



CHICAGO HARRIS

PUBLIC POLICY | THE UNIVERSITY OF CHICAGO

NEW APPROACHES IN PUBLIC POLICY EDUCATION

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DECEMBER 2015

Setting the Standard

For more than 25 years, the University of Chicago Harris School of Public Policy has been driven by the belief that rigorous, quantitative research is the best guide for public policy. The school does not restrict itself to any particular policy domain but distinguishes itself by its unique point of view. From urban studies to early childhood development, from energy to global health and global conflicts, Harris brings an exacting, data-driven perspective to the full spectrum of policy concerns.



At a Glance

The Harris School of Public Policy and The University of Chicago

First Degree Awarded: 1977

Enrollment: 375

Countries Represented: 36

Faculty: 29

Faculty-Student Ratio: 13:1

Alumni: 2726 worldwide

Research Centers: 13

Degrees: 6 + joint degrees

Quantitative
Analysis

Policy
Innovation

Harris
Impact

Faculty
Leaders

All Sectors

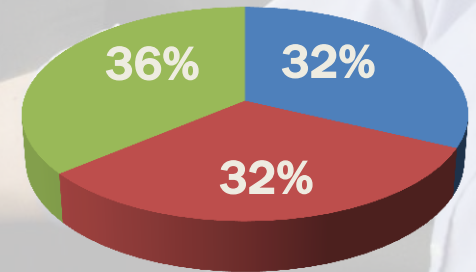
Post-graduate Employment

Top Employers: First Destination Hires, 2012 - 2014



Alumni Careers By Sector

- Nonprofit
- Public
- Private

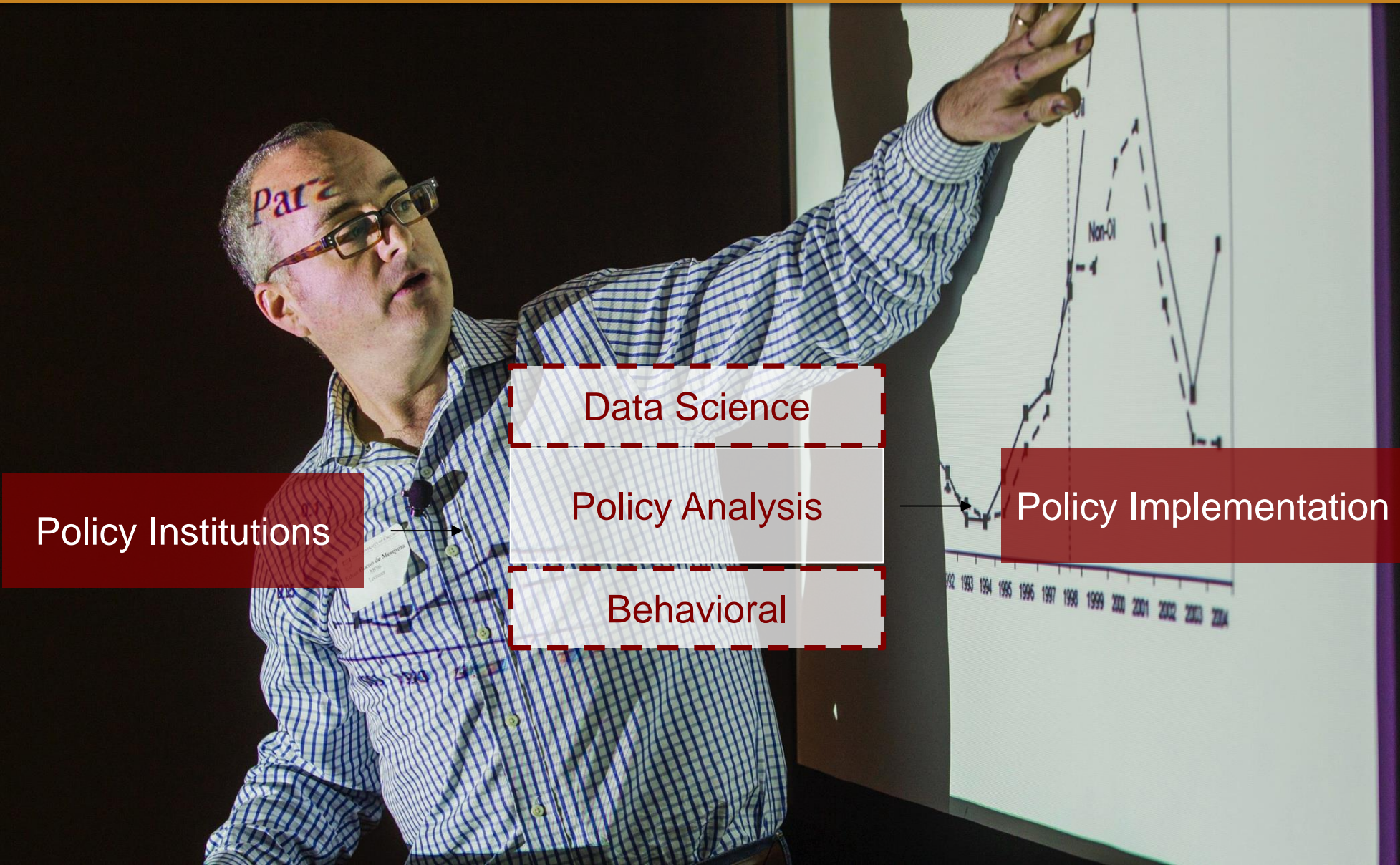




A CHANGING LANDSCAPE

IMPLICATIONS FOR POLICYMAKING

From Policy Analyst to Policy Maker



Policy Institutions

Data Science

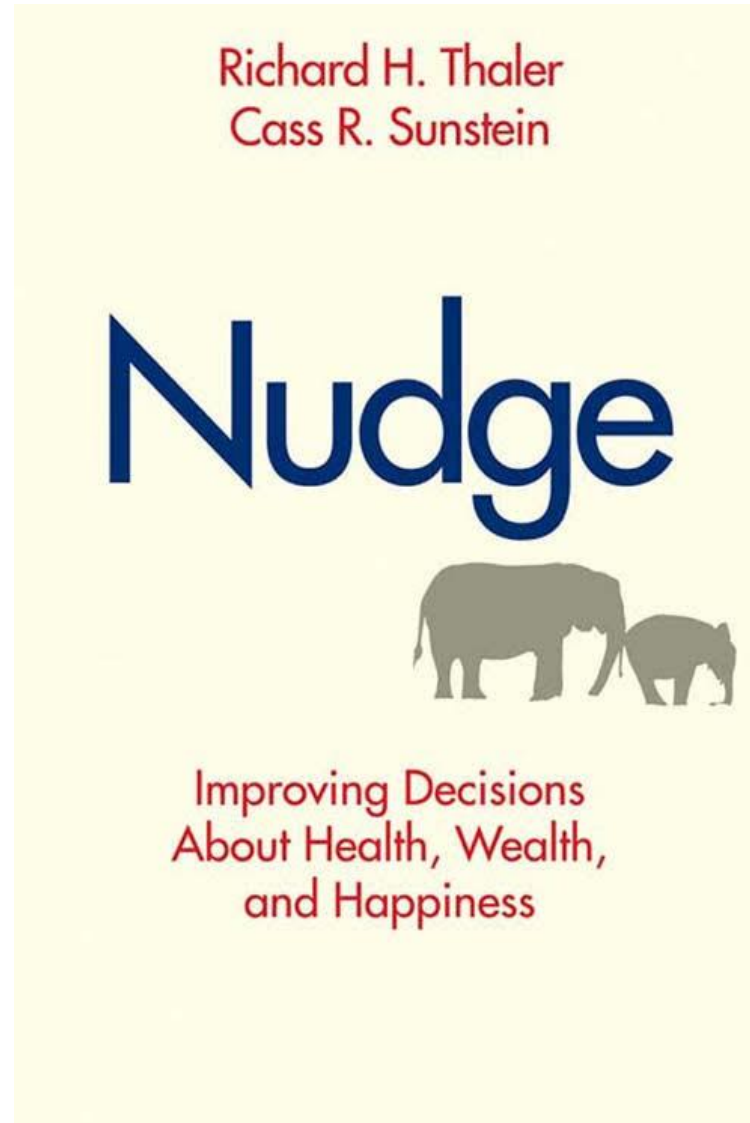
Policy Analysis

Behavioral

Policy Implementation

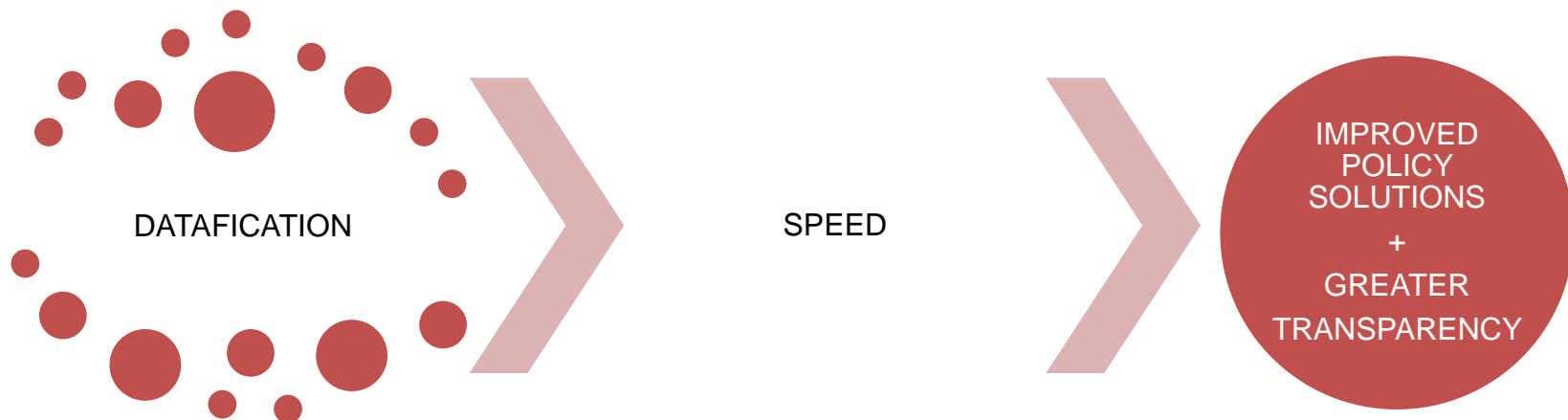


The Rise of Behavioral Science



Big Data and Public Policy

Advances in data analytics promise to **transform governmental decision-making** at all levels, driven by fundamental changes in how policy-relevant data are collected, analyzed, and distributed. As a result, we now have the potential to revolutionize the quality of policy solutions and the responsiveness of governance processes.



A faint, stylized line drawing of a griffin or dragon is visible in the background, rendered in a light orange color that matches the text. The creature is shown in profile, facing right, with its wings spread and its tail curled.

DATA IN ACTION

CASE STUDIES IN POLICY IMPACT

The University of Chicago Crime Lab

REDUCING VIOLENT CRIME WITH RANDOMIZED TRIALS

■ Crime Lab uses insights from basic science to help government agencies and non-profit organizations develop innovative new approaches to reducing violence, testing them using randomized control trials

- Launched in 2008 by co-founder Jens Ludwig
- Crime Labs in **two cities**: Chicago and New York

■ One innovative violence reduction program in Chicago, Becoming a Man (BAM), addresses non-academic barriers to school success, and has **decreased violent crime arrests** of program participants **by 44 percent**.

