

Cognitive Science and Policy Making

CDCR 6045 – Winter 2019

Dept. of Cognitive Science and School of Public Policy

Central European University

No. of credits: 2

Course e-learning site: [CEU Moodle](#)

Thursdays 15.30 - 17.10, Okt6*7, Room 101

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Course description

How can cognitive science (Cognitive Science, Experimental and Behavioral Economics) inform policy-making? Can policy be improved by taking findings of cognitive science into account?

Traditional policy making assumes that citizens are rational agents who always take the best decisions for themselves. Yet, findings in behavioral economics and cognitive psychology show that it is not the case: people are “predictably irrational”. This fact might open new avenues for making policies that foster individual decisions that are better for both the individual taking them and society.

The course addresses both the method and the moral basis of the use of cognitive psychology in policy making. This includes issues in contemporary political philosophy regarding the legitimacy of using scientific theories about human behavior for political purposes. It also include issues in behavioral economics and a specification of its relevance to policy making.

Course Structure

The course will include old fashioned lectures, seminars and labs/fairs organized as discussion. A lecture summarizes the main theoretical and empirical advances in each topic, and the seminar is devoted to the discussion of the reading material and the lab to apply these concepts to improve policies for current issues. Students are also required to write an essay on a topic agreed with the lecturers.

The first sessions are dedicated to the core of the theory: (1) From (rationality,) cognitive biases to policy making; (2) Experimental economics: relevant methods and results; (3) Choice architecture and nudge; (4) Two examples of nudges; (5) Moral issues regarding paternalism

The following sessions will focus on empirically examining nudging outcomes: (6) Evidence based policy making; (7) Efficiency of nudges; (8) Economic arguments for and against nudging.

The last sessions will integrate this in a broader framework: (9) Legal aspects; (10) Prosocial behaviour; (11) Nudges in developing countries; (12) Nudge fair: last session where students shall design their own nudge or critically examine an existing nudge.

Learning outcomes

In this course, students will acquire knowledge about, and will reflect on:

- theories in cognitive science deemed to be relevant to policy making; these mainly include experimental work on biases in decision-making.
- specific applications of policy-making informed by cognitive psychology/science, behavioral economics, game theory, whether exploiting the theories of psychology for policy-making can be understood as beneficial or even acceptable, depending on one's ethical principles

Requirements

- All students must read the core reading before the lectures and seminars. Students are expected to contribute to class discussion and should have ready, each week, at least one question based on the texts and that could be fruitfully addressed during class discussion.
- Each student will present one paper to the class. For this presentation, we encourage preparing a handout that summarizes the goals of the papers, their main arguments and the method and evidence they rely on. We discourage the use of power point if that hinders engaging presentations.
- Registered students must submit a final essay of no more than 2,000 words at the end of the term.

Evaluation

- Final essay 30% (The short essay – less than 2000 words – will either be an independent position paper, or a critical review of a relevant book, paper or set of papers. The subject should be decided as early as possible together with the me).
- Presentation of a paper 20% (the presentation looks for an ability to verbally express and criticize arguments. It also focuses on the skills needed to explain general arguments in a crisp and succinct way).
- Presentation of a nudge in the nudge fair 20% (The presented nudge should be thoroughly analyzed: What are the psychological evidence that the nudge is needed? In what way would the presented nudge improve peoples life? Does it respect those nudged (nudgee)? Does it go against their autonomy? What experiment (lab or field) would enable assessing the efficiency of the nudge?
- Short tests and/or assignments 15%
- Participation and performance in the debate sessions 15%

Course outline (subject to change)

Session 1: Rational decision making, bounded rationality and Cognitive Biases

(Lecture and discussions)

Introductory lecture to decision theory and related notions: preferences, risks, calculation of expected utility, rationality and bounded rationality.

(no required reading)

Session 2: Experimental economics: relevant results and methods

(Lectures: Christophe & Anand)

Overview of different cognitive biases discovered by behavioural economists and cognitive psychologists. Explanation of the theoretical framework and experimental method put to work for investigating irrational choices.

Required reading:

- Shampanier, Kristina, Nina Mazar, and Dan Ariely. “Zero as a special price: The true value of free products.” *Marketing Science* 26.6 (2007): 742-757.

Further reading:

- Kahneman, D., & Tversky, A. (1979). Prospect Theory: An Analysis of Decision under Risk. *Econometrica*, 47(2), 263-292.
- Ariely, Dan (2008) *Predicably Irrational*.

