

ECONOMICS 797BF

BEHAVIORAL FOUNDATIONS FOR DEVELOPMENT AND THE ENVIRONMENT

SPRING 2022

(This version: Jan.23.2021)

Class meets at Crotty 114

Tuesdays 6:15pm-8:45pm

Prof. Juan-Camilo Cardenas

Email: juancamilo@umass.edu

Synopsis:

This course provides an approach to the current challenges in the interactions and intersection between development and the environment, using the lens of the current tools of behavioral sciences, and including a critique of the methods of inquiry used currently. By looking at the micro-foundations of how economic agents interact through their behavioral and institutional restrictions and incentives, we will tackle the questions that today many societies around the world face in the search for a more sustainable, fair, efficient and democratic economic system. The problem of cooperation among humans will play a special role in the course as most of the development and/or environmental challenges today require solving collective action dilemmas. The course will have a strong emphasis on empirical studies involving experiments from the laboratory, the field-lab and random-controlled trials that can illuminate the barriers and potentials for finding a path for a more ecologically sustainable, feasible and fair path for societies, while preserving their biological and cultural diversity.

Motivations:

Most problems in development economics involve today an environmental dimension, and most environmental challenges involve a development economics issue. Imagine land conflicts that also involve access to water or forests, or expansion of the agricultural frontier with agribusiness to supply food for a growing population or biofuels to substitute fossil fuels. Think of the extractive industries in the developing world and the tensions between access to minerals and fossil fuels to fund government social programs and the rights of indigenous peoples in Asia, Africa or Latin America to their territories and their mode of living. In all of these interactions, there are individuals, households, communities, local, regional and national governments that create a set of formal and informal institutions that shape how individuals make decisions that affect -and are affected by, the economic and ecological outcomes. Many of these formal and informal rules of the game, and the restrictions and incentives that they shape, involve power distributional issues that can exacerbate inequalities and have consequences on the biosphere. Humans, on the other hand, are ultimately making these decisions, within those institutions, but also within their cognitive abilities, biases and restrictions.

The behavioral revolution coming from dialogues among biological and social sciences offer now valuable tools to understand why some attempts fail or succeed in protecting the biosphere or in achieving economic and social progress in the locations where poverty and inequality are pervasive.

PREREQUISITES:

- Fundamentals of game theory. Any of the following provide the foundations required in this course: RESEC702, ECON700, ECON702.
- Fundamentals of econometrics. Any of the following provide the foundations required in this course: ECON753, RESEC702

GRADING AND REQUIREMENTS

Grades will be based on the following:

- (25%) Short (1 page) reaction papers to weekly reading assignments (13 in total)
- (20%) Comments to reactions papers by peers (13 in total)
- (20%) Mid-term essay
- (25%) Final paper: redesign one of the studies (an experiment involving a lab-in-the-field or random intervention) discussed in class

Each week will have a set of required readings that all students are expected to have read in advance of the class meeting. There will be suggested readings for those interesting in deepening the particular subject in question and for further research into the final paper for the course.

Students are expected to write short reaction papers on the assigned readings and comment on the writing of other students. A random sample of the written essays and reactions will be used in the grading for the course.

Academic calendar

- Winter - Last day to drop - Friday, January 7
- Winter - Holiday - Martin Luther King day - Monday, January 17
- Winter - Last day of classes - Monday, January 24
- Winter - Final grades due - Monday, January 31
- Spring - First day of classes - Tuesday, January 25
- Last day to add/drop with no record (Graduate) - Monday, February 7

Special dates:

- Monday, February 21 is a holiday. Tuesday, February 22 will follow a Monday class schedule.

- Monday, April 18 is a holiday, Wednesday, April 20 will follow a Monday class schedule.

STRUCTURE FOR THE COURSE:

The course is based on four major sections. Part I will lay out the motivations for the course in the present times of major societal challenges in terms of building an inclusive and sustainable economy. Part II will be devoted to the tools, both conceptual and empirical, that the behavioral revolution has provided for the understanding of human action. In Part III we will focus on some of the big questions –not all- that societies face today, through the behavioral lens and with special focus on those within the intersection of development and the environmental. The last part (IV) of the course will serve as a wrap up of the lessons learned and the roads ahead.

