

# The First Asia Pacific Conference on Gambling & Commercial Gaming Research

**Program and Presentation Abstracts** 



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The First Asia Pacific Conference on

Gambling and Commercial Gaming Research

**November 5-8, 2012** 

Gaming Teaching and Research Centre,

Macao Polytechnic Institute, Macau, China

# The Program and Venues at a Glance

#### Registration and conference administration will be open:

November 5, Monday 14:30-17:00(Venue A), 17:00-20:00(Venue B)

November 6, Tuesday 8:30-17:00 (Venue A)

November 7, Wednesday 8:30- 16:00(Venue A)

November 8, Thursday 8:30-12:00 (Venue A)

#### November 5, Monday

15:30-17:00, MPI Public Lecture (Venue A)

18:00 Reception and Welcome Dinner (Venue B)

#### November 6, Tuesday

9:30-10:00 Opening Ceremony (Rm321)

10:00-11:30 Keynote Speeches (Rm321)

11:30-12:00 Morning Tea

12:00-13:00 Parallel Session 1A (Rm336), 1B (Rm339), 1C (Rm340)

13:00-14:30 Lunch (Venue B)

14:30-16:00 Parallel Session 2A (Rm336), 2B (Rm339), 2C (Rm340)

16:00-16:30 Afternoon Tea

16:30-18:00 Parallel Session 3A (Rm336), 3B (Rm339), 3C(Rm340)

18:30 Dinner (Venue D)

#### November 7, Wednesday

9:00-10:30 Parallel Session 4A (Rm336), 4B (Rm339), 4C (Rm340)

10:30-11:00 Morning Tea

11:00-13:00 Parallel Session 5A (Rm336), 5B (Rm339), 5C (Rm340)

13:00-14:30 Lunch (Venue B)

14:30-16:30 Parallel Session 6A (Rm336), 6B (Rm339), 6C (Rm340)

17:30 Cocktail and Conference Dinner (Venue E)

#### November 8, Thursday

9:00-10:30 Parallel Session 7A (Rm336), 7B (Rm339),

10:30-11:00 Morning Tea

11:00-12:30 Keynote Speeches (Rm321)

12:45-14:00 Lunch (Venue B)

14:00-18:00 City Tour

18:30 APAGS General Meeting: KUAN I HIN Chinese Restaurant, 2/F Grandview Hotel

Macau 澳門君怡酒店 2 樓君怡軒

**Venue A:** Conference and MPI Public Lecture: Gaming and Teaching Research Centre, MPI Taipa Campus (King light Garden, r/c)澳門理工學院氹仔校區博彩教學暨研究中心

**Venue B:** Reception, welcome dinner, lunches: VALENCIA Restaurant, 2/F Grandview Hotel Macau(close to Jockey Club) 澳門君怡酒店 2 樓華倫西餐廳

Venue C: Conference Hotel: Hotel Taipa Square, Rua de Chaves, Taipa, Macau (close to Jockey Club ) 駿景酒店

Venue D: Dinner (November 6) Cozinha Pinocchio, Largo dos Bombeiros No. 38, Taipa(木偶葡國餐廳, 澳門氹仔消防局前地 38 號)

**Venue E:** Cocktail and Conference Dinner: Oasis, Galaxy Macau, COTAI, Macau (澳門路氹城「澳門銀河™」綜合渡假城綠洲餐廳)

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\*The conference is in the English language.

# The Program

# Registration

November 5, Monday

14:30-17:00 Gaming and Teaching Research Centre, MPI Taipa Campus 澳門理工學院氹仔校區博彩教學暨研究中心

17:00-20:00 VALENCIA Restaurant, 2/F Grandview Hotel Macau 澳門君怡酒店 2 樓華倫西餐廳

## 15:30-17:30, November 5, Monday

#### **MPI Public Lecture**

Venue: Room 321, Gaming and Teaching Research Centre, MPI Taipa Campus
The Corruption of World Sport by Betting and the Role of Asian Markets

David Forrest, University of Salford, UK

# 18:00 Reception and Welcome Dinner

Venue: VALENCIA Restaurant, 2/F Grandview Hotel Macau 澳門君怡酒店 2 樓華倫西餐廳

### November 6, Tuesday

#### **8:30-17:00 Registration**

Venue: Gaming and Teaching Research Centre, MPI Taipa Campus

# 9:30-10:00 Opening Ceremony

Venue: Room 321, Gaming and Teaching Research Centre, MPI

# 10:00-11:30 Keynote Speeches

Venue: Room 321, Gaming and Teaching Research Centre, MPI

- Responsible Gambling: What is the Responsibility of the Gambler and of the Operator in Self-Exclusion and Pre-commitment (Smart Card) programs?
   Robert Ladouceur, Université Laval de Québec, Canada
- The Unhappiness of Problem Gamblers
   David Forrest, University of Salford, UK

# 11:30-12:00 Morning Tea

# Parallel Session 1A: Treatment of Problem Gambling

12:00-13:00, November 6, Tuesday

Venue: Venue: Room 336, Gaming and Teaching Research Centre, MPI

Chair: Alun Jackson, University of Melbourne, Australia

- 1. An in-patient treatment programme for people with gambling problems **Peter Harvey**, Flinders University, Australia
- 2. Cultural Narratives of Chinese American Recovering Gamblers in Group Treatment

Eddie Yu-Wai Chiu, Richmond Area Multi-Service, USA

# Parallel Session 1B: Political Economy and Public Policy

12:00-13:00, November 6, Tuesday

Venue: Room 339, Gaming and Teaching Research Centre, MPI

Chair: Jorge Godinho, University of Macau

1. Taking other people's money: development and the political economy of Asian casinos

William Vlcek, University of St Andrews, UK

2. Pokies, Punters and Policy: What is to be done about problem gambling? An Australian Overview

Nadine Grinblat, Australasian Gaming Council, Australia

# **Parallel Session 1C: Culture and Gambling**

12:00-13:00, November 6, Tuesday

Venue: Room 340, Gaming and Teaching Research Centre, MPI

Chair: Jia Yuan, University of Macau, Macau

- The Developmental State, Casino Capitalism and Crime in Macao Sonny Lo, Hong Kong Institute of Education, Hong Kong
- 2. The socialization processes of online gambling: experiences of Finnish online gamblers

Jani Kinnunen, University of Tampere, Finland

13:00-14:30 Lunch (VALENCIA Restaurant, 2/F Grandview Hotel Macau)

# **Parallel Session 2A Gambling in Western Culture**

14:30-16:00, November 6, Tuesday

Venue: Room 336, Gaming and Teaching Research Centre, MPI

Chair: **Zhidong Hao**, University of Macau

1. Internet Gamblers in Australia: Gambling Behaviour, Gambling Problems and Comparisons with Non-Internet Gamblers

Nerilee Hing, Southern Cross University, Australia

2. Gambling in Europe: an anthropological approach

Rebecca Cassidy and Claire Loussouarn, Goldsmiths, University of London

3. Types of past-year gambling activities influenced by social motivations and gender

Michael Ellery, University of Manitoba, Canada

# **Parallel Session 2B Social Impacts of Gambling**

14:30-16:00, November 6, Tuesday

Venue: Room 339, Gaming and Teaching Research Centre, MPI

Chair: Eddie Chiu, Alliant International University, USA

 Problem Gambling and Family Violence in Chinese Help-Seeking Clients: Prevalence, Impact and Coping

**Mei Lo Elda Chan**, Tung Wah Group of Hospitals Integrated Centre for Addiction Prevention and Treatment, Hong Kong

- Distinct emotions and their regulation in recreational and problem gambling Mikko Salmela, University of Helsinki, Finland
- Health impacts of gambling on Asian families and communities in New Zealand Amritha Sobrun-Maharaj and Fiona Rossen, University of Auckland, New Zealand

# **Parallel Session 2C Chinese Gambling**

14:30-16:00, November 6, Tuesday

Venue: Room 340, Gaming and Teaching Research Centre, MPI

Chair: Christopher Anderson, Monash University, Australia

- Locus of control and gambling behavior among Chinese gamblers
   Vivienne Y.K. Tao, University of Macau, Macau
- Could materialism and perceived equity predict gambling amount? A comparison between casino and non-casino workers

Kwok Kit Tong, University of Macau, Macau

3. Gender Difference in the Relationship between Gambling Severity and Health Correlates among Hong Kong People

Wai Lim Li, McKenzie & Associates Rehabilitation Services Ltd, Hong Kong

**Afternoon Tea 16:00-16:30** 

# **Parallel Session 3A Gambling Beliefs**

16:30-18:00 November 6, Tuesday

Venue: Room 336, Gaming and Teaching Research Centre, MPI

Chair: Imelu Mordeno, University of St. Joseph, Macau

1. Psychometric Properties of the revised Inventory of Gambling Motives, Attitudes and Behaviors (GMAB-R)

Anise Man Sze Wu, University of Macau, Macau

- 2. Cross-cultural comparison of luck between Chinese and Caucasian individuals **Eric Hoo,** University of Sydney, Australia
- 3. Luck and Superstition in Gamblers

Helen Soteriou, City University, UK

# **Parallel Session 3B Responsible Gambling**

16:30-18:00 November 6, Tuesday

Venue: Room 339, Gaming and Teaching Research Centre, MPI

Chair: Peter Harvey, Flinders Centre for Gambling Research, Australia

 Responsible Gambling with an Emphasis on Consumer Protection: A CSR Framework for Macau's Casinos

Zhidong Hao, University of Macau, Macau

Linda Hancock, Deakin University, Australia

2. Consumer perspectives on gambling harm minimisation measures in an Australian jurisdiction

Alun Jackson, University of Melbourne, Australia

3. Exposure or Adaption? Evidence from Macau

Guihai (Samuel) Huang, Macao Polytechnic Institute, Macau

# **Parallel Session 3C Gaming Business Administration**

16:30-18:00 November 6, Tuesday

Venue: Room 340, Gaming and Teaching Research Centre, MPI

Chair: IpKin Anthony Wong, Institute for Tourism Studies, Macau

- Selection of Gaming Destinations among Mainland Chinese
   Cathy Hsu, The Hong Kong Polytechnic University, Hong Kong
- 2. Casino Gambling in the Asian Millennium: Environment, Strategies, and Implications

Sudhir Kale, Bond University, Australia

3. Identifying Extremely Frequent Casino Gamblers-A FSQCA Approach **Ting-Hsiang Tseng**, Feng Chia University, Taiwan

18:30 Dinner Cozinha Pinocchio, Largo dos Bombeiros No. 38, Taipa(木偶葡國餐廳, 澳門氹仔消防局前地 38 號)

# November 7, Wednesday

## **8:30-16:00 Registration**

Venue: Gaming and Teaching Research Centre, MPI Taipa Campus

# **Parallel Session 4A Gaming Business Administration**

9:00-10:30, November 7, Wednesday

Venue: Room 336, Gaming and Teaching Research Centre, MPI Taipa Campus

Chair: Shianghau Wu, Macau University of Science and Technology, Macau

- Stress and productivity in hospitality and gambling workplaces
   Helen Breen, Southern Cross University, Australia
- Using game simulations to shed insight into common gaming behaviours
   Mark Spence, Bond University, Australia
- 3. The Text Mining Analysis on Public Opinion Focus toward Macau's Gambling Industry(2011-2012)

Shianghau Wu, Macau University of Science and Technology, Macau

# **Parallel Session 4B Problem Gambling**

9:00-10:30 November 7, Wednesday

Venue: Room 339, Gaming and Teaching Research Centre, MPI Taipa Campus

Chair: Nerilee Hing, Southern Cross University, Australia

- Effects of unrelated arousal on reckless gambling behavior Takuhiro Takada, University of Tsukuba, Japan
- Casino Employee Perceptions of Gambling and Problem Gambling
   Brett Abarbanel and Sarah St. John, University of Nevada, Las Vegas, USA
- Addiction to Gambling: A Matter of Will?
   Thomas Amadieu, University of Paris-Sorbonne, France

#### **Parallel Session 4C Problem Gambling**

9:00-10:30, November 7, Wednesday

Venue: Room 340, Gaming and Teaching Research Centre, MPI Taipa Campus

Chair: Claire Loussouarn, Goldsmiths, University of London

- The Suitableness of Both DSM-IV and SOGS as the Diagnostic Criteria for Problem Lottery Players in Mainland China
  - Haiping Chen, Beijing Normal University, China
- Examining the Factor Structure of the Victorian Gambling Scale in Gambling-exposed Chinese Casino Employees
  - Imelu Mordeno and Sin U Leong, University of St. Joseph, Macao
- 3. Pathways Development of Problem Gamblers and Implications for Treatment Concerns

