



Southern Ontario Behavioural Decision Research Conference

Program

May 8th, 2015



Rotman
UNIVERSITY OF TORONTO

BEWORKS

www.BEworks.com/SOBDR2015 or SOBDR@BEworks.com

Welcome!

It is with great pleasure that we welcome you to the 11th annual Southern Ontario Behavioural Decision Research Conference. This year's conference is hosted by the Rotman School of Management and sponsored by BEworks Inc. Every year, the SOBDR conference brings together researchers and academics who share a common interest in the study of human decision-making. We are fortunate to have so many extraordinary specialists researching and practicing in the province of Ontario. SOBDR gives us not only an opportunity to learn about new research, key topics, and challenges in the field, but also to spend a day acknowledging and appreciating the work being done in our own backyard.

In light of the recent surge of interest in behavioural research amongst business leaders and policy-makers, for this year's conference we have added a spotlight on "Applied Research". We will be hearing from a selected group of academics and we will be engaging with experts from the public and private sector who will be sharing examples drawn from their own experience.

Throughout the planning process we heard from a number of researchers and spoke with a variety of business and policy representatives. The enthusiasm and the ideas that were shared were nothing short of encouraging. This year's presenters and roundtable participants each bring something unique and fresh to the discussion. Our keynote speaker, David Pizarro, is renowned for his work in understanding the relationship between emotions and decision-making, particularly the impact of disgust on moral judgments. He will share his insights on applying his research in the commercial domain. Our roundtable discussion will feature one academic, two government representatives, and two industry representatives: Tanjim Hossain, Associate Professor of Marketing, University of Toronto Mississauga, Elizabeth Hardy, Manager, Behavioural Insights Unit, Government of Ontario, Ryan Hum, Data Scientist & Strategic Designer, Privy Council Office, Bryan Pearson, President and CEO of LoyaltyOne, and Kelly Peters, Co-founder and CEO of BEworks Inc.

As practitioners and researchers who are passionate about blending academic and applied behavioural research, we see great opportunity in consistent dialogue between perspectives. We hope that you enjoy the conference and are equally inspired by this goal.



Nina Mažar



Kelly Peters



Julian House

Introducing our Chairs

Nina Mažar – Rotman School of Management & BEworks

Nina is an Associate Professor of Marketing at Rotman and a co-founder and partner of BEworks. She is also a member of the Behavioural Economics in Action research cluster at Rotman (BEA@R). With her focus on behavioural economics, Nina investigates consumer behaviour and how it deviates from standard economic assumptions. In addition, she studies moral decision-making and its implications for policy. Her research topics range from irrational attraction to free products, the paradoxes of green behaviour to temptations to be dishonest.

Kelly Peters - BEworks

Kelly is CEO of BEworks and a specialist in the field of Behavioural Economics. Prior to founding the company in 2010, she worked with Royal Bank of Canada, Bank of Montreal, CANOE, and Financial Post specializing in financial services strategy and IT innovation. Last year Kelly was a Sessional lecturer for the Marketing and Behavioural Economics MBA course at Rotman School of Management. She holds a Master in Business Administration from Dalhousie University and is a Fellow at the Institute of Canadian Bankers.

Julian House – Rotman School of Management

Julian House is a PhD candidate in Organizational Behaviour at the University of Toronto's Rotman School of Management, a SSHRC Doctoral Fellow, and the lead research scientist in the Provincial Government's newly announced Behavioural Insights Unit. His research interests include moral decision-making, the influence of the physical and social environment on behaviour, and how this knowledge can be leveraged to advance public policy and social welfare aims. His research appears in the Journals of Personality and Social Psychology, Social Psychological and Personality Sciences, Experimental Social Psychology, and Research in Organizational Behaviour.

Introducing our Sponsors

About the Rotman School of Management, University of Toronto

The Rotman School of Management is located in the heart of Canada's commercial and cultural capital and is part of the University of Toronto, one of the world's top 20 research universities. The Rotman School fosters a new to think that enables its graduates to tackle today's global business challenges.

For more information, see visit www.rotman.utoronto.ca.

About Rotman's Behavioural Decision Research through the Behavioural Economics in Action research cluster – BEA@R

Consistent with the Rotman School's relentless pursuit of new thinking and novel approaches to stubborn challenges, BEA@R partners with (not-)for-profit organizations and government agencies to use insights from behavioural science and apply them to solve problems ranging from financial literacy to obesity and fraud. The core-team consists of Professors Claire Tsai, Dilip Soman, Min Zhao, Nina Mažar, and Tanjim Hossain.