Part I. Motivations for the course

- Poverty, inequality, and the environmental crisis
- From local to global dilemmas: Beyond the Ostromian world of the isolated local commons
- Preferences, choice, institutions and outcomes

Part II. Behavioral foundations and tools: motivations, preferences, rationality, biases, heuristics, methods

- Concepts: rationality, heuristics, biases, incentives, institutions.
- Preferences over risk, time, others, nature, and why they matter to deal with poverty, inequality and the environment
- The experimental approach: lab experiments, lab-in-the-field experiments, RCTs
- The replication crisis: what experiments (psychology and economics) hold strong? Which are relevant to the development and environment intersection
- A critical eye on RCTs. Ethics, scaling-up, methods, knowledge (Deaton vs Duflo, Ostrom vs Duflo)

Part III. Big questions on development & environment

- The Cooperation problem
- Collective action in development & environment
- Behavioral traps and possibilities for action
- Inequality and the environment
- Experiments as thermometers or as vitamins

Part IV: The road ahead: What should be next in terms of policy

The students will attempt to generate a set of key findings from this literature that could enrich economic analysis and policy making and express it through a design of an experiment that best reflects the state of the art of behavioral sciences applied to key questions in the course.

Weekly plan (This version: Jan.23.2021)

Week	Topic	Main readings
Part I. Motivations for the course		
1 - Jan 25	Why study environmental and development issues through a behavioral lens	Jayachandran (2021) Cardenas & Carpenter (2008)
2 – Feb 1	On the challenges for a fair and sustainable Anthropocene	Schill et.al (2019) Ostrom (2010)
Part II. Behavioral foundations and tools		
3 – Feb 8	The main concepts I – On rationality	Sen (1977) Bowles (2004) Chp.3
4 – Feb 15	The main concepts II – On Preferences	Dhami (2016) Falk et.al. (2018)
Feb 22 (Monday schedule)		
5 – Mar 1	The experimental approach: tools, concepts, data patterns	Dhami (2016) Intro Banerjee & Duflo (2009)
6 – Mar 8	External validity, The replication crisis	List (2020) Camerer et.al (2016) OSC (2015)
Mar 15 (Spring break)		
7 – Mar 22	RCTS and other ethical issues	Deaton vs Duflo Bryan et.al (2009)
Part III. Big questions on development & environment		
8 – Mar 29	The cooperation problem	Ostrom (1998) Bowles (2004) Chp.4
9 – Apr 5	Collective action in development & environment	Peña et.al (2017) Velez et.al. (2020) BenYishav et.a. (2017)
10 - Apr 12	Behavioral traps and possibilities	Shah et.al (2012) Balboni et.al (2021) Laajaj Mullainathan
11 – Apr 19	Inequality and the environment	Boyce (1994) Cardenas (2003) Hamman et.al 2018
12 - Apr 26	Experiments as thermometers or as vitamins	Cardenas (2009)
13 – May 3	Part IV: The road ahead: What should be next for a behavioral, science-based, policy design	Oliver (2019) Balmford et.al (2021)
14 – May 6-12	FINAL EXAMINATIONS WEEK	

Readings (Current version Dec.25.2021):

Aker, Jenny C., and Kelsey Jack. *Harvesting the rain: The adoption of environmental technologies in the Sahel*. No. w29518. National Bureau of Economic Research, 2021.

Andreoni, James and John Miller (2002) "Giving According to GARP: An experimental test of the consistency of preferences for altruism". *Econometrica* March 2002 Vol. 70(2): 737-753.

(*) Balboni, Clare A., et al. Why do people stay poor?. No. w29340. National Bureau of Economic Research, 2021.

(*) Balmford, Andrew, et al. "Making more effective use of human behavioural science in conservation interventions." *Biological Conservation* 261 (2021): 109256.

(*) Banerjee, Abhijit and Esther Duflo (2009) "The Experimental Approach to Development Economics": *Annual Review of Economics*. 1:1.1–1.28

Baland, Jean-Marie, and Jean-Philippe Platteau. *Halting degradation of natural resources: is there a role for rural communities?*. Food & Agriculture Org., 1996.