**Ying Ying Chan**, Upper Iowa University (Hong Kong Campus)

Morning Tea 10:30-11:00

# Parallel Session 5A Culture and Gambling

11:00-13:00, November 7, Wednesday

Venue: Room 336, Gaming and Teaching Research Centre, MPI Taipa Campus

Chair: Linda Hancock, Deakin University, Australia

1. Not all gamblers are created equal: which game to play depends on the personality trait

**Shu Li** and **Zhu-Yuan Liang**, Institute of Psychology, Chinese Academy of Sciences, China

2. Gambling culture in China as compared to that of India

Carlos Gohn, University of Macau, Macau

3. Cultural Diversity and Gambling: Exploring the Impact of Culture and Migration on Gambling

**Christopher Anderson** and **Harriet Radermacher**, Monash University, Australia

4. An Exploratory Study on Hong Kong and Mainland Chinese Gaming Behavior in Macau Casinos

Louisa Yee-Sum Lee, The Hong Kong Polytechnic University, Hong Kong Parallel Session 5B Lottery and Gaming Industry

11:00-13:00, November 7, Wednesday

Venue: Room 339, Gaming and Teaching Research Centre, MPI Taipa Campus

Chair: Shuang Liu, Macao Polytechnic Institute, Macau

- Regulation of China Lottery Industry: Perspective of Protecting the Vulnerable Changbin Wang, Macao Polytechnic Institute, Macau
- 2. The concession for instant lotteries and sports betting in Macau **Jorge Godinho**, University of Macau, Macau
- 3. Evolution of the Industry Life Cycle Characteristics of Variables after Macau Gambling Liberalization

Jinquan(Jim) Zhou, Macau University of Science and Technology, Macau

4. The Social-Responsibility-Based Management of Public Opinion for Lottery Industry

Kun Li, Beijing Normal University, China

# **Parallel Session 5C Social Factors of Gambling**

11:00-13:00, November 7, Wednesday

Venue: Room 340, Gaming and Teaching Research Centre, MPI Taipa Campus

Chair: Zhidong Hao, University of Macau, Macau

 Impacts of Parental Gambling on Adolescent Gambling Behavior and Mental Health Status: A Hong Kong School-based Study

Siu Man Hsu, HKFYG Youth Wellness Center, Hong Kong

Irene Wong, Hong Kong Polytechnic University, Hong Kong

2. Problem Gambling in Chinese American Adolescents: Characteristics and Risk Factors

Eddie Yu-Wai Chiu, Alliant International University, USA

3. Fear of the future: a narrative analysis of the experiences of partners of problem gamblers

**Elaine Nuske**, Centre for Gambling Education and Research, Southern Cross University, Australia

 Examining the Latent Structure of Gambling Motivation Scale in Gambling-exposed Chinese Casino Employees Carla Coteriano, Galaxy Macau, Macau and Sin U Leong, University of St. Joseph, Macau

13:00-14:30 Lunch (VALENCIA Restaurant, 2/F Grandview Hotel Macau)

# Parallel Session 6A Casino Management

14:30-16:30 November 7, Wednesday

Venue: Room 336, Gaming and Teaching Research Centre, MPI Taipa Campus

Chair: Sudhir Kale, Bond University, Australia

1. Loyalty program membership influences perceptions of service quality, customer satisfaction and loyalty: evidence from Macao casinos

Yongdong Shi, Macau University of Science and Technology, Macau

2. An Investigation of Casino Service Experience

Anthony IpKin Wong, Institute for Tourism Studies, Macau

3. Service attributes of Casinos in Macau

L C Koo, City University of Macau, Macau

4. Attitudinal and Behavioural Loyalty amongst Casino Players in Macau Catherine Prentice, Swinburne University, Australia

# **Parallel Session 6B Gaming Business Administration**

14:30-16:30 November 7, Wednesday

Venue: Room 339, Gaming and Teaching Research Centre, MPI Taipa Campus

Chair: Max Zhao, Institute for Tourism Studies, Macau

1. The motives for recreational gambling

Ivan Ka Wa Lai, Macau University of Science and Technology, Macau

- 2. Understanding Macao Casino Gambling Behaviors of Chinese Subcultures **Penny Yim King Wan**, Institute for Tourism Studies, Macau
- 3. Locus of control on luck: Theoretical and strategic implications for casino gaming

Lawrence Hoc Nang Fong, Hong Kong Polytechnic University, Hong Kong

4. Interactive Competition between Casino Corporations: The Example of Macau **Erdan Ma**, Macao University of Science and Technology, Hong Kong

# **Parallel Session 6C Economics of Gambling**

14:30-16:30 November 7, Wednesday

Venue: Room 340, Gaming and Teaching Research Centre, MPI Taipa Campus

Chair: **Irene Wong**, Hong Kong Polytechnic University

- Is Lottery Demand Driven by Effective Price? Evidence from China Lottery
   Jia Yuan, University of Macau, Macau
- 2. Advanced computer modeling of horse racing to identify profitable wagering opportunities

William Benter, University of Southampton, UK

3. Resolving the question of why favourite-longshot bias exist in some betting markets but not in others

David C.J. McDonald, University of Southampton, UK

4. A Tale of Two Asian Cities

Danny Ng, Edith Cowan University, Australia

#### 17:30 Cocktail and Conference Dinner

Oasis, Galaxy Macau, COTAI, Macau (澳門路氹城「澳門銀河™」綜合渡假城綠洲餐廳)

#### November 8, Thursday

## **8:30-12:00 Registration**

Venue: Gaming and Teaching Research Centre, MPI Taipa Campus

# **Parallel Session 7A Gaming Business Administration**

9:00-10:30, November 8, Thursday

Venue: Room 336, Gaming and Teaching Research Centre, MPI Taipa Campus

Chair: Catherine Prentice, Swinburne University, Australia

 A Study of Cognition and Effects on Gaming Education-National Kaohsiung University of Hospitality and Tourism as an Example

**Teng-Yuan Hsiao**, National Kaohsiung University of Hospitality and Tourism, Taiwan

2. Applying TRIZ Based Business Innovation Tools to Integrated Resort Development in Matsu

Tai-Chi Wu, I-Shou University, Taiwan

3. An Empirical Analysis of Synthesizing the Effects of Service Quality, Perceived Value, Corporate Image and Satisfaction on Gamblers' Behavioral Intentions in the Gaming Industry: The Case of Macau

Jonathan Hung-Che Wu, Macau University of Science and Technology Macau

# **Parallel Session 7B Pathway Model**

9:00-10:30, November 8, Thursday

Venue: Room 339, Gaming and Teaching Research Centre, MPI Taipa Campus

Chair: Rebecca Cassidy, Goldsmiths, University of London, UK

- Pathways to problem gambling: A summary of research from 2010-2012
   Chi Chuen Chan, University of St. Joseph, Macau
- 2. Problem gambling and emotional vulnerability among women **Ching Yue Chan**, Upper Iowa University (Hong Kong Campus)
- 3. Gambling pathways development of triad members, female sex workers, male sex workers, and taxi drivers: A summary of four qualitative studies on gambling deviant subcultures in Hong Kong.

Paul Khiatani, Upper Iowa University (Hong Kong Campus)

# 10:30-11:00 Morning Tea

## 11:00-12:30 Keynote Speeches

Venue: Room 321, Gaming and Teaching Research Centre, MPI Taipa Campus

The Growth Trend of Macau's Gambling Industry: a Scenario Analysis

Zhonglu Zeng, Macao Polytechnic Institute, Macau

Informed Choice: Are 'Addicted' Gamblers able to Make Rational Choices?

Alex Blaszczynski, University of Sydney, Australia

**Closing Remarks 12:30-12:45** 

**12:45-14:00 Lunch** (VALENCIA Restaurant, 2/F Grandview Hotel Macau)

14:00-18:00 City Tour

**18:30 APAGS General Meeting:** KUAN I HIN Chinese Restaurant, 2/F Grandview Hotel Macau 澳門君怡酒店 2 樓君怡軒

# **Presentation Abstracts**

#### Casino Employee Perceptions of Gambling and Problem Gambling

Brett Abarbanel(University of Nevada, Las Vegas), Bo Bernhard(University of Nevada, Las Vegas), Debi LaPlante(Cambridge Health Alliance, Harvard Medical School), and Sarah St. John (University of Nevada, Las Vegas)

Because gambling industry employees are at-risk for gambling-related problems (Hing & Breen, 2008; Hing & Gainsbury, 2011; LaPlante, Gray, LaBrie, Kleschinsky, & Shaffer, 2011; Shaffer & Hall, 2002; Wu & Wong, 2007), empirical attention is warranted. Accordingly, this research examined casino employees? Beliefs about what constitutes gambling and problem gambling by surveying new employees at a Las Vegas Strip casino prior to their responsible gambling orientation training. More specifically, we considered whether there were any associations apparent between employees? Gambling industry tenure or gambling frequency prior to survey, and their gambling-related beliefs. We hypothesized that pre-training employee who gamble more frequently and those new to the industry, would be less likely to accurately define gambling and problem gambling. We used ANOVA to compare cumulative gambling knowledge scores for different gambling frequency and tenure groups, and chi-square tests to look at group comparisons of knowledge of individual games and problem gambling indicators. We observed a significant relationship between employees? Tenure and their definition of sports betting (p = .043) and poker (p = .052) as Gambling Relative to new- or long-tenured employees, middle-tenured employees were more likely to report sports betting and poker are not gambling activities. Our analysis also showed a significant relationship between employees? Gambling frequency and their belief whether gambling is a problem when any gambling is done (p = .02), and whether gambling is a problem when someone loses money (p = .015). In both cases, employees who gamble less frequently are more likely than others to believe that gambling is a problem. These findings illustrate that not all new gambling industry employees are alike and specialized training might be necessary to ensure optimal responsible gambling knowledge within the industry workforce. By better understanding employees' perceptions of gambling, training programs could target gaps in knowledge and understanding.

#### Addiction to Gambling: A Matter of Will?

Thomas Amadieu (University of Paris-Sorbonne)

Pathological gambling has been sparsely studied from a sociological point of view, the phenomenon having usually been apprehended by psychologists and other specialists of mental disorders. The present study aims at testing the empirical validity of social theories on addiction, in particular the notions of weakness of will and time-discounting. Is the pathological gambler rational or irrational? This work hypothesizes that in a context of strong habit and of depreciation of themselves and their future gamblers may have good reasons to keep playing. Excessive players evolve in a social context that favors a strong attachment to the activity, despite their frequent desire to stop. Empirical evidences rely on

semi-structured interviews with gamblers and ethnographic observations in Parisian horse-race betting shops (France) as well as on reports of interviews of pathological gamblers consulting at an addiction treatment centre. Results show that rational mechanisms partly explain excessive gambling behavior.

#### Cultural Diversity and Gambling: Exploring the Impact of Culture and Migration on Gambling

Christopher Anderson and Harriet Radermacher (Monash University)

Approximately 70% of the Australian adult population participates in some form of gambling activity every year and approximately 2.1% of the population may develop gambling problems (Productivity Commission, 2010). However, people from CALD communities may be particularly vulnerable to problem gambling due to pre-existing vulnerabilities, factors related to migration, as well as cultural beliefs. They are often excluded from research for various reasons (e.g. high cost, difficulty recruiting participants; Feldman et al., 2008), resulting in limited and fragmented evidence-based research relating to the experiences and role of gambling in the lives of Australia's CALD communities. This paper will present the findings from the first stage of a qualitative research study to investigate the experiences, attitudes and beliefs about gambling of people from CALD communities, and examine how these cultural perspectives influence their gambling proclivity and their help-seeking behaviour and access to support services. The preliminary findings from a series of key informant interviews with community leaders and service providers to CALD, Chinese- and Tamil-speaking communities be presented, including the examination of challenges in recruitment and gaining trust and overcoming secrecy. These findings will then be used to inform the next stage of the project, which will be to interview members from the Chinese and Tamil speaking communities. It is anticipated that a more comprehensive understanding of the issues will be able to inform strategies and assist organisations within the sector to provide more culturally appropriate support in the future.

#### Advanced computer modeling of horse racing to identify profitable wagering opportunities

William Benter (University of Southampton)

The use by horserace bettors of advanced statistical models for estimating outcome probabilities has been a growing trend in the racing world over the past three decades. The author will describe in some detail the structure of these probability models, and give an overview of the steps necessary to develop such a model in practice. Also described will be the relevant mathematical formulae useful for implementing an optimal wagering strategy in pari-mutuel betting pools.

#### Informed choice and gambling: Are 'addicted gamblers able to make rational choices?

Alex Blaszczynski(University of Sydney)

The decision to gamble is, or ought to be, based on an individual making an informed choice. Industry operators and governments share responsibility in guaranteeing sufficient information to individuals on which choices can be based. However, to make optimal informed choices, individuals must assume some

responsibility for being aware of the motivation underlying their behaviour, being aware of the presence and impact of irrational and erroneous cognitions have an accurate perception of the probabilities of winning, and accepting the risk and implications that losing may have on their financial and personal circumstances. However, it is recognized that informed choice, by itself, does not guarantee that decisions made will be optimal. There are multiple external factors involving psychological, personality and neurobiological processes that may interact resulting in an individual selecting poor decisions. In particular, the addiction model suggests that neurochemical dysregulation involving the dopaminergic system with projections into the prefrontal lobe are associated with anticipatory rewards and inhibition of executive functions effectively 'high-jacking' the brain. This raises important questions as to the extent to which gambling represents a 'rational' choice or is the product of neurobiological forces that impair decision-making and control. Determining the extent to which an individual is responsible for poor decision-making in gambling has important therapeutic and legal implications. This presentation outlines the relevant issues but raises more questions than answers in so doing.