- BAM served as the motivation for President Obama's \$200 million **My Brother's Keeper** initiative



Making Data Accessible

CHICAGO

Search



SHARE THIS STORY



Plenario, a Powerful City-Data Tool, Debuts

Chicago's open-data community takes another step forward with a site that makes working with that data easier, faster, and more comprehensible.

BY WHET MOSER

PUBLISHED SEPT. 24, 2014



Chicago Smart Data Platform

- The City of Chicago collects approximately **7 millions rows of data a day**
- SmartData is a search engine that can be used to find relevant data, detect relationships, and **analyze** millions of lines of **data in real-time**
 - Allows managers to engage in predictive problem solving
 - Blueprint for other cities



Applying the Smart Data Platform: Chicago Rodent Combat Team

USING DATA TO KEEP RAT POPULATIONS DOWN

- By using 311's data, analytics team can decipher the right time for an intervention before there is a spike in rat population
- Garbage calls are measurable indicators that can signal changes in rat trends
- Request for rodent control **dropped 15% in 2013**

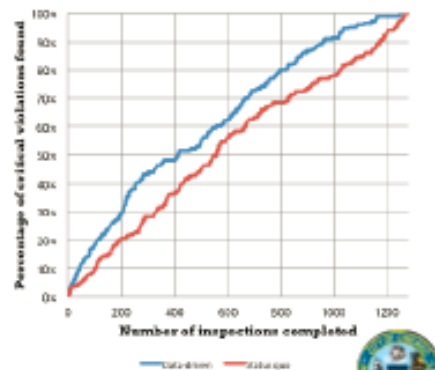


Improving Food Safety

OPTIMIZING FOOD INSPECTIONS

Discovering critical violations sooner rather than later reduces the risk of patrons becoming ill, which helps reduce medical expenses, lost time at work, and even a limited number of fatalities.

Impact



(Source Tom Schenk, City of Chicago; Dan Neil, CMU)



Preventing Lead Poisoning in Children

COLLABORATION WITH CHICAGO DEPARTMENT OF PUBLIC HEALTH

- Goal: Prevent lead poisoning instead of reactive, post-poisoning home inspections
- Approach: Use machine learning models to predict children who are at high risk of lead poisoning
- Intervention: Targeted home inspections to detect lead hazards



Fighting Crime in a New Era of Predictive Policing

NEW DATA AND STATISTICAL TOOLS ALLOW POLICE DEPARTMENTS TO PREDICT CRIMES

- Crime mapping has been used since 1892
- Predictive policing is a business technique used by the Santa Cruz to combat crime since mid-2011
 - The system divides the city map into 150x150 cells
 - Probabilities of crime are assigned to each cell
 - Officers are briefed on 15 cells with highest probabilities
 - Officers devote extra time to monitoring these locations
 - Burglaries **dropped by 27%**; Increased arrests by **56%**; and **22% more** of stolen cars recovered
- Three important analytics
 - Analysis of Space: ‘Point Location’ Mapping
 - Analysis of Time and Space: Apps such as CrimeStat III and Series Finder
 - Analysis of Social Network
- Santa Cruz Police operations are **becoming more efficient**



Array of Things

URBAN SENSING PROJECT COLLECTS REAL-TIME, LOCATION-BASED DATA TO IMPROVE CITY EFFECTIVENESS

- “Array of Things” uses Argonne remote autonomous system architecture
- Partnership with City of Chicago to install 500 nodes by 2017
- Collects real-time data on the city’s environment, infrastructure, and activity for research and public use
- All data to be published openly, freely
- Current configuration includes:
 - Air temperature and humidity, barometric pressure, ambient light, ambient sound, vibration, road surface temperature, carbon dioxide, nitrogen dioxide, ozone, sulfur dioxide, and hydrogen sulfide