Barr, A. (2003). "Trust and expected trustworthiness: experimental evidence from zimbabwean villages." *The Economic Journal* 113(489): 614-630.

BenYishay, Ariel, et al. "Indigenous land rights and deforestation: Evidence from the Brazilian Amazon." *Journal of Environmental Economics and Management* 86 (2017): 29-47.

Bertrand, Marianne, Sendhil Mullainathan, And Eldar Shafir A (2004) "Behavioral-Economics View of Poverty", *American Economic Review*, Vol. 94 No. 2 May 2004: 419-423

Bowles (2004) "Microeconomics: Behavior, Institutions and Evolution". Princeton University Press. 2004.

Boyce, J. K. (1994). Inequality as a cause of environmental degradation. *Ecological economics*, 11(3), 169-178.

(*) Bryan, Gharad, James J. Choi, and Dean Karlan. "Randomizing religion: the impact of Protestant evangelism on economic outcomes." *The Quarterly Journal of Economics* 136.1 (2021): 293-380.

(*) Camerer, Colin F., et al. "Evaluating replicability of laboratory experiments in economics." *Science* 351.6280 (2016): 1433-1436.

Camerer, Colin. "The promise and success of lab-field generalizability in experimental economics: A critical reply to Levitt and List." *Available at SSRN 1977749* (2011).

(*) Cardenas, Juan Camilo, and Jeffrey Carpenter. "Behavioural development economics: Lessons from field labs in the developing world." *The Journal of Development Studies* 44.3 (2008): 311-338.

(*) Cárdenas, Juan Camilo. "Experiments in environment and development." *Annu. Rev. Resour. Econ.* 1.1 (2009): 157-182.

Cárdenas, Juan-Camilo, and Elinor Ostrom. "What do people bring into the game? Experiments in the field about cooperation in the commons." *Agricultural systems* 82.3 (2004): 307-326.

(*) Cardenas, Juan-Camilo. "Real wealth and experimental cooperation: experiments in the field lab." *Journal of development Economics* 70.2 (2003): 263-289.

Carpenter, J. P., & Matthews, P. H. (2003). *Behavioral Marxism I: Collective Action*.

Chattopadhyay, Raghabendra, and Esther Duflo. "Women as policy makers: Evidence from a randomized policy experiment in India." *Econometrica* 72.5 (2004): 1409-1443.

De Los Rios, Camilo. "The double fence: Overlapping institutions and deforestation in the Colombian Amazon." *Ecological Economics* 193 (2022): 107274.

(*) Dharmi, Sanjit. *The foundations of behavioral economic analysis*. Oxford University Press, 2016.

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Falconi, J.L. and J.A. Robinson (2021) "The Political Economy of Latin America: New Visions". Manuscript.

(*) Falk, A., Becker, A., Dohmen, T., Enke, B., Huffman, D., & Sunde, U. (2018). Global evidence on economic preferences. *The Quarterly Journal of Economics*, 133(4), 1645-1692.

Fehr, Ernst and Klaus Schmidt (1999) "A theory of fairness, competition and cooperation". *Quarterly Journal of Economics*, 114(3): 817-68.

Ferraro, Paul J., and Agnes Kiss. "Direct payments to conserve biodiversity." *Science* 298.5599 (2002): 1718-1719.

Gangadharan, Lata, Tarun Jain, Pushkar Maitra, and Joe Vecchi. "Lab-in-the-Field Experiments: Perspectives from Research on Gender." Available at SSRN 3841310 (2021).

Greenstone, Michael, and B. Kelsey Jack. "Envirodevonomics: A research agenda for an emerging field." *Journal of Economic Literature* 53.1 (2015): 5-42.

Hamann, M., Berry, K., Chaigneau, T., Curry, T., Heilmayr, R., Henriksson, P.J., Hentati-Sundberg, J., Jina, A., Lindkvist, E., Lopez-Maldonado, Y. and Nieminen, E., 2018. Inequality and the Biosphere. *Annual Review of Environment and Resources*, 43, pp.61-83.

Harrison, Glenn W., and John A. List. "Field experiments." *Journal of Economic literature* 42.4 (2004): 1009-1055.