#### Stress and productivity in hospitality and gambling workplaces

Helen Breen, Margaret Tiyce, Nerilee Hing and Grant Cairncross (Southern Cross University)

Workplace stress has business and human costs for employees, organisations, families and society. However, employee stress and the workplace stressors that create it go largely unaddressed by organisations. Hospitality workplaces, including gaming venues where the conditions of work usually include a high pressure environment, appear especially conducive environments for employee stress, although little gambling research has examined this. Through qualitative analysis of data from a previous study of gaming venue employees, this paper explores stressors in gambling workplaces. The analysis reveals that hospitality employment conditions, such as uncertain shift work, demanding work roles and high levels of emotional labour are experienced by gaming employees as hospitality employees. In addition, stressors distinctive to the gambling workplace include: close patron interactions (such as building relationships with customers and experiencing role conflict), uncertainty and lack of control (such as managing customers with alcohol-related problems and gambling losses), legal responsibilities (such as providing responsible gambling and responsible alcohol service within venue management goals), ethical concerns (such as role ambiguity of providing duty of care to customer and profit maximisation for owners), and super-charged environments (such as a highly stimulating physical environment including noise and lights). The tendency to view stress as an individual problem overlooks important environmental factors that heighten business costs in productivity losses and human resource overheads. Understanding causes of workplace stress and introducing effective human resource strategies to reduce stress may improve the efficiency, energy and performance of employees, may increase may an organisations's productivity and performance of employees, may increase may an organisations? productivity and deliver health benefits for employees.

Pathways to problem gambling: A summary of research from 2010-2012

This study is a meta-analysis on the results of eight projects undertaken by the first author and his research team in Hong Kong and Macau. The purpose of the present meta-analysis was to understand the pathways development of recreational and problem gambling. These eight research projects were all qualitative studies on different groups of active gamblers, which included day-traders (N=16), elderly gamblers in public housing estates (N=25), working class women (N=15), young gamblers primarily interested in soccer-betting (N=18), a group of gamblers with criminal background (N=11), female sex workers (N=20), male sex workers and taxi drivers (N=20) and working adults (N=20). All the participants were clinically interviewed by the first author, who is an experienced clinical psychologist or his assistants. The interviews were structured on the Diagnostic and Statistical Manual 4th edition, text revision (American Psychiatric Association, 2000). The questions covered the participant? 胀 developmental history, his/her recollections on the acquisition and maintenance of the gambling habits, his career and family development and the current state of gambling. In addition, personality tests and the Problem Gambling Severity Index ((Ferris & Wayne, 2001) will be given to the participants in order to assess their personality and gambling involvement. Results indicated that 25% of the participants can be classified as pathological gamblers. Most of the pathological gamblers came from the groups of sex workers and gamblers with criminal background. Further analysis on the participants? Background and history and their trajectory of gambling development demonstrate that the pathways development of problem gambling does not follow a linear model, whereby problem gambling is always preceded by recreational gambling. The current study clearly indicates that the basic differences between recreational and problem gambling are more qualitative than quantitative. When compared to recreational gamblers, pathological gamblers were found to have significant deficits in impulse control, which resulted in frequent chasing of losses, the preoccupation of gambling and the failure to pursue a law-abiding lifestyle. Further, most of the pathological gamblers show a general lack of adequate moral development. While the current study supports the claims of Volberg (2002) and Blaszczynski and Nower (2002) model, it proposes a new model that focuses the subjective experiences of gambling and the influences of one? 胖 work and social environment.

#### Problem gambling and emotional vulnerability among women

Ching Yue Chan(Upper Iowa University ,Hong Kong Campus), Keis Ohtsuka, Ki Hu Ho, Mei La Cheung

Problem gamblers tend to have higher rates of depressive symptoms (Goodyear-Smith et al., 2006). Compared with men, women with gambling problems usually experience higher levels of negative moods and women gamblers who scored high on avoidance coping tended to exhibit more problems with their gambling (Brown & Coventry, 1997; Trevorrow & Moore, 1998). Women were more likely to gamble in social games of chance (e.g., bingo, cards, slot machines) (Noella, 2010). The present study aimed to investigate emotional vulnerability and problem gambling for female Mahjong players. One hundred and forty nine women (aged 25-55) from Hong Kong were recruited in the current study. All participants were assessed with Chinese Beck Depression Inventory (Zheng et al, 1988) and the Problem Gambling Severity Index (Ferris & Wayne, 2001). The major findings were that depression was found to be correlated positively with problem gambling. When compared with social gamblers and non-gamblers, women with problem gambling tend to be more depressive. Further statistical analysis indicated that their scores on the depression scale can predict their involvement in gambling. As a social game, mahjong appears to be a game of choice for women with problems in adjusting to everyday problems.

# Problem Gambling and Family Violence in Chinese Help-Seeking Clients: Prevalence, Impact and Coping

Elda Mei Lo Chan (Tung Wah Group of Hospitals Integrated Centre for Addiction Prevention and Treatment), Tan Lei Daniel Shek(The Hong Kong Polytechnic University) and Nicki Dowling(The University of Melbourne)

Despite substantial evidence that problem gambling is associated with a wide range of family difficulties, only limited effort has been devoted to studying family coping styles and impacts of problem gambling on families, including family violence. In particular, scientific studies on the above issues amongst Chinese communities are non-existent. The aims of this study were to a) determine the prevalence of family and couple violence among families who experience gambling problems; b) explore how family members cope with their family members' gambling problems and c) examine the relationships between family coping styles and family impacts.

A total of 285 participants (182 gamblers and 103 family members) were recruited from Tung Wah Group of Hospitals Even Centre over a 12 month period. Information on demographic characteristics, gambling behaviour, alcohol and drugs use, gambling related family impacts and coping, family violence victimization and perpetration, and psychological symptoms was collected. Results showed that 11.6% (n=12) of family members reported having experiences of being a victim in family and couple violence, and 12.6% (n=13) of them reported being the perpetrator. Furthermore, 14.6% (n=15) reported being both the victim and perpetrator. For the gambler's group, 24.2% (n=44) reported being victimized, 6.0% (n=11) reported being the perpetrators, and 4.9% (n=9) reported being both the victim and perpetrator. Significant differences on coping styles and family impacts between problem gamblers and family members of gamblers were found. Impacts on family had stronger correlations with withdrawal coping than tolerant-inactive and engaged coping.

As the current service provision is fragmented with little attention paid to family impacts and coping, the findings of this research will be useful for the development of an appropriate intervention and treatment model including family coping skill training programs and the inclusion of family and couple therapy in treatment programs.

#### Pathways Development of Problem Gamblers and Implications for Treatment Concerns

Ying Ying Chan (Upper Iowa University) and Chi Chuen Chan (University of St. Joseph)

This research project is a qualitative study on the pathways development of pathological gamblers in Hong Kong. In this study, we were particularly interested in the pathways development of problem gamblers with similar occupational nature. The recruitment of these individuals has proved to be difficult as they would usually not be amenable for treatment. In this study, the snowballing approach was employed. Thirty participants with similar occupational nature took part in the current study. All participants were administered with a battery of personality measures, which included the Beck's Depressive Inventory (BDI), a clinical interview based on the Diagnostic and Statistical Manual (4th edition, text revision), and the Problem Gambling Severity Index (Ferris & Wayne, 2001). Detailed psychological assessment was performed by an experienced clinical psychologist. The results showed that 18 or 60% of the participants could be considered as pathological gamblers. Among these gamblers, the majority (N=11) could be classified as behaviorally conditioned problem gamblers according to the Blaszczynski & Nower (2002). The characteristics of the behaviorally conditioned

problem are repeated poor judgment demonstrated in gambling behaviors, but lacking a specific psychiatric pathology. These gamblers might lead a socially irresponsible lifestyle. 5 problem gamblers can be classified as antisocial impulsivity problem gambler with the majority being diagnosed with antisocial personality disorder according to the Blaszczynski and Nower (2002) model. Antisocial impulsivity problem gambler tend to have emotional vulnerability, multiple addictions, and other comorbid psychiatric conditions. Their motivation for treatment is poor. Further, the results of this study are interpreted with the models of pathological gambling (Blaszczynski & Nower, 2002; Chan & Ohtsuka, 2011) and the particular cultural context of Hong Kong.

# The Suitableness of Both DSM-IV and SOGS as the Diagnostic Criteria for Problem Lottery Players in Mainland China

Haiping Chen (Beijing Normal University)

Diagnostic criterion is very important for a prevalence of Problem Gamblers`. But in Mainland China, no gaming or gambling except lottery is legal, and lottery issued by the government is propagandized as a behavior of public interest. Is diagnostic criterion of problem lottery players (PLP) same to that of problem gamblers in the case? 19-item DSM-IV and 16-item SOGS are adopted to compare their suitableness for PLPs. Data from an online survey of 19,389 lottery players shows Both DSM-IV and SOGS: (1) have high alpha coefficients and split-half coefficients; (2) gave quite similar PLP prevalence; (3) comprise a few of items that its described behavior is rather popular among the general lottery players; and (4) do not include some characteristic behaviors of PLPs. It is concluded that it is necessary to make diagnostic criterion specially for PLPs in Chinese Mainland.

#### Problem Gambling in Chinese American Adolescents: Characteristics and Risk Factors

Eddie Yu-Wai Chiu (Alliant International University)

A total of 192 Chinese American students (aged 13-19) from 9<sup>th</sup> to 12<sup>th</sup> grades were recruited from three high schools in San Francisco, California. Students were administered the South Oaks Gambling Screen Revised for Adolescents (SOGS-RA) and a questionnaire that inquired about demographics, gambling behaviors, substance use, video game playing, and other related domains. This study found that estimated past-year prevalence rate among this adolescent group was 10.92%, much higher than the rates reported by several national studies, which ranged from 2% to 6%. The findings here provide evidence to support ethnic minority status as an important factor associated with problem gambling. Other findings also indicate that problem gambling may manifest itself differently in ethnic minority communities and needs to be better understood. Clinical and research implications of the findings are discussed.

#### **Cultural Narratives of Chinese American Recovering Gamblers in Group Treatment**

Eddie Yu-Wai Chiu( Richmond Area Multi-Service, San Francisco)

Recent studies have shown that Chinese Americans have disproportionately high rates of problem and pathological gambling. However, to date there are only a few culturally specific treatment programs in

Northern America that focus on gambling problems in this population. Despite that many Chinese gamblers respond positively to these programs, factors contributing to the recovery are largely unknown. In order to achieve a better understanding of the issues related to providing culturally sensitive and effective intervention, it is important to explore the experiences of recovering gamblers in treatment. This is a preliminary project to collect cultural narratives of Chinese recovering gamblers in group treatment. Cultural perception of gambling problems and recovery experiences would be examined.

#### Types of past-year gambling activities influenced by social motivations and gender

Michael Ellery (University of Manitoba)

Emotion-related reasons for gambling have been identified as loading onto three main factors: gambling to cope with unpleasant experiences, gambling to enhance pleasant experiences, and gambling to increase affiliation with others. Given that affective motivations may play different roles for men and women, 436 undergraduates (188 male, 247 female, 1 missing gender data; mean age = 20.8 years, SD = 5.3), who had gambled on at least two occasions in the last year, completed an online questionnaire that included the Gambling Motives Questionnaire, the Problem Gambling Severity Index, and past-year gambling activities. Those in the upper and lower quartile on the social motives subscale of the GMQ were classified into high (n = 109) and low (n = 113) socially-motivated gambling groups. Women were expected to score higher on social gambling motives, and those in the high social motives category were expected to score higher on the coping and enhancement subscales of the GMQ, as well as on the PGSI. Low socially motivated gamblers were expected to be more likely to endorse past year gambling on relatively solitary activities, such as EGM play. High socially motivated gamblers were expected to be more likely to endorse past year gambling on more social activities, such as poker. Preliminary results suggest that, interestingly, men scored higher on social motives than women, and that those in the high social motives category did score higher on coping and enhancement motives, as well as on problem gambling severity. Social motives and gender influenced past year gambling activities in many of the categories examined, but not always as expected. The results support the conclusions that problem gambling and social gambling are not mutually exclusive, and that gender and social motives influence the types of gambling activities people engage in, but not always in ways we might expect.