For more information, see <http://inside.rotman.utoronto.ca/bear>.

About BEworks Inc

Founded in 2010, BEworks is a Canadian-based firm that specializes in applying behavioural economics to real-world challenges. The company focuses on closing the gap between scientific understanding of consumer behaviour and its application. The team combines leading academics from the fields of cognitive and social psychology, neuroscience, and marketing with consulting experts. Using a tried-and-tested methodology grounded in empirical testing, BEworks offers Global 1000 business and public sector organizations a suite of services to drive evidence-based strategy and innovation. BEworks is the world's first commercial firm specializing in behavioural economics and continues to help lead the way towards a new way of thinking in business and policy-making.

For more information, see <http://beworks.com/>

SOBDR 2015 – Program Schedule “At a Glance”

Friday May 8, 2015 at Rotman School of Management – Desautels Hall

Arrival Time [8:45am – 9:25am]		
8:45 – 9:25	Registration & Complementary Breakfast	

Session 1 [9:25am – 11:00am]		
9:25 – 9:30	Welcome Note	Kelly Peters & Julian House
9:30 – 10:00	Speaker 1	Derek Koehler – University of Waterloo
10:00 – 10:30	Speaker 2	Fei Song – Ted Rogers School of Management
10:30 – 11:00	Speaker 3	Johanna Peetz – Carleton University

11:00 – 11:15	Break	
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Session 2 [11:15am – 12:30am]		
11:15 – 12:30	Keynote Address	David Pizarro – Cornell University

12:30 – 1:30	Break & Complementary Lunch	
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Session 3 [1:30pm – 2:30pm]		
1:30 – 2:00	Speaker 4	Lisa Kramer – Rotman School of Management
2:00 – 2:30	Speaker 5	Pat Barclay – University of Guelph

2:30 – 2:45	Break	
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Session 4 [2:45pm – 4:30pm]		
		Tanjim Hossain - University of Toronto Mississauga
		Kelly Peters - BEworks Inc.
2:45 – 4:30	Roundtable Discussion	Elizabeth Hardy - Government of Ontario
		Ryan Hum - Privy Council Office
		Bryan Pearson - LoyaltyOne

Reception (Cash Bar) and Poster Presentations [4:30pm – 6:00pm]		
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Presenters and Research Abstracts

Session 1 [9:25am – 11:00am]

9:30-10:00

Can "false balance" distort public perception of consensus in expert opinion?

Derek Koehler

Professor
*Department of
Psychology
University of Waterloo*



Media critics have expressed concern that journalistic “false balance” can distort the public’s perceptions of what ought to be non-controversial subjects (e.g., climate change). I report several experiments testing the influence of presenting conflicting comments from two experts who disagree on an issue (balance condition) in addition to a complete count of the number of experts on a panel who favor either side. Compared to a control condition, participants in the balance condition were not able to discriminate as clearly issues that did and that did not have strong expert consensus. Participants in the balance condition also perceived less agreement among the experts in general, and were less likely to think that there was enough agreement among experts on the high-consensus issues to guide government policy. Evidently, “false balance” can distort perceptions of expert opinion even when participants have all the information they would need to correct for its influence.

Author: Derek Koehler

10:00-10:30

In-group favoritism and moral decision-making

Fei Song

Associate Professor
*Ted Rogers School of
Management
Ryerson University*



We present a controlled laboratory experiment, which allows us to investigate whether, and to what extent, people will cheat on behalf of a member of their own social group at the expense of a non-member. We investigate the impact of social/group identity on cheating by running new variant of die-under-cup methodology (Fischbacher and Heusi, 2013) that captures both the key features of in-group bias and cheating behaviour. Specifically, we answer these questions: Does the moral concern curb people from immorally benefiting their own group? Is the moral burden of unselfish cheating as heavy as that of selfish cheating? Would a person cheat on behalf of her own group as much as cheating on behalf of herself? We find evidence of incomplete dishonesty in order to benefit not only one self but his/her in-groups as well. More importantly, we find that people are just as willing to lie for their in-group’s payoff, even though such lying behaviour will have no direct, material implication for their own payoff.

Authors: Fei Song & Bram Cadsby

10:30-11:00

Calendar Choices Matter – An Account of Motivated Perception of Time

Johanna Peetz

Associate Professor
Department of Psychology
Carleton University



We investigate how individuals perceive and structure time (e.g., a future year). Consistent with a motivated perception explanation, participants preferred to temporally segregate positive years (i.e., during which they anticipated positive events) but aggregate negative years (i.e., during which they anticipated negative events). Specifically, they structured the year in more distinct categories (Study 1) if they imagined a positive compared to a negative year. Temporally segregated time presentation mattered: when a more segregated timeline (Study 2), or a more segregated calendar (Study 3) was presented to participants, or if participants themselves chose a more segregated calendar (Study 4), the impact of events anticipated during the year was amplified compared to an aggregated time presentation (e.g., monthly calendar instead of daily calendar). This set of studies highlights how we may shift perception of time in a manner than aids a positive outlook towards the future and positive mood.

