

Three Ways Social Factors Stratify Individual Choices About Organizations

by

Nick Bloom

Department of Sociology
Duke University

Date: _____

Approved:

Martin Ruef, Supervisor/Chair

Kieran Healy

Scott Lynch

Stephen Vaisey

Dissertation submitted in partial fulfillment of the
requirements for the degree of Doctor of Philosophy
in the Department of Sociology
in the Graduate School of
Duke University

2019

ABSTRACT

Three Ways Social Factors Stratify Individual Choices About Organizations

by

Nick Bloom

Department of Sociology
Duke University

Date: _____

Approved:

Martin Ruef, Supervisor/Chair

Kieran Healy

Scott Lynch

Stephen Vaisey

An abstract of a dissertation submitted in partial fulfillment of the
requirements for the degree of Doctor of Philosophy
in the Department of Sociology
in the Graduate School of
Duke University

2019

Copyright © 2019 by Nick Bloom
All rights reserved

Abstract

The goal of this dissertation is to articulate specific modes and mechanisms by which the process of an individual choosing an organization is shaped by (1) the status of the organization, and (2) the attributes of the chooser. I do this with three types of chooser attributes: individual demographics, neighborhood context, and cultural values; and in two settings: choosing a hospital for cancer treatment, and choosing a church to attend and contribute to financially. Chapters 1 and 2 use data from the SEER-Medicare linked database to demonstrate the relationship between chooser (patient) demographics, at both the individual and neighborhood levels, on the likelihood of choosing a "high-status" cancer hospital in California. Chapter 1 does this in multiple ways. First, it shows that a patient's propensity to seek treatment for their cancer is a function of the patient's race, sex, and age, and by the racial makeup of a patient's neighborhood. Second, it shows that a patient's propensity to leave California for treatment is a function of both patient attributes and attributes of the hospitals they choose. Finally, it shows that patient choice of high-status cancer hospitals is moderated by the educational level of the patient's neighborhood. Chapter 2 shows that patient choice of high-status cancer hospitals is moderated by both individual-level race and the racial composition of the patient's neighborhood. Chapter 3 uses data from multiple sources to describe the ways that congregants' cultural values interact with organizational status (denomination) in the church choice process. Specifically, I use the National Congregations study to demonstrate the organization-level returns to nondenominational status on both legitimacy (attendees) and performance (tithes). Nondenomina-

tional churches are uniquely successful, even when compared only to conservative churches. I then use over 45,000 individual-level responses from the nationally-representative Religious Landscape/Faith in Flux Survey and Congregational Life Studies to demonstrate the individual-level valuative mechanisms behind organizational returns to categorical ambiguity. Though the settings and attributes differ across the three chapters, they all point to a similar conclusion: candidate choice processes are shaped by attributes of both candidates and choosers, and a neglect of chooser attributes misses important stratification in the choice process.

To everyone who was told they couldn't or wouldn't, and then did.

Contents

Abstract	iv
List of Tables	xi
List of Figures	xiii
Acknowledgements	xiv
Introduction	1
1 Stratified Ranking Impact on Cancer Patient Selection of Treating Hospitals	5
1.1 Rankings, Status, and Consumer Choice	7
1.1.1 Rankings	7
1.2 SES and Fundamental Cause Mechanisms in Cancer Treatment	9
1.2.1 Individual Mechanisms	9
1.2.2 Neighborhood Mechanisms	10
1.2.3 Another Status Designator: NCI Cancer Centers	11
1.3 Data	12
1.3.1 Claims and Demographics: SEER-Medicare	12
1.3.2 Rankings: <i>U.S. News and World Report</i>	13
1.4 Methods	13
1.4.1 Analytical Approach	13
1.4.2 Cancer Sites	15

1.4.3	Prefatory Analyses	16
1.4.4	Main Analysis: Mixed Logit of In-State Hospital Choice	17
1.5	Findings	20
1.5.1	Descriptives	20
1.5.2	Prefatory Models	21
1.5.3	Mixed Models	24
1.6	Discussion	26
1.7	Figure	30
1.8	Tables	30
2	Racial Stratification in Access to High-Status Blood Cancer Treatment	40
2.1	Evidence for and Mechanisms of Racial Inequalities in Cancer Treatment	42
2.1.1	Cancer Treatment and Racial Segregation	42
2.2	Evidence and Mechanisms for Racial Parity in Cancer Treatment . . .	44
2.2.1	Area-Level Parity in Cancer Service Supply	44
2.2.2	Racial Inequality in NCI Cancer Center Treatments	45
2.3	Data and Methods	46
2.3.1	Dependent Variables	47
2.3.2	Focal Variables	47
2.3.3	Controls	48
2.3.4	Models	48
2.4	Results	48

2.4.1	Descriptive Statistics	48
2.4.2	Average Distance to Hospitals	49
2.4.3	Regressions	50
2.5	Discussion	51
2.6	Tables	54
3	The Value of Categorical Ambiguity for Religious Organizations	58
3.1	Market Categories and Market Order	60
3.2	The Church Market	63
3.2.1	Church History and Denominational Proliferation	64
3.2.2	Contemporary Churches and Congregational Audiences	66
3.2.3	What is a Nondenominational Church?	67
3.2.4	Modes and Organizational Mechanisms for NDC Success	70
3.2.5	Operationalizing Audience Norms	71
3.3	Data, Measures and Method for Congregations	73
3.3.1	Data	74
3.3.2	Methods and Measures	75
3.4	Data, Measures and Method for the Church Market Audience	76
3.4.1	Religious Life/Faith in Flux	76
3.4.2	RL/FF Measures and Methods	77
3.4.3	Congregational Life Study	78
3.4.4	CLS Measures and Methods	79

3.5	Results	82
3.5.1	NDCs and the Categorical Imperative	82
3.5.2	Audience-Level Normative Mechanisms of Valuation	84
3.6	Conclusions	90
3.7	Figure	93
3.8	Tables	93
	Conclusion	101
C.1	Linking Demand-Side Traits and Status Salience	102
C.2	Sociologists and Individual Choices	103
C.3	Expanding Horizons in Medical and Organizational Sociology	105
C.4	Parting Thoughts	106
	References	107
	Biography	126