#### Locus of control on luck: Theoretical and strategic implications for casino gaming

Lawrence, Hoc Nang Fong and Rob Law (The Hong Kong Polytechnic University)

Luck plays a critical role in human life given the fact that not every outcome in people? life is controllable. Uncontrollable outcome is particularly salient in casino gaming as most of the games are primarily driven by chance. Therefore it is common to see casino players talking about luck all the time and sharing their strategies on how to prolong their good luck and eradicate their bad luck. Coherent with these episodes, many previous studies reveal that people who feel lucky have a higher winning expectancy, intention to play, and risk-taking propensity. However, little scholarly attention falls into the factor that moderates the effect of perceived luck on subsequent behavior. The current paper proposes a notion called Locus of control on luck as a potential moderator. Locus of control on luck is

derived from the classical concept Locus of control Which posits that some people attribute outcomes to their ability and effort while others attribute outcomes to external forces like luck and powerful others. Following this principle, it is proposed that people would also attribute their luck, which is a chancy outcome in nature, to them per se or external factors like lucky charms and alike. Previous research suggests that locus of control would differentiate the impact of evaluation of an existing outcome on outcome expectancy. This grounds the proposed moderating role of locus of control on luck on the relationship between perceived luck and gaming behavior. It is expected that locus of control on luck will render a direction for researchers to further investigate like developing a measurement scale for it and examining its relationships with other psychological constructs. By examining the proposed moderating role of locus of control on luck, casino operators will gain insights about how they can better influence the players? Gaming behavior with luck.

#### The unhappiness of problem gamblers

David Forrest (University of Salford)

In 2011, the UN General Assembly passed a resolution inviting member states to gather data to capture the importance of the pursuit of happiness, with a view to these measures guiding their public policies. The latest edition of the British Gambling Prevalence Survey is the first large-scale social survey in the World to have included a question on happiness alongside detailed questions about gambling behaviour; and it also administered to respondents two of the most commonly employed screens for problem gambling. In the present paper, data from the Survey are analysed with an eye to implications for public policy. Statistical modelling reveals that problem gamblers typically exhibit exceptionally low wellbeing, comparably low with those reporting very bad physical health, even in the presence of a rich variety of controls for life circumstances. In the case of the DSM-IV screen, there proves to be a similarly strong association between low wellbeing and 'at risk' problem gambling (but only for women). In the case of the PGSI screen, low wellbeing is evident for both men and women amongst those who score any points on the screen, even when their total score is well below the threshold for classification as a problem gambler. Further, respondents who report having a relative with a gambling problem also tend to exhibit significantly lower wellbeing than would be expected from their personal characteristics and situation. Together all these findings suggest that significant expenditure on therapy may be justified for individuals who test positive for 'problem gambling'. They further suggest that the thresholds used to estimate the number of 'problem gamblers' may be conservatively high, leading to underestimation of the number of people affected by gambling issues. The paper goes on to explore the association between low wellbeing and endorsements of individual items on the DSM-IV screen and finds that the patterns of which questions predict unhappiness are very different between men and women. Together, these extra findings are relevant to development of short screens and also raise issues about whether interpretation of screen results should be different according to gender. Finally, the analysis finds, particularly for men, that gamblers who have no signs of a gambling problem tend to report modestly higher levels of wellbeing than people who do not gamble at all, again controlling for life circumstances.

#### The concession for instant lotteries and sports betting in Macau

Jorge Godinho (University of Macau)

This communication analyzes the creation and subsequent evolution of the monopoly concession of

instant lotteries in Macau, which was later expanded to include sports betting, from a legal point of view. The administrative law framework of both instant lotteries and sports betting in Macau needs to be studied together, as these two types of legalized gambling are today part of one unified concession and therefore are inextricably linked. Instant lotteries were the first to appear, on the basis of legislation passed in 1984. Subsequently, in 1998 betting on sports events was deemed by the Government to be a type of lottery and formally authorized as an extension of the concession of instant lotteries. One of the main purposes of the discussion is the documentation and critique of the current administrative practices, especially in relation to sports betting. Another objective is to consider the prospects for the evolution of this concession, and especially whether the linkage between sports betting and instant lotteries makes sense, and whether the current practice of granting a monopoly concession has a sound legal basis and is justified from a policy perspective.

#### Gambling culture in China as compared to that of India

Carlos Gohn (University of Macau)

This paper aims at exploring some analogies and some differences in the context of gambling culture in China and gambling in the cultural context of India. TSE et al (2010) look at gambling problems in China through a social-historical, cultural perspective; YE (2009) examines the motives that lead Chinese people to flock to Macau casinos and LAM (2007) compares gambling motivation factors between Chinese and players in other parts of the world. The original contribution from the present author is to provide a counter-perspective stemming from India, which approaches the topic from a different angle, so to speak. In India one may deeply experience the ritualization of gambling, which is already present in the Mahabharata epic. One may probably say that nowhere else has gambling been codified to such an extent. Suffice it to say that Pachisi (a kind of Ludo game) has been metaphorically described as the battlefield where the individual may be given the chance to get to know how to arrive to his or her final destination. Gabriel (2000) further elaborates in an article with the suggestive title of ?ambling and Spirituality, a New Anthropological Perspective? The literature about gambling psychology in China deals with therapeutic measures to tackle addiction, but it goes not to the extent of viewing the gambler as one who is facing the experience of ying? So that the ultimate aim of life may be fulfilled (which may be seen as an intriguing perspective from the point of view of new therapeutic approaches to problems resulting from excessive gambling). The paper thus engages with some recent debate over how to best help problem gamblers.

#### Pokies, Punters and Policy: What is to be done about problem gambling? An Australian

#### Overview

Nadine Grinblat (Australasian Gaming Council)

Gambling is one of the most heavily regulated areas of the Australian entertainment and leisure sector. While various gambling forms and activities are widely enjoyed by many Australians, in recent years formal inquiries and public scrutiny of Australia's gambling industries, the regulatory provisions to which they are subject and concerns regarding the manner in which problem gambling is best minimised, have come to the fore - and look to stay in the spotlight. This presentation provides an overview of the gambling environment, responsible gambling practices and gambling research in

Australia. It goes on to discuss recent events? Including the Australian policy environment subsequent to a 2010 Productivity Commission review of gambling, the ongoing debate surrounding pre-commitment and calls for the limitation of betting on electronic gaming machines. The presentation closes by providing a brief look at emerging issues, including challenges to the regulation of Australia? Online gambling market as policymakers navigate the global gambling environment, and possible future changes.

# Responsible Gambling with an Emphasis on Consumer Protection: A CSR Framework for Macau's Casinos

Linda Hancock (Deakin University ,Victoria, Australia) and Zhidong Hao (University of Macau, Macau)

Casino gambling is a significant contributor to government and gambling industry revenues in Macau, China, but with rising concerns about negative impacts in customers' communities of origin. Macau casino industry's designation as a liberal or "light touch" regulatory regime raises particular issues for industry corporate social responsibility (CSR). We frame CSR in the context of gambling as a "dangerous consumption" emphasizing "responsible gambling" and consumer protection from harms. We adopt a CSR definition emphasizing the economic, legal, ethical [and philanthropic] responsibilities of corporations, which draws on The Global Compact and the six domains covered by the Global Reporting Index, including human rights and product responsibility. To maintain the integrity and legitimacy of the industry, a new CSR model, the "Responsible Gambling – Consumer Protection CSR," or RG-CP CSR framework, is applied to the Macau casino industry across seven groups of stakeholders as an important developing tool to enhance gambling industry providers' social responsibility.

#### An in-patient treatment programme for people with gambling problems

Peter Harvey (Flinders University)

In excess of 1000 people sought treatment through the Statewide Gambling Therapy Service for gambling problems during 2008 and 2009 in South Australia. Of this cohort, 53 clients participated in an inpatient version of the graded exposure therapy treatment programme offered by the health service. This paper describes who these clients were why they chose this particular support programme, what the treatment actually entailed and the outcomes achieved through this unique treatment programme. The social and clinical profile of the clients involved was far more complicated and complex than the mainstream client group who routinely access the outpatient treatment programme offered by the Adelaide Health Service. The personal perspectives of the clients' experiences along with longitudinal modelling of clinical outcomes reveal promising developments in the treatment of people with gambling problems.

# Internet Gamblers in Australia: Gambling Behaviour, Gambling Problems and Comparisons with Non-Internet Gamblers

Nerilee Hingand (Southern Cross University), Alex Blaszczynski(University of Sydney), Robert Wood(University of Lethbridge) and Sally Gainsbury (Southern Cross University)

Internet gambling is one of the fastest growing forms of gambling internationally and in Australia. The Interactive Gambling Act in Australia is under review, but currently prohibits Internet gambling sites from accepting money from Australian residents. However, Australians have convenient access to over 2,000 Internet gaming sites in addition to legal wagering and lottery sites. This presentation will describe the results of one the most comprehensive Internet gambling studies conducted in Australia.. Results will include information about the types of gambling, time and money spent and levels of problem gambling. Comparisons will be made to determine how Internet gamblers compare to non-Internet gamblers. This presentation will provide pivotal information about the Internet gambling behaviour of Australians. This research is extremely important to understand the impact of Internet gambling on society and guide key stakeholders in forming appropriate responses to Internet gambling.

#### Cross-cultural comparison of luck between Chinese and Caucasian individuals

Eric Hoo (University of Sydney)

Background. Luck is a distinct concept from chance and skill that has been demonstrated to impact gambling and treatment-seeking behaviour. Despite its ubiquity across different cultures, it has been suggested that the Chinese hold more profound beliefs of luck than other ethnic groups. However, there is a dearth of empirical evidence to support such anthropological findings and anecdotal evidence, particularly in the area of gambling. Elucidating the role of luck in gambling may be useful given the higher rates of problem gambling that has been reported amongst the Chinese. Specifically, previous studies have estimated the prevalence rate of problem gambling to be almost three times higher in Chinese communities than in the general Australian population. This was also consistent with other population studies conducted in Canada, Taiwan, and Hong Kong. Aims. The main objective of the present study is to explore the differences in the level of belief in luck between Chinese and Caucasian relationship between the concept of luck and other gambling correlates will be examined findings. Preliminary findings suggest that there are differences in the belief of luck across the two cultural groups. In addition, the differences in the perception and endorsement of luck, as well as its association with other gambling-related factors will be discussed further. Implications. Findings from the present study will contribute toward underlining cultural specificity in problem gambling. The research can also shed understanding on the development of a culturally relevant model of gambling amongst the Chinese, which is important in establishing effective treatment and management of problem gambling in this community.

# A Study of Cognition and Effects on Gaming Education-National Kaohsiung University of Hospitality and Tourism as an Example

Teng-Yuan Hsiao, Rong-Da Liang and Yung-Pin Chen (National Kaohsiung University of Hospitality and Tourism)

In order to increasing competitiveness of international tourism and attracting more tourists, gambling-related tourism is one of the plans which are executed by many developed countries. The Taiwan? Legislative Yuan passed an amendment Act No.10-2 to the Off-Shore Island Development in January 2009 which allows off-shore islands to build casinos as a part of an international tourist resort

area. Its facilities should also include international tour hotels, amusement facilities, international convention and exhibition centers, shopping malls, and other tourism-related services. In July 2012, Mazu area was passed the development of Casino Industry by referendum. In Taiwan, lottery and arcade games have been implemented for several years. After the amendment has passed, there would be more non-government organizations and schools introducing game training courses. As a nature of school education, the game training should play its missionary function of conveying the truth, passing on the knowledge, and clarifying the doubts. Based on the outreach program which provided by National Kaohsiung University of Hospitality and Tourism, The pre-test questionnaires took place between June and November 2009, and 90 questionnaires were recycled. After deducting the invalid questionnaires, 84 were valid, and the effective rate was 93.9%. For post-test questionnaires, 88 questionnaires were valid, and the effective rate was 97.8%. The study was expected to detect and analyze whether the perception of gaming activities (such as lottery tickets, events, table games, and electro-mechanical arcade games) and the traditional concept of gambling would be changed through education. Results of this study can be followed up and evaluated by school education units in the creation of game-related courses.

#### **Selection of Gaming Destinations among Mainland Chinese**

Cathy Hsu (The Hong Kong Polytechnic University)

With mainland Chinese outbound tourism on the rise, visiting casinos while abroad has become a major attraction. The influx of mainland Chinese to casinos in overseas countries and regions has made them one of the main markets and revenue source. However, scientific reports and discussion on mainland Chinese??casino visitation and gaming behavior have been limited. The purpose of the study was to identify factors that influence the selection of gaming destinations among mainland Chinese. A questionnaire was designed based on a review of destination choice literature and expert interviews. The draft questionnaire was reviewed by a panel of experts, and revised accordingly. A pilot test via e-mail was conducted with 48 valid responses. Further revisions were made on wording and scale. The finalized questionnaires were distributed to a convenience sample of 400 mainland Chinese who had visited or were visiting gaming destinations. Of the questionnaires, 200 were distributed on the borders of Macao and Vietnam. The other 200 were distributed through travel agencies based in Shanghai, Beijing, Shenzhen, and Hangzhou. The two data collection methods resulted in 149 and 74 usable questionnaires, respectively, for a total response rate of 55.8%. Descriptive statistics were calculated to provide a demographic and gaming behavioral profile of respondents. About half of respondents (52.5%) visited casinos for sightseeing and participated in gaming in passing. Only 12.0% visited casinos for the purpose of gaming. The most popular information source for gaming destination was the Internet (31.1%), followed by TV/radio (16.9%) and family/friends (16.1%). A factor analysis was conducted on the 46 destination selection items, resulting in 9 factors. The most important determinant of gaming destination selection was accessibility, followed by tourism development status and personal characteristics. The least influential factors were ease of communication/past experience and destination image/promotion. Marketing implications will be discussed during the presentation.