Session 3: What is a nudge?

(Lecture & student discussion)

Session dedicated to

- (a) explaining the idea of libertarian paternalism that motivates nudging, in contrast with other kinds of paternalisms.
- (b) specifying what criteria could be used for distinguishing nudges from other political interventions.
- (c) Clarify what kind of assumptions there is behind the advocacy of nudging policies

Required reading:

- Thaler and Sunstein, *Nudge* (2008), Ch. 1, 4, and 15
- Saghai, S. Salvaging the concept of nudge, *J Med Ethics* (2013) 39: 487-493
- Gigerenzer, G. (2015). On the Supposed Evidence for Libertarian Paternalism. *Review of Philosophy and Psychology*, 1-23

Session 4: Nudging against procrastination + Choice architecture for health patient

(Discussions and Lecture CH)

The first part of the session will be dedicated to analysing time inconsistent choices, their psychological basis and the way to nudge against them. Key notions include hyperbolic discounting, weakness of the will and meta-preferences.

Required reading:

- Bullock, E. C. (2014) Free Choice and Patient Best Interests, *Health Care Analysis* (Online).
- Cohen, S. (2013) Nudging and Informed Consent. *The American Journal of Bioethics*. 13, 6: 3-11.

- Blumenthal-Barby, J.S., McCullough, L.B., Krieger H., and Coverdale, J. (2013) Methods of Influencing the Decisions of Psychiatric Patients: An Ethical Analysis

Recommended reading:

- Lloyd, A. J. (2001). The extent of patients' understanding of the risk of treatments. *Quality in Health Care*, 10.I, i14-i18.
- Miller, S. M., & Mangan, C. E. (1983). Interacting effects of information and coping style in adapting to gynaecologic stress: Should the doctor tell all? *Journal of Personality and Social Psychology*, 45(1), 223-236.
- Sandman, Lars & Munthe, Christian (2009). Shared decision-making and patient autonomy. *Theoretical Medicine and Bioethics* 30 (4):289-310.
- Strull, W., Lo, B., & Charles, G. (1984). Do patients want to participate in medical decision making? *JAMA*, 252(21), 2990-2994

Further reading:

- Elster, Jon (2000) *Ulysses Unbound* Chapter 1 (until p. 33.)
- Schrift, R. Y., & Parker, J. R. (2014). Staying the Course: The Option of Doing Nothing and Its Impact on Postchoice Persistence. *Psychological Science*.
- Ariely, Dan (2008) *Predictably Irrational* Chapter 7.

Session 5: Distributed Cognition

(Discussions and Lecture CH)

Required reading:

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Further reading:

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Session 6: Evidence based policy making

(Discussions and Lecture)

We will look how empirical data can be gathered for policy making (lab experiments and randomized control trial) and what statistical analyses can be done. We will focus on the

main mistakes or misconceptions made when reading statistics, particularly when reported by (popular) press.

If time permits, we will introduce the (famous five¹) methods of statistical analyses.

Required reading:

- Angrist, J.D. and Pischke, J.S., 2014. Mastering ‘metrics: The path from cause to effect. Princeton University Press. (select chapters)
- Gilboa, I., Making Better Decisions. Wiley-Blackwell, 2010. (select chapters)

Further reading:

- Chetty, R. (2015). Behavioral economics and public policy: A pragmatic perspective. The American Economic Review, 105(5), 1-33. (specified pages)
- Goldacre, B. (2013). [Building evidence into education](#). Bad Science.

Session 7: Moral issues regarding paternalism, autonomy and respect

(Guest Lecture and discussion)

Students ponder the following questions: Is there a clear difference between nudging and strong paternalism? Which one? Is Nudging truly respectful? Does it respect the autonomy of citizens?

Required reading:

- Legrand and New. Government Paternalism, Chs. 2-3

Further reading:

- Dworkin, Gerald, “Paternalism”, [The Stanford Encyclopedia of Philosophy](#)
- Waldron, J. ‘Theoretical Foundations of Liberalism’ in his Liberal rights, CUP, 1984
- Christman, John, “Autonomy in Moral and Political Philosophy”, [The Stanford Encyclopedia of Philosophy](#)
- Raz, J. The Morality of Freedom, Ch. 14.
- Noggle, Robert (1996). Manipulative Actions: A Conceptual and Moral Analysis. American Philosophical Quarterly 33 (1):43 - 55.
- Quong 2010, Paternalism and Perfectionism in Liberalism without Perfection (OUP)

¹Randomization, regressions, Instrumental Variables, Difference in Differences and Regression Discontinuity Design

- Conly, S. *Against Autonomy*, 2013, CUP. Chapters 1 and 6.
- Darwall, S. 'Two kinds of respect', *Ethics*, 1977, 88, 36-49.
- Blumenthal-Barby, J.S. (2013) Chapter 9: Choice Architecture: A mechanism for improving decisions while preserving liberty?, in *Paternalism: Theory and Practice*.