List of Tables

1.1	Table 1.1: 10 Most Common Blood Cancers	31
1.2	Table 1.2: Hospital Demographics (n = 343)	32
1.3	Table 1.3: Patient Demographics (n = 902)	33
1.4	Table 1.4: Results from a Logit Regressions of Seeking Any Treatment	34
1.5	Table 1.5: Results from Logit Regressions of Leaving CA for Treatment	35
1.6	Table 1.6: Results from Mixed Logit Regressions of Patient Hospital Choice	36
1.7	Table 1.7: Robustness Check 1. Bootstrapped Coefficients for Inverse Rank	37
1.8	Table 1.8: Robustness Check 1. Bootstrapped Coefficients for NCI Cancer Center Status	38
1.9	Table 1.9: Robustness Check 2. Structural Equation Model.	39
2.1	Table 2.1: Patient Demographics (n = 885)	54
2.2	Table 2.2: Hospital Demographics (n = 189)	55
2.3	Table 2.3: Distances to Hospitals in Miles, by Race	55
2.4	Table 2.4: Results from a Logit Regressions of Seeking Treatment at an NCI Cancer Center	56
2.5	Table 2.5: Results from a Logit Regressions of Seeking Treatment at a <i>U.S. News</i> Ranked Hospital	57

3.1	Table 3.1: Within-Form Means and T-Tests for Individual Tithing Predictors	94
3.2	Table 3.2: Coefficients from OLS Models of Attendance and Tithing Income, NCS 1998 & 2012	95
3.3	Table 3.3: Reasons for Leaving Previous Denomination - Current DC Affiliates	96
3.4	Table 3.4: Reasons for Leaving Previous Denomination - Current NDC Affiliates	96
3.5	Table 3.5: Reasons for Joining Current Denomination - Current NDC Affiliates	97
3.6	Table 3.6: Reasons for Joining Current Denomination - Current DC Affiliates	97
3.7	Table 3.7: Generalized Reasons for Leaving Old Denomination, by Current Denominational Affiliation	98
3.8	Table 3.8: Generalized Reasons for Joining New Denomination, by Current Denominational Affiliation	98
3.9	Table 3.9: Coefficients from a Multilevel Model of Individual Tithing	99

List of Figures

- 1.1 Figure 1.1: Marginal Effects of Rank on Probability of Visit, by ZIP %
College Degree 30

- 3.1 Figure 3.1: Mean/SD Denominational Political and Theological Con-
servatism by Year (NCS 1998 and 2012) 93

Acknowledgements

This is the most important thing in this document, because without the people below, it would not exist. Martin Ruef saw this project from its beginning as a squiggly, undefined morass to its (somehow still) squiggly, much-more-defined end. His thoughtful guidance, incisiveness, and, perhaps most importantly, constant patience, were invaluable. My other committee members, Kieran Healy, Scott Lynch, and Steve Vaisey, all provided encouragement, advice, and feedback at crucial junctures. These four people were the reason I came to Duke in the first place, and it was quite literally a dream come true to work with them. In particular, Kieran and Steve supported, encouraged, and counseled me on probably the best paper I've ever written. Scott taught me how to "go Bayesian," and gave me patient and useful methodological advice at the 11th hour.

A second set of individuals guided the other half of my academic personality at the Cancer Institute. Karen Steinhauser has been an incredibly meaningful mentor, and a kindred spirit. Her intellect, insight, encouragement, and compassion have helped me to stretch and grow in deep and profound ways. Tom LeBlanc has also provided tremendous support and mentorship. His encouragement and consistent interest in my work motivated me when not much else could. Kath Pollack and Yousuf Zafar gave me numerous pieces of useful advice and encouragement, as well as many hours in support of my work. Each of these individuals have proven to me, over and over, that it is possible to be as kind as you are brilliant; what a privilege it has been to work with them. Jennie Riley started as a colleague, and became a friend,

on account of our hours spent salvaging and commiserating together.

Given my long academic history, my mentors extend beyond Duke. At Notre Dame, Chris Smith, Mary Ellen Konieczny, and Lyn Spillman were all crucial motivators in sending me along this path. I have it on good authority that Chris is one of the reasons I ended up getting into Duke off of the waitlist, so many thanks to him for that, among many other things. Mary Ellen was such a light for me, and for the world. It is noticeably darker without her. Lyn gave me time and attention when not many else would. That time and attention turned, eventually, into this document. Thanks for believing in me, Lyn. Finally, I want to thank Sara Skiles for being and showing me how to be a kind, cool, fun, enthusiastic, and interesting graduate student and person. I've tried to follow that model as best I could.

At UCSD, Tom Medvetz, Isaac Martin, and Amy Binder supported me from the beginning. Tom contributed to my development in many ways, but perhaps most importantly by encouraging my move to Duke one crucial day at Lestat's. Amy's support of me was especially consequential both in theory and practice, since my work with her produced my first "real" publication, and my only sociological one. It's hard to say too many kind things about Isaac Martin. He is perhaps the world's loveliest person, and also an inspiring and model scholar.

My mentors helped me navigate the academic maze, but my friends gave me the strength and energy to do it. So much so that I cannot put into words how meaningful my friendships have been over the past six years, but I will try.

Lauren Valentino, Trish Homan, and Jess Dawson were there from the beginning, and will be for a long time afterward. Lauren was a near-daily source of com-

miseration and comfort in both the beginning and the end of our time in graduate school. I have so enjoyed every moment of our time together so far, during which we've discussed just about every possible topic under the sun. I'll say it both for us now: take a breath...everything is going to be *fine*.

It took me a little while to come around on Trish Homan, but I am so much better for it. She is a model person, parent, and scholar to me. Her ability to offer genuine expressions of compassionate vulnerability, while not compromising on her intellect and expertise, is one I will always seek to emulate. She, Rusty, Taylor, Wesley, and Graham have been a tremendous source of fun, joy, and unconditional love. You're amazing, Trish!