Authors: Johanna Peetz & Kai Epstude

11:00 – 11:15

Break

Session 2 [11:15am – 12:30pm]

11:15-12:30

David Pizarro

Professor
Department of Psychology
Cornell University

Keynote Address



David is renowned for his work in understanding the impact of emotions on decision-making; particularly the impact the emotion disgust has on moral judgments. David is a featured TED talk presenter, and hosts a podcast on the nature of human morality called Very Bad Wizards.

12:30– 1:30

Break & Complementary Lunch

Session 3 [1:30pm -2:30pm]

1:30-2:00

Lisa Kramer

Associate Professor,
Finance
*Rotman School of
Management
University of Toronto*



Examining the Effect of Social Distance on Financial Decision-Making

Previous studies show the role emotion plays in decision making, including financial decisions. Construal-level theory suggests that individuals draw on more cognitive and less emotional thought processes with increased social distance. Building on these links, this study finds consumers are less vulnerable to the influence of emotions on their financial decisions as an increasing function of the social distance between the decision maker and the decision target. Results from four experiments show that consumers were significantly more risk-seeking and more inclined to discount future rewards when investing on behalf of themselves than for a family member, co-worker, or client. The findings are robust to use of both hypothetical and incentive-compatible tasks and are evident based on both between-subjects and within-subjects designs.

Authors: Hal E. Hershfield & Lisa A. Kramer

2:00 – 2:30

Pat Barclay

Associate Professor
*Department of
Psychology
University of Guelph*



Inequity aversion and willingness-to-harm under local competition

Humans reject uneven divisions of resources, even at personal cost, and incur costs to actively harm others. Why do humans possess such a psychology? We suggest that the scale of competition is crucial: under local competition with few competitors, it pays to harm others or reject inequity if it will hurt one's competitor(s) more. When competing against the broader population ("global competition"), absolute payoffs are more important than payoffs relative to one's immediate group, so harming and inequity aversion are not as beneficial. We support this with a mathematical model and five behavioural experiments, with monetary prizes based on payoffs relative to immediate partners (local competition) versus a larger group (global competition). Under local competition, participants demanded fairer offers in Ultimatum Games, and paid more to reduce others' earnings in a money-burning game. This suggests that local competition increases people's demands for fairness, inequality aversion, and willingness to harm others.

Author: Pat Barclay

2:45 – 4:30

Roundtable Discussion

This year's conference will feature a roundtable discussion between an eclectic group of leading behavioural research practitioners. The attendees will discuss the ways in which they have harnessed a behavioural approach in their respective fields, the phenomena that they have observed and experienced along their journey, and their outlook on how these behavioural disciplines will continue to shape their fields.

Roundtable Participants

Academic Representative – **Tanjim Hossain**

**Associate Professor in Marketing, Department of Management
University of Toronto Mississauga**



Tanjim Hossain is an Associate Professor of Marketing in the Department of Management at the University of Toronto Mississauga, with a cross-appointment to the Marketing Area at Rotman. His main research interests include behavioural economics and industrial organization, especially using field and laboratory experiments to test the validity of theoretical predictions in the real world.

Behavioural Economics Practitioner – **Kelly Peters**

Co-founder and Chief Executive Officer, BEworks Inc.



Kelly is a behavioural economics expert with over 20 years of experience in financial services strategy and information technology innovation with Royal Bank of Canada and Bank of Montreal. In addition to founding and managing BEworks, a boutique management consulting firm, Kelly is a Faculty Lecturer at the Rotman Business School of Management.

Government Representative – Elizabeth Hardy

Manager, Behavioural Insights Unit, Government of Ontario



Elizabeth is the Manager of the Behavioural Insights Unit for the Government of Ontario. She leads a small team of dedicated and passionate staff who use evidence-based methodology and innovative problem solving to improve program and policy outcomes. Throughout her career, she has worked in a variety of areas including policy development, program delivery and information management.

Government Representative – Ryan Hum

Data Scientist & Strategic Designer, Privy Council Office



Ryan is a strategic designer and data scientist in the Privy Council Office's Innovation Hub where he leads the design-insights and data analytics practice to improve policy, program and service delivery. He has degrees in engineering, biology, product design and is completing his PhD in engineering where he studies global health. He is also an adjunct professor in design at OCAD University.

