Psychology 335: Gambling and Decision Making
University of British Columbia, Vancouver

Instructor:

The primary Instructor for this course is Dr. Luke Clark, Director of the Centre for Gambling Research at UBC, in the Department of Psychology. For office hours, Luke will be available for discussion with students after each class, and on Wednesdays 1-2pm in his office (CIRS building on West Mall, 4ᵗʰ floor, room 4342B). Email luke.clark@psych.ubc.ca.

We are fortunate to have some additional guest lecturers contributing to the course: Dr Gerald Thomas is the Director for Alcohol and Gambling Policy at the BC Ministry of Health, and he will contribute lectures on gambling policy, and Dr Terri-Lynn MacKay is a clinical psychologist who will give a class on addiction treatment.

Teaching Assistant:

The TA for this course is Spencer Murch (email spencer@psych.ubc.ca); Spencer is a PhD student in the Centre for Gambling Research, working on physiological arousal in gambling and the addictive features of modern slot machines. His office hours will be Thursdays at 4pm in room 3508 (Kenny Building).

You may contact the TA or the Instructor in person or by email. Please be judicious in your use of email: if you have more than 2 questions, your best option is to visit in person, in office hours.

Timetable:

Lectures are on Mondays, Wednesdays, Fridays at 12 noon in Buchanan A 101.

Course description

This course will study gambling behaviour as a lens for examining the psychology of decision-making and the brain mechanisms that support risky choice. Gambling is a ubiquitous form of entertainment that becomes dysfunctional for a minority. In British Columbia, 73% of the population report past-year gambling, and BC receives 2.7% of its total provincial revenue from gambling, which is higher than that revenue from alcohol and tobacco combined. Around 1% of the population warrant a diagnosis of 'pathological gambling', with some evidence of gambling harms in 4-5% of the population. While this may be viewed as a fairly small minority of the population, this subset generates roughly a quarter of gambling revenue in the province.

Two questions dominate the course. First, what does the existence and popularity of gambling tell us about human decision-making? Second, how does gambling become pathological for some people, and how should society respond to these harms? This multi-disciplinary course will integrate complementary approaches from cognitive and clinical psychology with relevant work from neuroscience, economics and public health.

Learning Objectives

By the end of this course, students will be able to:

1) demonstrate knowledge of concepts from the fields of decision-making, neuropsychology and addiction research that are relevant to understanding the psychology of gambling behaviour.
2) explain the assessment of gambling involvement and the clinical diagnosis of problem gambling, as well as contemporary theories of problem gambling within an addictions framework.
3) consider the application of psychological research on gambling to informing public policy and government regulation of gambling ('responsible gambling').
4) evaluate primary literature in gambling research, including the design, key methods, and interpretation, as well as considering strengths and limitations of the research
5) critically consider the media portrayal and public perceptions of gambling, with attention to newspaper coverage of gambling research, gambling advertising, and gambling in the movies.
6) synthesize findings across disparate fields of research, in order to appreciate the inter-disciplinary nature of gambling research.

Prerequisites:

Either (a) PSYC 100 or (b) all of PSYC 101, PSYC 102.

Evaluation

- Midterm exam   35%   (assessing LO 1, 2, 4)

- Written assignment   15%   (assessing LO 4, 5)

- Final exam   50%   (assessing LO 1 – 6)

The purpose of the classes is to review key material in the set readings. The readings vary in their depth and complexity; also some of the readings are review papers and others are original research articles. Thus, some classes will serve as an introduction to the reading material, whereas others will go beyond the reading material. The two exams will be geared towards the material covered in class. I will not examine details from the readings that have not been considered in class. This is one reason why attendance at class is important.

The midterm will consist of multiple choice and short-answer questions, and will take place in the lecture theatre in place of a regular class. Short answer questions may involve drawing or labelling figures discussed in the lectures. The final exam (2 hours) is cumulative, with an emphasis on the second half of the course. The final exam will involve multiple choice questions, short answers and a short essay (~2 sides). In the essay, high marks will be awarded for critical thinking and synthesis of concepts across the course.

Written assignment

Students will prepare a report (maximum length 5 pages; 12 point Times New Roman, double spaced, 1 inch margins) on a ***newspaper article*** describing a research paper on gambling.

