### ENDING POVERTY WITH TECHNOLOGY

**PUBLIC POLICY 147 & SOCIOLOGY 157 (A CARDINAL COURSE)**

Quarter: Winter, 2016-17  
Meeting time: Tuesdays and Thursdays (3pm-4:20pm), Rm. 013, Bldg. 200

**Professor:** David B. Grusky ([grusky@stanford.edu](mailto:grusky@stanford.edu), 2nd floor, Bldg. 370)  
Appointments: Thursdays (contact Danielle Choi, [dechoi@stanford.edu](mailto:dechoi@stanford.edu), to schedule)

**Teaching Assistants:** Madeline Young ([mfyoung@stanford.edu](mailto:mfyoung@stanford.edu), office hours immediately after Thursday class in Rm. 032, Bldg. 200); Christianne Corbett ([ccorbett@stanford.edu](mailto:ccorbett@stanford.edu), office hours on Monday, 3pm-4:30pm, CPI Conference Room, first floor, Bldg. 370)

There are growing worries that new technologies may eliminate work, increase inequality, and create a large dependent class. But can technology instead be turned against itself and used to end poverty? This class explores the sources of domestic poverty and then examines how new technologies might be developed to eliminate poverty. We first survey existing poverty-reducing products and then attempt to imagine new products that might end poverty by equalizing access to information, reducing transaction costs, or equalizing access to training. Throughout the course, we rely heavily on key leaders in the nonprofit and technology industries to discuss technology products that are already on offer, products that are being developed, and products that might usefully be developed in the future. In a follow-up class in the spring quarter, students who choose to continue will select the most promising ideas, continue to develop them, and begin the design task within Stanford’s new Poverty and Technology lab.

**Readings:** The readings are typically available in *Inequality in the 21st Century* (edited by David B. Grusky and Jasmine Hill). In many cases, the readings have an accompanying 5-minute video (featuring the author of the reading), videos that will be made available as well (for optional viewing).

**Meetings:** Each student is expected to meet three times with one of the TAs, once in the second or third week of the course to brainstorm about possible projects, again in the fifth or sixth week of the course to deliver a progress report, and yet again in the ninth week of the course to prepare for the final presentation. The signup sheet for TA appointments can be found on Canvas.

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**Assignment:** The course is built around a single formal assignment due on Friday, March 24. Each student should submit a 5,000 word paper describing a new technology-based poverty-reduction product that addresses one or more of the problems covered in the course (e.g., meeting basic needs; encouraging good decision-making; reducing transaction costs; increasing access to capital, training, or social networks). The paper should review existing research on how a particular problem (e.g., unequal access to human capital) generates poverty, how that problem is currently addressed with existing poverty programs and products, and how the proposed product would build on or otherwise go beyond existing programs and products. It is fine to join a team and submit a single team-based paper or to work as an individual and submit an individual paper (but of course the expectation is that team products should rest on correspondingly more labor and result in a superior product). Each student (or team) will also present their project to an audience of poverty experts and foundation and nonprofit representatives (Thursday, March 16, 1pm).
Course Schedule

A. A Dire Future?

Tuesday, January 10: We examine some of the classic and new accounts of how emerging technologies may - or may not - reduce prime-age employment, increase inequality, and create new forms of poverty. We then turn to the question of whether those very same technologies can be harnessed in the future to reduce poverty and inequality.

A follow-up presentation on ethical and effective service by Luke Terra (Director of Community Engaged Learning & Research Assoc. Director, Haas Center for Public Service).

Readings


Eby, John. 1998. Why service-learning is bad. (NOTE: Please read in advance of January 10 meeting.)

B. Overview of Poverty in the U.S.

I. Describing Poverty

Thursday, January 12: How are absolute and relative poverty measured? What is deep poverty, extreme poverty, and near poverty? What are the main trends in poverty? How is poverty experienced? How does it affect child development, stress, and cognitive functioning? How is it addressed in the U.S. and elsewhere?

Readings


II. Causes of Poverty

Tuesday, January 17: Why is there so much poverty? An exploration of the effects of redistribution, philanthropy, economic restructuring, precarity and the “gig economy,” incarceration, residential segregation, eviction, school rationing, immigration, racial and gender inequality, family structure, and access to capital.

Readings


III. Conventional Approaches to Reducing Poverty

Thursday, January 19: Can we reduce poverty through home visiting, early education, equal access to schooling, nudges, neighborhood redevelopment, job training, mindset interventions, or other late interventions?

Readings


C. Other Poverty-Relevant Developments

I. Rising Income Inequality and Commodification

*Tuesday, January 24:* Since the late 1970s, income inequality has taken off in the U.S., with current levels as high as have ever been recorded in the U.S. The second key trend in play, rising commodification, means that access to goods and services increasingly depends on the simple capacity to pay for them. It follows that those at the bottom of the income distribution are now doubly disadvantaged: It is not just that they have less money (relative to others), but also that access to goods, services, and opportunities increasingly requires precisely the money that they do not have. It may be said that relentless commodification is what gives rising inequality its teeth.