Industry Representative – Bryan Pearson

President and Chief Executive Officer, LoyaltyOne



An internationally recognized expert, Bryan has over 20 years of experience in developing customer relationships for the world's leading companies. Sharing his knowledge in this field, Bryan is the author of the bestselling book *The Loyalty Leap: Turning Customer Information into Customer Intimacy* as well *The Loyalty Leap for B2B*.

Poster Presentations

Raina Armstrong, Lindie H. Liang, Douglas J. Brown, Judit Szabo, Trishala Pillai, & Sam Hanig *University of Waterloo*

Righting a Wrong: Does Deviance Restore Justice Following Abusive Supervision?

Abusive supervision has been linked to several negative employee-level outcomes including increased employee retaliation, which may represent subordinates' efforts to restore a sense of fairness, or perceived justice, at work. This study directly examines the role of negative employee behaviors in restoring perceived justice after exposure to abusive supervisory behaviors. In a vignette study (Study 1), we found that participants who revenged against an abusive supervisor perceived greater re-established fairness. In an experimental study (Study 2) whereby we manipulated abusive supervision and supervisor-directed deviance, we found that following abusive supervision, stabbing a voodoo doll representing the supervisor mitigates abusive supervision and participants' activation of implicit injustice. Finally, in a time-lagged field study with full-time employees (Study 3), we found engaging in supervisor-directed deviance buffers the negative impact of abusive supervision on subordinate job attitudes and job strain via subordinate perceptions of justice. Theoretical and practical implications are discussed.

Franki Y. H. Kung *University of Waterloo*

How Do People Structure Their Goals Differently: Evidence for Hierarchical, Network, and Sequential Goal Models

People are constantly managing multiple goals; how people structure the goals and navigate conflicts between them has been a crucial area in motivation and decision-making literature. While it has long been assumed that goal structures are predominantly hierarchical (e.g., Powers, 1973), what we do not know is how lay people subjectively structure their goals differently and how such differences may influence psychological outcomes. Across 2 studies, participants drew concept maps to represent how they naturally structured their life goals. They categorized their representations into a hierarchical, network, or a sequential model. Contrary to the dominant academic view of hierarchical goal structures, lay people tended to represent their goals in sequential (43%) and network models (38%). Interestingly, those who represented goals in a hierarchical fashion tended to have lower self-esteem and life satisfaction. Implications of the associations with other individual differences will also be discussed.

Gord Pennycook, Jonathan Fugelsang, & Derek Koehler *University of Waterloo*

The dual roles of ideology and rationality in judgments of the ideal and estimated distribution of American wealth

Norton and Ariely (2011) found that Americans a) totally underestimate the massively unequal distribution of wealth in the United States and b) almost unilaterally desire a much more egalitarian distribution of wealth. Using a novel distribution judgment task where participants were given a visual distribution and assigned the proportion of wealth to quintiles, we found that participants who endorse a free-market ideology desired a less egalitarian distribution of wealth (a lower proportion to the top 20%), but were nonetheless very egalitarian. Performance on a battery of heuristics and biases tasks was associated with more accurate estimates of wealth distribution, though these estimates were still highly inaccurate. Moreover, replacing 'wealth' with 'income' did not significantly change estimates. Our results support the key aspect of N&A: That most desire an egalitarian distribution of wealth despite underestimating the true distribution. These findings belie recent criticisms (Chambers et al., 2013; Eriksson & Simpson, 2012).

Jeffrey Hughes & Abigail A. Scholer *University of Waterloo*

The “Whys” and the “Hows” of Wanting the Best: The Motivational Goals and Strategies of Maximizers

Maximizing (vs. satisficing) is the process of evaluating options to choose the absolute best one. Past research has identified three aspects of maximizing: high standards, alternative search, and decision difficulty. Although maximizing has at times been linked with negative life outcomes, varying definitions of maximizing in the literature make the picture unclear. We propose that examining antecedent motivational factors may reveal adaptive and maladaptive forms of maximizing. In Study 1, we show that assessment mode characterized a maladaptive form of maximizing (higher chronic decision difficulty), while promotion focus characterized a more adaptive form of maximizing (lower chronic decision difficulty). In Study 2, we show that alternative search strategies and reconsidering previously dismissed options led to more maladaptive experiences on an actual choice task. Our research suggests the importance of examining motivational profiles to understand how and why some individuals suffer negative consequences when searching for the best option.