Selection of articles:

i)   The newspaper article must cite the research paper in a way that the paper can be located in PubMed or PsycInfo.
ii)   The research paper should be an original article not a review or opinion piece.
iii)   The research paper should have been published since 2010.

iv)   Newspaper articles should be identified online in a reputable news outlet e.g. New York Times, BBC, CBC, Vancouver Sun, Washington Post, Wall Street Journal, Globe and Mail, The Guardian. The article should have been written by a journalist; please do not use science websites like medicalxpress.com and ScienceDaily.com, which paraphrase university press releases.

v)   The newspaper article and research paper should be relevant to the content of the course: the psychology of gambling, decision-making, problem gambling, behavioural addictions. I suggest you begin searching for suitable articles by entering terms like 'gambling' 'psychology' 'research' in search engines on some of the news sites.

Copies of the newspaper article and research paper should be submitted for approval on 2nd Nov (end of class). The report should describe the objectives and findings of the journal paper, including limitations and weaknesses. High marks can be awarded for reports on flawed research. The report should describe the implications of the research for treatment, public policy, or gambling theory. Strong marks will be given for considering implications that are *not* discussed in the article or paper. The report should consider the accuracy of the media coverage (Does new article 'dumb down' the findings? Does the journalist show evidence of an 'agenda'? How might reporting influence public understanding of gambling, for better or worse?). Strong marks will be awarded for the student's evaluation of the media portrayal of the research.

Some examples of appropriate newspaper articles:

http://www.theguardian.com/education/2010/sep/27/gambling-brain-dysfunction-improbable-research

referring to Shiv et al (2010) Investment Behavior and the Negative Side of Emotion. *Psychological Science:*

http://www.washingtonpost.com/national/health-science/sounds-of-slot-machines-can-manipulate-players-researchers-say/2013/07/06/bfbd34ec-e3f8-11e2-80eb-3145e2994a55_story.html

referring to Dixon et al (2013). The Impact of Sound in Modern Multiline Video Slot Machine Play. *Journal of Gambling Studies*; 10.1007/s10899-013-9391-8

(It is acceptable to choose these articles/papers for your own report, but be aware they may be popular choices)

And one that would **not** be appropriate (as there is no searchable publication linked to the story):

http://www.theguardian.com/society/2014/feb/28/englands-poorest-spend-gambling-machines

Deadlines: The written assignment is scheduled after the midterm exam (see dates in the Lecture and Reading Schedule). One lecture will give an overview of the objectives and requirements of the written assignment. Students must submit hard copies of their chosen research article and newspaper article for approval to the instructor by Nov 2. Feel welcome to email the instructor to check article suitability in advance of the deadline. Students will be informed of any unapproved articles by Nov 7. The deadline for the written assignment is end of class on Nov 14.

Marking: The written assignment will be given a mark out of 20, with marks allocated for the following:

- accurately and concisely describing the objectives of the original research article (4 points)

- accurately and concisely describing the design of the original research article, with awareness of limitations (4 points)

- accurately and concisely describing the findings of the original research article (4 points)

- consideration of how the research informs either treatment, gambling theory, or public policy (4 points)

- discussion of the accuracy and objectivity of the media coverage (4 points).

Course grading

In order to reduce grade inflation and maintain equity across multiple course sections, all psychology courses are required to comply with departmental norms regarding grade distributions. According to departmental norms, **the mean grade in a 300-level class is 70 for a good class, 68 for an average class, and 66 for a weak class, with a standard deviation of 13**. Scaling may be used in order to comply with these norms; grades may be scaled up or down as necessary by the professor or department. Grades are not official until they appear on a student's academic record. You will receive both a percent and a letter grade for this course. At UBC, your course percentage is converted according to the key below:

A+	90-100%	**B+**	76-79%	**C+**	64-67%	**D**	50-54%
A	85-89%	**B**	72-75%	**C**	60-63%	**F**	0-49%
A-	80-84%	**B-**	68-71%	**C-**	55-59%		

Remember, you are earning a degree at a highly reputable post-secondary institution. Therefore, criteria for success are high. The Faculty of Arts offers the following guidelines that broadly characterize the kind of work that is generally associated with the main grade ranges. These characteristics help to put the Psychology Department Grading Policies into context. Please note that adequate performance is in the C range, which is the typical class average.