Jess Dawson might well be the most inspiring person I know. Her boundless curiosity and energy, and limitless creativity and passion kept me inquisitive and motivated. Her seemingly endless love, ability to care for others, and razor-dark sense of humor carried me through some of my lower moments. She gives me hope almost every day. I'm so lucky to know you, Jess.

Colin Birkhead taught me so much about being a person, even when he didn't realize he was. He is an exemplar for me as a man, father, and scholar. His wise and patient counsel has gotten me through many overwhelming (to me) situations, and one particularly insightful piece of counsel he gave me in the Fall of 2018 is a large part of the reason this document exists as it does today. He also helped me to get to a place where I could bench press almost as much as Spenser.

Kevin and Annie Kiley were incredibly generous with me at a really crucial time in my life. Their support has, at times, been a literal lifesaver. Aimee Chabot and I rode

the ups and downs of life's rollercoaster together for a while. It was a deeply meaningful friendship while it lasted. Hope you're well, Aimes. Josh Bruce, Jessie West, Danielle Montagne, Josh Doyle, Christina Kamis, and Molly Copeland all provided hours of commiseration and fun when it was most-needed. I hope we'll get drinks for years to come.

I need to also mention my two remaining friends from college. The first is Carlene Koken. swalsh will never know the impact his class had on our lives! Your strength, compassion, and drive to always be better keep me comforted, cared for, and inspired. I'm lucky to have friends like you in my life, who show me it's really possible do it all!

Chris Millard has been my best and most superlative friend of more than a decade. He's been through it all with me, and I'm sure he will for many more years to come. That's really all there is to say about Chris, without writing an acknowledgment as long as this whole document. I love you, Bro Namath.

Finally, I want to acknowledge Kate Avery for her contributions to my life in graduate school. Although she wasn't there for the end bits, she was much more than a friend, and journeyed with me through well over half of the process. Along the way, she made several indelible marks on my life, taught me a lot about myself, and supported and loved me as best she could. I'll always be grateful for that.

Right behind my friends are Drs. Trent Moyer, Rachel Dew, and Sarah Bryce. Without them and Sandoz and Mallinckrodt Pharmaceuticals, none of these words would exist. Literally. Sarah Bryce has been an especially outstanding physician throughout the past year or so, and has redefined what I thought a psychiatrist could

be. Related thanks go to Andrea Savage, Jen Bullock, Peter Perelman, John Mitchell, and, especially, Rachel Miller-Slough. Rachel has journeyed with me through the beginning of what will likely be the most consequential and long-lasting changes in my life, and has done such a marvelous job of listening and guiding. Because of my work with her, my life is truly becoming what I want it to be for the first time.

A number of other people made my the research part of my day-to-day life cushy. The Duke Graduate School, and more specifically the Phillip Jackson Baugh family, funded this project for a year, even when many didn't believe in it. More accurately, they both funded my research and gave me extra time to put my life back together when I needed it most. The SSRI Secure Data Team made getting and using my SEER-Medicare data a breeze. Given my ability to procrastinate, this ease of use was a literal dissertation-saver. Jessica Ellington also saved my hide on a number of occasions, in addition to making the seemingly-endless paperwork of graduate school more manageable for me. No amount of credit is enough for what you do, Jessica. The rest of the Sociology department staff, most of whom have left for other positions, also supported me many times. Tisha Quinn, Rachel Brown, Jon Nicolla, Fred Friedman, and Brenda Branchaud at the DCI also made my life a lot easier at multiple points.

As many superlatives as I applied to my mentors and friends, orders of magnitude more apply to my family. Chuck and Mary Bloom, or Grandad and Grandmom, are just behind my parents as the most important people in my life. Their constant support, love, adoration, and joy from the literal moment I was born lights up every corner of my life. I am so grateful that they are still able to share in the joy of

this with me. Keaton, we've come a long way from screaming at each other in the back seat of the 4Runner! I'm so proud of what you've done, and the man you've become. And you brought Maíra into the family, which might be your best move yet! Finally, Mom and Dad. You've worked so hard, both on your own and with me. Your constant love and support has smoothed and charted what could have been a much bumpier journey for me. I am so grateful for your company and guidance along the way, and so proud to be your son. I love you.

Introduction

But with a few exceptions, economists and political scientists typically pay little attention to the structure of preferences, while sociologists and anthropologists do not embed their analyses of social forces and culture in a powerful analytical framework.

- (Becker 1996, 3)

Why do people choose the things they do? Economists and sociologists have long disagreed about the correct way to approach this question. Economists think about choices in terms of individual utility maximization, and (almost always) mean “individual” in the strongest sense: idiosyncratic to the individual, and independent of all other people.¹ Sociologists, as usual, argue that it’s more complicated. Lately, sociologists have been particularly fascinated by the ways that the features of potential organizations affects the choice process. Chief among these features is the organizations’ status.

Market choices are fraught with uncertainty. Neoinstitutional scholars argue that audience members rely on socially-constructed categories and metrics to simplify the menagerie of organizational candidates, and thereby reduce transaction costs and manage uncertainty when making choices. Biological constraints on cognition limit the number of heuristics that audiences can use at any given time (Powell and DiMaggio 1991, Introduction; DiMaggio 1997). The diverse field of market candidates is thus reduced along a few status-indicating eigenvectors (Podolny 1993; Baum and Oliver 1991; Zuckerman 1999). These status eigenvectors can be categorical, like denominational affiliation, or more explicitly evaluative, like rankings. In

1. For a few introductory examples of how this is an oversimplification, see (Becker 1996; Akerlof and Kranton 2010).

both cases, they give individuals socially-produced tools with which to make decisions under uncertainty.

However, we should not expect status measures to have singular effects on individual choices, for two reasons. First, status is imperfectly correlated with quality. Thus, choosing the #1-ranked cancer hospital, while certainly suggestive of high-quality care, is no guarantee. Similarly, a “Presbyterian” church gives many indications of what parishoners can expect, but there is still significant variation in day-to-day church life. This means that individuals may weight status markers differently from one another when making decisions. Second, since status markers are socially-produced, we might expect individual use or weight of these metrics to vary by social position along a number of dimensions (Bourdieu 1984; McPherson 2004, 1983; Valentino 2019). However, sociologists have not yet begun to seriously examine how attributes of the *choosers* affect the salience of organizational status indicators.