Justin Peeta Brienza, Henri Santos, D. Ramona Bobocel, Ori Friedman, & Igor Grossmann
University of Waterloo

Design and Validation of the Conflict-Reconstruction Method to Assess Wise Reasoning

Philosophers have discussed wisdom and its utility for dealing with social dilemmas for centuries. Yet, psychologists have faced difficulties assessing the construct. We introduce a process (vs. trait) approach to wisdom as a way of reasoning about social conflicts. In five samples ($N = 2,268$) we tested the reliability, validity, and predictive utility of a new measure of wise reasoning. Whereas measures of trait wisdom are strongly affected by social desirability bias, the novel conflict reconstruction method of wise reasoning is unrelated to impression management and self-deception. The measure is reliable, and distinct from a host of adaptive psychological variables (e.g., empathy, mindfulness, emotional intelligence). Wise reasoning is positively related to cooperative behavior in conflict and in social dilemma games, as well as debiased information search regarding a separate intergroup conflict. The results show potential for ecologically-sensitive psychological research on wisdom.

Kristen Blackler, Erin L. Beatty, & Oshin Vartanian *Toronto Research Centre*

Evaluating the Types of Intuition Scale: Personality and reasoning performance

The *Types of Intuition Scale* proposes that intuitive judgements can be affective or inferential. Affective intuitions are based on emotional reactions while inferential intuitions are based on analytical processes that have become automatic. It has been shown that intellect—as measured by the Big Five—is positively correlated with inferential intuition, but unrelated to affective intuition (Pretz et al., 2014). The current study sought to replicate and extend those findings by examining the relationship between types of intuition and performance on reasoning and decision making tasks. Specifically, we were interested in conditions of conflict, where the solution to a problem suggested by one’s intuitions is contrary to the solution arrived at by examination of the evidence. In addition to replicating the expected relationship between inferential intuition and intellect, we find that affective (but not inferential) intuitions are associated with poorer performance on the Cognitive Reflections Task and base-rate neglect problems.

Donna Kwan *York University* **Carl F. Craver** *Washington University* **Joel Myerson** *Rotman Research Institute at Baycrest*

Episodic prospection as an intertemporal choice “nudge”: The roles of age and reward amount

One way to nudge intertemporal choices toward the future is by cueing people to imagine personal future experiences before making decisions (Peters & Büchel, 2010). We examined if this “cueing effect” depends on a) age, given age-related changes in financial decision-making and b) reward amount, given differences in baseline discount rates for small and large rewards. We compared cueing effects in younger (N = 20, mean age = 19.47, SD = 3.17) and older adults (N = 20, mean age = 69.25, SD = 7.00) and across smaller (\$100) and larger (\$2,000) rewards. Both groups discount future rewards less steeply when cued to imagine personal future experiences. For older adults, the cueing effect's magnitude depends on reward amount (smaller reward = smaller cueing effect), whereas young adults show the same benefit regardless of the reward amount. We conclude that both age and reward amount modulate the cueing effect on intertemporal choice.

M. Mahdi Roghanizad *University of Waterloo* **Derrick Neufeld** *Western University*

Intuition, Risk, and the Formation of Online Trust: The asymmetric effect of Risk on System1 vs. System2

Understanding how consumers evaluate website trustworthiness is a critical factor for online vendors. The dominant view espouses a deliberative trust formation process whereby shoppers evaluate security certificates, return policies, user feedback and the like, implying a highly rational underlying trust calculus. In this paper we use a laboratory experiment to explore an alternative perspective, based on the non-rational associative reasoning perspective. Our findings show that when faced with a no-risk ?hypothetical? decision about whether or not they would purchase a book from an online bookseller, subjects? decision-making processes were indeed consistent with the dominant deliberative view. However, when confronted with a decision entailing risk (i.e., sharing sensitive personal information with an unknown website), subjects suddenly became reliant on their non-rational, gut-level intuition. We conclude that vendors could gain considerable value by taking into account associative reasoning factors when designing online interfaces. Future research directions are provided.

Nicholas M. Hobson *University of Toronto* **Michael Inzlicht** *Rotman School of Management*

“Us” versus “them” and the outcome of our decisions: How the brain processes rewards by group membership

Recent research has begun to look at the effects of social context on reward processing in the brain (e.g., Fließbach et al., 2007). Leveraging from this work, we surmise that group membership, perhaps one of the most salient features of the social environment, influences our decisions and the intrinsic valuations they carry. Here, we used an EEG paradigm to show that even minimal grouping assignments can selectively modulate two separate neural components associated with reward-monitoring, namely the feedback-related negativity (FRN) and f-P300. Results revealed a dissociated pattern in the two brain components: Participants showed a sensitivity to punishment while in the presence of an ingroup member (i.e., heightened FRN, preconscious activity), but a sensitivity to rewards while in the presence of an outgroup member (i.e., heightened f-P300, conscious activity). These findings suggest that the brain responds differently to rewards/punishments depending on the subtlest cues of group membership.

