

GAMBLING RESEARCH

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Developing an Ecologically-Valid Primate Model of Bartering and Gambling Behaviours

The Uluwatu Temple in Bali, Indonesia is home to a unique population of free-ranging macaque monkeys who have learned that it can be “profitable” to rob tourists of their electronics, sunglasses and other goodies. Items are held for ransom by the monkeys and returned only after a suitably tasty food item has been bartered back to them in exchange for the stolen booty. Dr. Jean-Baptiste Leca, University of Lethbridge (Psychology), and his research team have been studying this group of macaques as part of their Institute-funded investigation entitled, “Development of an Ecologically Valid Non-Human Primate Model of Gambling (#85).” Their aim is to adapt this naturally-occurring bartering system among the macaques and introduce a series of gambling tasks to mirror the conditions under which gambling occurs in humans.

Dr. Leca and his team are experimentally testing the behavioural prerequisites of gambling-like tasks in the monkeys by introducing uncertainty into the outcome of their bartering system. To accomplish this, the macaques have been trained to gamble using a modified version of the Plinko board game as a proxy to assess the near-miss effect. Preliminary results indicate that the macaques are exhibiting strong motivations to keep on staking tokens on the gambling game. They also are using idiosyncratic strategies oriented to their most preferred food reward slot. These strategies include rapidly retrieving and depositing their gambling tokens into the basket, saving their least preferred rewards in a pile beside them, and trying to place tokens directly into the most preferred reward slot.

In a separate but related experiment, the researchers have begun to test how risk-prone these monkeys are by giving them a choice between a safe but low-reward gambling option and

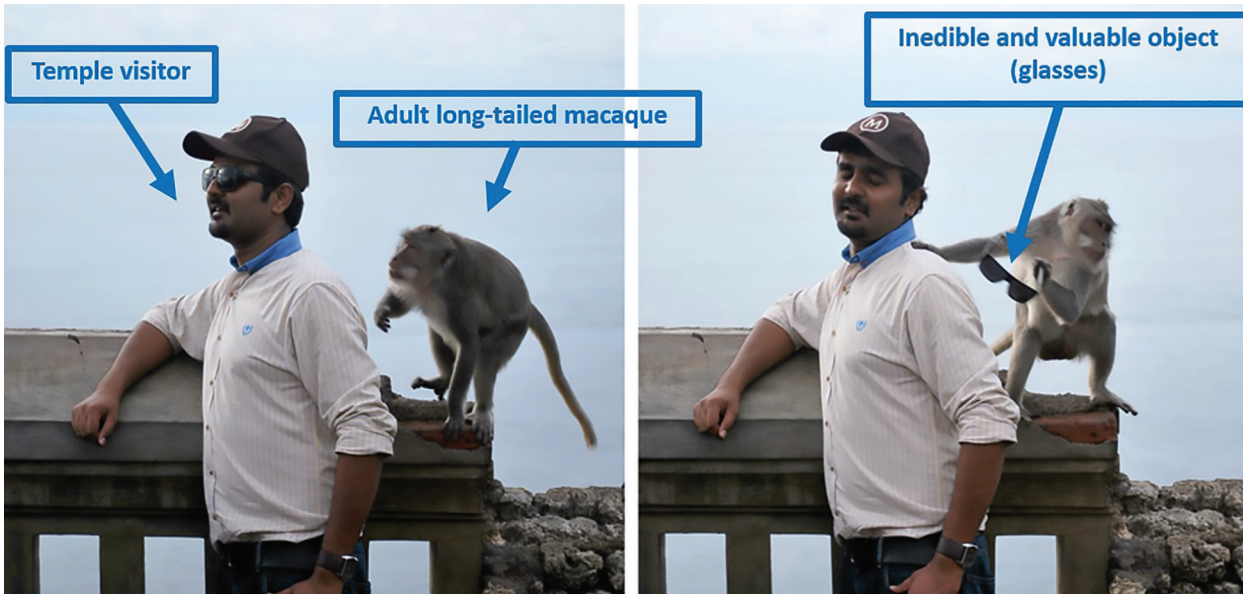


The primary aim of the Alberta Gambling Research Institute, a consortium of the Universities of Alberta, Calgary, and Lethbridge, is to support academic research related to gambling.

MISSION

To facilitate evidence-based broad research that informs gambling public policy and educates Albertans and the wider audience about the effects of gambling.