#### Impacts of Parental Gambling on Adolescent Gambling Behavior and Mental Health Status

Siu Man Hsu(HKFYG Youth Wellness Center), Lok Man Lam (HKFYG Youth Wellness Center) and

Irene Lai Kuen Wong (The Hong Kong Polytechnic University)

A school-based survey was conducted to examine the impact of parental gambling on adolescent gambling behavior and mental health status. A self-administered standardized questionnaire was distributed to 1,095 high school students. The response rate was 84.5%. Forty-seven percent of the participants reported gambling in the past year. Using the DSM-IV-MR-J (Fisher, 2000), 3.5% (n=31) of the participants could be identified as being at–risk for developing problem gambling, and 0.9% (n=8) could be classified as probable pathological gamblers. Only 16.7% of the participants (n=155) disclosed having a parent who gambled but the perceived harms in the family were alarming including disrupted family relationship, family financial difficulties and diminished need fulfillment. Comparing with youth who had no parental gambling problems, adolescents with parental gambling problems reported significantly higher levels of stress, anxiety and depression. They also experienced lower levels of social support from their family. The study results have implications for preventive initiatives, intervention strategies and future research.

#### **Exposure or Adaption: the Evidence from Macao**

Guihai(Samuel) Huang (Macao Polytechnic Institute)

Exposure and adaption models are competing perspectives of the gambling opportunity on the development of disordered gambling. Some argue that Macao residents have secured immunity to gambling and no or very few local residents are disordered gamblers as gambling has been there since the birth of Macao as a city. This argument is consistent with adaption model. On the other hand, some argue that pathological gambling prevalence must have increased with the growth of casino business as Macao has become the world largest casino city since its gross gaming revenue surpassed Las Vegas in 2007. This argument is consistent with exposure model. Macao disordered gambling problem had worsened from 2003 to 2007 peaked at round 2010 and decreased since then. Casino employees tend to have higher disordered gambling problem. The changing attitude toward gambling may have contributed to the rise of the disordered gambling prevalence between 2003 and 2010 and the responsible policy may have contributed to its decline. Macao experience seems to support the exposure model with a component of adaption. Implication to Macao responsible gambling policy is also discussed.

#### Consumer perspectives on gambling harm minimisation measures in an Australian jurisdiction

Alun Jackson, Nicki Dowling and Darren Christensen(Problem Gambling Research and Treatment Centre, University of Melbourne)

A mixed method study was undertaken in Tasmania, Australia, to determine awareness of harm minimisation measures; support or opposition to the measures; and assessments of the measures? Effectiveness if already implemented, the anticipated impact of measures yet to be introduced in new legislation and code of Practice. These measures were also evaluated through measurement of their impacts on gambling spend and enjoyment. Data were analysed form two sources: a computer-assisted

telephone interview (CATI) of over 4,000 Tasmanian adults, and 13 group interviews with 126 participants ranging in age from 18 to 70. Problem gambling severity of participants, as measured by the Problem Gambling Severity Index of the Canadian Problem Gambling Index, was: Non-problem gambler? 86; Low risk gambler? 24; Moderate risk gambler? 12; Problem gambler ?4. Measures assessed included changes to electronic gaming machine note acceptors. The majority of survey respondents indicated that there was no change to their spend or enjoyment as a result of the reduction in lines played, maximum bet per spin and amount that can be inserted into note acceptors in new EGMs. In addition, the majority of respondents considered that measures proposed in a draft Mandatory Code of Practice would result in either no change to their spend, or a decrease in spend. Moderate risk and problem gamblers, however, believed their spend would be impacted by: reducing the amount they could withdraw from an EFTPOS machine for gambling or from an ATM at the casino; restricting the payment of cash for EGM payouts; locating highly visible clocks on gaming room walls; and allowing only socially responsible advertising of gambling. Moderate risk and problem gamblers perceived that all proposed measures would impact more on their enjoyment than on the enjoyment of non-problem gamblers.

# Resolving the question of why the favourite-longshot bias exists in some betting markets but not in others

Johnnie E.V. Johnson, Ming-Chien Sung, David C.J. McDonald(University of Southampton)

Favourite-longshot bias (FLB) is a phenomenon in betting markets reported over many decades and in many jurisdictions, whereby market prices deviate systematically from their fundamental value; favourites/longshots being under-/over- value. Many studies have sought to explain the enduring presence of the FLB and its absence in some markets, but little consensus has been reached. This paper aims to settle this debate by providing a clear explanation for the FLB's continued presence in most markets and its absence in others. We develop a model which suggests the bias may result from competition between bookmakers and with betting exchanges, combined with bettors' greater demand elasticity with respect to favourites. Further, we propose that the FLB will be eliminated when informed traders dominate and transaction costs are low. We use the predictions of our model to develop hypotheses, which we test empirically by analysing how the bias develops over the course of the markets for 6,058 races run between August 2009 and August 2010, requiring the analysis of over 5.5 million market prices in total.

Our results confirm that three factors contribute to the existence of the FLB: the pricing decisions of bookmakers, the availability of information, and the level of transaction costs. This analysis helps to identify the roles played by previously suggested accounts of the bias. In particular, we show that, because of (a) competition between bookmakers themselves and with exchanges, and (b) bettors' demand for competitive prices on favourites, bookmakers' optimal pricing decisions necessarily lead to the FLB. Second, we show that there is FLB in exchange prices in the early stages of the market, which is not eliminated because of higher transaction costs (in the form of wider bid-ask spreads). Finally, we draw upon models of prediction markets to suggest that, when informed traders dominate, any FLB in betting exchanges is likely to be short-lived, and we find that this is the case.

#### **Companies**

Sudhir H. Kale and Sangita De (Bond University)

With spectacular growth in demand since opening the market to foreign competition, executives within the Macau casino industry seem to have focused their attention to enhancing capacity and opening new casino properties. Meanwhile, the Singapore casino market is expected to overshadow that of Las Vegas in the very near future. Despite such optimistic prognosis, the long-term scenario for the casino industry in both jurisdictions could spell trouble. It seems most casino operators in major Asian markets have not devoted adequate thought to their service culture and internal marketing strategy. With overall capacity in Asia slated to increase significantly in the next couple of years, the labor shortage for casino companies in Macau and Singapore will get more acute. Current impressive revenues notwithstanding, increased capacity will also put pressure on marketing to attract and retain valued customers. In light of these developments, we review five key challenges to internal marketing practices for casinos in Macau and Singapore: culture, climate, recruitment, compensation, and training.

Gambling pathways development of triad members, female sex workers, male sex workers and taxi drivers: A summary of four qualitative studies on gambling deviant subcultures in Hong Kong.

Paul Khiatani, Chi Chine Chan, Kelvin Yick, Tiffany Tse [Upper Iowa University (Hong Kong Campus)]

This summary analysis was based on four ongoing qualitative studies undertaken in Hong Kong involving four active gambling subgroups---- triad-related members (n=30), female sex-workers (n=30), males sex workers (n=10), and taxi drivers (n=10). The purpose of the summary was to explore the pathways development of these subculture groups, the gambling motivations, and lifestyle. Each participant was administered the Problem Gambling Severity Index (PGSI) of the Canadian Problem Gambling Index (CPGI) (Ferris & Wayne, 2001) and the DSM-IV diagnostic criteria for Pathological Gambling (American Psychiatric Association, 2000). They were also given semi-structured clinical interviews by an experienced clinical psychologist and his students. Results indicated that the majority of the participants met the criteria for pathological gambling. Furthermore, in general, all four groups came from troubled childhoods and poor family backgrounds. Most of the participants had co-addiction problems. The lifestyle of their subculture was a significant factor for their involvement in gambling. Differences found among the groups included their motivations towards gambling? Apart from monetary gains? Their adopted gambling habits, their feelings towards gambling, and lifestyle differences. The triad-related members gambled mostly for social lingering and business purposes. Female sex workers gambled for the reward of escaping problems and bad moods. Male sex workers gambled mostly for the excitement and thrill. Taxi drivers gambled mostly for killing time. All the 4 groups of participants expressed their reluctance in seeking for treatment for their gambling problems. The summary of the four studies support the claims of the pathways development model of Blaszczynski & Nower (2002) and Hirschi? Theory on social bonding (1969).

#### The socialization processes of online gambling: experiences of Finnish online gamblers

Jani Kinnunen (University of Tampere, Finland)

The presentation focuses on the gambling experiences of Finnish online gamblers. It studies the role of social interaction in the processes of learning to gamble, starting to play new games and adopting gaming as part of everyday life. For many players the first gambling experience has taken place in company of parents or grandparents. The role of friends is important in the introduction of new games and playing can be one way of maintaining social relations. Gambling is integrally connected with players? Social networks. Online gambling is often seen as asocial activity. However, different levels of sociality have been connected with online gambling in recent years. Players can interact with each other before, during and/or after playing. The first Finnish online gambling games, which enabled in-game social interaction, were opened in the year 2010. Veikkaus (Finnish Lottery) introduced a new game eBingo and Ray (Finnish Slot-machine Association) opened its online casino and online poker site. Based on the questionnaire data of 409 average players of the new Finnish online gambling games 16 players were selected for thematic interviews. The interviews focused on the social aspects of offline and online gambling. The analysis of interview data reveals that gambling is fundamentally social activity which is learned and experienced in specific socio-cultural frames.

#### Service attributes of Casinos in Macau

#### L. C. Koo (City University of Macau)

Since the liberalization of the gaming industry in Macau in 2002, the gaming business has been growing rapidly. Being the most important service sector, the gaming industry has to strive its best to improve its service level continuously in order to gain and maintain a high competitive edge over the other competitors in the region. This is particular relevant as the industry is experiencing a slowdown in growth in 2012. This empirical study aims to reveal important service attributes as perceived by a group of experience casino employees. These service attributes are carefully reviewed and the rationale why a particular service attribute is important is discussed. Then ways to improve these service attributes are suggested. The service attributes revealed provide useful reference for the casino practitioners to improve service standard more effectively. Kano model is applied to study a selected group of unique casino attributes and their respective Customer Satisfaction Coefficients are calculated.

# Responsible Gambling: What is the Responsibility of the Gambler and of the Operator in Self-Exclusion and Pre-commitment (Smart Card) programs?

Robert Ladouceur (Université Laval, Québec, Canada)

This keynote address will first present the basic elements of Responsible Gambling. In order to illustrate the application of the Model, two programs, Self-Exclusion and Pre-commitment (Smart Card), will be reviewed. The strengths and limitations of each program will be highlighted and their efficacy will be discussed in the perspective of scientific inquiry. Finally, the responsibility of each party involved will be questioned and some avenues for improving these programs will be suggested.

#### The motives for recreational gambling

Ivan Ka Wa Lai (Macau University of Science and Technology)

Over the past few decades, gambling has become an increasingly popular, widely available, and socially acceptable recreational activity in Asia. Many researchers stated that gambling creates a real problem – the pathological gambler. However, other researchers suggested that if gambling players can control their gambling with a reasonable money and time, gambling is a recreational activity. Most research on gambling motivation has examined the causes of pathological gambling. Only a few studies have examined motivation for recreational gambling. This study tries to identify the motives for recreational gambling in Macau. Semi-structured interviews were conducted with gambling players to record the processes of their gambling activities. Context analysis was employed to identify powerful insights on the motivation for recreational gambling. Twelve motives in three categories were identified. They are psychological motives (excitement, fun, enjoyment, risk-taking, self-determination, and tension releasing/escaping), social motives (friendship, expertizing, and learning), and functional motives (winning, exercise, and benefit). Several recreational gambling methods are suggested for gambling players to obtain above motives in the most cost effective way. This study contributes a set of motives that can be employed to further study the behavior of recreational gambling. The results of this study also provide practical guidelines for the government and gambling marketers to formulate marketing strategies to prompt recreational gambling.

## An Exploratory Study on Hong Kong and Mainland Chinese Gaming Behavior in Macau Casinos

Louisa Yee-Sum Lee and Cathy H.C. HSU (School of Hotel and Tourism Management, The Hong Kong Polytechnic University)

Macau, known as "The Monte Carlo of the Orient", is the largest gaming city in the world, with great influx of Hong Kong and Mainland Chinese players. Inspite of their potential spending power, limited information is available about their gaming behaviors. In-depth interviews were employed to fill the knowledge gap by detailing their gaming behaviors, including gaming frequency, types of games played, betting amount, and superstitions and taboos. Findings revealed that majority of the respondents favored table games, and would dine, shop, and enjoy performances in the casinos apart from gaming. No special pattern was noted in terms of gaming duration and self-control when losing or winning money. An interesting finding was the different gaming behaviors between Hong Kong and Mainland Chinese interviewees. Interviewees from Hong Kong visited Macau casinos more frequently than the Mainland interviewees because of geographic proximity and convenience. Consequently, Mainland Chinese interviewees acted as tourists and were more likely to visit different casinos as sightseeing activities. They were more attentive to the tangible elements of casinos, whereas Hong Kong interviewees paid more attention to service quality, gaming rules and behaviors of other players. In addition, Hong Kong interviewees were more familiar with the Chinese gambling superstitions and taboos than did the mainlanders, probably due to the popularity of gaming movies in Hong Kong. Another significant finding was that the long-standing Chinese beliefs feng shui did influence Chinese? Gaming behavior. A conceptual framework and several propositions illustrating the interrelationship between Chinese cultural value system and behavior are discussed. Recommendations for casino practitioners, including selling of auspicious mascots or souvenirs at the casino stores and improving service quality of employees, to serve these segments better are also suggested.