Rebecca Elskamp *University of Guelph*

Demand Reduction In the Uniform Price Auction

This study builds on our incomplete understanding of bidding behaviour in the uniform price auction with a proposed in-depth analysis of the effect of varying the supply of auctioned goods and number of bidders on demand reduction. An important feature of this study distinguishing it from the existing literature is that the effect of varying auction parameters is experimentally analyzed under two conditions: the number of bidders is less than the supply of auctioned goods; the number of bidders is greater than or equal to the supply of auctioned goods. This former condition, characterizing the majority of real-life uniform auctions (i.e., treasury auctions, foreign exchange auctions, etc.) has received minimal attention in the existing literature and is the main motivation for this experimental analysis. Results of this study will contribute to the ongoing debate regarding optimal multi-unit auction design.

K. Yourie Kim, John L. Michela, & Caroline Bhaskar *University of Waterloo*

Understanding change in entrepreneurial intent: application of an expanded model of career choice motivation

One of the difficulties people face when making career decisions is the lack of fit between occupation choices and what they desire in a career (Gati et al., 1996). However, we don't know whether there is indeed a lack of fit or if people are simply perceiving one. In our study, we are tapping into this issue by investigating whether fine tuning people's perceptions of whether a career can indeed involve desired aspects in a career could change their intention to pursue that career. Using entrepreneurship as the career in question, we hypothesized that, through a lab experiment involving a group discussion, changing the perception of entrepreneurship in terms of three motivational factors – intrinsic interest, utility, and identity – would lead to a change in entrepreneurial intent. Results support the hypothesis such the group discussion lead to a significant increase in entrepreneurial intent, with identity being the strongest mediator.

Suzanne Rath & Laurence Ashworth *Queen's University*

Fear Not, Go Green! Social Rejection Facilitates Preference for Eco-friendly Brands

Theoretically based in terror management theory (Solomon et al., 1991), brands with a reputation for upholding cultural worldviews, such as environmental sustainability, may play a role in augmenting threatened self-esteem after experiencing social rejection, resulting in a preference for eco-friendly brands. We tested this idea with a 2 (Eco-friendly brand: high vs. low) x2 (Rejection vs. neutral task) between subjects design. Participants completed either a neutral experiences task or a social rejection task; next, they saw one of two versions of Tide Laundry detergent: Cold Water Tide (High eco-friendly) and Tide with Fabric Softener (Low eco-friendly). They rated their attitude towards the brand on a 7-point semantic differential scale. A two-way Anova reveals a marginal interaction effect on attitude toward the brand ($F(1, 94) = 2.84; p = 0.09$); an analysis of simple effects demonstrates that when rejected, participants preferred the eco-friendly Tide ($M = 5.92, SD = 1.23$) compared to the non-eco-friendly Tide ($M = 4.74, SD = 1.86; F(1, 94) = 3.54, p = 0.06$). Solomon, S., Greenberg, J., & Pyszczynski, T. (1991). A terror management theory of social behavior: The psychological functions of self-esteem and cultural worldviews. In M. E. E Zanna (Ed.), *Advances in Experimental Social Psychology* (Vol. 24, pp. 91-159). San Diego, CA: Academic Press.

Zoe Francis *University of Toronto* & **Michael Inzlicht** *Rotman School of Management*

Effortful Anchoring: The Paradoxical Effect of Depletion on the Anchoring-and-Adjustment Bias

People generally rely more on heuristics when making decisions while fatigued. The anchoring-and-adjustment bias, however, does not play by the same rules. Using a statistically powerful, repeated-measures design for ego depletion, we find that people incorporate provided anchor values less into their own estimated answers when they are mentally fatigued compared to when they are energized. Anchoring to provided numbers might not be as automatic as previously assumed. In a second study, we replicate previous findings showing that positive mood inductions also weaken the anchoring effect, but find depletion manipulations weaken the anchoring effect even further. A final study replicates the findings that, within-subject, stronger anchoring occurs with more energy and a more negative mood, and additionally finds anchoring to be associated with less self-reported confidence in one's answer, yet more precise ranges of estimates. Unlike other heuristics, anchoring seems to require some mental effort.