This dissertation examines the interplay between organizational status and three kinds of chooser attributes: chooser context (neighborhoods), chooser demographics (education and race), and chooser values. It does so in two quite distinct settings: choosing a hospital for cancer treatment, and choosing which church to attend.

Chapters 1 and 2 both analyze the the hospital choices of patients with blood cancers. To do this, I define organization status using *U.S. News and World Report* rankings of cancer hospitals, and use data from the SEER-Medicare database (more on that below). Chapter 1 focuses on how patient context affects whether a patient chooses a high-status hospital or not. In particular, I show that a patient’s propen-

sity to patronize a highly-ranked hospital over other hospitals is, in part, a function of the education level of his or her neighborhood. Chapter 2 investigates the role of individual- and neighborhood-level demographics on the choice of high-status hospitals. I show that, while neighborhood-level racial composition is not a predictor of high-status cancer treatment, individual-level race is. In fact, urban black patients are *more* likely than urban white patients to seek treatment from high-status hospitals. The findings of Chapters 1 and 2 are consequential not just for sociological theory, but also have important implications for clinical practice.

Chapter 3 is an entirely different type of analysis. In it, I examine the theoretically-surprising success of nondenominational churches in the 21st century. I include this chapter because it allows me to investigate a dimension of chooser attributes not available in my SEER-Medicare data: explicit statements of audience values. “Status” in this chapter is a church’s denominational affiliation. Though this may initially seem like something altogether different than a straightforward ranking, I show that it is actually quite similar: church audiences use denominational affiliation as a valuative and evaluative marker, which interacts with their own preferences and values.

There are two final clarifications. First, what I refer to as “chooser” attributes might, in some cases, more accurately be called “demand-side” attributes. This is especially true in the case of neighborhood context, which is obviously not individual-level attribute. For simplicity, I still refer to contextual features as “chooser” attributes, since these phenomena still structure and shape the choice process at the individual level. Second, the choices I examine are socially structured. For example,

in the case of cancer hospitals, physician referrals play a significant role in creating the choice “tracks” that individual move along, especially for rural patients (Menzin et al. 2002; Byrne et al. 2011; Medeiros et al. 2015). Nevertheless, patients still retain final say in where they seek treatment. As such, I still discuss these situations as “choices,” since patients must individually choose to accept and follow a physicians recommendation. However, In other words, I use “choice” as a shorthand for making and acting on a particular decision, while also acknowledging that the decision has other contextual influences that I cannot measure given the limitations of my data.

In sum, my three chapters show that social choice processes are, in fact, “more complicated” than economists argue. At the same time, they articulate the specific modes and mechanisms of these complications more rigorously than some past sociological arguments have. The throughgoing conclusion is the same throughout all of them: chooser traits interact with organizational status to produce choice outcomes, and any serious sociological investigation of choice processes should include both kinds of attributes.

Chapter 1

Stratified Ranking Impact on Cancer Patient Selection of Treating Hospitals

In the Spring of 2017, the Republican party made several attempts to repeal and replace the Affordable Care Act. One pillar of the Republican critique was the need for more consumer choice in health care. Speaker of the House Paul Ryan, in a March 2017 op-ed, reinforced that “Republicans have long said that we have to empower patients as consumers to spur competition and bring down costs.”¹ In short, giving patients more choice was assumed to produce a more efficient healthcare market. However, the connection between patient choice and optimal functioning of a market hinges on information about market candidates. Accurate, intelligible information has to be made readily available to consumers (in this case patients), and consumers must use that information when making choices.

An extensive literature in economics evaluates the utility of quality reporting on the selection of health insurance plans (Scanlon et al. 2002; Dranove et al. 2003; Chernew, Gowrisankaran, and Scanlon 2001; Beaulieu 2002; Dufny and Dranove 2005), but decidedly less attention has been paid to patient selection of providers and hospitals. A small body of work using New York state report cards finds that consumers use them marginally at best in decision-making (Cutler, Huckman, and Landrum 2004; Jha and Epstein 2006). This seems at odds with findings that health

1. <https://www.usatoday.com/story/opinion/2017/03/07/health-care-obamacare-replacement-paul-ryan-column/98858696/>

care consumers *want* information about provider quality (Hibbard and Jewett 1996), but deeper inquiry reveals that quality reports are often arcane, and orthogonal to what consumers actually want (Hibbard and Jowett 1997). The result is lackluster patient use of quality information.

Rankings — and especially *U.S. News and World Report (USNWR)* rankings — provide a much different kind of quality information. U.S News rankings were created with the explicit goal of providing straightforward information to consumers (Espeland and Sauder 2007). Compared to more esoteric quality information like low-birthweight-infant rates and rates of eye exams for diabetics (Hibbard and Jowett 1997), *U.S. News and World Report* (henceforth *USNWR*) rankings provide easily-digestible measures of (presumed) quality: a rank-ordering of the “Best Hospitals” in America.² It is not surprising, then, that *USNWR* rankings appear to more readily influence consumer behavior (Pope 2009).

However, existing research on consumer use of rankings fails to account for potential stratification along social dimensions, and especially socioeconomic status (Bruce G. Link and Jo Phelan 1995). Area-level socioeconomic status (SES) remains a persistent stratifier in both cancer incidence and mortality (Menzin et al. 2002; Hastert et al. 2015). At the individual level, higher SES is associated with both increased information seeking (Wagner et al. 2009; Nutbeam 2008) and increased information use in cancer care settings (Gage 2010; Gage-Bouchard 2017; Shim 2010). As such, the role of SES in stratifying consumer information use is a key gap in existing research.

2. <https://health.usnews.com/best-hospitals>

I examine the relationship between neighborhood SES and the selection of US-NWR-ranked cancer hospitals by patients with leukemias and lymphomas. Using data from the SEER-Medicare linked claims database, I find that — controlling for patient, disease, hospital, and distance measures — the education level of a patient’s ZIP code has a strong, significant effect on a patient’s probability of patronizing a highly-ranked hospital. I describe a number of possible mechanisms for this finding at individual and neighborhood levels, and discuss its implications for future research.