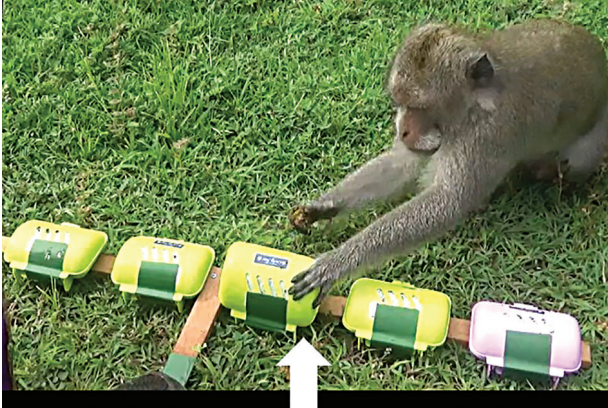
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a risky but high-reward option based upon their visual access to information. Though results are preliminary, Dr. Leca and his team have found that, as in humans, there is a tendency for male monkeys to choose the risky options when compared to female monkeys.

To learn more about Dr. Leca's research investigation, see his [poster presentation](#) and [presentation video](#) [03m:05s] which were presented at the Institute's recently completed annual conference (2021, April).

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- Choice: **Risky/High-Reward** Option
- Outcome: **Win**

Jean-Baptiste (JB) Leca, Ph.D. is an Associate Professor in the Department of Psychology at the University of Lethbridge and an Adjunct Faculty with the School of Natural and Engineering Sciences, National Institute of Advanced Studies, Bangalore, India.

Since Dr. Leca's Ph.D. in Ethology (2002) at the University Louis Pasteur, Strasbourg, France, he has been studying the development, mechanisms,

function, and evolution of material culture in non-human primates, including socially learned object play, extractive foraging techniques, and tool use in macaque populations. Dr. Leca's research on the acquisition of tool-assisted behaviours encompasses both literal tool use (e.g., stone-aided foraging) and symbolic tool use (e.g., token-mediated bartering/gambling behaviour). He is also interested in the proximate and ultimate causes of non-conceptive sexual behaviors in primates. Ultimately, Dr. Leca strives to view putative behavioral adaptations (e.g., tool use, female-male mounting) and their hypothesized by-products (e.g., object play, female-female mounting) as two complementary sides of the same evolutionary coin. He employs comparative, longitudinal, experimental, and physiological approaches in his research, that intersect with disciplines such as Psychology, Ethology, Anthropology, Ecology, and Endocrinology.

Dr. Leca's research is mainly funded by the following agencies: *Natural Sciences and Engineering Research Council of Canada (NSERC)*, *Social Sciences and Humanities Research Council (SSHRC)*, *Alberta Gambling Research Institute (AGRI)*, *Japan Society for the Promotion of Science (JSPS)*, and *The Leakey Foundation*.



Gambling on Single-Event Sports Games Coming to Canada with Passing of Bill C-218



On June 22nd, 2021, Canada's Senate passed Bill C-218 (Safe and Regulated Sports Betting Act) to amend the Criminal Code's provisions around gambling on single-event sports games to legalize this activity. The upper chamber approved the bill by a vote of 57-20 and it will become law once it receives royal assent. This means that Canadians will soon be able to legally place bets with provincially-sanctioned operators on the outcomes of single games of ice hockey, football, and other sports. At the present time, the legal betting on sports events only occurs in the form of sports lottery parlay betting (i.e., a single sports wager that involves two or more bets combined into one) and pari-mutuel betting on horse racing.

Bill C-218 was introduced as a private member's bill by Conservative MP Kevin Waugh of Saskatoon-Grasswood, Saskatchewan. In his [Sponsor's speech](#) (2020-11-03), Waugh argued that single-event sports betting is, in fact, already taking place in Canada at an estimated rate of \$14-billion annually and being run by "black market gambling rings and offshore websites." None of those proceeds are directed back to public coffers or fund provincial problem gambling-related treatment or consumer protection initiatives. He also suggested that Indigenous communities and major sports leagues are in favour of legalized single-event wagering and that tax

revenues resulting from the activity could be re-invested in education, health care and other public services.

For those interested in reviewing the briefs and witness statements about single-event wagering submitted by stakeholders, they're available online within the *House of Commons Standing Committee on Justice and Human Rights (JUST) Report 8*. Those submissions from provincial lottery corporations -including the Alberta Gaming, Liquor & Cannabis (AGLC) - indicated their enthusiastic support of Bill-218. In their brief, the AGLC stated that the passage of the bill will present new options for players on Alberta's regulated gambling website PlayAlberta.ca and also assist in the recovery of an estimated \$1.8-billion per year that Albertans wager on unregulated offshore sites. Horse racing associations were however, less excited about the introduction of single-event betting and their submissions outlined concerns about cannibalization of existing pari-mutuel revenues.