Henrich, J., McElreath, R., Barr, A., Ensminger, J., Barrett, C., Bolyanatz, A., ... & Ziker, J. (2006). Costly punishment across human societies. *Science*, 312(5781), 1767-1770.

Henrich, J., Ensminger, J., McElreath, R., Barr, A., Barrett, C., Bolyanatz, A., ... & Ziker, J. (2010). Markets, religion, community size, and the evolution of fairness and punishment. *science*, 327(5972), 1480-1484.

Hoff, K. and J. Stiglitz (2001). Modern economic theory and development. In "Frontiers of development economics". G. Meier and J. Stiglitz. Oxford, Oxford University Press: 389-459.

(*) Jayachandran, Seema. How economic development influences the environment. No. w29191. National Bureau of Economic Research, 2021.

Kremer, Michael, Gautam Rao, and Frank Schilbach. "Behavioral development economics." *Handbook of Behavioral Economics: Applications and Foundations* 1. Vol. 2. North-Holland, 2019. 345-458.

Laajaj, Rachid. "Endogenous time horizon and behavioral poverty trap: Theory and evidence from Mozambique." *Journal of Development Economics* 127 (2017): 187-208.

Levitt, Steven D., and John A. List. "Field experiments in economics: The past, the present, and the future." *European Economic Review* 53.1 (2009): 1-18.

List, John A., Sally Sadoff, and Mathis Wagner. "So you want to run an experiment, now what? Some simple rules of thumb for optimal experimental design." *Experimental Economics* 14.4 (2011): 439.

Moya, Andrés. "Violence, psychological trauma, and risk attitudes: Evidence from victims of violence in Colombia." *Journal of Development Economics* 131 (2018): 15-27.

Mullainathan, Sendhil. "Development economics through the lens of psychology." Annual World Bank Conference in Development Economics 2005: Lessons of Experience. Oxford University Press and World Bank Oxford, UK and Washington, DC, 2005.

Nunn, N. (2020). The historical roots of economic development. *Science*, 367(6485).

(*) Oliver, Adam. "Towards a new political economy of behavioral public policy." *Public Administration Review* 79.6 (2019): 917-924.

(*) Open Science Collaboration. (2015). Estimating the reproducibility of psychological science. *Science*, 349(6251).

(*) Ostrom, Elinor. "A behavioral approach to the rational choice theory of collective action: Presidential address, American Political Science Association, 1997." *American political science review* 92.1 (1998): 1-22.

Ostrom, Elinor. *Understanding institutional diversity*. Princeton university press, 2009.

Ostrom, Elinor. "A general framework for analyzing sustainability of social-ecological systems." *Science* 325.5939 (2009): 419-422.

(*) Ostrom, Elinor. "Beyond markets and states: polycentric governance of complex economic systems." *American economic review* 100.3 (2010): 641-72.

(*) Peña, Ximena, et al. "Collective property leads to household investments: lessons from land titling in Afro-Colombian communities." *World Development* 97 (2017): 27-48.

(*) Schill, Caroline, et al. "A more dynamic understanding of human behaviour for the Anthropocene." *Nature Sustainability* 2.12 (2019): 1075-1082.

(*) Sen, Amartya (1977). "Rational Fools: A Critique of Behavioral Foundations of Economic Theory". *Philosophy and Public Affairs*. Vol. 6(4): 317-344, Summer 1977.

Sethi, Rajiv, and Eswaran Somanathan. "The evolution of social norms in common property resource use." *The American Economic Review* (1996): 766-788.

Shah, Anuj K., Sendhil Mullainathan, and Eldar Shafir. "Some consequences of having too little." *Science* 338.6107 (2012): 682-685.

Somanathan, Eswaran. "20. Institutions, the Environment, and Development." *The Handbook of Economic Development and Institutions*. Princeton University Press, 2020. 733-750.

Smith, Vernon L. (2003) "Constructivist and Ecological Rationality in Economics". *American Economic Review* 93(3): 465-508.

(*) Vélez, M. A., Robalino, J., Cardenas, J. C., Paz, A., & Pacay, E. (2020). Is collective titling enough to protect forests? Evidence from Afro-descendant communities in the Colombian Pacific region. *World Development*, 128, 104837.