1.1 Rankings, Status, and Consumer Choice

1.1.1 Rankings

Work by Espeland and Sauder (Espeland and Sauder 2007; Sauder and Espeland 2009; Espeland and Sauder 2016; see also Espeland and Stevens 2008) remains the definitive sociological statement both on rankings’ social effects, and *U.S. and World Report* rankings, specifically. Espeland and Sauder’s work focuses on the effects of rankings for organizations: how organizations react and reshape themselves in response to being ranked. Consumer use of rankings is a key mechanism evoking organizational responses, but Espeland and Sauder do not study it directly.

Other sociologists have attended to consumer information use more generally. One group has studied the relationship between consumer choices and product conformity to market categories (Zuckerman 1999; Kovacs and Hannan 2013; Hsu and Hannan 2005; Hsu, Koçak, and Hannan 2009). A second group has studied consumer response to status designations (Kovacs and Sharkey 2014; Rossman and

Schilke 2014). However, sociologists have not examined consumer use of rankings in market choice-making. Instead, these studies have taken place in economics.³. Even still, existing work is scant, and generally finds that consumer use of report cards is marginal or circumstantial (Jha and Epstein 2006; Dranove et al. 2003).

To date, Pope (2009) has conducted the only study of consumer use of *USNWR* hospital rankings' in hospital selection. Pope's primary analyses estimate the effect of a rankings change on patient volume at the hospital-specialty level (e.g. Mass General's Cardiology department). He also estimates the individual-level utility of rankings change, as compared to the hospital's distance. He does not provide specialty-specific estimates for any models, but finds that "the average value to an individual of a change in rank by ten spots is equivalent to the value placed on the hospital being approximately one mile closer to the individual" for non-emergency visits (1155).

There are two key limitations of Pope's analysis. First, he examines only inpatient claims. The majority of cancer treatments are outpatient-based, and thus Pope's estimates may be biased for cancer hospitals. Second, Pope elides social factors that are well-known mediators to both information use and outcomes more broadly. Chief among these social factors is socioeconomic status.

3. Health policy scholars have generated a large body of work on health plan ratings (e.g. Scanlon et al. (2002); Dranove et al. (2003); Chernew, Gowrisankaran, and Scanlon (2001); Beaulieu (2002); Dufny and Dranove (2005)), but these studies are orthogonal to my study.

1.2 SES and Fundamental Cause Mechanisms in Cancer Treatment

Studies of the link between socioeconomic status (SES) and health forms one of the foundational pillars of medical sociology, and, increasingly, clinical research (Bruce G. Link and Jo Phelan 1995; Chetty et al. 2016; Singer et al. 2016). In the wake of Link and Phelan's (1995) seminal assertion that SES is a "fundamental cause" of disease, scholars have set about studying myriad mechanisms linking SES to outcomes (e.g., Lutfey and Freese 2005). This section discusses both individual- and neighborhood-level mechanisms that may affect neighborhood-level variation in patient information use.

1.2.1 Individual Mechanisms

One genre of fundamental cause mechanisms encompasses patients' individual-level capacities to understand and navigate the healthcare ecosystem. Specific mechanisms in this genre are health literacy (Nutbeam 2008) and cultural health capital (Shim 2010). In short, these mechanisms affect patient propensities to both *seek out* information and also to *employ/enact* that knowledge in medical encounters. Each of these mechanisms is highly correlated with patient SES, and especially education.

Researchers have begun to examine these mechanisms among patients with cancer, specifically. More health-literate patients sought significantly more information about colorectal screening than less health-literate patients (Wagner et al. 2009), and patients with higher SES follow through with screenings at higher rates

(Link et al. 1998). Parents with higher levels of education are better able to understand their children's cancer diagnoses and treatment options, and demonstrate increased willingness and aptitude to effectively engage medical professionals (Gage 2010; Gage-Bouchard 2017). Together, these findings suggest that patients with higher levels of education will be more likely, on average, to seek out and employ relevant information in their health care decision-making. This includes data on quality, like rankings. These individual-level effects can be further enhanced by effects at the neighborhood level.

1.2.2 Neighborhood Mechanisms

Mechanisms for neighborhood variation in cancer treatment are unclear, but area-level variation in cancer incidence and treatment remains strong for all cancers, including blood cancers (Ward et al. 2004; Menzin et al. 2002; Hastert et al. 2015). For example, many patients in rural areas never pursue treatment for acute leukemia (Medeiros et al. 2015). The most obvious neighborhood resource potentially affecting outcomes and mortality is the supply of cancer treatment services. However, recent work has shown that otherwise under-resourced urban areas do not exhibit significant under-supply of cancer treatment services (Elizabeth B. Lamont et al. 2012) (though *actual* accessibility of services is likely lower in these areas (e.g. Beyer et al. 2016)).

Instead, a significant portion of neighborhood features affecting cancer outcomes appear to be related to education and information about cancer screening, diagnosis, and treatment (Wardle et al. 2004; Datta et al. 2006). In addition to the

individual-level mechanisms described above, the extensive “neighborhood effects” literature in sociology specifies myriad mechanisms for better information transfer in more well-educated areas (Sampson 2012). Chief among these are (1) social ties, which aid the passage of information and support between residents (Hofferth and Iceland 1998; Soares et al. 2013; Gage-Bouchard et al. 2015; Ell et al. 1992) and (2) institutional resources, like libraries, schools, and community centers, which provide direct access to information and services (Sampson, Morenoff, and Gannon-Rowley 2002; Small 2009). These neighborhood-level characteristics may produce independent effects to individual-level mechanisms, or may simply compound them. In either case, we should expect the flow, use of, and response to relevant information to be higher in areas with more well-educated patients:

- *Hypothesis 1:* Patients from more well-educated neighborhoods are more likely to select highly-ranked hospitals for treatment, as compared to patients from less well-educated neighborhoods