The next few years should reveal whether Canada's legalization of single-event sports betting will actually result in a reduction of illegal sports gambling activities, the creation of jobs, and an increase in gambling revenues as its proponents suggest. This would appear to hinge, as former Institute research

coordinator Dr. Garry Smith postulated in 2013, on whether provincial governments are able to make their sports betting odds and related services (i.e., internet betting, offering credit) attractive to sports gamblers in order to compete with the established illegal suppliers.¹

Additional Information:

Bill C-218 (LEGISinfo)

- Text of the Bill (latest publication), Status of the Bill, Major Speeches at Second Reading, etc.

Report 8: Bill C-218, An Act to amend the Criminal Code (sports betting)

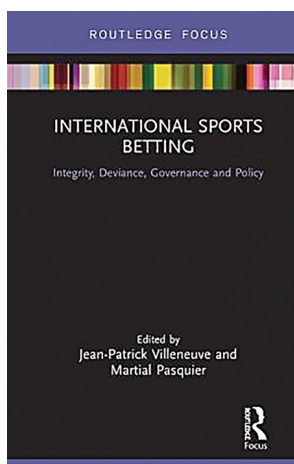
- 29 briefs (i.e., written submissions) from provincial lottery corporations, horse racing associations, professional sports bodies, Responsible Gambling Council, etc. as well as an additional 32 interview statements from witnesses.

1 Pros and Cons of Single Event Sports Betting.

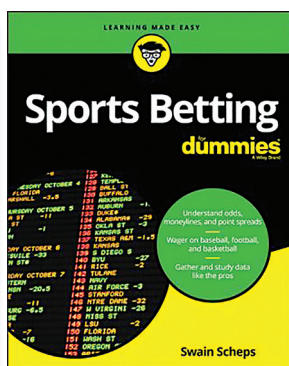
Presentation by Garry Smith at the 15th International Conference on Gambling & Risk Taking, Las Vegas, NV, May 29, 2013.

Ten Recently Publications (Books, E-books & Reports) Related to Sports Betting

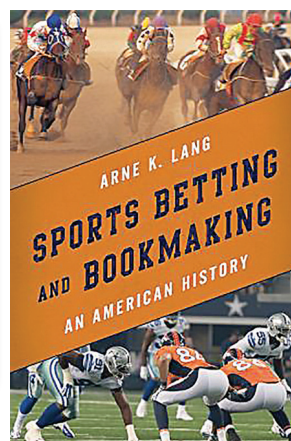
The Institute provides annual funding to each of the three Institute-affiliated libraries (U. of Alberta, U. of Calgary & U. of Lethbridge) to purchase library resources relevant to various aspects of gambling research. Contact Institute Librarian & Information Specialist Rhys Stevens (rhys.stevens@uleth.ca) to submit a specific request.



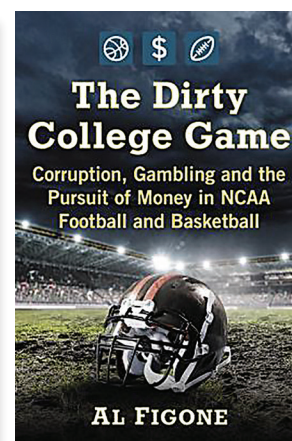
International sports betting: Integrity, deviance, governance and policy. (2019). Edited by Jean-Patrick Villeneuve & Martial Pasquier.



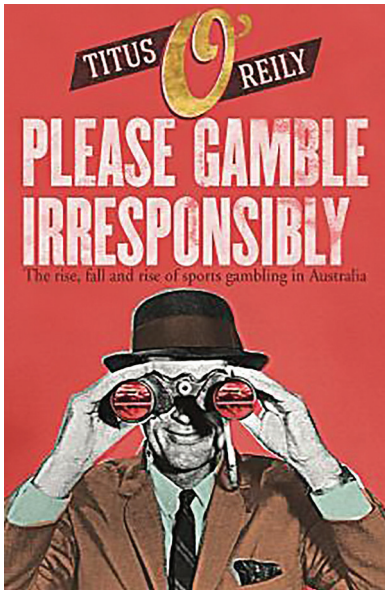
Sports betting for dummies. (2020). Swain Scheps.



Sports betting and bookmaking: An American history. (2016). Arne K. Lang.