Monica Soliman & Roger Buehler *Wilfrid Laurier University*

Effort perceptions explain the preference for improvement over consistent strong performance

In this research, we propose that improvement is sometimes used as a heuristic for effort. This can result in a preference for improvement, even when it is compared to consistent strong performance. For example, people may see a student improving over time to reach an A-average as having invested more effort in studying compared to a straight-A student (i.e., the amount of effort underlying consistent strong performance would be devalued). Three studies support these hypotheses. In Study 1, participants mentioned effort more frequently when supporting the profile of an improved (vs. consistently-strong) candidate for an award. In Study 2, participants rated an improved employee as more deserving of promotion than one with consistent strong performance, and these preferences were explained by judgments about the amount of effort invested. Study 3 suggests that ambiguity moderates the use of improvement as a heuristic for effort.

Lisa Stockley *University of Toronto*

Reference Dependent Labour Supply: Evidence from a Field Experiment with Piece Rate Workers in Brazil

Reference dependence may explain surprising labour supply behaviour. Specifically, high income targets may lead to increased effort as workers seek to avoid feelings of loss that accompany falling short of a goal. Furthermore, in the presence of an income target, high wages may lead to decreased effort as workers reach their goals with relative speed. I document this relationship using a framed field experiment conducted with an impoverished population for whom the experimental decisions parallel their livelihood - Brazilian piece rate workers. I find that using a hurdle model, which allows me to study the extensive and intensive margin decisions independently, is crucial to understanding the entirety of the labour supply decision. Conditional on participation, doubling an exogenous expectation-based income target increases effort by 22% while doubling wages decreases effort by 29%. The odds of participation are halved by the doubled income target, but more than doubled by the high wage.

Jake Kurczek, Donna Kwan, & Shayna Rosenbaum *Baycrest*

Ventromedial prefrontal cortex lesions impair both intertemporal and probabilistic decision-making

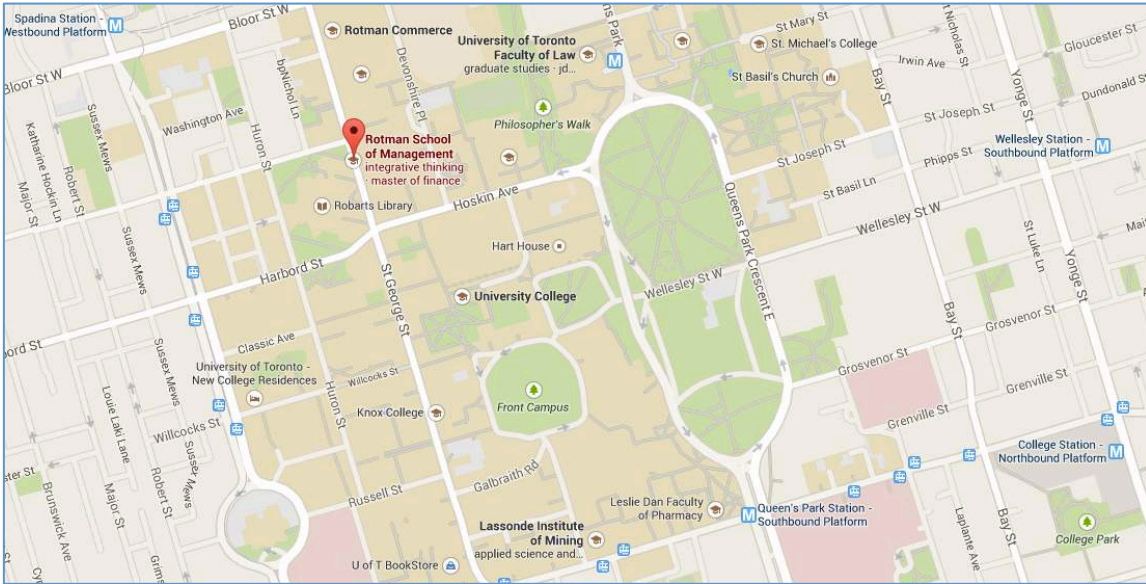
Neuroimaging studies suggest that a common neural mechanism exists for deciding among delayed and probabilistic rewards, yet these processes respond differently to experimental manipulations and only weakly correlate in healthy adults. Previously, individuals with ventromedial prefrontal cortex (VMPFC) damage have been described as “myopic for the future” based on forgoing larger future rewards in favour of small immediate rewards on gambling and delay discounting tests. However, it is unclear if impaired decision-making is due to a failure to regard outcomes that are displaced in time or in the valuation of outcomes, independent of time. Here we report that patients with VMPFC damage have parallel impairments to both forms of decision-making: unlike healthy controls or other neurological populations, patients with VMPFC lesions both steeply discount the future and shallowly discount probabilistic outcomes. Results indicate that the VMPFC may be a critical area for subjective reward valuation across different domains of decision-making.