1.2.3 Another Status Designator: NCI Cancer Centers

Rankings are not the only mechanism by which a hospital can be externally legitimated. Within the population of cancer hospitals, a select few are designated as National Cancer Institute Cancer Centers. These hospitals receive special funding from the National Cancer Institute, with the explicit purpose of developing novel cancer treatments (primarily, though not exclusively, pharmaceutical).⁴ As such,

4. For more on the NCI Cancer Center program, visit <https://www.cancer.gov/research/nci-role/cancer-centers>

an NCI Cancer Center designation provides a cancer hospital with status in two ways. First, it allows the hospital to receive legitimation from a trusted source (in this case, the federal government), which has been shown to increase audience trust in quality (Podolny 1993; Baum and Oliver 1991). Second, it provides an explicit, albeit indirect, assurance (in the form of additional funding) that a hospital is exceptional in its qualifications to treat cancer. Given the highly-public nature of the NCI Cancer Center program, and designated hospitals' penchant for advertising their designation,⁵ we might expect patient selection of NCI Cancer Center hospitals to be similarly stratified:

- *Hypothesis 2:* Patients from more well-educated neighborhoods are more likely to select NCI Cancer Center-designated hospitals for treatment, as compared to patients from less well-educated neighborhoods

1.3 Data

1.3.1 Claims and Demographics: SEER-Medicare

My patient and hospital data come from the National Cancer Institute's SEER-Medicare linked database.⁶ SEER data are the national standard for cancer research, and are used in mortality rate reports by the National Center for Health Statistics (National Cancer Institute 2015). SEER provides links to Medicare claims histories for all diagnosed individuals in SEER who are Medicare eligible and over the age of

5. Many hospitals include the designation in their name, e.g., UNC Lineberger Comprehensive Cancer Center.

6. SEER stands for Surveillance, Epidemiology, and End Results

65. For these patients, the Centers for Medicare and Medicare services provides up to 10 of the most recent years of complete claims.⁷ Together, these data are called SEER-Medicare (SEER-M). In addition to Medicare claims data, SEER provides two additional types of information: patient demographic information (at the individual and ZIP-Code Level), and information on organizations in the Medicare universe.

Medicare patients are an ideal population with which to examine hospital choice. Unlike patients with private insurance, who are often restricted to a small set of local providers, Medicare beneficiaries have flexible coverage. This means Medicare beneficiaries are eligible to receive treatment from any Medicare-participating organization.

1.3.2 Rankings: *U.S. News and World Report*

My rankings data come from the July 2010 and 2011 issues of *U.S. News and World Report*, which featured their “Best Hospitals” rankings. *USNWR* has published hospital rankings since 1991, and ranks hospitals in several specialties. Since the SEER patients are seeking treatments for cancer, I use *USNWR*’s cancer hospital rankings.

1.4 Methods

1.4.1 Analytical Approach

My analytical sample includes all patients diagnosed with the 10 most common blood cancers in the state of California in 2011. This sample includes several strategic

7. Medicare claims files are very large, so CMS restricts claims histories to 10 years to limit excessive storage needs.

restrictions.

First, I limit diagnoses to 2011. This is the most recent year for which new diagnoses are available in my data. I do not include diagnoses from previous years, because these cases are either missing key information (2003-2008) or too close to the Recession and passage of the Affordable Care Act (2008-2010), which likely produced idiosyncratic changes in patient demand.

Second, I limit diagnosed patients to only those who reside in California.⁸ The sheer size of the SEER data make standard models for consumer choice technically infeasible with a full SEER sample, given the existing computing resources available. Thus, my options are to either sample patients randomly, or to limit my sample geographically.

I chose the latter for multiple reasons. First, California is the most populous state in the US, so it contains a comparatively large number of diagnosed individuals. Second, California contains a number of both ranked and unranked hospitals, providing ample variation for a study of patient preferences for rankings. Third, California's geography presents natural barriers to out-of-state travel, reducing the likelihood that patients will leave the state for treatment, as compared to SEER states like New Jersey and Connecticut (though I analyze those who leave the state below). Fourth, SEER registries cover the entire state of California, giving me a database of every single patient diagnosed with blood cancer in the year 2011. Finally, previous studies of patient preferences about hospital ranking have made the same geographic limi-

8. Note: Patients who list a California ZIP as their Medicare address are included regardless of where they were diagnosed/registered. However, residents diagnosed outside of California must have been diagnosed in a organization covered by a SEER registry to be included in the data.

tation (Pope 2009), so limiting analyses to California enables me to better compare my results to those studies.

1.4.2 Cancer Sites

I analyze claims data for patients with blood cancers (leukemias and lymphomas).

Blood cancers are an ideal match for my investigation, because they:

1. Affect individuals of all races, sexes, and ages (but, like other diseases, are more common in the elderly)
2. Are not linked to particular individual behavioral patterns (e.g. smoking, drinking alcohol, sun exposure, diet, etc.)
3. Are reasonably common, with about new 50 cases diagnosed/100,000 people per year in the U.S.; blood cancers are the 5th most common cancer behind digestive, breast, prostate, and lung cancers.⁹
4. Are eventually fatal in many cases (and therefore taken seriously by all parties), but increasingly demonstrate variable rates of remission.

As such, blood cancer patients are a large, diverse pool with which to examine treatment decisions. The delayed terminal nature of cancer is analytically advantageous, as it produces significant uncertainty for patients, physicians, and hospitals alike. Both the severity and uncertainty inherent in a diagnosis means patients should be inclined to seek the best care possible. Additional information about the 10 most common blood cancers is available in Table 1.1.

9. For comparison, there are about 185 first-time strokes/100,000 people per year in the U.S. (Mozaffarian et al. 2015)

1.4.3 Prefatory Analyses

In order to better describe the patterns of treatment trajectories among patients with blood cancer in California, I conducted a series of prefatory analyses predicting (1) whether a patient sought any treatment at all (“Seeking Treatment”), and (2) whether a patient sought treatment out-of-state (“Out-of-State”). I estimate these models using a standard logit model. The predictor variables are all described in more detail below, so I only discuss the dependent variables here.

