University of Toronto (Fall 2021)

Topics in Behavioural Economics (ECO438/2150H1F) Syllabus

Instructor:
Yoram Halevy

Office:
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Contact:
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Office hours:
Monday 16:00-17:00
Tuesday 14:00-15:00
Thursday 14:00-15:00

https://utoronto.zoom.us/j/89141146070
Meeting ID: 891 4114 6070

Course time and location:
Monday: 13:00-15:00, Sydney Smith Hall 1073

First two meetings (September 13, 20) will be held online:
https://utoronto.zoom.us/j/89935255346
Meeting ID: 899 3525 5346
Passcode: 362770

Possible additional lessons/tutorials/lab sessions/online sessions: Thursday 18:00-20:00 (SS 2105) – will be coordinated in advance.

TA:
Hugo Yi-Tsung Hsieh
Email: hugo.hsieh@mail.utoronto.ca

Grading:
25% assignments: will be in-class and out of class assignments. This includes short quizzes about material covered in the lesson by me or by students. Generally, I will not provide a special announcement about these forthcoming assignments.

15% class presentation (in a group of four students, at least one undergraduate student in each group) on selected papers (20 minutes long). The presentation should present the *main idea* of the paper,

intuition for the proof (for a theoretical paper) or experimental design (experimental work), main result and some critical discussion (for example: what assumption does not make sense or is very strong, is the design or analysis flawed).

25% individual short report (up to 1000 words) on a single paper in the reading list. You should choose a different paper for the report than the one you chose for the class presentation and the report cannot cover topics that we discussed in class until October 4 (inclusive). The report should shortly (600-700 words) present the main idea of the paper (in your own words!), and the rest of the report should include justified subjective opinion including some (constructive) critical suggestions. The last part can also discuss the importance of the paper in the literature. Report is due October 18 by 12:59PM (before class starts that day).

35% paper (up to 5000 words) on one topic in the list, or application of behavioural methods to other fields. The paper should include: discussion of the "standard" model used in economics for this issue, evidence against the standard model, survey of the existing (behavioural) literature, limitations/problems of existing literature, proposed plan of investigation (could be theoretical, experimental, or both), conjectures. The paper could be written in groups of up to 3 students, but every group that has two or more students should include at least one undergraduate student. Topic (and groups) must be selected by November 4 (you will lose up to 5 points if you do not select the topic by that date). The paper is due by December 8 at 11:59PM.

For every assessment with a due date (except in-class assessments), there will be a late penalty: 10% (of the assessment grade) for the first day (or part of it), 2% for each additional day (or part of it). Late submissions of more than a week will not be accepted, and a grade of 0% will be recorded for the paper. If you anticipate being late for a justifiable reason – please notify me as soon as possible.

Lecture recording

Online lectures, including your participation, may be recorded and will become available to students in the course for viewing remotely.

Course videos and all other teaching and research materials belong to your instructor, the University, and/or other sources depending on the specific facts of each situation, and are protected by copyright. Do not download, copy, or share any course or student materials or videos without the explicit permission of the instructor.

For questions about recording and use of videos in which you appear please contact your instructor.

The unauthorised use of any form or device to share the recording above or any teaching or research materials to which you will gain access in the class is covered by the Canadian Copyright Act and is prohibited. In the case of private use by students with disabilities, please consult me.

Religious accommodation

As a student at the University of Toronto, you are part of a diverse community that welcomes and includes students and faculty from a wide range of backgrounds, cultural traditions, and spiritual beliefs. For my part, I will make every reasonable effort to avoid scheduling tests, examinations, or other compulsory activities on religious holy days not captured by statutory holidays. Further to University Policy, if you anticipate being absent from class or missing a major course activity (like a test, or in-class assignment) due to a religious observance, please let me know as early in the course as possible, and with sufficient notice (at least two to three weeks), so that we can work together to make alternate arrangements.

Learning Disability Accommodation Requirement

Students with diverse learning styles and needs are welcome in this course. If you have an acute or ongoing disability issue or accommodation need, you should register with Accessibility Services (AS) (accessibility.utoronto.ca) at the beginning of the academic year. Without registration, you will not be able to verify your situation with your instructors, and instructors will not be advised about your accommodation needs. AS will assess your medical situation, develop an accommodation plan with you, and support you in requesting accommodation for your course work. Remember that the process of accommodation is private: AS will not share details of your condition with any instructor, and your instructors will not reveal that you are registered with AS.