Nathaniel Barr, Gordon Pennycook, Jennifer A. Stolz, & Jonathan A. Fugelsang
University of Waterloo

At the Intersection of Technology and Thinking: Intuitive Thinking Style is Related to Increased Reliance on Smartphone Search Engine Use

With the advent of Smartphone technology, access to the internet and its associated knowledge base is at one’s fingertips nearly anytime and anywhere. We explored how this technological advance related to thinking styles, and across three studies, we found that those who think more intuitively and less analytically when given reasoning problems were more likely to rely on the search engine on their Smartphones for information in their everyday lives. There was no such association with the amount of time spent using the Smartphone for social media and entertainment purposes, nor did boredom proneness qualify any of our results. These findings demonstrate that people may offload thinking to technology, which suggests that Smartphone search engine use can be construed as a modern form of cognitive miserliness and demands that psychological science understand the meshing of mind and machine to adequately characterize cognition.

Getting to the Conference



Conference Location

The conference is being held at the Rotman School of Management located at:

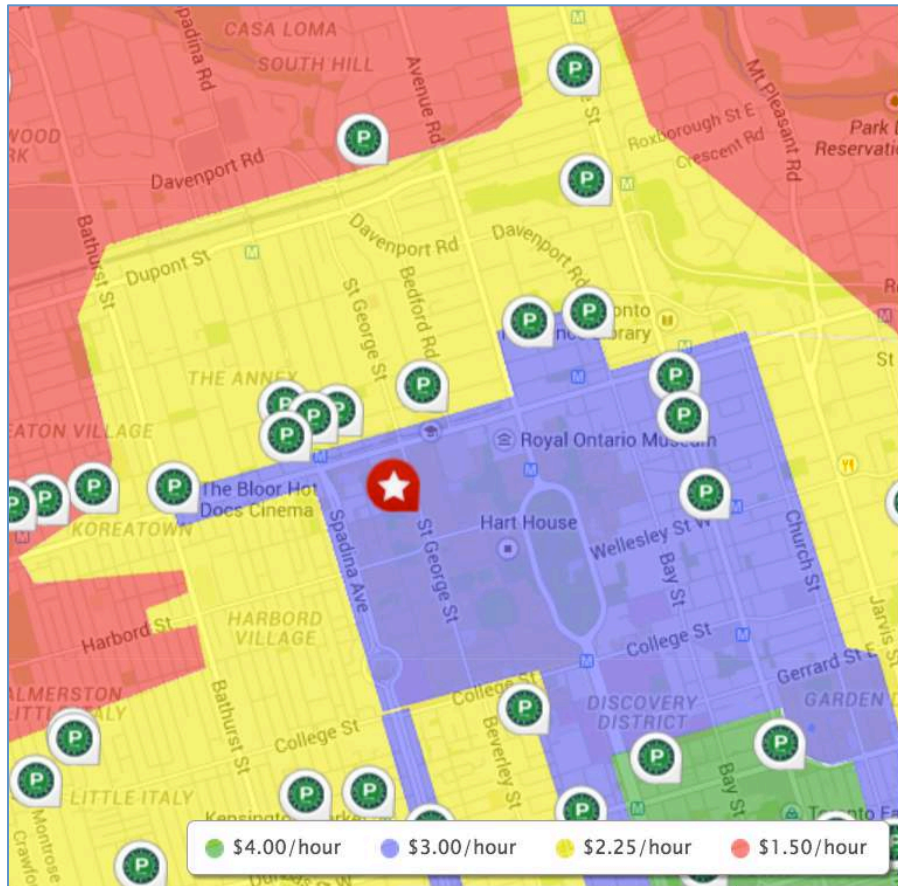
105 St George Street,
Toronto, Ontario

The building is a block south of Bloor St. West and two blocks east of Spadina Ave. in downtown Toronto. The closest Subway Station is St. George Station or Spadina Station.

Conference Room Location

All speaking sessions, poster presentations, the keynote address, and the Roundtable discussion will be held in the Desautels Hall Rotman School of Management.

Parking Options



For more information on parking at the school, visit this link:

<https://www.rotman.utoronto.ca/-/media/Files/Programs-and-Areas/Executive-Programs/RotmanExecutivePrograms-Parking.pdf>

Additional city parking options are provided in the map above.