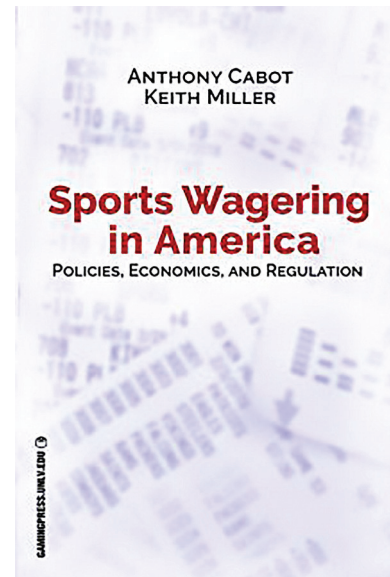
The dirty college game: Corruption, gambling and the pursuit of money in NCAA football and basketball. (2019). Al Figone.



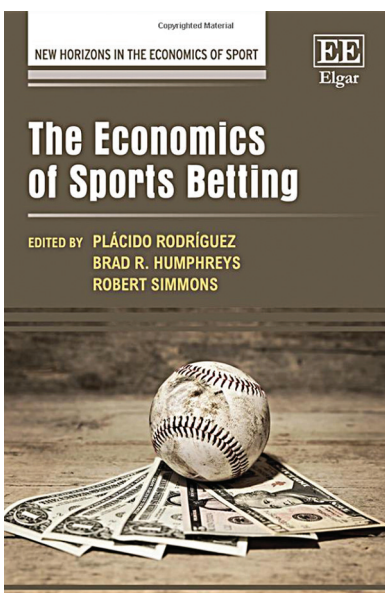
Please gamble irresponsibly: The rise, fall and rise of sports gambling in Australia. (2019). Titus O'Reilly.



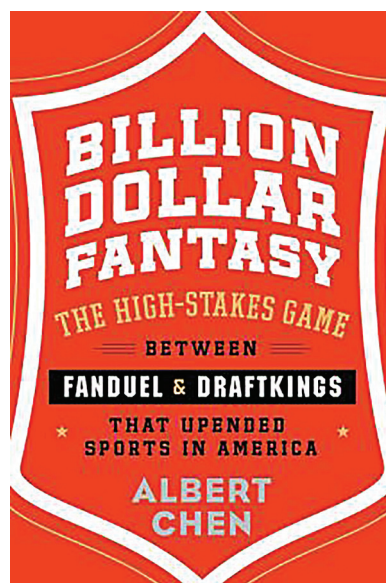
Match manipulation and gambling: A growing threat to Canadian sport integrity. White Paper in Response to the International Symposium on Match Manipulation & Gambling in Sport. (2019).



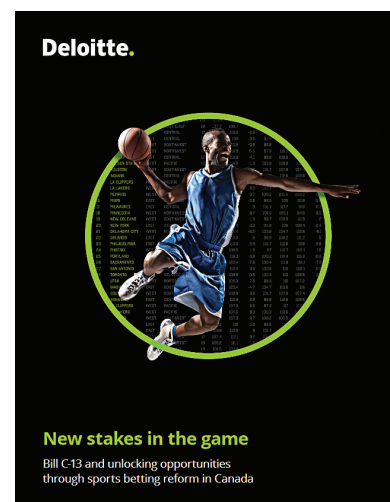
Sports wagering in America: Policies, economics, and regulation. (2018). Anthony Cabot.



Economics of sports betting. (2017). Edited by Plácido Rodríguez, Brad R. Humphreys & Robert Simmons.



Billion dollar fantasy: The high-stakes game between FanDuel and DraftKings that upended sports in America. (2019). Albert Chen.



New stakes in the game: Bill C-13 and unlocking opportunities through sports betting reform in Canada (2021, February). Deloitte.

Announcement of Graduate Scholarship Recipients 2021/2022

The Institute is pleased to announce seven Scholarship and Research Allowance Award Recipients for 2021/2022:

Albright – Tolman, Jami

(Health Sciences, U of Lethbridge)

Baxter, David

(Political Science, U. of Alberta)

Brazeau, Bradley

(Psychology, U. of Calgary)

Ethier, Ashley

(Psychology, U. of Calgary)

Gorenko, Julie

(Clinical Psychology, U. of Calgary)

Leslie, Diandra

(Psychology, U. of Calgary)

Wilcox, Sean C

(Cultural, Social & Political Thought, U. of Lethbridge)

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*The Institute is funded by the Government of Alberta.

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North Design Group
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Photo Credit/Images:

North Design Group, Stock & Submitted.

ISSN: 1911-8724 (Online)
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