that he readily shared evidentiary stories with his gambling peers, and these were reaffirmed by casino discourse:

I: Like, what types of conversations would you have with the individuals there? Would you talk about the slot machines themselves? What would you talk to them about?
P45: We talk about the latest people who won....
I: So, if I were a fly on the wall in one of those conversations, what would they be about?
P45: Well, they [the casino] post the winners, say every week or every other week. So, we describe a lot of people we know. “We know this guy, they won so and so.” “Yeah I know that guy.” So, we talk about the winners.

The casino provided a weekly wall of winners, helping the PGs remember that they too could eventually be on the wall.

The casino discourse was reinforced by media stories, also used by PGs to validate their prophetic claims:

P2: Well, I mean, yeah. When I heard that a lady at the casino won 1.5 million, yeah, that made me think, oh my God, that could happen to me. It’s just randomly she won it. So, you never know.

P30: …Korean immigrants, I read in the paper, they came just after a year and they won a big jackpot…. They…won twice! Yes, they have a convenience store and they won twice, in the 80s and also late 90s. And the pregnant lady in Sweden! Yes, the pregnant lady.
I: Yes. She won three times, right?
P30: [On her] brother’s birthday (first). (The next), before she gave birth…and they won a big jackpot, it was four-point-some million, on the latest one. So it’s a matter of getting lucky…

P34: And it’s up to a million dollars. So you can, but you have to play it and then you have to get to the bonus round and then after that, maybe you can make it. I don’t know. Some, some people have won the million.
I: Have you seen anyone ever win?
P34: No, but I’ve, I’ve heard about it and I saw it in the paper.
I: Right.
P34: People at Casino X. One, one old guy won a million.
Evidence published by a fact based source took on special significance. When such claims were expressed in social discourse, their validity was heightened, making them more impactful pieces of evidence.  

6.3 Relevance of Empirical, Odds Based, Information for PGs

Unconventional beliefs are said to be vulnerable to disconfirmation. This is confirmed by Festinger and colleagues (1956) and by researchers with expertise in gambling (Abt et al. 1985a; Czerny et al. 2008). Of course, treatment with a cognitive focus tends to assume some belief vulnerability in the gambler’s quest to alter misinformed and biased interpretations of the ability to procure a win. Probability theory is a key component of cognitive based therapy (McCown and Chamberlain 2000) and is used to explain to gamblers how chance operates. In many ways, the odds are against gamblers, in that odds based information is oftentimes unavailable or not conveniently accessible to slot machine gamblers (Harrigan and Dixon 2009; Schüll 2012) creating room for uncertainty and interpretation. Conceivably, this type of information could be the first step in steering more logic-based decisions. Logic driven decision making is the aim of cognitive therapists and individuals advocating evidence-based information strategies as discussed in an earlier section.

The study’s gamblers were keenly aware that they lacked odds based information, with some saying no one or only managerial staff knew such information:

P41: Random, the chip. Nobody knows (the odds of winning). Even the casino owners or whatever... they don't know about it.

P23: Well I do know that some of them have the different odds [from when I worked as a technician]. And only the manager knows that the technician only programs them but the odds in it but you never know what the odds are.

If equipped with information on probability or the odds of winning, how would gamblers digest it? Many took such information to be irrelevant to their gambling experience. That is, they knew

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36 In the course of a discussion with a perceived non-believer, me, a researcher, this information may have been used more readily or with greater enthusiasm in order to validate their claims.
the odds of winning, generally, were low, but what good was such information when the chance of winning was always present?

P31: That’s why I said because how can you figure out the odds? I mean you could walk in there and put the – play the machine for the first time and maybe hit. Another guy could play all day and how do you figure it out, it’s just you’re lucky enough to go and sit at the right one out of thousands of machines and hope you picked out the right ones. I guess someone could figure out the odds over thousands and thousands, but. But your chances of going there and winning…I don’t know it’s pretty slim. But like I said, it’s just somebody could go over there for the first time and walk up to the machine, for the first $20 they play (and hit a jackpot) and yet they could (also) go there all there life and never hit nothing. And, yes, it’s unpredictable.

When asked directly how knowing the odds of winning would impact their machine selection or overall game play, PGs’ answers fell into the following camps: 1) they would use it to change game play, but not change their gambling behaviour or 2) it would go largely ignored.

First, the knowledge of odds might prompt gamblers to select machines with a higher probability of winning, but it would not curb their behaviour:

I: Okay so, so but would it influence you at all, just to know that, like say it was made available to you or it was somehow put on, put on the machine right. The odds. P34: I don’t know. Maybe a little bit. I mean, you would like to know the odds but they don’t tell you that.

The information might be used to target optimal machines, but other non-empirical input would also have a place, according to some gamblers:

I: Do you think if gamblers were explained the probability of winning they would change their behavior? P5: No, probably not, no. I: So knowing the probability of winning would not change your behaviour? P5: No probably not. ‘Cause like the machines aren’t always clear too, especially the slot machines…like what the probability of winning actually is, right? I: But if you were given that information… P5: Yeah. No it wouldn’t change [my gambling]… I could say that now not knowing. But maybe I could change my mind, if I did see something. You know I might say, okay the probability is better, and I could win here. Maybe I might do that. It’s kind of like that aura type of thing, though, when I was walking by and I liked this one [machine] because of this colour…
Turning the supposed use of such information on its head, some PGs would actually use odds based information to challenge themselves. That is, this information would inspire them to target low probability machines to see if they could beat the odds:

I: So let's say the machine had a probability of winning on it, like it said one in a million, the odds of winning are one in a million. In other words, the odds are very, very low. Would that influence your gambling? Knowing the odds before you start with that machine.
P29: No. I'd want to play those machines just to see if I can beat the odds.

This participant even questioned the validity of empirical insight:

I: Okay. So if there's let's say a new law passed and there's now a huge sign that indicates the probability of winning on each machine, whatever it may be. Do you think that would influence your gambling?
P35: Well, maybe, yeah.
I: How?
P35: I don't know. Well, just if the machine is you know…if you know the information was true then I might just with the sheer fun, with the sheer luck of it. But maybe it isn’t true.

Second, many participants, roughly 70% of the sample, said at some point in the interview, that they would disregard fact based information:

I: The machines don't have the probability of winning on them, right? It doesn't tell you this machine has a one in a thousand chance or whatever the odds are. If you did know the probability of winning on a machine, like say it was noted, would that influence the way you gamble at all?
P41: No.
I: No. And how come?
P41: Well, as I said, it's pure luck. It's at random.

I: If there was a clear probability of winning noted on the machine, do you think it would change your gambling?
P43: Not really. I'm thinking that we all take a chance when we walk in the casino doors.

I: You think it’s (wins are) controlled (by the management). You’re on the machines a lot of times, and you don’t see the probability of winning, right? I’m wondering if you

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37 It is important to note that information related to machine functionality and odds were not readily available, with gamblers seemingly coming to accept the process as veiled. How PGs would adapt to greater transparency requires further research.
saw the probability, if it was noted, “This machine has one in a million chances of winning” or whatever, do you think it would influence your behavior at all?
P30: Well, I would like to still play that machine.
I: You would. So irrespective of the probability, then?
P30: Yes because that machine can actually bring you luck, you don’t know. That will not distract me from playing.