Academic Integrity

All students, faculty and staff are expected to follow the University's guidelines and policies on academic integrity. For students, this means following the standards of academic honesty when writing assignments, collaborating with fellow students, and writing tests and exams. Ensure that the work you submit for grading represents your own honest efforts. Plagiarism—representing someone else's work as your own or submitting work that you have previously submitted for marks in another class or program—is a serious offence that can result in sanctions. Speak to me or your TA for advice on anything that you find unclear. In particular, copying material from other sources (even when properly citing them) without noting it is a quotation is a serious offence. To learn more about how to cite and use source material appropriately and for other writing support, see the U of T writing support website at www.writing.utoronto.ca/. Consult the Code of Behaviour on Academic Matters for a complete outline of the University's policy and expectations. For more information, please see http://www.artsci.utoronto.ca/osai and http://academicintegrity.utoronto.ca/

Normally, students will be required to submit their course essays to the University's plagiarism detection tool for a review of textual similarity and detection of possible plagiarism. In doing so, students will allow their essays to be included as source documents in the tool's reference database, where they will be used solely for the purpose of detecting plagiarism. The terms that apply to the University's use of this tool are described on the Centre for Teaching Support & Innovation web site (https://uoft.me/pdt-faq).

Specific Medical Circumstances

Students who are absent from academic participation for *any reason* (e.g., COVID, cold, flu and other illness or injury or family situation) and who require consideration for missed academic work should report their absence through the online Absence Declaration tool on ACORN. Find the tool under the Acorn Profile and Settings menu. Please try to advise me of your absence ahead of time (if possible).

If you get a concussion, break your hand, or suffer some other acute injury, you should register with Accessibility Services as soon as possible.

Accommodation for Personal Reasons

There may be times when you are unable to complete course work on time due to non-medical reasons. If you have concerns, speak to me. It is also a very good idea to speak with an advisor in your College Registrars office; they can support you in requesting extensions or accommodations, and importantly, connect you with other resources on campus for help with your situation.

Quercus info

This course uses the University's learning management system, Quercus, to post information about the course. This includes materials required to complete class activities and course assignments as well as share important announcements and updates. The site is dynamic and new information and resources will be posted regularly as we move through the term. The principal source of information about all course-related work will be the course site in Quercus, so please make it a habit to log in to the site on a regular if not daily basis. To access the course website, go to the U of T Quercus log-in page at https://q.utoronto.ca and log in using your UTORid and password. Once you have logged in to the Portal using your UTORid and password, look for the "My Courses" module where you will find a link to the ECO438/1250 course site. Note that if you are currently enrolled in other courses at the University, your other course links will also appear here. Click on the ECON438/1250 link to open our course area and view the latest announcements and updates, and access your course resources.

SPECIAL NOTE ABOUT GRADES POSTED ONLINE: Please note that any grades posted within the Quercus Grade Centre are posted for your information only, so you can view and track your progress through the course. No grades are considered official, included any posted in Quercus at any point in the term, until I have formally approved them at the end of the course. Please contact me as soon as possible if you think there is an error in any grade posted on Quercus.

I will mainly use Zoom for teaching and learning online. You should however, have MS-Teams as a backup.

Piazza

This term we will be using Piazza for class discussion. The system is highly catered to getting you help fast and efficiently from classmates, the TA, and myself. Rather than emailing questions to the teaching

staff, I encourage you to post your questions on Piazza. If you have any problems or feedback for the developers, email team@piazza.com.

Find our class signup link at: https://piazza.com/utoronto.ca/fall2021/eco4381250

Cell phone and laptop use

Online lectures: during these times we rely on technology to learn and interact. This requires high level of self-control in order to get the most out of this course. Please silence your phones, close all windows that are not related directly to the course and try to isolate yourselves from your surrounding during the lesson. If you are online, please keep your camera open so we can have a real conversation and dialog during the lesson.