*Readings*


II. Declining Social Mobility

*Thursday, January 26:* It is conventional to make a sharp distinction between the distribution of social rewards (e.g., the income distribution) and the distribution of opportunities for securing these rewards. It is the latter distribution that often governs popular judgments about the legitimacy of inequality: The typical American, for example, is quite willing to tolerate substantial inequalities in power, wealth, or prestige provided that the opportunities for securing these rewards are distributed equally. This sensibility has in turn led to much research, which we review here, assessing to what extent the country’s commitment to equal opportunity has indeed been upheld.

**Readings**


Reardon, Sean F. 2017. The widening academic achievement gap between the rich and the poor. *Inequality in the 21st Century,* edited by David B. Grusky and Jasmine Hill. New York: Perseus. Also see optional video [here](#).


D. Applying New Technologies to Reduce Poverty

I. *How New Technologies Can Change our Approach to Poverty*

*Tuesday, January 31:* Can technology be turned against itself to reduce poverty? We next take on the task of imagining how new technologies might be the foundation of a new 21st century approach to poverty. We examine their capacity to reduce poverty by (a) meeting basic needs, (b) lowering the costs of information and improving decision making, (c) lowering transaction costs, (d) customizing services based on needs, (e) creating artificial neighborhoods and allowing for peer-to-peer interactions, and (e) exploiting big data and new opportunities for experimentation. These capacities may be used to improve conventional social services (e.g., deliver food stamps more efficiently) or to help low-income workers make more money and escape poverty (without necessarily taking advantage of conventional social services).

**Readings**

II. A Primer on Design

Thursday, February 2: We next discuss how to face the task of imagining 21st century approaches to taking on poverty that exploit the new capacities that new technologies present. We borrow heavily from existing models of developing and designing new products.

Readings and videos


Needs finding. Start-Up Garage (S356) video.

Where do good ideas come from? Start-Up Garage (S356) video.

Introduction to brainstorming. Start-Up Garage (S356) video.

Introduction to prototyping. Start-Up Garage (S356) video.

E. Case Studies

We next turn to providing examples of existing technology-exploiting applications within different sectors of the anti-poverty “industry.” We consider six examples: (a) improving service delivery; (b) using big data to evaluate social programs; (c) using big data to deliver better information to service providers; (d) improving financial services; (e) reducing barriers to accessing training and securing jobs; and (f) building “artificial neighborhoods” designed to break down barriers to acquiring social and political capital.

The first three examples focus on building a better social service sector (or “safety net”). This sector can be improved in three ways:

Efficient delivery: We can use big data, integrated delivery platforms, and other innovations to make service delivery more efficient, personalized, and dignity-preserving;

Evaluating programs: We can use big data and rapid testing to sort out which programs work, to improve those that do work, and to design new and better social programs; and

Providing information: We can use using big data and new visualizations to deliver better information to service providers.
The remaining three examples pertain to interventions that work outside the conventional social service sector. These include, for example, interventions that help low-income individuals secure low-cost loans, high-quality training, and good jobs.

I. Delivering Better Information to Service Providers

Tuesday, February 7: In many cases, service providers are operating in the blind without adequate information on who is in poverty, what services they need, or how the experience and dynamics of poverty are changing. This session examines how big data can be exploited to build a better infrastructure for monitoring poverty and service use.

Video


Thursday, February 9: Andrew Dunckelman, Portfolio Manager, Google.org.


II. Program Evaluation and Reform

Tuesday, February 14: It is equally important to evaluate existing programs and, on the basis of the results, either eliminate programs that aren’t working or improve those that are. The purpose of this session is to examine how big data and rapid testing can assist with such program evaluation and reform.

Thursday, February 16: Elisabeth Rhodes, Lead Researcher, Y Combinator Research, Basic Income Study

Readings and videos


Chetty, Raj, Mark Duggan, and David B. Grusky. 2016. Using big data to solve social problems. Also see optional video here.


**III. Improving Service Delivery**

*Tuesday, February 21:* We next examine how technology and big data can be used to create integrated delivery platforms that reduce barriers to information, lower transaction costs, use behavioral nudges to encourage good decision making, and are customizable (and thus move beyond conventional one-size-fits-all policy).

*Thursday, February 23:* Jimmy Chen, Founder and CEO, *Propel*

**Readings**


Daugherty, Lindsay, William R. Johnston, and Tiffany Tsai. 2016. *Connecting college students to alternative sources of support.* Rand Corporation.


*Quick exercise:* Investigate *Propel, Single Stop,* and other providers that are exploiting the capacity of technology to reduce transaction and information costs for those seeking social services.