P37: Honestly I hope this is being helpful but honestly some of them I don’t even understand (the machines) or want to understand. They come up with all these ridiculous lines...

The unpredictability of the event was coveted by gamblers, so much so that even when this participant was enticed with certain “fact-based information” s/he rejected it, choosing to keep the process ambiguous:

P39: They know—you have people beside you and one night I was on the nickel machine and this was in that room where you can go to the back and smoke and I won $300 but if I would’ve bet $45 I would’ve won $600, but not bad (for a night’s win). So the lady beside me, she goes “oh my god you won big!” I said, “how do you know?” She said, “I know the pattern.” I'm like, “you do?” But I’d rather not know. I like to be surprised. So people know how to read the pattern... I’d rather not know. I want to be surprised.

This PG, in particular, went on to suggest that such fact based information would devalue the excitement and/or enchantment inherent in the unpredictability of the game. Although the odds of winning were low, as a number of PGs admitted, the hope nestled in an unpredictable outcome motivated many gamblers.

Whether the gamblers felt such information inhibited the unpredictability and excitement of the game or questioned its validity, they frequently deemed empirical information to be insignificant. In other words, evidentiary information would be ignored, considered inconsequential, untrustworthy or, at most, used to change game play in a paradoxical fashion. Fact based information, for many, had no place in a context rife with hope and faith. Believing in the potential for prophetic fulfillment was crucial:

P12: Whether it helps you or not having beliefs, who knows, right but I think, you got to have something, right? It's like whether there's a God or not, we don’t know, but you have hope, right? So it's the same thing with the casino, you go there, you have hope but you want all the edge you can get type of thing (using all insight, including that which is
intuitive). You have to have something, right? But anyway, so beliefs in the casino and wins (well it) happen(s) so much it's true that you can win.

This gambler had faith in probability of a win, with success stories helping to affirm his faith.

For these particular problem gamblers, “hope” and “faith” were an important aspect of the experience, rendering fact based information an unwelcome intrusion. The possibility of invalidity carried little weight for PGs. They ignored falsifiable claims and empirically sound data, confirming the low relevance of empirical evidence discussed in an earlier section.

7 Discussion

The beliefs of these particular gamblers and, most importantly, the core belief, were self-validating, in a manner analogous to the beliefs of contemporary religious movements. Overall, their beliefs show loose logical interrelatedness and little consideration of empirical evidence along with the beliefs of new religious movement members (Snow and Machalek 1982:20). The study finds a lack of substantive components in the belief system. In addition, gambling beliefs are “resilient and apparently invulnerable to disconfirmation”, in part, because of the interrelatedness of beliefs (Snow and Machalek 1982:19).

These gamblers’ beliefs were not only impervious to external evidence but that evidence was deemed inconsequential, a finding supported by research into other unconventional beliefs (Snow, Zurcher, Ekland-Olson 1980; Benassi et al. 1980 cited in Snow and Machalek 1982). For most people, and perhaps more so for PGs, “believing is natural; doubting requires an unnatural exertion of will in order to overcome the inertia of taken-for grantedness” (Snow and Machalek 1982:23). A scientific approach doubts everything until evidence is presented (Schwartz and Jacobs 1979). But Snow and Machalek (1982) say there is “sound theoretical reasoning” to move forward with the conclusion that people, in general, are “typically inclined toward belief rather than disbelief” (p. 24). Schutz (1971) explains most people subscribe to the “natural attitude” rather than the “scientific attitude;” they assume things to be fact unless proven otherwise (cited in Snow and Machalek 1982:24). Eschewing a scientific approach, the study’s PGs are not interested in finding evidence to disprove their beliefs. The research here, following Snow and Machalek’s (1982), does not deny the existence of dissonance reducing
mechanisms in maintaining beliefs (see e.g., Abt et al. 1985; Prus 1976; Dawson 1999). However, belief is often sustained by ignoring disconfirming evidence, which to the believer, unlike the nonbeliever, is unpersuasive.

Where gambling beliefs lie on the “vulnerability to challenge” continuum should be of interest to those studying cognitive dissonance or cognitive theory. The immunity of such beliefs to challenge should be particularly relevant to treatments seeking to develop rationality. Although treatment providers are aware of the reinforcing quality of such beliefs (Joukhador et al. 2004), they are deemed treatable. What this study finds, however, is that the core belief seems tied to the potential or probability of winning, not necessarily to the ability to somehow determine or coax out a win, as suggested by the psychological literature (Ladouceur and Walker 1996). The core belief is related to this array of beliefs that seek to determine or facilitate a certain outcome. This assortment of beliefs are repositioned as claims used to protect the core belief in the potential chance of winning, making them akin to the “justifications” posited by Czerny and colleagues (2008), following Toneatto (1999, 2002). That is, to continue their gambling activity, these PGs need to find ways of mitigating challenges to the core belief. Claims that are falsifiable are also used by these PGs to protect the core belief; for example, they draw on examples of wins seen, heard, or found in discourse to validate their claims.

The findings of this study suggest treatment strategies targeting errors in thinking by teaching probability theory may be ineffective. The study’s PGs were not interested in empirical evidence, including the probability of winning. Although they understood the odds of winning were generally low, they were propelled by hope and faith. For them, the rational, empirical world had little place in the casino, something suggested by Reith (2002). She says gamblers are not ignorant (i.e., fail to understand the odds of winning) or helpless (i.e., lack agency) and concludes that the ubiquity of chance and the meaninglessness of probability theory is the impetus for gambling action. This finding suggests treatment or prevention regiments that seek to teach probability theory to PGs may be remiss. In fact, Williams and Connolly (2006) find teaching college students the mathematics of gambling does not change their gambling behaviour. Treatment centered on teaching PGs that gambling outcomes are devoid of distinct patterns or that aims to teach how chance operates to distort cognitions and acquired beliefs may
require re-evaluation (McCown and Chamberlain 2000). McCown and Chamberlain (2000) reveal the difficulty inherent in trying to treat PGs with cognitive therapies that work best for rational people. In the same vein, onscreen educational modules, appealing to gamblers’ rational thinking flies in the face of the actual design of machines which propagate anything but rational decision making (e.g., Dickerson 2003:40 cited in Schüll 2012). That is, educational software promoted by some companies (e.g., Safe@Play) in the form of warnings or touchscreen links to understand the stop configuration of each reel or warning messages require further investigation in light of the findings here and suggestions made elsewhere (e.g., Dickerson 2003; Schüll 2012).

Findings here propose that PGs possess a problematic belief system that is as "normal" as any other belief system. Like any other belief system, this one is non-rational rather than irrational rendering it fairly resistant to contrary empirical evidence. Schüll (2012:260), reflecting on prevention in the form of informational initiatives, promoting responsible gambling, casts doubt on the efficacy of them, inferring that they may serve a form of risk management for the casino industry. Gamblers are aware of the odds being against them as Schüll’s (2012) informants relay and this study’s gamblers also showed awareness of. Despite this awareness, full transparency should be a rule of all industries, committed to best practices, including and especially gambling an industry for which the majority of its revenue comes from a small percentage of problem gamblers (Williams and Wood 2004, 2007). More research is undoubtedly needed to assess the value and impact of such prevention strategies.

