

OFFICE CONTACT INFORMATION

MIT Department of Economics
77 Massachusetts Avenue, E52-301
Cambridge, MA 02139
ryanhill@mit.edu
<http://economics.mit.edu/grad/ryanhill>

HOME CONTACT INFORMATION

292 Vassar St. Apt. D3
Cambridge, MA 02139
Mobile: 801-669-6625

MIT PLACEMENT OFFICER

Professor Robert Townsend
rtownsen@mit.edu
617-452-3722

MIT PLACEMENT ADMINISTRATOR

Ms. Julia Martyn-Shah
jmshah@mit.edu
617-253-8787

DOCTORAL STUDIES

Massachusetts Institute of Technology (MIT)
PhD, Economics, Expected completion June 2020
DISSERTATION: "Essays on the Economics of Science"

DISSERTATION COMMITTEE AND REFERENCES

Professor Heidi Williams
Stanford Department of Economics
579 Jane Stanford Way, Office 323
Stanford, CA 94305
650-723-9303
hlwill@stanford.edu

Professor Amy Finkelstein
MIT Department of Economics
77 Massachusetts Avenue, E52-442
Cambridge, MA 02139
617-253-4149
afink@mit.edu

Professor Joshua Angrist
MIT Department of Economics
77 Massachusetts Avenue,
E52-436
Cambridge, MA 02139
617-253-8909
angrist@mit.edu

Professor Pierre Azoulay
MIT, Sloan School of Management
100 Main Street, E62-487
Cambridge, MA 02142
617-258-9766
pazoulay@mit.edu

PRIOR EDUCATION

Brigham Young University (BYU)
BS in Economics, Mathematics, and Political Science
Magna Cum Laude

2014

CITIZENSHIP

USA

GENDER: Male**FIELDS**

Primary Field: Labor Economics

Secondary Fields: Public Finance, Economics of Innovation

TEACHING EXPERIENCE	14.73: The Challenges of World Poverty (undergraduate)	2016
	Teaching Assistant to Prof. Esther Duflo and Prof. Frank Schilbach	
	14.473: Public Policy in Health Economics (graduate)	2017
	Teaching Assistant to Professor Heidi Williams	
	14.03: Microeconomic Theory and Public Policy (undergraduate)	2018
	Teaching Assistant to Professor David Autor	
	15.S64: Competitive Strategy Bootcamp (short MBA course)	2018
	Teaching Assistant to Professor Pierre Azoulay	
	15.S57: Platform Strategy (short MBA course)	2019
	Teaching Assistant to Professor Pierre Azoulay	
14.33: Research and Communication in Economics (undergraduate)	2019	
Teaching Assistant to Professor Sara Ellison		
14.32: Econometrics (undergraduate)	2020	
Teaching Assistant to Professor Joshua Angrist (scheduled)		
RELEVANT POSITIONS	Research Assistant to Professor Joshua Angrist (MIT)	2016-2018
	Research Assistant to Professor Heidi Williams (MIT)	2014-2015
	Research Assistant to Professor Joseph Price (BYU)	2012-2014
FELLOWSHIPS, HONORS, AND AWARDS	National Science Foundation Graduate Research Fellowship	2014-2019
	Wheatley Endowed Leadership Scholarship, BYU	2013-2015
	Phi Beta Kappa, BYU	2013-2014
PROFESSIONAL ACTIVITIES	Referee for <i>American Economic Review: Insights</i>	
PUBLICATIONS	“Internalizing Externalities: Designing Effective Data Policies,” with Carolyn Stein and Heidi Williams. 2020 Forthcoming in <i>AEA: Papers and Proceedings</i>	
	“Inside Job or Deep Impact? Using Extramural Citations to Assess Economic Scholarship,” with Joshua Angrist, Pierre Azoulay, Glenn Ellison, and Susan Feng Lu. 2018 Forthcoming in <i>Journal of Economic Literature</i>	
	“Economic Research Evolves: Fields and Styles,” with Joshua Angrist, Pierre Azoulay, Glenn Ellison, and Susan Feng Lu, <i>American Economic Review Papers and Proceedings</i> . 2017	
RESEARCH PAPERS	“Scooped! Estimating Rewards for Priority in Science” with Carolyn Stein (Job Market Paper) Abstract: The scientific community assigns credit or “priority” to individuals who publish an important discovery first. We examine the impact of losing a priority race (colloquially known as getting “scooped”) on subsequent publication and career outcomes. To do so, we take advantage of data from structural biology where the nature of the scientific process together with the Protein Data Bank — a repository of standardized research discoveries —	

enables us to identify priority races and their outcomes. We find that race winners receive more attention than losers, but that these contests are not winner-take-all. Scooped teams are 2.5 percent less likely to publish, are 18 percent less likely to appear in a top-10 journal, and receive 28 percent fewer citations. As a share of total citations, we estimate that scooped papers receive a credit share of 42 percent. This is larger than the theoretical benchmark of zero percent suggested by classic models of innovation races. We conduct a survey of structural biologists which suggests that active scientists are more pessimistic about the cost of getting scooped than can be justified by the data. Much of the citation effect can be explained by journal placement, suggesting editors and reviewers are key arbiters of academic priority. Getting scooped has only modest effects on academic careers. Finally, we present a simple model of statistical discrimination in academic attention to explain how the priority reward system reinforces inequality in science, and document empirical evidence consistent with our model. On the whole, these estimates inform both theoretical models of innovation races and suggest opportunities to re-evaluate the policies and institutions that affect credit allocation in science.

“Searching for Superstars: Research Risk and Talent Discovery in Astronomy”

Abstract: What is the role of luck in the careers of scientists? Since the production of science is inherently risky, the allocation of resources, promotions, and publications may be based on noisy signals of ability. Therefore, success might be path dependent, such that lucky breaks early in the career are amplified into future recognition and opportunities. I seek to quantify the short- and long-run effects of exogenous project success and failure in the context of academic astronomy. Using weather conditions during telescope viewing sessions, I test whether project-level shocks have a lasting effect on publication and citation rates. I find that idiosyncratic weather quality increases publication and citation rates for novice astronomers but does not affect the productivity of veteran astronomers. Good weather shocks increase the number of future telescope sessions novices are awarded, suggesting that lucky breaks may improve early-career opportunities. However, these positive effects on productivity are transient, lasting about four years before diminishing. Receiving a good weather shock has no detectable effect on long-run productivity or the probability of staying in academia.

Research in Progress

“Competition and Quality in Science” (with Carolyn Stein)

Abstract: We study how competition to publish first and establish priority may impact the quality of scientific research. First, we develop a model where scientists decide how long to work on a given project. Scientists trade off the marginal benefit of higher quality research against the marginal risk of being scooped. More competition encourages scientists to rush and release lower quality work. In particular, our model suggests that the most important (highest potential) projects are executed with the lowest quality. We test our model using project-level data from the Protein Data Bank (PDB), a repository for the structures of large macromolecules. An important feature of the PDB is that it

assigns objective measures of project quality. Consistent with our model, we find that projects with the most ex-ante potential are completed with the lowest ex-post quality. We conclude by considering the welfare implications of competition in science when the quality of published findings can vary.