Session 8: Economic argument for and against nudging

(Student presentations and discussion)

For economic reasons, should or should not policy makers continue using only the traditional policy tools (regulation and incentives) or also incorporate nudges? We'll debate, reason and assess the trade-offs.

Required reading:

Argument against nudging

- J. Rizzo and D.G. Whitman (2009) "The Knowledge Problem of New Paternalism," *BYU Law Review*. (pp. 907 - 912, 960 - 968)
- Brown, J.R., Farrell, A.M. and Weisbenner, S.J., 2016. Decision-making approaches and the propensity to default: Evidence and implications. *Journal of Financial Economics*, 121(3), pp.477-495.
- Damgaard, M.T. and Gravert, C., 2016. The hidden costs of nudging: Experimental evidence from reminders in fundraising.
- Cialdini, R. B., Demaine, L. J., Sagarin, B. J., Barrett, D. W., Rhoads, K., & Winter, P. L. (2006). Managing social norms for persuasive impact. *Social influence*, 1(1), 3-15

Argument for nudging

- Benartzi, S., Beshears, J., Milkman, K. L., Sunstein, C. R., Thaler, R. H., Shankar, M., & Galing, S. (2017). Should Governments Invest More in Nudging?. *Psychological Science*, 0956797617702501.
- Alcott and Kessler (2019) The Welfare Effects of Nudges: A Case Study of Energy Use Social Comparisons, *AEJ: Applied Economics*, Vol 11(1)
- Bernedo, M., Ferraro, P.J. and Price, M., 2014. The persistent impacts of norm-based messaging and their implications for water conservation. *Journal of Consumer Policy*, 37(3), pp.437-452.
- Chapter 5 of Thaler, R. H. (2015). *Misbehaving: The making of behavioral economics*. WW Norton & Company.

Popular press/Policy Reports

- G. Lowenstein and P. Ubel (2010) [Economics Behaving Badly](#), New York Times.
- [Behavioral Economics and Public Policy](#), Tim Harford in Financial Times
- Bower, B. (2017) [Nudging people to make good choices can backfire](#), Science News
- [UK BIT Team report 2015-16](#)
- [US SBST Team report 2016](#)

Session 9: The efficiency of Nudging

(Discussions and Lecture)

We examine recent advances in combining data with pragmatic behavioural assumptions that have provided new empirical findings. These studies have led to policies (defaults, framing) with large welfare implications and unlike traditional public interventions does not rely on changing the choice sets (regulation) or changing the costs (subsidies and taxes). We discuss the cost-effectiveness (short term and long term) of these new policy levers.

Required reading:

- Chetty, R. (2015). Behavioral economics and public policy: A pragmatic perspective. *The American Economic Review*, 105(5), 1-33. (specified pages)
- Congdon, W.J., Kling, J.R. and Mullainathan, S., 2011. Policy and choice: Public finance through the lens of behavioral economics. Brookings Institution Press. (Chapters 2 & 3, pp. 17 - 40)

Further reading:

- Allcott, H., 2011. Social norms and energy conservation. *Journal of Public Economics*, 95(9), pp.1082-1095.
- Bryan, G., Karlan, D. and Nelson, S., 2010. Commitment devices. *Annual Review Economics*, 2(1), pp.671-698.
- O'Donoghue, T. and Rabin, M., 2003. Studying optimal paternalism. *The American Economic Review*, 93(2), pp.186-191. Further:
- Allcott, H. and Rogers, T., 2014. The short-run and long-run effects of behavioral interventions: Experimental evidence from energy conservation. *The American Economic Review*, 104(10), pp.3003-3037.
- Chetty, Raj, and Nathan Hendren. 2015. "The Effects of Neighborhoods on Children's Long-Term Outcomes: Quasi-Experimental Estimates for the United States." NBER Working paper.