Although recommendations for prevention are treatment are beyond the scope of this chapter, it would be beneficial for professionals to attempt to better understand the beliefs of PGs from their clients’ perspectives; reflecting on their complex form and function. Thusly, it

38 Warning messages can include reminders that the outcome of a chance-based game cannot be controlled or that the ratio of wins to losses in favor of the casino (cited in Schüll 2012:269).
39 Responsible gambling does not stop at the provision and understanding of odds-based and related information. This initiative is also associated with “seat belt” devices to track time on the machine and money spent to help curb behaviour and spending (Schüll 2012:277). However, even this type of initiative may lack efficacy or, worse yet, result in unintended consequences like increased gambler spending (Schüll 2012:275-279).
40 See Schüll (2012:268-271) for a fuller discussion of the casino industry’s standards including the need for enhanced transparency and accountability.
would be wise for gambling researchers and treatment providers to heed Snow and Machalek (1982) when they say scientists “should be counselled not to project onto their subjects their own criteria for belief” (Snow and Machalek 1982:23). Taking this advice could start the process of reframing current perceptions of these beliefs, perhaps facilitating improvements in how problem gambling is researched, prevented, and treated. Luhrmann’s (2015) insight on religious beliefs is helpful here. She writes that we evaluate factual beliefs with “perceptual evidence”, but religious beliefs more with our “sense of destiny, purpose and the way we think the world should be”. Although Luhrmann reflects on religious beliefs, this reasoning can provide some insight into the form, function and persistence of gamblers’ beliefs.

8 Conclusion

The structure of gambling beliefs places them in an invulnerable situation despite research that suggests they are vulnerable to dissonance. As the study’s PGs show, these beliefs are loosely integrated, with high internal inconsistency making them difficult to disprove. Furthermore, the PGs have little reliance on or faith in empirical evidence, rendering these beliefs durable to empirical disconfirmation. The built in validation logics and strategies of gambling beliefs, allowed these PGs to use both falsifiable and unfalsifiable claims to enhance immunity. In the end, the findings of this study accord with Snow and Machalek’s (1982) assessment that logic structures make unconventional beliefs fairly immune to disconfirmatory evidence with plausibility structures serving a supportive role. In light of the present findings, treatment that intends to discredit such beliefs might need to reassess the fragility assumption, including vulnerability to disconfirming information.
Chapter 8
Conclusion

1 Limitations and Future Directions

This research was conducted with a small sample of problem and moderate level gamblers and a very small comparison group. Given the case study design, the findings can only be said to represent this case. That is, how findings extrapolate to other slot machine gamblers or gamblers engaged in other game types is uncertain, especially those that participate in isolated forms of gambling (e.g. online gambling). This is especially important considering the recent launch of Ontario-regulated online slot machine gambling. It can be argued, however, that no gambling occurs in a vacuum meaning that sociocultural factors would play some, undetermined, role in the beliefs and actions of those involved in even the most isolated form of gambling. For one, increased accessibility and normalization of gambling, and now, even online gambling may lead to increases in problem gambling rates. More research on gambling beliefs is warranted across game types with a similar focus on sociocultural factors in their formation and maintenance. With a similar focus, other subtypes might also be considered, such as youth gamblers.

The research does not definitively show a causal relationship between gambling beliefs and problem gambling behaviour, but it provides insight into how sociocultural factors might play a role in the maintenance of beliefs and gambling activity. Again, the goal of qualitative research is not to identify causal relationships, making assertions of this beyond the limits of qualitative inquiry. Future research may benefit from exploring whether and how beliefs or ritual activity might lead to problem behaviour.

The comparison group provided some interesting insight, but future research would benefit from a larger, demographically diverse sample for a more thorough comparison of belief types between gamblers and the lay public. Chapter 6 looks at similarities in processes of belief maintenance in problem level gamblers and members of apocalyptic groups. While the findings are interesting, this is a preliminary study only; future research will benefit from a more thorough comparison of more extreme gamblers and more radical members of contemporary
religious movements. Such insights might point to different treatment approaches for gamblers, given the similar obstacles to treatment when attempting to change the beliefs and behaviour of those immersed in apocalyptic groups.

Although screening instruments such as the PGSI and Lie-Bet are validated and said to be useful in detecting problem level gamblers, these instruments may suffer from limitations. They may account for a new breed of “problem level gamblers” entrenched in a growing subculture, given the increased availability, advertising, and incentives tied to participation. The proliferation and normalization of gambling in this period of history is something that need be considered in any discussion of gambling (e.g., St. Pierre, Walker, Derevensky, and Gupta 2014). Do we define gambling as an individual level problem without taking aim at the social context which may breed such activity? And exactly what are problem/pathological or destructive levels of gambling? Those entrenched in the gambling subculture likely do not use the definition held by outsiders. Indeed, gamblers from this sample indicated various factors differentiating “problem level” gamblers. Research should solicit subjective opinions of problem gambling from gamblers engaged in frequent gambling. Of course, I am not suggesting these screening instruments lack validity. Rather, I recommend thinking of gambling involvement in a more contextualized fashion while drawing on the subjective opinions of gamblers and those with whom they are associated when possible (e.g., significant others). Assessment might be best reserved for in-depth discussions with gamblers using screening or diagnostic instruments as guiding sources.

Extracting the subjective interpretations of gamblers requires great patience and much probing by the researcher. Gamblers seem programmed to repeat standard responses when asked about their involvement. Many of the gamblers in this study had never spoken to anyone about their gambling, and several were initially stumped by some of the questions especially those attempting to unpack their attachment to the activity and beliefs. Most gamblers relied on the term “addiction” to describe their behaviour, relying on push factors that described their involvement in the activity rather than reflecting on what positive aspects of the experience pull them in and keep them there. With time, however, we had meaningful conversations. Almost antithetical to the “think aloud” method promoted by Walker (1992b) and others, I found in-
depth interviews worked well with gamblers providing insightful and lucid responses. Future research on beliefs might benefit from a follow-up interview, giving gamblers time to reflect.

2 Consolidated Discussion and Related Insights

This study uses psychological research as a launching pad, given its contribution to current understanding of gambling beliefs and problem behavior, but takes a different approach to the framing of such beliefs and associated action. The intention was not to decry the dearth of existing research, but to question some of its assumptions. The five papers encompassing this dissertation are linked through their united goal of illuminating how context factors into gambling belief and action.

Findings from Chapters 3 and 4 indicate great similarity between the beliefs of problem and moderate level gamblers and non-problem gamblers. Especially important are the similarities between the belief types and the applicability of Campbell’s (1996) theory of modern superstition to both sets of beliefs. Before similarities could be assessed, the original typology designed to account for the beliefs of PGs, required modification to carve out the gambling focus. Once this was done, the categories of “Magnified Skill”, “Superstitious Beliefs”, “Attribution Biases”, “Over-interpretation of Cues”, “Control Over Luck”, and “Illusionary Correlation” all appeared to account for the beliefs of both the focal and comparison group. Similar categories or subcategories were removed including “Selective Memory”, “Probability Biases”, “Attribution Errors” and “Temporal Telescoping”.