# Examining the Factor Structure of Gambling Motivation Scale in Gambling-exposed Chinese Casino Employees

Sin U Leong (Universidade de Sao Jose), Imelu Mordeno (Universidade de Sao Jose) and Carla Marisa Pack Coteriano(Galaxy Macau)

Gambling Motivation Scale (GMS; Chantal et al., 1994) is one of the most popular scales used in assessing gambling motivation. Wu and Tang (2010) validated the Chinese Version of the scale and found out that a second-order model adequately fits with the data. This study tries to extend their study by utilizing a population exposed to gambling in almost daily basis, the casino employees. 817 casino employees were administered the Chinese version of the GMS and other related measures. Results revealed that of the four models tested, a second-order model with three major factors reflecting three types of gambling motivation, including intinsic motivation (for knowledge, for accomplishment, for stimulation and due to identified regulation), extrinsic motivation (due to introjected regulation and external regulation), and amotivation fitted well. The scale achieved high reliability rho and its factors (gambling types) were significantly related with each other. Moreover, these gambling types also predicted problem gambling. Overall results showed that GMS can be used with Chinese population, more specifically with Chinese casino employees.

#### The Social-Responsibility-Based Management of Public Opinion for Lottery Industry

# Kun Li (Beijing Normal University)

Issuing lottery is for raising public welfare funds for society, but the lottery also is a double-bladed sword because it is born to be a kind of gambling. The issuance of lottery depends on the integrity of the country, and the lottery has some other characteristics, for example, Lottery players come from different social status; Lottery isn't kind of life necessity; Lottery marketing is different from other marketing, etc. Therefore, public opinion of lottery (POL) is important, because lottery covers different groups, and the comment, opinion, emotion, attitudes of the public or lottery players are significant for matters with society, economy, culture and politics etc.

POL means in a fixed social space, with the start, development and change of lottery issuing, management, sales etc, the opinion of the public as subject (especially lottery players) on the lottery administrators who are object (including companies as assistant operation), and it is the sum of the belief, attitude, opinion, emotion of the public on the lottery.

POL has not been given enough attention, also no further research, and some lottery information except sales data, such as the marketing participation, the structure of lottery players, and the use of public funds, and so on, have not been enough transparent since the lottery was first launched in 1987 in China mainland. This paper will expound the social responsibility of the lottery issuing organizations, lottery companies, and social media etc, which are lottery subjects. We propose Philanthropic lottery, Scientific lottery, Healthy lottery, paying more attention to public opinion of lottery, devoting to the attention, reflect, and lead of the POL. We also prevent some social events from taking place and strengthen

the research and basic building of POL so that the social responsibility of lottery can be implemented.

# Gender Difference in the Relationship between Gambling Severity and Health Correlates among Hong Kong People

Wai Lim Li, Lai. Fan Lee, Kwok Ping Cho, Ying Ying Leung, and C. C. Chan (McKenzie & Associates Rehabilitation Services Ltd)

The purpose of this quantitative study was to understand the gender difference in the relationship between gambling severity and health correlates among Hong Kong people. Cross-sectional design was used in this study. 56 male and 28 female participants whose age 18 or above were recruited into the study with Gambling severity, the risk of alcohol use, anxiety level, severity of depression, self-perceived physical and mental health were examined by standardized tools. Multiple regression predicted gambling severity (dependent variables) by health correlates (risk of alcohol use, anxiety level, severity of depression, self-perceived physical and mental health), which were classified as independent variables both in male and female participants. Pearson correlations were utilized to explore the relationship between gambling severity and health correlates in both genders. Results indicated that gender difference toward the relationship between gambling severity and several independent variables varied. For male, significant positive correlations were found between gambling severity and the risk of alcohol use, anxiety level but negative correlation with self-perceived mental health. Multiple regression showed that health correlates mentioned above significantly accounted for 19.3% of the variance of gambling severity, with the risk of alcohol use being the only significant predictor of the variance. For female, only significant positive correlation was found between gambling severity and risk of alcohol use. Multiple regression showed that health correlates mentioned above significantly accounted for 38.2% of the variance of gambling severity, with the risk of alcohol use being the only significant predictor of the variance. In conclusion, risk of alcohol use might be one of the important predictors of gambling severity among Hong Kong people from different age groups in both genders. Further investigations are recommended to find out other significant predictors on gambling severity. Keywords: gambling, gender, alcohol use

#### Not all gamblers are created equal: Which game to play depends on the personality trait

Shu Li (Institute of Psychology, Chinese Academy of Sciences, Beijing, China), Yu Zheng(Jinan University), Gui-Hai Huang(Gaming Teaching and Research Centre, Macau Polytechnic Institute) and Zhu-Yuan Liang (Institute of Psychology, Chinese Academy of Sciences, Beijing, China)

Individuals exhibit personal preferences in different types of gambling games. However, whether and how personality differences affect these preferences remain unclear. Using latent class analysis, we explored the latent classes of risk preference in different types of gambling and the effect of personality trait on these classes. A total of 743 Macau residents completed a questionnaire survey dealing with 13 types of gambling and personality traits (ZKPQ-II). We found that participant preference for gambling varies among four latent classes of games, namely, random gambling, competitive gambling, technical gambling, and entertainment gambling. In addition, not all of the personality traits can consistently predict preference for these gambling classes. For instance, the Aggression–Hostility trait can

positively predict a general preference for the four classes of gambling, but the Sensation Seeking and Neuroticism–Anxiety traits have no such effect. In particular, the Impulsive trait can only positively predict preferences for competitive and technical gambling. These results suggest that personal preferences for certain kinds of gambling games may be related to specific personality traits, thus calling into question the current classification of pathological gambling as an Impulse Control Disorder in the DSM-IV.

#### The Developmental State, Casino Capitalism and Crime in Macao

Sonny Shiu-Hing Lo (Hong Kong Institute of Education)

The interrelationships between the Macao developmental state, casino capitalism and casino crime are complex. In order to control organized crime penetration into casinos, the Macao developmental state in 2002 liberalized and internationalized the casino sector. Since 2002, however, various types of crimes have emerged inside and outside Macao's casinos. While casino capitalism has generated huge public revenues for the government, created employment opportunities for citizens, and stimulated local economic growth, it has also delegitimized the developmental state to some extent by producing various criminal activities, by bringing about addictive gambling, by providing more opportunities for mainland Chinese citizens and officials to gamble heavily, and by plunging Macao into an over-dependency on casinos-driven development. In response, the central government in Beijing and the Macao developmental state have jointly tackled the negative and unintended consequences of casino capitalism in a proactive and preemptive manner. Beijing tightened its control over mainlanders' visits to Macao in mid-2008, but it quickly relaxed the policy in fear of a decline in casino revenues and capitalism in the Special Administrative Region. On the other hand, the Macao developmental state has taken social measures to address the income gap between the rich and the poor, experimented with economic diversification in an attempt to reduce its dependency on casino capitalism, and implemented the emphasis on "responsible gaming" to tackle any detrimental impacts of casino capitalism on the society. In brief, the developmental state in Macao utilizes casino capitalism to accelerate the development of its productive forces, but the negative impacts of casino capitalism have propelled the developmental state to be more regulatory and socially interventionist for the sake of maintaining its legitimacy. The interrelationships between casino capitalism and the Macao developmental state are clearly both dynamic and responsive.

#### Gambling in Europe: an anthropological approach

Claire Loussouarn, Rebecca Cassidy (Goldsmiths, University of London)

In this paper, I will present the Gambling in Europe Research project which is funded by the European Research Council and highlight its innovative anthropological approach to the study of gambling as a social and cultural activity. The project explores how regulations and technologies are framing a diversity of gambling products and behaviours across geographical, legal, historical and conceptual boundaries. Within the field of gambling studies, the impact of regulations and technologies has been underexplored in comparison with the focus on quantifying and categorizing gamblers and gambling activities within national boundaries. The project addresses this lacuna in studies on gambling. For its approach, it uses anthropological methods which are locally sensitive to cultural factors and the way that particular gambling activities are shaped distinctly throughout Europe. The variety of social contexts is highlighted through the study of four distinctive case studies that are being combined and

compared systematically: the gambling industry based upon mobile technologies in the UK, the British spread betting industry, casinos and Italian players in Slovenia and land-based Raditional? Casinos located in Cyprus. The project? Ambition is therefore to propose new avenues to conceptualise gambling which diverge from more traditional lines of research that focus on gambling as an individual pathology. Thus the project aims to capture the dynamism and internationalism of the gambling industry in Europe today by exploring fresh approaches to a well understood subject.

### **Interactive Competition between Casino Corporations: The Example of Macau**

Erdan Ma (Macau University of Science and Technology)

Although Macau SAR government opened up the gaming industry in order to introduce competition, and the introduction of foreign gaming companies has aroused an unprecedented hyper-competition and significant change in the Macau gaming industry, despite both of casinos corporations and society have concerned on the trend, Macau still lack researches on such competitive moving, not only exploring about the models of the present new competitive behaviors between casinos, but also evaluating competition trends and threats on future. With new mega casinos are spring up in the southeast and even the world, Macau will face more dramatic and fierce competition from the outers. It is the research gap in the Macau gaming history. Without it, the ongoing strategic transformation in Macau gaming industry should have no foundation. The paper will focus on the gap. Based on the informative texts about strategic competition between casinos in the past ten years, it will use text analysis and root-grounded method to construct the model of interactive competition.

### Examining the Latent Structure of Gambling Motivation Scale in Gambling-exposed Chinese Casino Employees

Imelu G. Mordeno(University of St. Joseph), Carla Coteriano(Galaxy Macau) and Sin U Leong, University of St. Joseph

Gambling Motivation Scale (GMS; Chantal et al., 1994) is one of the most popular scales used in assessing gambling motivation. Wu and Tang (2010) validated the Chinese Version of the scale and found out that a second-order model adequately fits with the data. This study tries to extend their study by utilizing a population very much exposed to gambling in almost daily basis, the casino employees. 817 casino employees were administered the Chinese version of the GMS and other related measures. Results revealed that of the five models tested, a first order model with seven factors achieved better fit in contrast to all other models. The seven factors include intinsic motivation (IM) for knowledge, IM for accomplishment, IM for stimulation, extrinsic motivation (EM) due to identified regulation, EM due to introjected regulation, EM due to external regulation, and *amotivation*. However, the seven-factor model did not reach the conventional fit indices for good fit. After some posthoc modifications, the revised model achieved adequate fit. Moreover, the seven factors were significantly related to frequency of gambling, amount spent for gambling, gambling behaviors and Victorian Gambling Subscales. Generally, results showed that modified GMS with seven factors can be used with Chinese population, more specifically with Chinese casino employees.

#### A Tale of Two Asian Cities

Danny Ng (Edith Cowan University, Australia)

For the greater part of the 20th century the gaming sector in Macau was monopolised by a single organisation; Sociedade de Turismo e Diversoes de Macau (STDM). This changed in 2002 when the Special Administrative Regional (SAR) government liberalised the gaming sector to international casino operators. Only three years later (2005), Singapore joined the Asian casino landscape by passing a constitution amendment allowing the establishment of a gaming sector on the island nation. This was a bold step by the Singaporean government after decades of explicitly rejecting the gaming sector. Each government administration has different reason for opening up their gaming sector, but they all share a common objective: the lucrative gaming tax for state coffers and an increase in the size of the economy. The growth of the gaming sector is much determined by the political, policy, economic and societal circumstances both local and global. The objective of this paper is to examine the differences in terms of gambling governance in both Macau and Singapore. The influence these differences in governance have on the growth of the gaming sector and the national economy will be the primary focus. The paper will use a comparative method to understand how the casino operators can better devise strategies to cope with any possible changes to the governance environment. The second part of this paper will look at how Macau can diversify its economy by leveraging its geographical position. Keywords: casino, policies, governance, integration, economic.

### Fear of the future: A narrative analysis of the experiences of partners of problem gamblers

Elaine Nuske, Louise Holdsworth : Margaret Tiyce, and Nerilee Hing (Southern Cross University, Australia)

Research has shown that numerous people are affected by any one person with a gambling problem. In addition, the role of partners and significant others is known to be crucial in assisting behavioural change in those who gamble at problematic levels, yet little research has explored their stories. In-depth interviews with 18 partners of people with gambling problems were analysed to explore how the stories they told reflected how they made sense of their discovery of their partner's gambling. Narrative analysis is used to uncover how participants developed a new sense of self in the light of their traumatic discovery, and enabled them to redefine themselves in their relationship to their partner. Three types of narratives are discussed, all beginning with similar stories of disbelief, feeling unsafe, fear of the future and a sense of powerlessness, with a subsequent movement toward taking control of both the relationship and themselves. The knowledge gained in the analysis of these narratives can be used in the development of education and support required both at individual and family levels, to enhance coping strategies for those involved.