A RANGE: *Exceptional Performance.* Strong evidence of original thinking; good organization in written work; capacity to analyze (i.e., break ideas down) and to synthesize (i.e., bring different ideas together in a coherent way); superior grasp of subject matter with sound critical evaluations; evidence of extensive knowledge base.

B RANGE: *Competent Performance.* Evidence of grasp of subject matter; some evidence of critical capacity and analytic ability; reasonable understanding of relevant issues; evidence of familiarity with the literature.

D-C RANGE: *Adequate Performance*. Understanding of the subject matter; ability to develop solutions to simple problems in the material; acceptable but uninspired work; not seriously faulty but lacking style and vigor.

F RANGE: *Inadequate Performance.* Little or no evidence of understanding of the subject matter; weakness in critical and analytical skills; limited or irrelevant use of the literature.

Course Policies

Please mute your cell phones during class. Laptops are permitted but use of social media etc during class is obviously discouraged.

Academic Misconduct

Cheating, plagiarism, and other forms of academic misconduct are very serious concerns of the University, and the Department of Psychology has taken steps to alleviate them. Relevant to this course, the Department has implemented software that can reliably detect cheating on multiple-choice exams by analyzing the patterns of students' responses. Second, the Department subscribes to TurnItIn, a service designed to detect plagiarism. If a student has any questions as to whether or not their work is even a borderline case of plagiarism or academic misconduct, they are advised to consult the instructor.

In all cases of suspected academic misconduct, the parties involved will be pursued to the fullest extent dictated by the guidelines of the University. Strong evidence of cheating may result in a zero credit for the work in question. According to the University Act (section 61), the President of UBC has the right to impose harsher penalties including (but not limited to) a failing grade for the course, suspension from the University, cancellation of scholarships, or a notation added to a student's transcript.

Required readings

There is no textbook for this course. Rather, course content will be taught via these set readings. The lectures will discuss the key concepts from the readings; jointly, this is the 'examinable content' of the course. Details of the set readings that are not discussed at all in class will not be examined. However, the final exam will emphasize a synoptic understanding of the course; that is, students ability to synthesize material across the course, and the set readings are crucial in this regard. The assigned readings are as follows (all will be available on Connect):

A Plan for Public Health and Gambling in British Columbia. (2015). Victoria, BC.
        https://www.gaming.gov.bc.ca/reports/docs/plan-rg-public-health-and-gambling-2015.pdf

Binde, P. (2005). Gambling Across Cultures: Mapping Worldwide Occurrence and Learning from
        Ethnographic Comparison. *International Gambling Studies*, *5*(1), 1–27.
        doi:10.1080/14459790500097913

Blaszczynski, A., & Nower, L. (2002). A pathways model of problem and pathological gambling.
        Addiction, *97*(5), 487–499. doi:10.1046/j.1360-0443.2002.00015.x

Clark, L. (2016). Decision-making in Gambling Disorder: understanding behavioural addictions. In J-C
        Dreher & L Tremblay (Eds.), *Decision Neuroscience*. Elsevier. doi:10.1017/CBO9781107415324.004
        (This volume is due to be published in Sept 2016 but I will upload a copy to Connect)

Clark, L., Lawrence, A. J., Astley-Jones, F., & Gray, N. (2009). Gambling near-misses enhance motivation
        to gamble and recruit win-related brain circuitry. *Neuron*, *61*(3), 481–490.
        doi:10.1016/j.neuron.2008.12.031

Dixon, M. J., Graydon, C., Harrigan, K. A., Wojtowicz, L., Siu, V., & Fugelsang, J. a. (2014). The allure of
        multi-line games in modern slot machines. *Addiction*, *109*, 1920–8. doi:10.1111/add.12675

Ellery, M., & Stewart, S. H. (2014). Alcohol affects video lottery terminal (VLT) gambling behaviors and
        cognitions differently. *Psychology of Addictive Behaviors*, *28*(1), 206–16. doi:10.1037/a0035235

Fortune, E. E., & Goodie, A. S. (2012). Cognitive distortions as a component and treatment focus of pathological gambling: A review. *Psychology of Addictive Behaviors*, *26*, 298–310. doi:10.1037/a0026422

Hodgins, D. C., Stea, J. N., & Grant, J. E. (2011). Gambling disorders. *Lancet*, *378*, 1874–1884. doi:10.1016/S0140-6736(10)62185-X

Ladouceur, R., & Walker, M. (1996). A cognitive perspective on gambling. In *Trends in Cognitive and Behavioural Therapies*.