“Aligning with Luck”, a subcategory under “Control Over Luck”, was the only belief type from the original Toneatto (1999, 2002) typology that was identified in the focal group, but did not apply to the comparison group. This might reflect a larger emphasis on luck in discussions of chance-based gambling. For example, one comparison group participant explained that she encouraged her mother to pat her head when buying lottery tickets to better

41 The modified typology for the PG group does differ in the way of certain subcategories that were added to account for slot machine specific gambling beliefs (e.g., “Bet Max” under the main subtype category “Magnified Skill”). Descriptors added to account for slot machine gambling specific beliefs or actions, of course, were not added to the comparison group typology. For “Cognitive Superstition”, focused mind state was added as a descriptor for the gambling group exclusively.
secure a win (See Table 9, “Luck as a Variable”). Superstitious behaviours associated with luck are perhaps more pronounced when gambling outcomes are involved. The similarity in behaviour between this comparison group participant and those articulated by PGs in Chapter 3 under the same subcategory, “Luck as a Variable” underscore the core finding of this chapter.

The addition of (sub)categories to the original typology were similar for both groups. For example, the category of “Karma” can be added to both typologies. In the subcategory “Luck as a Variable,” luck is manipulated by both cognitions and behaviour. For “Cognitive Superstitions”, positive mind state has been added to the existing descriptor to account for an additional variant of cognition focused superstition. The emphasis on cognition might be reflective of the proliferation of ideas linked to superstitious law of attraction centred on thoughts controlling outcomes. For instance, “The Secret”\textsuperscript{42}, a best-seller, attracted much attention when released in 2006, with many gamblers speaking to the thematic content or to the book directly.

In their entirety, these beliefs all appeared to demonstrate superstitious causality, although only a subset of the belief types were deemed superstitious in the original typology. More specifically, they were identified as modern superstitions. According to Campbell (1996) modern superstitions are only half-believed and practices are recognized as unjustifiable. Practices are self-sustaining and not integrated into social institutions or formal systems of belief. These beliefs honour the value of instrumental activism in the Western world, or continuing to struggle instead of quitting in challenging times. Both sets of beliefs are aligned with this theory as are the practices that echo instrumental activism. The similarity between the two sets of beliefs and related actions, along with the overall alignment with Campbell’s theory, yields a new perspective on their nature. If these beliefs are modern superstitions, current attempts at treating them may need to be rethought; they are half-beliefs, honouring the value of instrumental activism. Although the ritual of instrumental activism might lead to problem behaviour, in this research the acts seem to resemble modern superstitions used to grapple with the uncertainty surrounding slot machine functionality and gambling outcomes.

\textsuperscript{42} In fact, 3 of the 43 gamblers referenced this text directly either generally or in direct relation to their beliefs.
Chapter 5 explores how the casino establishment frames experience to mobilize gambler participation. Findings suggest the casino uses both values and belief amplification to encourage participation. For one thing, by gambling, gamblers are able to live up to a host of personal values reinforced by the casino, including competition and perseverance. In the latter value, for example, they seem to believe if they continue to push forward despite adversity and loss, they are displaying the quality of perseverance. For another, the gamblers’ firm belief in the probability of change and their ability to facilitate change seems directly linked to the casino’s efforts to mobilize its clientele. Not surprisingly, the chapter points to potential problems caused by the casino’s framing of experience. Recommendations include more transparency in the odds of winning and how to actually play the machines, including more knowledgeable and forthright staff. The rewards point system tied to amount spent on machines is another problem to overcome in gambling prevention and treatment. Finally, gamblers seem tied to the value of self-determination and often apply it to the “Know Your Limit. Play Within It” campaign – which, of course, is intended to have quite the opposite effect. The unintentional consequences of this campaign might need to be evaluated in light of how the experience is framed for and by slot machine gamblers.

Beliefs were also amplified by the casino including the chance of winning and the ability to procure an outcome. The latter belief, tied to the value of instrumental activism, as noted in Chapter 3, amplified in the context of the casino to enhance perceptions of control. The casino’s involvement in deceptive techniques has been documented previously, but here the gamblers’ direct insight affirms their effect on them. In the end, this chapter illuminates the complexity inherent in frame alignment which entails the synergy between gambler interests, values and/or beliefs with a casino’s goals and/or ideology. Moreover, the amplification of values and beliefs in the casino context undoubtedly plays a key role in sustained involvement, making the experience particularly meaningful and fulfilling.

The social processes involved in maintaining belief in winning are articulated in Chapter 6. Rationalizations used to deny dissonance are supported by various social processes including: socialization into the prophetic milieu, prior preparatory processes, leadership response processes, and social support processes. These beliefs point to general forms of socialization and
their role in anchoring gamblers to the gambling worldview. The chapter highlights leadership involvement, with both management and workers encouraging and sustaining beliefs. Problem gamblers display a dependency on an external authority with a special connection to and control over the ultimate reward. The incentive based program referenced in Chapter 5 is highlighted here but this time with respect to the social support it facilitates. Membership in the casino establishes a link between patron and casino through email and mail based contact. This form of communication kept alive their hopes of winning, encouraging members to return to the casino for another attempt.

As suggested by Dawson (1999) members of apocalyptic groups are not terribly vulnerable to the negative ramifications of disconfirmation (also highlighted in Chapter 6). Groups can and do, however, rely on dissonance management strategies, including rationalizations centred on spiritualization, tests of faith, human error, and blaming others, with reaffirmations playing a lesser role in bringing gamblers back after loss. Dissonance management strategies point to the spiritualization of gambling, with gamblers placing faith in a higher power for their “salvation.” This finding calls into question any true belief in the individual level power to facilitate a win, mirroring the findings in Chapters 3. It is important to note that the success of any one of these adaptive strategies is heightened by the type and number of social processes involved. In this study, most social processes were used thereby heightening the success of rationalizations.

Chapter 7 reflects on the validation structure of beliefs and the indestructability of beliefs. The main belief considered here is the probability of securing a win, or, in other words the faith in or hope of securing a win. Interestingly, this seems very similar to the core belief of apocalyptic groups as described in Chapter 7. Some of the beliefs described in Chapter 3 could be restructured to act as built in validation logics or strategies to buffer critics. Some have classified a subset of the beliefs identified by Toneatto (1999) as justifications (Czerny, Koenig, and Turner 2008). They serve to protect a relevant belief, in this case, the probability or chance of winning, the dominant belief. Built in validation strategies, along with the structure of these
beliefs make them fairly indestructible. Gamblers are not interested in information\textsuperscript{43} (i.e. odds based information) that seeks to impose rationality on these beliefs. The combination of these factors makes it difficult to target these beliefs either via preventative (e.g., training modules or responsible gaming devices\textsuperscript{44}) or treatment (e.g., cognitive therapy) strategies that target rational thought and work best for rational people (McCown and Chamberlain 2000). More interestingly, this research suggests to “believe is natural; doubting requires an unnatural exertion of will in order to overcome the inertia of taken-for-grantedness” (Snow and Machalek 1982:23). In the end, the “scientific attitude” (Schutz 1971) of doubting may be deviant in the larger scope of beliefs that align with the “natural attitude”. Changing the core belief of gamblers is a difficult challenge, given their structure, validation logics and the overall desire to believe.