Session 10: Nudging and social preferences

(Discussions and Lecture)

In this session, we'll examine findings that explicit economic incentives designed to promote pro-social behaviour sometimes are counterproductive or less effective than would be predicted among entirely self-interested individuals. We discuss how policy-making can take into account individuals' altruism and intrinsic motives to serve the public good.

Required reading:

- Bowles, Samuel. (2018). "[Machiavelli's mistake: Why good laws are no substitute for good citizens.](#)" Forthcoming, Yale University Press.

Further reading:

- Bowles, S. and Polania-Reyes, S., 2012. "Economic incentives and social preferences: substitutes or complements?". *Journal of Economic Literature*, 50(2), pp.368-425.
- Kraft-Todd, Gordon, Erez Yoeli, Syon Bhanot, and David Rand. "Promoting cooperation in the field." *Current Opinion in Behavioral Sciences* 3 (2015): 96-101.
- Alpizar, Francisco, Fredrik Carlsson, and Olof Johansson-Stenman. "Anonymity, reciprocity, and conformity: Evidence from voluntary contributions to a national park in Costa Rica." *Journal of Public Economics* 92.5 (2008): 1047-1060.
- Kasperbauer, T.J. 2015. "Psychological Constraints on Egalitarianism: The Challenge of Just World Beliefs"

Session 11: Nudging in developing countries

(Discussions and Lecture)

Are there differences in why/how to nudge in developing countries? Reasons to give a positive answers include:

- a) while developed countries may already have good choice architectures, developing countries may not.
- b) poverty might impose cognitive loads and influence decision making in specific ways.

Required reading:

- Shah, A. K., Mullainathan, S., & Shafir, E. (2012). Some consequences of having too little. *Science*, 338(6107), 682-685.

Further reading:

- Banerjee, Abhijit, et al. “The miracle of microfinance? Evidence from a randomized evaluation.” *American Economic Journal: Applied Economics* 7.1 (2015): 22-53.
- Ashraf, Nava, Dean Karlan, and Wesley Yin. 2006. “Tying Odysseus to the Mast: Evidence from a Commitment Savings Product in the Philippines,” *The Quarterly Journal of Economics*, MIT Press, 121(2): 635-672, May.
- Duflo, E., M. Kremer, and J. Robinson (2011), “Nudging Farmers to Use Fertilizer: Theory and Experimental Evidence from Kenya,” *American Economic Review*, 101(6), 2350-2390.
- Hanna, Mullainathan and Schwartzstein, “Learning Through Noticing: Theory and Experimental Evidence in Farming”, 2012.

Session 12: Nudge Fair

(Student Presentations)

Groups of students will design or select a nudge. They will point out the underlying psychology motivating or enabling the nudge and analyse whether the nudge conforms to principles of liberal paternalism or other normative principles. They will also specify the implementation and consider possible unintended effects. Here are examples of student designed nudges in the past courses or that you could possibly critically analyse.

Nudging against smoking

- Barton, A. How tobacco health warnings can foster autonomy. *Public Health Ethics*, 6(2), 2013. Pp. 207-219.

Using laptops during courses (students will have to discuss whether teachers should nudge against using laptops during course and how)

- Mueller, P., and Daniel M. Oppenheimer, ‘The Pen Is Mightier Than the Keyboard: Advantages of Longhand Over Laptop Note Taking’, *Psychological Science* 25(2014), pp. 1159-68.
- Sana, F., T. Weston and N. Cepeda ‘Laptop multitasking hinders classroom learning for both users and nearby peers’ *Computers and Education*, 62 (2013) 24-31.

Sin taxes

- O’Donoghue, Ted, and Matthew Rabin. ”Optimal sin taxes.” *Journal of Public Economics* 90.10 (2006): 1825-1849.

Peer effect and shaming

- Duflo, Esther, and Emmanuel Saez. The role of information and social interactions in retirement plan decisions: Evidence from a randomized experiment. No. w8885. National Bureau of Economic Research, 2002.

Cooling-off

- Rekaiti, Pamaria, and Roger Van den Bergh. "Cooling-off periods in the consumer laws of the EC Member States. A comparative law and economics approach." *Journal of Consumer Policy* 23.4 (2000): 371-408.

Nudging at CEU: against procrastination; for eco-friendly behavior; in favour of pedagogic behaviour from faculty (e.g. finishing on time, giving timely feedback, motivating students).

- The nudges [actually implemented by the insight team in the UK](#).