#### Attitudinal and Behavioural Loyalty amongst casino players in Macau

Catherine Prentice (Swinburne University)

Since delivering high quality service tends to improve the loyalty of valued customers, operators should have an understanding of how such customers react to the provision of such experiences. The current investigation was undertaken in Macau casinos and explored the relationship between service

quality and customer loyalty, with the latter operationalized on the basis of attitudinal and behavioural dimensions. The researchers used a quantitative method to explore this relationship amongst gamblers characterised by low, medium or high visiting frequency. The segments that were chosen for analysis purposes were consistent with a commonly used approach to segmentation within the survey casinos. Service quality was measured by using a newly developed four dimensional scale (CASERV). The results indicate that service quality explains significant variance in customer loyalty. In particular, Service environment and service delivery make substantial contributions to both attitudinal and behavioural loyalty. However, when analysing the relationship separately for VIP and non-VIP players, service quality has minimal influence on the behavioural loyalty of the latter group. Implications of these findings are provided for practitioners and researchers.

#### Distinct emotions and their regulation in recreational and problem gambling

Mikko Salmela (University of Helsinki)

Previous research suggests that problem gamblers differ from recreational gamblers in terms of their emotional attitude towards gambling. Thus, recreational gamblers display a harmonious passion for gambling which is characterized by positive feelings and emotions such as amusement, excitement, and fun, whereas problem gambling associates with obsessive passion for gambling, characterized by feelings of guilt, anxiety, and other negative emotions (Mageau et al 2005; Ratelle et al 2004). In this presentation, I offer a potential explanation to this difference between the dissimilar emotions of recreational and problem gamblers. According to this explanation, recreational gamblers differ from actual and potential problem gamblers in terms of their emotions already from the outset. Whereas the emotions of recreational gamblers focus mainly on the game and its outcomes, actual and potential problem gamblers also experience strong emotions about themselves as winners or losers in the game. The regulation of the latter kind of emotions such as pride, humiliation, anger, and shame is psychologically more exhaustive and demanding than the regulation of game-focused emotions such as arousal, joy, and disappointment. This difference predisposes players that experience emotions both about the game and themselves to tilting, strategically poor choices in the game, loss of control, and chasing losses, which already manifest problem gambling. Finally, I review empirical evidence that supports this hypothesis.

## Loyalty program membership influences perceptions of service quality, customer satisfaction and loyalty: evidence from Macao casinos

Yongdong Shi (Macau University of Science and Technology) and He Wei(University of Electronic Science and Technology of China)

The influences of loyalty program membership on the relationships among service quality perceptions, customer satisfaction and loyalty were investigated using data obtained from interviews of 672 customers of Macao casinos. Regression analysis revealed that loyalty program membership negatively moderates the relationship between service quality and satisfaction but positively moderates the relationship between satisfaction and loyalty. These results extend the research on the relationship between service quality, customer satisfaction and loyalty by treating loyalty program membership as a moderator, yielding deepened insight into the effects of loyalty program in casinos.

### Health impacts of gambling on Asian families and communities in New Zealand

Amritha Sobrun-Maharaj, Fiona Rossen and Anita Shiu Kei Wong (University of Auckland)

The project investigated the impact of gambling and problem gambling on the health and wellbeing of Asian families and communities in New Zealand. This 2-year, multi-phase qualitative project included a focus group discussion with specialist Asian problem gambling intervention staff and other practitioners/stakeholders with knowledge relating to Asian gambling issues. Sixteen focus group discussions were also undertaken with stakeholders (including individuals who have experienced or been impacted by problem gambling) across the 5 major Asian ethnic subgroups of Chinese, Indian, Korean, Southeast Asian and Asian with Refugee background. These were followed by 50 individual face-to-face interviews with individuals who have experienced problem gambling or been impacted by gambling. Particular attention was given to the role of risk and resiliency factors, the antecedents and etiology of problem gambling, and any similarities or disparities between gambling issues for New Zealand? Five major Asian ethnic subgroups. Findings are presented in relation to major themes that emerged from the data, including: Asian culture and its role in gambling; the role of migration, settlement and the environment in problem gambling amongst Asians; and coping behaviours, impacts and consequences of gambling for Asian people and their families. Suggestions are made about an ecological approach to reducing problem gambling amongst Asians. The findings from this project have wide reaching implications for those working within the problem gambling field, and could assist with the development of effective and culturally appropriate public health and treatment measures and techniques in relation to Asian gambling issues.

### **Luck and Superstition in Gamblers**

### Helen Soteriou (City University)

Research has shown that luck is an irrational belief which is considered maladaptive (Ellis, 1971, 1973) But belief in good luck may be adaptive and that positive illusions surrounding luck can lead to feelings of confidence, control, and optimism (Darke & Freedman, 1997a, 1997b). The research that has been carried-out comprises novel studies which explore the extent to which individuals believe in various forms of luck in relation to gambling behaviour. The studies are based in a number of geographic locations to investigate whether different cultures hold different beliefs. Studies have been carried out in London, Las Vegas, Tokyo and Macao. They are important because preliminary findings show that all cultures have a strong belief in the concept of luck and a strong belief in luck in relation to gambling behaviour. These results have wide-reaching implications. Individuals who believe in luck to the detriment of probability estimates have the potential to become PGs, as they are gambling with false odds of winning.

This exploratory study investigated illusion of control in the choice of lottery numbers in an opportunistic sample in Macau. The sample comprised 96 participants (53 males and 43 females). Just over half of the sample (n=49) opted for their own choice of numbers whilst 47 participants chose a random selection of six computer generated numbers. Eighty-seven people stated that they believed in luck and nine people did not. Forty-seven people stated that they had never purchased a lottery ticket, whilst 49 had. Results showed that those that did not believe in luck were significantly more likely to say they would choose their own lottery ticket numbers. There were also significant differences for age and

education in relation to choosing lottery ticket numbers.

### Using game simulations to shed insight into common gaming behaviours

Mark Spence, Sudhir Kal and Stephen Sugden (Bond University)

Gambling and probably theory have a long intertwined history, with early publications dating to the 17th century. Fair games of chance, such as Blackjack or Baccarat, are exact: because the relevant elements of randomness within these games are known, probability theory can be applied to deduce outcomes, notably the house advantage. Application of probability theory can, however, prove unwieldy for computing the outcome of everyday gambling behaviours, such as using betting systems, like the Martingale, or enacting gambling biases such as the Gambler? Fallacy or its converse? Allow the Herd Mentality?? Simulation is one proven way to assess possible outcomes in such situations. Within this presentation we share insights from two gaming simulations we have created. The first simulates the behaviour of? Optimal blackjack players, all of whom intend to play approximately two hours, or one hundred hands. This simulation shows the effect of setting monetary loss/win limits. As should be expected, regardless of the width of the limit or the limit?脒 symmetry, the house advantage does not change; however, the length of play does, which in turn affects the cumulative losses and the handle, a relevant insight for gaming establishments. Asymmetrical betting limits, such as? Leave if I lose \$500, but stay until I win \$1000 increases the number of players who finish with losses relative to players with symmetrical bet limits, which could affect player psychology. A second simulation explores the effect of the herd mentality when applied to Baccarat (i.e., contrary to the gambler? fallacy bets escalate on to the winning side of a streak). The able differential? Is the difference between total banker bets to total player bets or vice versa, thereby limiting the casino? exposure to loss. Intuitively, as the differential increases, so does the collective player handle, hence house winnings, thus suggesting that high differentials are beneficial for the house? Regardless of differential, the house advantage does not change; but the greater the differential, the greater the number of shoes that end with players losing and the more extreme are the spikes in the positive domain for players (the house paying out for a hand of play). This simulation is therefore intended to help casino managers set betting limits that maximize total winnings while bearing in mind both the probability and magnitude of negative outcomes of increased differentials.

### Effects of unrelated arousal on reckless gambling behavior

Takuhiro Takada and Shintaro Yukawa (University of Tsukuba, Japan)

The relationship between gambling behavior and emotion has been demonstrated in several studies. Takada & Yukawa revealed the relationship between positive emotion and reckless gambling. However, core affect theory of Russell and Feldman-Barrett insists that emotional state is consisted by 2 dimensions (pleasure ??displeasure, and arousal ??sleepiness). In this study, effects of arousal without positive emotion were experimentally investigated in healthy undergraduates. Participants (18 males and 16 females) performed a Game of Dice Task (GDT) that consisted of 18 gambling trials. Before they conduct the GDT, participants of experimental group tried the step exercise for about 2 minutes, in order for them to elicit their arousal unrelated to the GDT. On the other hand, participants of control group waited with nothing to do, for 2 minutes, before they conduct the GDT. Result indicated that participants

of experimental group became significantly less recklessly on GDT than participants of control group. This result suggests that unrelated arousal without positive emotion might have not promoted but inhibited reckless gambling behavior. Further research is needed to understand the effects of emotional states on gambling behavior.

#### Locus of control and gambling behavior among Chinese gamblers

Vivienne Y.K. Tao, Kwok Kit Tong, and Anise M.S.Wu (University of Macau)

The present study aimed to examine the link between locus of control and gambling behavior, and the mediating roles of specific gambling attitudes and motives of the relationship in particular. Over two hundred Chinese gamblers were randomly sampled and interviewed in the survey. All the gambling related measures were adopted from the GMAB scale. Findings showed that external locus of control positively predicted impaired control in gambling. Results of path analysis suggested that the positive association between the external locus of control and impaired control in gambling was mediated by the gambling attitude towards fate and luck, and the gambling motive in monetary gain. Implications of findings will be discussed.

### Could materialism and perceived equity predict gambling amount? A comparison between casino and non-casino workers

Kwok Kit Tong and Sze ManWu (University of Macau)

Not only do casino workers display more pathological gambling symptoms but also gamble larger amount of money on average. While casino workers and non-casino workers are similar in their overall life satisfaction as well as perceived equity (current living standard is fair given efforts), casino workers are more materialistic. Controlling for the current life satisfaction level, hierarchical regression analysis showed that for casino workers, the amount of money they gamble on average can be predicted by materialism but not equity. On the contrary, for non-casino workers, the average gambling amount is predicted by equity but not materialism. Implications will be discussed.

### Taking other people's money: development and the political economy of Asian casinos

William Vlcek (University of St Andrews)

The transfer of Macau from Portuguese to Chinese governance elicited a change in the territory? Approach to its casinos and casino gambling. By opening up to foreign direct investment, the territory transformed a dowdy old-style casino into a Vegas-style glitzy casino complex that in turn attracted Mainland gamblers in ever increasing numbers. This situation represents the first instance for accumulation by dispossession via the casino, for gambling is illegal in Mainland China and the success of the Macau casinos transferred wealth from the Mainland to Macau and the foreign investors in its casinos. The second instance is shaped by the identification for the success of Macau? Casinos as a model for economic development, and the migration of this strategy for using casinos as a form of economic development to Singapore, where it again operates as accumulation by dispossession. For the

latter case the gambling laws explicitly shape the institution to appropriate other people? Money because the Singapore citizen is charged a levy to access its casinos. This strategy for accumulation by dispossession operates through the inside/outside dichotomy of sovereignty with its focus on appropriating the money of the non-citizen, while it relies on the foreign investment capital provided by a multinational casino company. The efficacy for the use of casinos as economic development is interrogated in this paper as it represents a crucial question when post-financial crisis governments propose the reproduction of this? Economic development through gambling? Strategy in the European Union and United States as a local path towards economic recovery.

### Understanding Macao Casino Gambling Behaviors of Chinese Subcultures

Penny Yim King Wan (Institute for Tourism Studies)

This study investigates Macao casino staff perceptions of their three major subcultures of casino customers in Macao: Mainland Chinese, Hong Kong Chinese and Taiwan Chinese. A total of 302 casino employees were surveyed. The findings reveal that although the Chinese subcultures have similar appearance, use the same Chinese characters, and share other common cultural inheritances; their gambling attitudes and behavior are perceived as being different, reflecting unique regional backgrounds and learning processes. Managerial and marketing implications are recommended to improve the service quality of Macao casinos.

### Regulation of China Lottery Industry: Perspective of Protecting the Vulnerable

Changbin Wang (Macao Polytechnic Institute)

The current regulation of China lottery industry has been focusing on preventing lottery buyers from cheating, while paying little attention to the negative effects of lottery to the vulnerable such as the minors, the people with lower income. With more people involving in buying lottery, the number of problem gambler has dramatically increased in mainland China in recent years. The government of China should make efforts to reduce incidence of problem gambling by changing the lottery market structure, limiting the supply side of lottery, making stricter and more detailed regulation on lottery advertisement, etc. This paper constitutes with three parts. The first part reviews the measures and actions that the western countries have taken to protect the vulnerable. The second part discusses the insufficiency of Chinese laws and regulations to prevent the vulnerable from being tempted to participate in lottery purchase. The third part makes a few specific proposals to improve the regulation of China lottery industry.