Reflecting on the insight of the final three chapters, it is clear that those seeking to change the problem gambler’s behaviour are faced with a great task. They, along with gamblers, are fighting social and cultural forces that propel gambling belief and activity. Furthermore, the belief structure itself is fairly impervious to disagreement. The most difficult belief to target appears to be the belief tied to the chances of winning given its link to the “natural attitude” and social and organizational reinforcement highlighted in Chapters 5 and 6. Conversely, PGs have little faith in the superstitious practices used to procure a win highlighted in Chapter 3. Additionally, these superstitious practices are not socially reinforced as is the case for the core belief, discussed in Chapter 6.

If the dissertation were distilled into a concrete finding, it would be problem gambling is not best viewed through a pathological lens especially as it relates to seemingly unusual beliefs; rather, it is best seen as the result of a problematic belief system, as "normal" as any other belief system. Like any belief system, it is non-rational\textsuperscript{45} rather than irrational and cannot be easily

\textsuperscript{43} Although this sample of gamblers appeared to lack interest in such information for the purposes of behaviour change, in the name of transparency and fairness, information related to odds and jackpot payouts should still be clearly and conveniently disclosed. In fact, this type of disclosure was a firm recommendation of a 2010 audit of the Ontario Alcohol and Gaming Commission regulatory policy.

\textsuperscript{44} Responsible gaming devices enable gamblers to track the amount of money and time spent on the machine. The goal is for gamblers to self-monitor thereby reducing the risks associated with erratic play (Schüll 2012:275-283).

\textsuperscript{45} That is, this study’s gamblers are not cognitively deficient, but choose to hold such beliefs alongside rational beliefs. Holding both non-rational and rational beliefs suggests belief complexity which other researchers have considered (e.g., Luhrmann 1989, 2015).
changed by contrary empirical evidence. So where do we go from here, once we take this assumption as fact? For one, the beliefs outlined in Chapter 3 are less impactful on problem gambling action than previously thought. Conversely, the core belief in the potential or chance of winning (i.e., faith in change) plays a pivotal role in gambling action, with sociocultural processes (Chapters 5 and 6) and belief validation logics (Chapter 7) reinforcing this belief. Again, in light of the findings here, challenging this particular belief proves difficult.

What, then, if anything, can be done then to help someone with a serious gambling problem? Converting a person from a problem gambler to a non-problem gambler requires getting that person to think about gambling – and perhaps about the world as whole – in a different way. When changing the world view of cult members, de-programming is a strategy used to reverse the effects of brainwashing. Deprogramming is a radical solution where the individual is forcibly removed from the cult context and subjected to non-consensual resocialization, an approach too extreme to merit serious consideration here. Furthermore, gamblers would still be nestled in the context which promotes such beliefs even when removed from the casino, thus limiting the effectiveness of such a strategy.

The PGs in this study appear to long for the hallmarks of community in the form of belonging, shared activity, and social support. While longing for these features of community they also sought an appropriate balance of togetherness and distance or security and freedom. In this way the casino satiated these and other needs. The strength of gambling’s pull for some appears linked to social deficits that the gambler is able to reconcile while engaged in gambling. Helping problem gamblers fill their time with activities that allow them to assuage some of their needs outlined in Chapter 5 (e.g., belonging, competition, pleasure, self-determination) might be worth investigating⁴⁶. This chapter alludes to larger economic, social, and political issues arising from neo-liberal policies that have left these gamblers struggling to find gainful employment and social support; leaving many financial compromised and socially unhinged. In many ways,

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⁴⁶ To some degree cognitive-behavioral oriented approaches to the treatment of PGs, oftentimes encourage gamblers to incorporate other pleasurable activities into their lives and social skills to help build healthier relationships. This treatment approach is said to be one of the most successful for disordered gamblers (Toneatto and Ladouceur 2003; Westphal 2008).
the casino becomes a sacred canopy of sorts, to use Peter Berger’s (1967) terminology, providing structure, order and guidance in an uncertain and insecure world (Bauman 2001; Giddens 1991).

As per the findings in Chapter 6, PGs find benefits that extend beyond the actual activity of gambling, allowing them to be connected as a communal entity, through shared activity, to some amorphous entity or higher order. Indeed, strongly held beliefs, even those of gamblers, must be treated carefully noting the perceived importance of it along with other aspects of their gambling life. Interventions need to recognize the social deficits that make such an activity particularly appealing and the ways in which the larger sociocultural context promotes such activity. This includes the land based casino context which seeks to propagate certain beliefs and values to assuage the various needs of PGs. Changes to the gambling environment, including the removal or rethinking of: individualized campaigns on gambling self-regulation, membership reward cards and ongoing contact tied to membership, hidden aspects of machine functionality which heighten gambling myths, slot machine tournaments which insinuate skill, and a culture promoting gambling as a viable option for financial gain as suggested by the “wall of winners” in some casinos may help minimize disordered gambling. Many of these factors are highly regarded by gamblers from this study, and their removal portents disgruntled gamblers, with some left devoid of the hope that gambling gives them. Furthermore, the efficacy of these changes remains uncertain and the efficacy of various regulative fixes warrants further research as others have also noted (e.g., Schüll 2012). Gamblers already heavily entrenched in this activity may continue to play despite such initiatives. Furthermore, the established mystery shrouding the gambling establishment, even with enhanced transparency measures, may leave gamblers doubting the validity and/or completeness of information provided.

In light of the findings here pertaining to the social and/or cultural reinforcement of beliefs, values, and other payoffs of involvement, in addition to ongoing gambling expansion, a host of challenges await anyone attempting to facilitate behaviour change in those heavily invested in gambling activity. In fact, research shows that very few disordered gamblers ever seek treatment (Cunningham 2005; Suurvali, Hodgins, Toneatto, Cunningham 2008). Slutske (2006) explains that a substantial portion of individuals with a history of pathological gambling
eventually recover, most without formal treatment\textsuperscript{47}. Although a natural recovery process might take place, the various costs that incur on this path for both the gambler (Responsible Gambling Council 2012) and those close to them should not be minimized (e.g., Darbyshire, Oster, and Carrig 2001; Tepperman 2009). Disordered gambling is very much a societal problem, requiring contextual inquiry into both its development and consequences. The expansion of gambling starting in the 1990s with a cultural shift toward post-industrial, consumption-driven societies continues with great vigour (Cosgrave 2008), playing an important role in both the fervour for this popular cultural activity and in the problems associated with it. That is, to decontextualize the problem gambler is to limit understanding of the factors that are said to propel disordered behaviour, including beliefs.

As Henslin (1967) makes clear, the beliefs of gamblers are a window into a fuller understanding of gambling behaviour. This research expands on this understanding, noting the need to reflect on the contextual factors propelling gambling beliefs and activities. Members of the casino find a sense of fulfillment inside its walls; in effect, it becomes a subculture complete with its own beliefs and ritual activities. In the end, however, the beliefs and ritual activities of problem gamblers inside this subculture are emblematic of the larger sociocultural environment in which they are embedded making it a particular challenge to decipher what causes and reinforces disordered gambling. Clearly, social and cultural factors all need to be factored into any comprehensive discussion of the gambling beliefs and actions of slot machine gamblers.