INNOVATIVE INITIATIVES

EDUCATING NEXT GENERATION OF
POLICY LEADERS

Data Science for Social Good

The Eric & Wendy Schmidt Summer Fellowship Goals

- Train the next generation of data scientists who care about and understand how to solve social problems
- Expose and train governments and non profits to better use data to make better decisions
- Seed a community of people and organizations working together to make an impact

Problem
Formulation

Computer
Science &
Programming

Statistics &
Machine
Learning

Communication

**MAKING
AN
IMPACT
WITH DATA**

Econometrics &
Social Science
Methods

Experimental
Design

Databases

DSSG Over the Years

2013



36 Fellows

6 Mentors



12 Projects

12 Weeks



2014



48 Fellows

8 Mentors



14 Projects

12 Weeks



2015



42 Fellows

5 Mentors
3 PMs



12 Projects

14 Weeks





NOBLE



WAKE COUNTY PUBLIC SCHOOL SYSTEM



KIPP: New Jersey

KIPP: Chicago

COLLEGE PREP PUBLIC SCHOOLS



Montgomery County Public Schools



ChapinHall
at the University of Chicago



City of Memphis



WORLD BANK GROUP



AUSTRALIAN CONSERVATION FOUNDATION



THE CASE FOUNDATION

EPIC | ENERGY POLICY INSTITUTE AT THE UNIVERSITY OF CHICAGO



Harris Mentor Program

Unique among top-tier policy schools, Chicago Harris has offered a Mentor Program ever since the school's inception more than twenty-five years ago. Thanks to this far-sighted initiative, the brainchild of Irving Harris, thousands of students have been mentored by high-level policy professionals. These leaders call on their decades of experience to help students **connect academic training with practical opportunities** and to navigate the transition to professional careers.



INTERNATIONAL INNOVATION CORPS



The International Innovation Corps challenges the next generation of global leaders to create **scalable solutions to critical development problems**. It selects top graduates from the University of Chicago and host-country universities, places them in diverse teams, and embeds them with government organizations for a year-long fellowship.

The Gary Project: A Partnership between Chicago Harris and City of Gary, Indiana

Since 2012, Chicago Harris students have had the opportunity to conduct research for and advise the Mayor of Gary on urban policies to **revitalize the City of Gary**, one of the most challenged cities in the United States.

As part of an academic course, teams of 4-6 students work on an issue for 10 weeks, and **present recommendations to the Mayor**.

Successive teams of students pick up the work where prior teams leave off, ensuring progress on complex issues that can't be easily solved in 10 weeks.





Making an Impact with the Gary Project

Students are helping address the issue of vacant buildings

- Designed and executed a survey of 58,000 properties to identify vacant vs. occupied homes and assess building conditions (using mobile phones!).
- Used survey data to help City obtain \$6 million grant for demolition.
- Now using survey data to advise on economic redevelopment priorities.

Students researched best practices to develop neighborhood clean-up program

- “5x5 Program”: Students developed and executed a successful pilot in one neighborhood; the City has institutionalized the program.

Students analyzed local economy and proposed a culinary business incubator

- Proposal has led to a partnership with an internationally-renowned artist.
- Project has attracted \$1.5 million in grants.
- Project now in development; will train culinary entrepreneurs and workers.

Harris Policy Labs

- Inspired by the success of the Gary Project, Harris Policy Labs is an intensive course in which teams of second-year Harris MPP students apply their rigorous Harris education to real-time public policy challenges facing client organizations. Students completing the program will be **better prepared policy professionals** with a **competitive advantage** in the job market.
- Harris Policy Labs will launch this academic year with **four labs**. Each will have:
 - About 15 Chicago Harris students
 - Outside “client” organization” (non-profit or government agency) with a set of policy challenges
 - One faculty member and one outside practitioner
- Students will engage in research and analysis and interact with the client for 10-20 weeks, concluding with policy recommendations for the client.



THANK YOU