For my Seeking Treatment model, the dependent variable represents whether a patient had any non-hospice Medicare claims for their cancer in *any* setting (inpatient hospital, outpatient hospital, other outpatient physician/clinic/office). Only about 55% of the 4,348 patients diagnosed in California in 2011 sought any kind of treatment for their cancer.¹⁰ These rates are comparable to past studies examining treatment rates for blood cancers in the elderly (Menzin et al. 2002; Byrne et al. 2011; Medeiros et al. 2015).

For my Out-of-State models, the dependent variable represents whether a patient who sought outpatient treatment in hospital setting did so out-of-state. Just over 7% (119 total) of hospital outpatient patients traveled out of state to receive their treatments. I exclude outpatient physician/clinic treatments from these analyses because these providers have no standardized ranking system. I exclude inpatient hospital visits because these visits are (1) more urgent, restricting the ability of patients to travel, and (2) often idiosyncratic with respect to blood cancers, in that certain

10. Like all of the statistics in my analyses, these numbers represent patients with the 10 most common blood cancers only.

diseases are more likely than others to require certain inpatient treatment regimes that are not universally available. Thus, inpatient visits may bias the effect of status markers on patient selection.

1.4.4 Main Analysis: Mixed Logit of In-State Hospital Choice

My main analysis uses the sample of patients who (1) seek treatment, (2) do so in an outpatient hospital setting, and (3) remain in-state for their treatment. Geographically limiting my sample means that I have complete coverage of all in-state outpatient treatment visits at hospitals made by California Medicare patients in 2011. In other words, the only individuals excluded from the entire population of diagnosed Medicare beneficiaries in 2011 are (a) those with a blood cancer not in the top 10 most common, and/or (b) patients who never have any outpatient treatment visit at a California hospital. The total number of patients who meet these criteria is 902, or about 20% of the original sample of diagnosed patients.

Dependent Variable: Treatment Visits

Each case in my data represents a patient-disease/hospital dyad, so my dependent variable signifies whether a patient with a given disease received outpatient treatment at a given hospital. This means that patients with multiple blood cancers appear multiple times in the data, because I expect that hospital preferences of patients may vary by disease.¹¹ Each patient-disease has either a zero or one tie to all hospitals in California (343 hospitals total). Ties are one if a patient had *at least* one treatment

11. A number of model specification tests indicate similar fit for models that include or elide disease-specific information, so I include it as a conservative approach.

visit at a given hospital for a given disease. Ties are imputed as zero for all other hospitals.

By “treatment visit”, I mean visits for which a patient’s cancer ICD code is in the first three positions in the claim diagnostic codes (up to 25 codes can be listed for any procedure), and is preceded only by a V58.11 ICD code for chemotherapy infusion, or both a V58.11 and V58.12 code for immunotherapy infusion, if the disease code is not in the first position.

Focal Variables

My two main effect variables are hospital rank and patient education. Hospital rank is continuous and inverted, such that a one-unit increase in the variable corresponds to a one-rank improvement (e.g. 5th to 4th).¹² USNWR released its 2011 hospital rankings on July 19, 2011. Visits before this date have 2010 rankings imputed for the hospital, visits after this date have 2011 rankings imputed for the hospital. I also include a binary control for whether the hospital was ranked or not.

SEER-M only provides socioeconomic data aggregated at the ZIP code level. My focal variable is therefore the percent of a patient’s ZIP code with a college degree. While aggregated measures of socioeconomic status are less than ideal, this limitation is common among analyses using observational claims data (Elizabeth B. Lamont et al. 2012; c.f. Singer et al. 2016; Hastert et al. 2015).

12. This variable is transformed to improve convergence in the mixed logit model.

Controls

I control for a number of patient and hospital characteristics. Individual-level patient controls are sex, race, the number of different cancers a patient has, and whether the patient's cancer is known to be especially aggressive/acute.¹³ ZIP-code level controls are the median household income in the patient's ZIP code (hyperbolic arcsine transformed and mean-centered in analyses) and the percentage of black residents in the patient's ZIP code. Hospital controls are for ownership type, number of beds (logged), whether the hospital is a National Cancer Institute Cancer Center, whether the hospital is a teaching hospital, and whether the hospital is affiliated with a medical school.

I also include two variables measuring the demographics of the area surrounding a hospital, aggregated at the hospital's Dartmouth Health Service Area: the percent of black residents and the median household income (hyperbolic arcsine transformed and mean-centered in analyses). Dartmouth Health Service Areas represent local hospital markets as determined by the Dartmouth Institute for Health Policy and Clinical Practice.¹⁴ Finally, I include controls for (1) the distance from the patient's ZIP code to the hospital's ZIP code (logged), and (2) the total number of sampled visits the hospital has.

13. Measured as Stage III or IV Lymphoma, or any leukemia with "acute" in the name.

14. For more information on Dartmouth HSAs, visit <http://www.dartmouthatlas.org/data/region/>.

Model

Mixed logit is the standard for hospital choice models like my final model (McFadden and Train 2000; Tay 2003; Pope 2009). Random slopes in the mixed logit relaxes the independence of irrelevant alternatives assumption of the standard logit model, which is important since changing the choice set of hospitals would likely affect patient choice. In my case, the models are multilevel logit models with random intercepts for patient-disease and hospital, and random slopes (by patient-disease) for my key variables: ZIP code % college degree, rank, NCI Cancer Center status, and the interactions between ZIP education and the two status designators. I chose not to estimate my final model using a conditional logit model, since doing so prevents me from estimating the effects of patient-disease-constant attributes, like ZIP-level education and per-capita income, among others.

1.5 Findings

1.5.1 Descriptives

Descriptive statistics are in Tables 2 and 3 for hospitals and patients, respectively. The average hospital in my sample has about 244 beds, and saw about five unique patients. There are 62 total NCI Cancer Centers, five of which are in California (all five are Comprehensive). The average hospital is in a Dartmouth HSA with ~5% black residents, and ~30% of residents with a college degree. The average arcsin-ed HSA per-capita income is 10.98 (about \$29,350). Most hospitals are private, nonprofit hospitals (42.6%); 22% of hospitals are government owned, 12% religiously owned,

and just over 21% are for-profit. 8% of hospitals are affiliated with a medical school, and half of the hospitals are teaching hospitals.