\textsuperscript{47} Hodgins, Wynne, and Makarchuk (1999) found that gamblers stopped gambling for reasons that include both financial and emotional problems. They estimate that roughly 36\% to 46\% of gamblers with a Level 3 SOGS score, or displaying significant gambling problems, would be considered “in recovery” or resolved gamblers.
References


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Appendices

Appendix 1: Problem Gambling Severity Index (PGSI)

Thinking about the last 12 months…

1. Have you bet more than you could really afford to lose?

Never=0  Sometimes=1  Most of the time=2  Almost always=3

2. Still thinking about the last 12 month, have you needed to gamble with larger amounts of money to get the same feeling of excitement?

Never=0  Sometimes=1  Most of the time=2  Almost always=3

3. When you gambled, did you go back another day to try to win back the money you lost?

Never=0  Sometimes=1  Most of the time=2  Almost always=3

4. Have you borrowed money or sold anything to get money to gamble?

Never=0  Sometimes=1  Most of the time=2  Almost always=3

5. Have you felt that you might have a problem with gambling?

Never=0  Sometimes=1  Most of the time=2  Almost always=3

6. Has gambling caused you any health problems, including stress or anxiety?

Never=0  Sometimes=1  Most of the time=2  Almost always=3

7. Have people criticized your betting or told you that you had a gambling problem, regardless of whether or not you thought it was true?

Never=0  Sometimes=1  Most of the time=2  Almost always=3
8. Has your gambling caused any financial problems for you or your household?

Never=0  Sometimes=1  Most of the time=2  Almost always=3

9. Have you felt guilty about the way you gamble or what happens when you gamble?

Never=0  Sometimes=1  Most of the time=2  Almost always=3
Appendix 2: Script to Determine Qualification (Focal Group)

When potential (focal group, slot machine gamblers) participants call they will receive the following telephone script to determine if they qualify to participate:

Hi, this is Tara Hahmann, the principal investigator of the study. Thank you for your interest. As you may know from the advertisement/posting, this study is on gambling beliefs and behaviours of slot machine gamblers. Can I start by asking if you are between 20 and 50 years of age? Do you spend over $100.00 per month at the slots? Do you consider slots your game of choice? If you are still interested, we will now move onto some additional questions to see if you qualify to participate in this study. They will take approximately 2 minutes of your time. Would you like to proceed?

Just to let you know, all information about excluded respondents or those who decide not to participate will be destroyed immediately. So we will proceed now with the questions:

1. Have you ever felt the need to bet more and more money?
   
   Yes________ No________

2. Have you ever had to lie to people important to you about how much you gambled?
   
   Yes________ No________

If both questions are answered with YES: let me tell you a bit more about the study, before you decide if you want to participate. You could be asked questions regarding:

- Your gambling beliefs

- Your gambling behaviour

- Family history, friends, work environment as they relate to gambling beliefs and behaviour

- Demographic questions including age and income
The interview will take about 60 minutes. You can quit at any time during the interview or refuse to answer any questions. The researcher will maintain complete confidentiality. Are you still interested in participating? Let’s arrange a meeting time and place.

OR

If one or both questions are answered with NO: sorry you do not qualify to participate. Thank you for your time and interest in the study.
Appendix 3: Script to Determine Qualification (Comparison Group)

When potential (comparison group) participants call they will receive the following telephone script to determine qualification for participation:

Hi, this is Tara Hahmann, the principal investigator of the study. As you may know from the advertisement/posting, this study is on decision making and beliefs (both religious and non-religious beliefs). Can I start by asking if you are between 20 and 50 years of age?

Given that this study is investigating the beliefs of non-gamblers, could you let me know if you have gambled at all this past year?

If NO: would you be interested in an hour long interview discussing your beliefs and decision making? Could we set up a time and place where we can meet for an hour long interview?

If YES: In the past year, did you spend over $100.00 per month gambling?

   If YES Or NO: we will now move onto some additional questions to see if you qualify to participate in this study. They will take approximately 2 minutes of your time. Would you like to proceed?

Just to let you know, all information about excluded respondents or those who decide not to participate will be destroyed immediately. So we will proceed:

1. Have you ever felt the need to bet more and more money?

   Yes_______ No_______

2. Have you ever had to lie to people important to you about how much you gambled?

   Yes_______ No_______
If both questions are answered with NO: thank you, you qualify to participate. Can we set up a time and place for a 60 minute interview?

OR

If one or both questions are answered with YES: unfortunately you don’t qualify to participate. Thank you for your time and interest.
Appendix 4: Letters of Information

Dear Participant,

You have expressed interest in participating in the study entitled: A Critical Realist Approach to the Study of Gambling Beliefs and Behaviour. The lead investigator on this study is Tara Hahmann, PhD. Candidate at the University of Toronto under the faculty supervision of Dr. Lorne Tepperman, Professor of Sociology at the University of Toronto.

A gap in our understanding of gambling beliefs and how they relate to behaviour is apparent in literature across disciplines. The purpose of this study is to gain a deeper understanding of what these beliefs are, how they are interpreted, what value they have for those who hold them, and how they may influence behaviour.

Participants will be informed about confidentiality and will be able decide if they want to give consent to be interviewed and have it recorded. Those who decide to participate will be interviewed by the lead investigator using a set of scripted questions to guide the interview. The interview will be recorded, and the recording will be transcribed into written form. All transcripts will be assigned a research code number and where applicable names will be substituted with pseudonyms (“false names”). The principal investigator will analyze the interviews to organize and describe what is learned. The faculty supervisor may view the transcribed data with a research code number and pseudonyms “false names”.

The risks of participating may include emotional discomfort. The benefits to participating include the opportunity for you to share your beliefs which will aid in developing a better understanding of gambling beliefs and behaviour in the research community. At the end of the interview, the interviewer will give you a $20.00 honorarium to thank you for your time. If you have any questions or concerns about your rights as a participant, you can contact the Office of Research Ethics at ethics.review@utoronto.ca or 416-946-3273.

Sincerely,

Tara Hahmann, MA, PhD. Candidate
Email: tara.hahmann@utoronto.ca, phone: 647-726-7446
Dear Participant,

You have expressed interest in participating in the study entitled: A Critical Realist Approach to the Study of Secular Beliefs and Behaviour. The lead investigator on this study is Tara Hahmann, PhD. Candidate at the University of Toronto under the faculty supervision of Dr. Lorne Tepperman, Professor of Sociology at the University of Toronto.

A gap in our understanding of how secular beliefs relate to behaviour is apparent in literature across disciplines. The purpose of this study is to gain a deeper understanding of what these beliefs are, how they are interpreted, what value they have for those who hold them, and how they may influence behaviour.

Participants will be informed about confidentiality and will be able to decide if they want to give consent to be interviewed and have it recorded. Those who decide to participate will be interviewed by the lead investigator using a set of scripted questions to guide the interview. The interview will be recorded, and the recording will be transcribed into written form. All transcripts will be assigned a research code number and where applicable names will be substituted with pseudonyms (“false names”). The principal investigator will analyze the interviews to organize and describe what is learned. The faculty supervisor may view the transcribed data with a research code number and pseudonyms “false names”.