**IV. Access to Capital**

*Tuesday, February 28:* It typically takes money to reduce poverty. If it’s not directly provided (via, for example, a basic income), it might instead be loaned. But low-income families have not typically had access to low-cost loans for the purpose of smoothing income shocks, acquiring skills, starting businesses, or buying key enabling goods (e.g., cars). Likewise, it has typically been difficult to finance “top-down” poverty-reducing initiatives (e.g., subsidized childcare), even when these initiatives have been shown to be good investments (by reducing subsequent expenditures on incarceration, healthcare, social programs, and the like). This section explores technology-based approaches to financing poverty-reducing efforts.

*Thursday, March 2:* Ryan Falvey, Managing Director, Financial Solutions Lab, Center for Financial Services Innovation

**Readings**


Keohane, Georgia Levenson (interviewed by John Kluge). Capital and the common good. Forbes (October 19, 2016). (See also Capital and the Common Good: How Innovative Finance is Tackling the World’s Most Urgent Problems.)

Quick exercise: Investigate Kiva’s U.S. loan program, FinLab, PayActiv, Even, and other firms that are providing innovative financial products that can reduce poverty.

VI. Access to Training and Jobs

Tuesday, March 7: The new economy is a booming-buzzing confusion of different types of training opportunities (e.g., conventional college, boot camps, badging) and increasingly precarious and short-term jobs (e.g., the “gig economy”). We turn next to efforts to increase information about training and job opportunities, to democratize training and make it more efficient, and to reduce transaction costs in effecting matches between jobs and workers. The guest speaker, Mitchell Stevens (Associate Professor of education, Stanford University), will share his views on opportunities in this domain.

Thursday, March 9: Jessica Santana, Stanford sociology PhD student. The Social Construction of Failure: right and wrong failure and how to move on from failure.

An open session to discuss and hone ideas ... a good time to raise any problems that you’re facing in putting together your proposals.

Readings

Stevens, Mitchell, Remaking College.


Weber, Lauren. 2015. Online skills are hot, but will they land you a job? Wall Street Journal (Nov. 17, 2015).


Quick exercise: Investigate TaskRabbit, Uber, and other firms that are exploiting the capacity of technology to reduce transaction costs (in ways that can be poverty-reducing).

IV. Access to Social Capital

Tuesday, March 14: The effects of poverty are magnified in the U.S. because extreme economic and racial segregation reduces the poor’s access to social capital (as poor people interact mainly with others who are just as poor). Although one might wish for major institutional change that results in more integrated neighborhoods, a fallback until that change happens is to create “artificial neighborhoods” through social media. These artificial technology-generated neighborhoods can provide poor children and adults with (a) on-line mentoring, (b) information about school
opportunities, and (c) information about job opportunities. The purpose of this section is to examine the future of these and related technologies. The presenter will be Bonny Gildin (Vice President, All Stars Project, Inc.).

Readings


Quick exercise: Investigate iMentor as an example of an initiative exploiting the capacity of technology to create “artificial neighborhoods.”

F. Final Presentation

Thursday, March 16: Each student (or team) presents their project to an audience of poverty experts and foundation and nonprofit representatives.

G. Possible Follow-Up Activities

SPRING QUARTER (2016-17): For students who wish to go on to build one or more of the anti-poverty products developed in this class, we offer a follow-up course (Public Policy 158 and Sociology 158) in which students work within Stanford’s new Poverty and Technology lab.

SUMMER SESSION (2016-17): In the 2016-17 summer, one or more of the products will be developed further by several Haas Center interns (selected from class participants), with the objective being to prepare for the initial build in CS50 (Using Tech for Good) or S356 (Start-Up Garage).

FOLLOWING FALL (2017-18): The product may be further developed within CS50 (Using Tech for Good) or Start-Up Garage (S356).
Honor Code


Students with Documented Disabilities

Students who may need an academic accommodation based on the impact of a disability must initiate the request with the Office of Accessible Education (OAE). Professional staff will evaluate the request with required documentation, recommend reasonable accommodations, and prepare an Accommodation Letter for faculty dated in the current quarter in which the request is being made. Students should contact the OAE as soon as possible since timely notice is needed to coordinate accommodations. The OAE is located at 563 Salvatierra Walk (phone: 723-1066, URL: http://studentaffairs.stanford.edu/oaet).

Affordability of Course Materials

Stanford University and its instructors are committed to ensuring that all courses are financially accessible to all students. If you are an undergraduate who needs assistance with the cost of course textbooks, supplies, materials and/or fees, you are welcome to approach me directly. If would prefer not to approach me directly, please note that you can ask the Diversity & First-Gen Office for assistance by completing their questionnaire on course textbooks & supplies (http://tinyurl.com/jpqbarn) or by contacting Joseph Brown, the Associate Director of the Diversity and First-Gen Office (jlbrown@stanford.edu; Old Union Room 207). Dr. Brown is available to connect you with resources and support while ensuring your privacy.