In-person lectures: Technology can support student learning, but it can also become a distraction. Research indicates that multi-tasking (texting, surfing the Internet, using social networks) during class time can have a negative impact on learning (Clapp, Rubens, Sabharwal & Gazzaley, 2011; Ellis, Daniels, Jauregui, 2010; Hembrooke & Gay, 2003). Out of respect for your fellow learners in this class, please refrain from using laptops or mobile phones for entertainment during class and do not display any material on a laptop which may be distracting or offensive to your fellow students. Laptops may be used only for legitimate classroom purposes, such as taking notes, downloading course information from Quercus, or working on an assigned in-class exercise. Checking social media, email, texting, games, and surfing the Web are not legitimate classroom purposes. Such inappropriate laptop and mobile phone use is distracting to those seated around you.

Participation

This course is built on your participation. Please make all efforts to attend all classes and actively participate in the discussion. In our structured and unstructured discussions and dialogues, we will have many opportunities to explore challenging issues and increase our understandings of different perspectives. A positive learning environment relies upon creating an atmosphere where diverse perspectives can be expressed. Each student is encouraged to take an active part in class discussions and activities. Honest and respectful dialogue is expected. Disagreement and challenging of ideas in a supportive and sensitive manner is encouraged. Hostility and disrespectful behaviour is not acceptable. In the time we share together over this term, please honour the uniqueness of your fellow classmates and appreciate the opportunity we have to learn from each other. Please respect each others' opinions and refrain from personal attacks or demeaning comments of any kind. Just as we expect others to listen attentively to our own views, we must reciprocate and listen to others when they speak, most especially when we disagree with them. In this class, our emphasis will be on engaging in the mutual exploration of issues as presented in the course readings as scholars, rather than in defending points of view we have formed outside the classroom.

Course Description:

Behavioral economists study models of human decision making and the interaction among such decision makers in games and markets. As behavioral economists aspire to construct "realistic" models, many of the models are inspired by Psychological and experimental studies.

We will cover the following topics: individual choices under risk and uncertainty; intertemporal choice; other-regarding preferences; bounded rationality in individual decision-making and games; measuring rationality; Procedural rationality; Neuroeconomics/non-choice data, and the mindless-economics debate.

Learning Outcomes:

- Understand the flexibility and limitations of the economic approach to modeling behaviour.
- Know how to use existing behavioural models to understand new economic phenomena.
- Learn to design experiments to evaluate a proposed behavioural model.
- Know to evaluate research in Economics and disciplines related to behavioural research.
- Be able to pose a novel research question, design a plan to investigate it and conjecture how to answer it.

Pre-requisites:

Students enrolled in this course are either 4th year majors in Economics or MA/MFE students. If you are not sure if you have the pre-requisites, do not hesitate to consult me.

Papers:

Prospect Theory:

- Kahneman and Tversky, "Prospect Theory: an Analysis of Decision under Risk", *Econometrica*, 1979
- Tversky and Kahneman, "Advances in Prospect Theory: Cumulative Representation of Uncertainty", Journal of Risk and Uncertainty, 1992
- Amos Tversky and Daniel Kahneman, "Loss Aversion in Riskless Choice: A Reference-Dependent Model" *The Quarterly Journal of Economics* Vol. 106, No. 4 (Nov., 1991), pp. 1039-1061
- Kahneman, Knetch and Thaler, "Experimental Tests of the Endowment Effect and the Coase Theorem", JPE, 98 (6), 1990, 1325-1348
- Plott and Zeiler, "The Willingness to Pay-Willingness to Accept Gap, the `Endowment Effect,' Subject Misconceptions, and Experimental Procedures for Eliciting Valuations", AER, 95 (3), 2005, 530-545
    - Plott and Zeiler, "Exchange Asymmetries Incorrectly Interpreted as Evidence of Endowment Effect Theory and Prospect Theory?" AER, 97(4), 2007, 1449-1466.
- Koszegi and Rabin, Quarterly Journal of Economics, 2006
- Rabin, "Risk Aversion and Expected Utility Theory: A Calibration Theorem", Econometrica, 2000
    - Rabin and Thaler, "Anomalies: Risk Aversion", Journal of Economic Perspectives, 2001

NEU under Risk:

- Machina (JEP,1987)

Ambiguity:

- Ellsberg, "Risk Ambiguity and the Savage Axioms", *Quarterly Journal of Economics*, 1961
- Fox and Tversky, "Ambiguity Aversion and Comparative Ignorance", *Quarterly Journal of Economics, 1995*
- Halevy and Feltkamp, "A Bayesian Approach to Uncertainty Aversion", *Review of Economic Studies*, 2005
- Halevy, "Ellsberg Revisited: An Experimental Study", *Econometrica*, 2007.
- Epstein and Halevy, "Ambiguous Correlation," Review of Economic Studies, 2019.
- Epstein and Halevy, "Hard-to-interpret Signals", working paper, 2021.