The risks of participating may include emotional discomfort. The benefits to participating include the opportunity for you to share your beliefs which will aid in developing a richer knowledge of how beliefs influence decision making and behaviour. At the end of the interview, the interviewer will give you a $20.00 honorarium to thank you for your time. If you have any questions or concerns about your rights as a participant, you can contact the Office of Research Ethics at ethics.review@utoronto.ca or 416-946-3273.

Sincerely,

Tara Hahmann, MA, PhD. Candidate
Email: tara.hahmann@utoronto.ca, phone: 647-726-7446
Appendix 5: Consent Forms

**Research Project Title:** A Critical Realist Approach to the Study of Gambling Beliefs and Behaviour

**Researcher:** Tara Hahmann, under the supervision of Dr. Lorne Tepperman.

This consent form, a copy of which will be left with you for your records and reference, is to get your informed consent. It should give you the basic idea of what the research is about and what your participation will involve. If you would like more detail about something mentioned here, or information not included here, you should feel free to ask. Please take the time to read this carefully and to understand any accompanying information.

I, ______________________________, understand that this interview is being conducted for a study on gambling beliefs and behaviours at the University of Toronto. I understand that the researcher for this study is Tara Hahmann, a PhD. Candidate at the University of Toronto and that that I will be interviewed by her. The supervisor of this project will be Dr. Lorne Tepperman, Professor of Sociology at the University of Toronto. I understand the focus of this interview will be on my gambling beliefs and behaviour. I am aware that I may find some of the topics discussed in the interview upsetting and that I may experience some emotional discomfort. I am aware I do not have to answer any questions I don’t want to, and at any time I may stop the interview and speak off the record and still be able to continue with the interview if I want to. I understand that upon request the interviewer can provide me contact information for services that can be of assistance in the event that I need to talk to someone after the interview.

I understand that I will participate in an interview that will last approximately 1 hour. I understand that with my permission the interview will be audio-recorded and later transcribed. I am also aware that the only the researcher and supervisor of this project will be able to read the transcripts from the interviews but without identifying information. I understand the audio-recordings and transcripts will not have my name or any other identifying information on them. A research code number will be used instead to anonymize collected data and where names are appropriate in the transcript, a pseudonym “false name” will be assigned. All data will be kept on an encrypted USB flash drive, which will be password protected and this flash drive will be kept in a locked cabinet when not in use. Access to the flash drive and password are known only to the researcher (Tara Hahmann). I understand that the completed interview schedules, transcriptions, audio-files and other research data will be stored on the encrypted USB flash drive and files will be safely destroyed once the research is completed (i.e., within a year).

Any questions I have asked about the study have been answered to my satisfaction. I recognize that the researcher may in the future intend to publish or make presentations based on this research. However, I have been assured that no information will be released or printed that would disclose my personal identity and that my responses will be completely confidential. Any risks or benefits that might arise out of my participation have also been explained to my satisfaction.
I understand that my participation is completely voluntary, that my decision either to participate or not to participate will be kept completely confidential, and a $20.00 honorarium will be provided as a token of appreciation for my time. I further understand that I can withdraw from the study at any time without explanation and without any negative consequences, including compensation for my time.

I hereby consent to participate in this study.

Date: ________________________

Participant name: _______________________________

Participant signature: _____________________________

☐ I give permission to have this interview audio recorded

Participant name: __________________________

Participant signature: ____________________________

Consent Form

Research Project Title: A Critical Realist Approach to the Study of Secular Beliefs and Behaviour

Researcher: Tara Hahmann, under the supervision of Dr. Lorne Tepperman.

This consent form, a copy of which will be left with you for your records and reference, is to get your informed consent. It should give you the basic idea of what the research is about and what your participation will involve. If you would like more detail about something mentioned here, or information not included here, you should feel free to ask. Please take the time to read this carefully and to understand any accompanying information.

I, ______________________________, understand that this interview is being conducted for a study on gambling beliefs and behaviours at the University of Toronto. I understand that the researcher for this study is Tara Hahmann, a PhD. Candidate at the University of Toronto and that that I will be interviewed by her. The supervisor of this project will be Dr. Lorne Tepperman, Professor of Sociology at the University of Toronto. I understand the focus of this interview will be on my beliefs and behaviour. I am aware that I may find some of the topics discussed in the interview upsetting and that I may experience some emotional discomfort. I am aware I do not have to answer any questions I don’t want to, and at any time I may stop the interview and speak off the record and still be able to continue with the interview if I want to. I
understand that upon request the interviewer can provide me contact information for services that can be of assistance in the event that I need to talk to someone after the interview.

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I hereby consent to participate in this study.

Date: ________________________

Participant name: _______________________________

Participant signature: ____________________________

☐ I give permission to have this interview audio recorded

Participant name: _______________________________

Participant signature: ____________________________
Appendix 6: Interview Guide (Focal Group)

1. Can you tell me a bit about the last time you gambled? (probe: take me through the experience).
   1.1. Was it slots? Why slots (and not some other game)? What is it about the machines or the casinos that you are most intrigued by?
2. Who did you go with? Is it common for you to go with someone (or not)?
3. Did you win? How does that make you feel? What is it about gambling that you enjoy most?
4. How do you know if you are going to win or not? (do you think it is better to use certain machines, or gamble alone or with others….use good luck charms, push certain buttons in a certain order, go to a specific casino, a specific spot in the casino?)
5. How do I know which slot machine is good if I want to win?
6. What tips would you give someone who wanted to know how best to win at slots? (if said, no strategies….probe: what is the point of playing)?
   6.1. Have you found that this strategy has helped you win? (probe: What do you tell yourself when you don’t win with these strategies?)
   6.2. How does it feel to know something that maybe others don’t? or How does it feel to have this special insight?
7. Who do you share your gambling beliefs/strategies/tips with?
   7.1. Do you ever discuss these beliefs with people at the casino?
   7.2. Do you ever discuss these beliefs with people outside the casino? (probe: family, friends, co-workers, school, members of an organization)? (if yes, what, why? If no, why is that?)
   7.3. Oftentimes people feel eager to share their beliefs, like what do you enjoy sharing?
      OR…. So why do you think you are less eager to share these gambling beliefs?
8. Are your beliefs stronger before, during or after you play the slots?
   8.1. Before: how important is it to play the machine when you have these beliefs? Do you have to play right away?
   8.2. During: how important is it to keep playing when you have these beliefs?
   8.3. After: how much will these beliefs impact how quickly you go back to play?
9. Do you usually act on your beliefs? (or do you sometimes try to push them out of your mind?)

10. When are you most eager to gamble? (probe: Are you more or less likely to gamble when certain signs present themselves to you?) (e.g. during particular times of the day, or month or when you are in a certain mood or when weather is one way or the other?)

11. When do you gamble most, is it when you are around people or alone?

12. How does gambling make you feel in control? Why nb to be in control? OR Why is it good to be out of control? (probe: Is there another part of your life that you feel less in control of? Was there a time growing up when you felt out of control? Does gambling help you cope with things? What, how?)

13. What would a larger win be for you? What would you do with that win? (probe: why would it be important for you to do that and not something else?)