### An Investigation of Casino Service Experience

Ip Kin Anthony Wong (Institute for Tourism Studies)

Managing customer experience can be particularly challenging, as there is no existing framework that can offer managers the exact experiential attributes customers are looking for. This study fills the void in the literature by exploring the criteria of customer experience in the increasingly experience-oriented hospitality context of casinos in two studies. In the first study, the author first identified six categories of experiential attributes pertaining to the service environment: employee service, value, hedonic and

novelty appeal, brand, and perceived luck. In addition, the roles of customers? Socio-demographics and spending patterns on the experiential attributes were also examined through a series of logistic regressions. The author then investigated the position of a set of 11 casinos in Macau based on the experience of the respondents. In the second study, the author conceptualized service experience equity (SEE) as customers? Functional and emotional evaluation of their experiences when they acquire services from, and interact with, service providers. Next, the author examined the customer equity model and replaced value equity with SEE. Structural equation modeling was used to estimate the effect of the three customer equity drivers: SEE, brand equity, and relationship equity on customer satisfaction and loyalty intention among casino customers. The results provide scholars and practitioners alike with a better understanding of the role of customer experience in shaping the positioning of casino services. In fact, this is the first study that incorporates experiential attributes in understanding the position of service providers. Implications for theory and practice are presented below. This study is also the first study to reconceptualize the customer equity model by replacing value with experience as a more relevant measure in today?

### Psychometric Properties of the revised Inventory of Gambling Motives, Attitudes and Behaviors (GMAB-R)

Anise Man Sze Wu, Vivienne Yick Ku Tao, Kwok Kit Tong, and Shu Fai Cheung (University of Macau)

In order to enhance the assessment validity and reliability, indigenous measurements of gambling cognitions and behaviors should be empirically developed and evaluated in Chinese populations. The Inventory of Gambling Motives, Attitudes and Behaviours (GMAB) for Chinese gamblers was first developed in 2011. Later, it was further refined and revised into the GMAB-R, based on the psychometric evaluation results among 697 Chinese adults in Macao who were randomly recruited and interviewed on telephone in a questionnaire survey. The GMAB-R consists of 25 items of six subscales of motives (self-worth, monetary gains, sensation seeking, boredom alleviation, learning, and socialization), 20 items of four subscales of attitudes (fate and luck, negative consequences of gambling, techniques, and superstition), and 18 items of five subscales of behaviours (impaired control, gambling involvement, arousal reaction, superstitious behaviour, and controlled gambling). Both the results of confirmatory factor analysis, correlation analysis, and regression analysis demonstrated the psychometric properties of the GMAB-R satisfactory. We conclude that the GMAB-R can serve as a valid and reliable assessment tool for not only future academic research among Chinese gamblers but also clinical intervention for excessive gambling.

# An Empirical Analysis of Synthesizing the Effects of Service Quality, Perceived Value, Corporate Image and Satisfaction on Gamblers' Behavioral Intentions in the Gaming Industry: The Case of Macau

Hung-Che (Jonathan) Wu and Ka-Wai Lai(Faculty of Hospitality and Tourism Management, Macau University of Science and Technology Macau, China)

It is important that casinos deliver quality services which in turn results in gamblers? Favorable behavioral intentions in today? Competitive gaming environment. This research identifies and examines the factors influencing gamblers? Favorable behavioral intentions in Macau gaming industry. Specifically, the purpose of this study is to identify the dimensions of perceived service quality; and examine the relationships between behavioral intentions, satisfaction and service quality, and perceived

value and corporate image. The data was collected from a convenience sample of gamblers at three large-scale casinos in Macau. The results indicate that satisfaction has an influence on casino gamblers? Favorable behavioral intentions. The results also provide support for the moderating effect of value on the relationships between service quality and satisfaction, and the moderating effect of corporate image on the relationships between service quality dimensions and service quality.

### The Text Mining Analysis on Public Opinion Focus toward Macau's Gambling Industry (2011-2012)

Shianghau Wu (Macau University of Science and Technology)

This study intended to analyze the keywords in the Chinese news reports related to Macau's gambling industry. The study compared the keywords of Chinese news reports between two time frames, September to December 2011 and June to September 2012. The contribution of the study includes the following two points. First, the study has found the keywords difference between the two time frames and conclude the public opinion focuses of Macau's gambling industry. Second, the study finds a new way of literature survey in gambling studies by using the text mining analysis.

### Applying TRIZ Based Business Innovation Tools to Integrated Resort Development in Matsu

### Tai-Chi Wu (I-Shou University)

After a prolonged debate and preparation, the controversial issue of opening up the gaming industry at Matsu, Taiwan has come to a conclusion with the pass of the referendum on the seventh of July, 2012. The gaming industry brings positive economic benefits as well as negative environmental and social impacts. Due to the limited land space and natural resources, the development of integrated resort brings a lot of conflicts between four major aspects, i.e., geographic, social, transportation, and eco-awareness. There is a need for efficiently solving the problems that may occur during the process of the introducing tourism and gaming business to Matsu. To better identify the conflicts and solve the problems, many of problem identification and innovative problem solving tools are created. Among those, TRIZ (The theory of inventive problem solving) is getting most attention due to its high efficiency. TRIZ provides a complete tool set ranging from problem identification to problem solving. While it was originally used in solving engineering problems, recent researches have modified and applied it to various areas, such as management and education. Cause-effect chains analysis, one of TRIZ problem identification tools, is now modified to identify service and business problems, namely RCA+ (conflict root cause analysis+) and BFD (Business Function Diagram). In any business body, conflicts usually exist between business goals and resources when trying to meet stakeholders" needs. Only by solving the conflicts appropriately can a business achieves excellence. After reviewing the factors that affect running a successful integrated resort, RCA+ and BFD are applied to identify the conflicts and problems in Matsu. Then, the fundamental TRIZ tool, modified contradiction matrix for management, is used to solve the conflicts and provides constructive suggestions. An important contribution of this research is evaluating the usefulness of TRIZ based tools in the gaming industry.

### Is Lottery Demand Driven by Effective Price? Evidence from the China Lottery Industry

Jia Yuan (University of Macau)

There has been a long debate on whether the expected utility model can explain lottery purchase decision under uncertainty. The traditional strand of research, named the effective price approach, following the expected utility approach takes the expected loss of each ticket as the lottery price and uses this effective price to understand lottery demand.

Another branch of literature, more from the prospect theory perspective, argues that lottery demand depends more on jackpot size, or small odds events, than expected values. It is hard to separately evaluate these two different approaches as they share common factors which are hard to cleanly differentiate. In this paper, we examine these two approaches by exploiting a unique lottery game setup in China. This lottery game is similar to the lotteries in other countries except that there is a cap policy on the grand prize, which limits the reward of each jackpot winner. We show that this seemingly complex cap-policy actually causes the whole lottery price to be almost fixed all of the time although the rollover money from the last draw significantly varies. This suggests that the effective price approach cannot explain the observed variation in lottery sales. We further conduct Monte Carlo simulations and provide evidence showing that the popular 2SLS method using rollover and its square as instruments in the effective price literature may give spurious estimation result. We also find that lottery sales are highly correlated to the rollover size.

### The Growth Trend of Macau's Gambling Industry: a Scenario Analysis

Zhonglu Zeng (Macao Polytechnic Institute, Macao, China)

Macau's gambling has been growing at a compound annual growth rate of more than 23% in the past 30 years. The growth was especially phenomenal in the last two years, with the growth rate of 58% and 42% respectively. The question is what will the future of Macau's gambling industry be? Can the growth of the past be repeated in the future? This research will make a scenario analysis of the development of Macau's gambling industry by studying the characteristics and changes of the visitors to Macau, the characteristics of the high rollers, and the future visitors' propensity to gamble. The research finds that two opposite forces determine the future growth of Macau's gambling industry: the upward forces and downward forces. The upward forces will drive the fast growth of Macau's gambling industry. These forces include the increasing supply of visitors from the cities or provinces other than Hong Kong or Guangdong, and the increasing disposable income of the China's population. The downward forces will slow down the growth of the industry. The downward forces include the adaptation effect and the learning effect of the gamblers, and the lower interest for gambling of the younger generation. In the short term, the upward forces will dominate the market, while in the intermediate term and the long term, the downward forces will be more powerful. The study is helpful for understanding the general trends of the casino industry in Macau as well as the casino industry in the world as a whole.

### Fuzzy-Set Qualitative Analysis for Identifying "Whales" and "Jumbo Shrimps" Casino Gamblers

Man Zhang (University of Rhode Island), Arch G. Woodside (Boston College), and Ting-Hsiang Tseng(Feng Chia University)

This article shows how to use fuzzy-set qualitative comparative analysis (QCA) to provide "causal recipes" sufficient for profiling X-consumers accurately. X-consumers are the extremely-frequent (top 2 to 3%) users who typically consume 25% of a product category. The study extends Dik Twedt's "heavy-half' product users for building theory and strategies to nurture or control X-behavior. The study here applies QCA to offer configurations that are sufficient in identifying "whales" and "jumbo shrimps" among X-casino gamblers. The findings support the principle that not all X-consumers are alike. The theory and method are applicable for identifying the degree of consistency and coverage of alternative X-consumers among users of all product-service category and brands.

### Evolution of the Industry Life Cycle Characteristics of Variables after Macau Gambling

#### Liberalization

Jinquan(Jim) Zhouand Sung Hee Park (Macau University of Science and Technology)

Since 2002, the Macau government ended the gambling monopoly system and opened door to foreign operators, rapid development of gambling industry has binged a key issue to Macau eco-social sustainable development. In this Study, we focus on Macau's gambling industry life cycle in the view of Industry Life Cycle theory, giving dynamic characterized analyses on the historical stages of the development of Macau's gambling industry and its life cycle. Proposed life cycle stage characteristics of the gaming industry include product features, organizational characteristics, and market characteristics, characteristics of industry structure and industry policy. We have discussed the basic law of the Macau gaming industry life cycle according to variable characteristics of Macau's gambling industry life cycle stage in this paper.

### Asia Pacific Association for Gambling Studies

The Asia Pacific Association for Gambling Studies (APAGS) is a not-for-profit international academic network consisting of scholars, professionals, regulators, and policy makers dealing with gambling research and the gaming business around the world. Without a collective position on gambling, APAGS is dedicated to promoting gambling studies from different perspectives (e.g., psychological, sociological, economic, and regulatory) through consultancy and scientific research and by holding international conferences and publishing scholarly journals.

### Gaming Teaching and Research Centre, Macao Polytechnic Institute

On September 1, 2009 the gaming part of the Macao Tourism and Casino Career Centre was incorporated into Macao Polytechnic Institute to establish the Gaming Teaching and Research (GTRC). GTRC continues to provide training services to related industries and develops more casino management training courses to prepare qualified local staff for management positions.

The Centre has started a Bachelor of Social Science in Gaming and Recreation Management Programme in academic year 2010/2011. The programme aims at nurturing local middle to senior level gaming management personnel. Also the Centre will promote regional academic research in gaming, carry out relevant researches of gaming industry's impact on society and economy in order to provide decision-making references to the government, enterprises and society.

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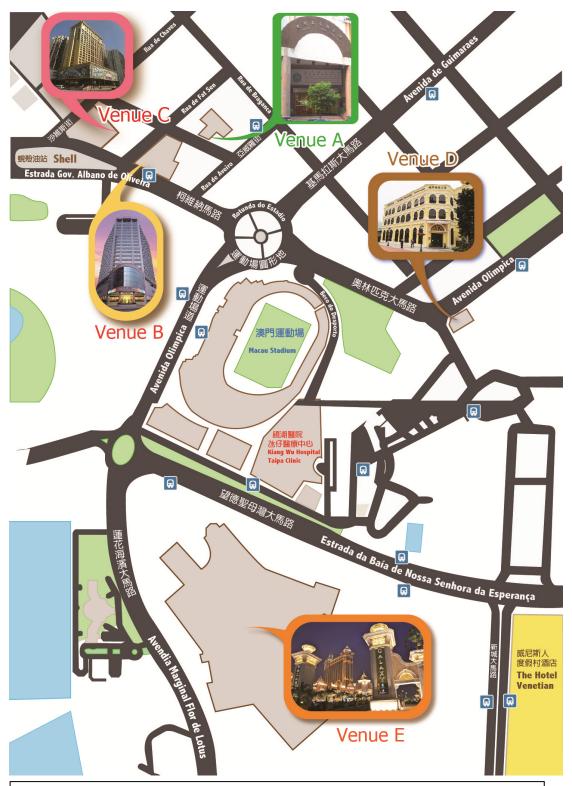
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**Venue C:** Conference Hotel: Hotel Taipa Square, Rua de Chaves, Taipa, Macau (close to Jockey Club )駿 景酒店

**Venue D:** Dinner (November 6) Cozinha Pinocchio, Largo dos Bombeiros No. 38, Taipa(木偶葡國餐廳,澳門氹仔消防局前地 38 號)

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