Lilienfeld, S., & Lynn, S. (2015). Clinical Decision Making. In R. L. Cautin & S. O. Lilienfeld (Eds.), *The Encyclopedia of Clinical Psychology* (pp. 1–13). Wiley & Sons. doi:10.1002/9781118625392.wbecp563

Lower the Stakes: A Public Health Approach to Gambling in British Columbia (Provincial Health Officer's 2009 Annual Report). (2013). Victoria, BC. http://www.academia.edu/5697812/Lower_the_stakes_A_public_health_approach_to_gambling_in_BC

Reber, A. S. (2012). The EVF Model: A Novel Framework for Understanding Gambling and, by Extension, Poker. *Gaming Research and Review Journal*, *16*(1), 59–76.

Studer, B., Limbrick-Oldfield, E. H., & Clark, L. (2015). "Put Your Money Where Your Mouth Is!": Effects of Streaks on Confidence and Betting in a Binary Choice Task. *Journal of Behavioral Decision Making*, *28*, 239–249.

Volkow, N. D., Koob, G. F., & McLellan, A. T. (2016). Neurobiologic Advances from the Brain Disease Model of Addiction. *New England Journal of Medicine*, *374*(4), 363–371. doi:10.1056/NEJMra1511480

Lecture and Reading Schedule

Lecture	Date	Day	Topic	Readings
1	7 Sep	W	Orientation	
2	9 Sep	F	Gambling: Definitions	(Reber 2012)
3	12 Sep	M	Gambling: History	(Binde 2005)
4	14 Sep	W	Foundations 1: Decision Making	
5	16 Sep	F	Gambling Policy in Canada and BC (GT)	(Lower the Stakes, pg 1-18, 71-73)
6	19 Sep	M	Foundations 1: Decision Making cont.	
7	21 Sep	W		(Lilienfeld and Lynn 2015)
8	23 Sep	F	Foundations 2: Neuropsychology	
9	26 Sep	M		
10	28 Sep	W		(Clark 2016)
11	30 Sept	F	Foundations 3: Addiction	
12	3 Oct	M		
13	5 Oct	W		(Volkow et al. 2016)
14	7 Oct	F	Problem Gambling: Diagnosis, Epidemiology, Assessment	
15	10 Oct	M	**NO CLASS - THANKSGIVING**	
16	12 Oct	W	Problem Gambling, cont.	(Hodgins et al. 2011)
17	14 Oct	F	NO LECTURE – COG RETREAT	
18	17 Oct	M	Revision Class	
19	19 Oct	W	**MIDTERM**	
20	21 Oct	F	Theories of Problem Gambling	(Blaszczynski and Nower 2002)
21	24 Oct	M		
22	26 Oct	W	Arousal and Conditioning	
23	28 Oct	F	Cognitive Distortions **(info on written assignment)**	(Ladouceur and Walker 1996)
24	31 Oct	M	Illusion of Control	
25	2 Nov	W	Gambler's Fallacy **(submit articles)**	(Studer et al. 2015)
26	4 Nov	F	Near-Misses	(Clark et al. 2009)
27	7 Nov	M		
28	9 Nov	W	Treatment and Prevention of Problem Gambling	(Fortune and Goodie 2012)
29	11 Nov	F	**NO CLASS – REMEMBRANCE DAY**	
30	14 Nov	M	**(submit written assignment)**	
31	16 Nov	W	Treatment and Prevention, cont.	
32	18 Nov	F	Policy and Programmatic Responses to PG in BC (GT)	(Lower the Stakes, pg 19-25, 53-64)
33	21 Nov	M	Rage against the machines	(Dixon et al. 2014)
34	23 Nov	W		
35	25 Nov	F	Cigarettes and alcohol	(Ellery and Stewart 2014)
36	28 Nov	M	Gambling Policy in BC: Current Status (GT)	(Lower the Stakes pg 65-68; A Plan for Public Health and Gambling in BC (2015)
37	30 Nov	W	Gambling and the media	

38	2 Dec	F	Conclusions; Revision Class	
	TBA		FINAL EXAMINATION	

GT = Dr Gerald Thomas