Time Preference and Self Control:

Survey:

- o Frederick, Loewenstein and O'Donoghue, "Time Discounting and Time Preference: A Critical Review", *Journal of Economic Literature*, 2002

Applications of Quasi-hyperbolic Discounting:
- o Laibson, "Golden Eggs and Hyperbolic Discounting", Quarterly Journal of Economics, 1997
- o O'Donoghue and Rabin, "Doing It Now or Later", *American Economic Review*, 1999

Rubinstein's Critique:

- o Rubisntein, "A theorist's view of experiments", *European Economic Review*, 2001
  - ▪ Rubinstein, "`Economics and Psychology'? The Case of Hyperbolic Discounting", *International Economic Review*, 2003

Time and Risk:

- o Halevy, "Strotz meets Allais: Diminishing Impatience and the Certainty Effect", *American Economic Review*, 2008
  - ▪ Chakraborty, Halevy and Saito, "The Relation between Behavior under Risk and over Time", *American Economic Review – Insights* 2020.

Dual-Self:

- o Thaler and Shafrin, "An Economic Theory of Self-Control", JPE 1981

Experimental Papers:

- o Andersen Harrison Lau Rutstrom (ECMA 2008)
- o Halevy, Time Consistency: Stationarity and Time Invariance (ECMA 2015)
- o Andreoni Sprenger Estimating Time Preference (AER 2012)
  - o Chakraborty, Calford, Fenig and Halevy (Experimental Economics, 2017)
- o Augenblick, Niederle and Sprenger, (QJE 2015)
  - o Chakraborty, Calford, Fenig and Halevy (Experimental Economics, 2017)

Other-Regarding Preferences:
- • Rabin, "Incorporating Fairness into Game Theory and Economics", *American Economic Review*, 1993
- • Levine, "Modeling Altruism and Spitefulness in Experiments", *Review of Economic Dynamics*, 1998
- • Fehr and Schmidt, "A Theory of Fairness Competition and Cooperation", Quarterly Journal of Economics, 1999

- Binmore and Shaked, "Experimental Economics: Where next?", *Journal of Economic Bahavior and Organization, 2010*
    - Fehr and Schmidt, "The Economics of Fairness, Reciprocity and Alruism – Experimental Evidence and New Theories", in: *Handbook of the Economics of Giving, Alruism and Reciprocity, vol 1, 2006*

Measures of Choice Consistency and rule-based rationality
- Andreoni and Miller, "Giving according to GARP: an experimental test of the consistency of preferences for altruism", ECMA, 70 (2), 737-753, 2002.
- Choi, Kariv, Muller, Silverman, "Who is (More) Rational?" *AER*, 104 (6), 1518-1550, 2014
- Halevy, Persitz and Zrill, "Parametric Recoverability of Preferences", JPE (2018)
- Halevy and Mayraz, "Identifying Rule-Based Rationality", (working paper, 2020)

Level-k Thinking:
- Nagel, "Unraveling in Guessing Games: An Experimental Study", *American Economic Review*, 1995
- Camerer, Ho, Chong, "A Cognitive Hierarchy Model of Games", Quarterly Journal of Economics, 2004
- Wang, Spezio, Camerer, "Pinocchio's Pupil: Using Eyetracking and Pupil Dilation to Understand Truth-telling in Deception in Sender-Receiver Games", *American Economic Reivew,* 2010
- Alaoui and Penta (REStud, 2016)
- Kneeland, Terri, "Identifying Higher-Order Rationality" (ECMA 2015)

Replication:
- Camerer *et al* Science, 2016

Critique:
- Rubinstein, "Dilemmas of an Economic Theorist", *Econometrica*, 2006
- Rubinstein, "Discussion of 'Behavioral Economics'" in Advances in Economics and Econometrics, Theory and Applications, ninth World Congress of the Econometric Society
- Gul and Pesendorfer, "The Case for Mindless Economics"
- Al Roth's critique page: http://web.stanford.edu/~alroth/critiques%20of%20experimental%20econ.html