14. Why are you due for a win? Why you and not the guy/girl before you? (two scenarios, 1) guy robbed a bank and then won big on the slots and 2) the other lost big but is a good person and takes good care of his family. Do you think this outcome is fair?)

15. What if a relative left you a large inheritance, would you still gamble? Why?

16. Do you have any family, friends, coworkers, who gamble? (yes--Do they gamble with you? Do you talk about gambling at all? Do you talk about tips/strategies?)

16.1. Did anyone that you were close to gamble while you were growing up? Can you take me through that experience when you were growing up? Do you still have a relationship with that person? What does that relationship mean to you?

16.2. Can you take me through your first gambling experience? What stands out most about that experience?

17. Can you tell me about your relationship with your parent(s) or what was your primary caregiver? Do you think they were the best parents they could be? What things could they have done differently? Were they the best citizens they could be? OR Tell me a bit about your childhood?

18. Do you have a partner? Can you tell me about your relationship with your partner? Do you think your relationship is as good as it could be? How could things be made better? What areas?

19. What role does religion play in your life? Was this always the case? What changed?
19.1. How do you reconcile the two (religion and gambling).

19.1.1. How do they both fit in your life together?

20. What is your greatest achievement? Are you satisfied with all your achievements? What would you still like to achieve? Why is that important?

21. You mentioned on the phone, sometimes lying about your gambling. Can you tell me about this? Also, you said you felt the need to bet more and more. Can you tell me about that?

22. What would you say the costs of gambling have been for you? (probe: Why gamble when the costs are so high?)

23. If you wanted to change your gambling behavior, how best could someone (anyone) help you with that? And who could help you?

24. Do you think if someone were to explain the probability of winning, it would help you to reduce your gambling?

25. What are your thoughts on the recent news that a casino might be built in Toronto?

26. What are your thoughts on gambling? Do you think gambling is a problem in Ontario? Why do you think so many people gamble? (probe: The economy? Greater accessibility? The layout of the casino? What is intriguing about certain layouts?)

27. Demographic questions:

27.1. How old are you?

27.2. What is your country of origin? How long have you been in Canada?

27.3. What is your income range (gross), less than 20,000, 20,001-30,000, 30,001-40,000, 40,001-50,000, 50,001-60,000, 60,001-70,000 or more than 70,000?

27.4. What is the highest level of education you have attained?

27.5. What is your marital status?

27.6. What other type of gambling do you engage in other than slots?

27.7. How long have you been gambling (probe: legal gambling)?

27.8. Occupation/job/field?

27.9. Job status (employed/unemployed)

27.10. How much would you say you spend on gambling in an average month?

****Is there anything you would like to add or is there something I did not ask and should have?

Administer PGSI. Thank you for your time and insight! Give honorarium.
Appendix 7: Interview Guide (Comparison Group)

1. As I said on the phone, I am interested in how people form beliefs and how these beliefs inform the decisions they make.
   1.1. We all probably know people who are what we call superstitious. In this day and age, do you think superstitions play a role in the decisions people make?
      1.1.1. Yes, what do you think about that? Do you think this is a good or bad thing?
      1.1.2. No, why don’t you think so? Do you think this is a good or bad thing?

2. Do you have any superstitions?
   2.1. Would you say you are superstitious?
      2.1.1. Yes, why do you feel that you are?
      2.1.2. No, do you ever knock on wood, say bless you, throw salt over your shoulder, avoid certain numbers like 13, pick up a lucky penny or rub a Buddha belly!

3. Do people ever describe you as superstitious? Why do you think others describe you that way?

4. Can you think the last time you made an important decision?
   4.1. What was that decision?
   4.2. Can you tell me a bit about how you made your decision?
   4.3. Can you think about one or two of things that were most influential in making it?
   4.4. What tools would you say that you use to make a decision? (find superstitions)
      4.4.1. Yes, how does it make you feel to know that you have this ability or resource to draw on to help make your decisions?

5. Do you have items that bring you luck or give protection? (Probe: something that makes you feel empowered or brings you good fortune? Or helps protect others?)
   5.1. Do you keep a special item with you from someone or from a specific time in your life?
      5.1.1. Yes, can you tell me a bit about it? Why is it important?
      5.1.2. Yes, have you ever used such an item to make a decision?

6. Is there anyone your share these types of beliefs with (or share your thoughts on these items)?
   6.1. How important is that…to have people to share this with?
   6.2. Is there anyone you wouldn’t share this with and why?
6.3. Do you ever discuss these beliefs with people? (probe: family, friends, co-workers, school, members of an organization)?
   6.3.1. If yes, what do you share and why?
   6.3.2. If no, don’t you share them?

7. Are there any other tools that you use to help guide your decisions? (e.g., toss a coin, read a horoscope, check numerological numbers?)
   7.1. Yes, Can you take me through a time that you used these tools to make a decision?
      7.1.1. Do you think most people use similar tools to help make decisions?
         7.1.1.1. If yes, how does it feel to know that you share this with others?
         7.1.1.2. If no, how does it feel to know that you are different from others with respect to this?)
   7.2. No, do you know of anyone that uses tools like horoscopes,

7.3. Has anyone in your family had similar beliefs or used similar tools to make decisions?
   7.3.1. Yes, can you take me back to your earliest memory of someone in your family having similar beliefs or using similar tools?
   7.3.2. No, how do you think you developed these beliefs or tools? (anyone else guided you towards them or introduced you to them?)

8. There seems to be a growing interest in new age or alternative forms of spirituality. Do you agree? (Probe).
   8.1. If yes, why do you think this is the case?
   8.2. If no, why do you think it isn’t of growing interest?

9. So I said I was interested in non-religious and religious beliefs. What role does religion play in your life? (probe: Does God/higher being play a role in your life)?
   9.1. How long has it played a role in your life? Has it always played this type of role in your life? What changed and why?
   9.2. If it doesn’t anymore, why did you leave behind organized religion?

10. How do you reconcile the two (organized religion and other beliefs)?
   10.1. If it is a part of his/her life, how do they both fit together in your life?
   10.2. If no, do you think the two can coexist in someone’s life?
11. **Demographic questions:**

11.1. How old are you?

11.2. What is your country of origin? How long have you been in Canada?

11.3. What is your income range (gross), less than 20,000, 20,001-30,000, 30,001-40,000, 40,001-50,000, 50,001-60,000, 60,001-70,000 or more than 70,000?

11.4. What is the highest level of education you have attained?

11.5. What is your marital status?

11.6. Occupation/job/field?

11.7. Job status (employed/unemployed)

***Is there anything you would like to add or is there something I did not ask and should have?***

Thank you for your time and participation. Here is your honorarium.
# Appendix 8: Country of Origin

## Table 9. Country of Origin: Focal Group *

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*Statistics reported as percentages.

## Table 10. Country of Origin: Comparison Group *

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*Statistics reported as percentages.
### Appendix 9: Participant Description (Focal and Comparison Group)

Table 11. Sample Description by Participant Number: Focal Group

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<th>Participant Number</th>
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Table 12. Sample Description by Participant Number: Comparison Group
Appendix 10: Mean Gambling History Score by Age: Full Sample (Focal Group)

Table 13: Mean Gambling History Score by Age

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