Most patients in my sample are white (~80%), and more than half are male (53%). Patient ZIP-code demographics are similar to hospital HSA demographics in proportion of college-educated residents (~29%), but have a slightly higher arcsin-ed per-capita income of 11.11 (about \$33,400) and % black residents (~9%). More than half of patients have an acute form of blood cancer (55%), and the average age of patients in my sample is 76. Patients traveled an average of 8.9 miles (2.19 exponentiated) to receive treatment (excluding imputed zero pairs). Cancer incidences in my sample generally match those of the general population, with Large B-Cell Lymphoma and Acute Myeloid Leukemia as the most common types.

1.5.2 Prefatory Models

Seeking Treatment

Table 1.4 presents results from the model predicting whether a patient seeks any kind of treatment after diagnosis. Neither ZIP education nor ZIP income affects a patient's probability of seeking treatment, which is a bit surprising given the predictions of fundamental cause theory. However, it may be that education- and income-based inequality occurs either before diagnosis, by determining who gets diagnosed at all, and/or after diagnosis, by influencing variation in the quality of treatment received. The former type of variation is nearly impossible to examine, since patients must be diagnosed to appear in any data on cancer. I address the latter type of variation in the analyses that follow.

Variation in seeking treatment is instead a function of gender (men less likely than women), race (Asians and Hispanics more likely than Whites), and age (older patients more likely than younger patients). Patients from ZIP codes with higher proportions of black residents are also less likely to seek treatment, but the same pattern is not observed when race is measured at the patient level. In other words, Percent Black Residents appears to be a true ecological effect: patients from these neighborhoods are less likely to seek treatment, regardless of their own race. This finding dovetails with many other findings about the effects of black neighborhoods, which tend to be significantly under-resourced compared to their non-black counterparts (Charron-Chenier, Fink, and Keister 2016; Sampson 2012; Massey and Denton 1993).

Out-of-State

Table 1.5 presents results from several models predicting whether or not a patient leaves the state for treatment. There are two main takeaways from these models. The first is that indicators of status are salient for those patients who choose to leave the state. The second is that patients from well-educated ZIP codes are *less* likely to leave the state for high-status hospitals than patients from less well-educated ZIP codes. The coefficient for inverse rank is positive in all models, but not significant in the first or third model. This appears to be a function of the divergent appeal of highly-ranked hospitals by SES. The coefficient for NCI CC status is large, positive, and statistically significant in all models. This isn't surprising, given that 65% of patients who go out of state leave to go to an NCI Cancer Center. In sum, patients

who leave the state do so in order to seek treatment at the (ostensible) best hospitals in the country.

However, patients from more well-educated ZIP codes are less likely to leave the state for these high-status hospitals. This is true for both inverse rank and NCI CC status. In other words, the patients who leave the state to receive care at a high-status hospital tend to be from less well-educated ZIP codes, even controlling for whether the patient lives in a county on a state border.

ZIP-level sociodemographic features also affect a patient's propensity to leave the state. Though neither ZIP education level nor per-capita income have independent effects on leaving the state, patients from ZIP codes with more black residents are less likely to leave the state. This is probably due to the concentration of black residents in urban areas, which are generally far from state lines in California. Unsurprisingly, patients in border counties are very likely to leave the state for treatment, and likely account for the majority of leavers. This explanation is further supported by the relatively small number of patients who leave the state (119/1505). These results suggest that, though these regressions are instructive about the general salience of status indicators for certain patients, more representative and comprehensive in-state models will more accurately reveal the relationship between patient socioeconomic status and selection of high-status hospitals.

1.5.3 Mixed Models

Ranking

Results from the mixed logit models of in-state hospital choice are in Table 1.6. The baseline effect of ZIP education is negative, meaning that patients from more well-educated ZIP codes are less likely to pursue treatment from the hospital represented by the intercept (not ranked, not an NCI Cancer Center, etc.). This is unsurprising, since such a hospital is low on a number of status dimensions. The effect of inverse rank is negative, meaning patients, in general, are less likely to patronize a hospital if it is more highly ranked. However, the interaction effect between ZIP education and inverse rank is positive, indicating that patients from well-educated ZIP codes are *more* likely to patronize highly-ranked hospitals. These effects suggest that patients from well-educated ZIP codes are more responsive to status indicators than patients from less well-educated ZIP codes.

Figure 1 plots marginal effects of this interaction term. Across levels of ZIP education, the probability of a patient seeking treatment from a hospital declines as the hospital's ranking increases. However, the decrease in probability of treatment is tempered as a function of ZIP education; patients from more well-educated ZIP codes remain more likely to seek treatment from highly-ranked hospitals than patients from less well-educated ZIP codes, even though their *overall* probability of doing so declines inversely to rank. In contrast, patients from less well-educated ZIP codes are much more likely to patronize unranked hospitals, and their probability of patronizing the highest-ranked hospitals in California is functionally zero.

Similar to ranking, the effects of NCI Cancer Center designation, Medical School

Affiliation, and Teaching Hospital status are negative, because the majority of patients do not or cannot patronize these hospitals. Hospitals that are in predominantly black HSAs are less likely to be patronized by patients. Finally, a patient's probability of patronizing a hospital decreases inversely with distance.

NCI Cancer Center Status

The patterns observed in the ranking model are essentially duplicated in a model interacting ZIP-level education and NCI Cancer Center status. The effect of NCI Cancer Center status is negative and highly significant, indicating that patients, in general, are unlikely to seek treatment from an NCI Cancer Center. However, its interaction with ZIP-level education is both positive and statistically significant, indicating that patients from more well-educated ZIP codes are more likely to patronize NCICC-designated hospitals than their counterparts from less well-educated ZIP codes.

Robustness Checks

I ran two separate robustness checks on my results. The first was a 1,000-iteration bootstrap of my multilevel logit models using 10% subsamples. Means and standard errors of coefficients from this analysis of ranking and NCI CC status are in Tables 1.7 and 1.8, respectively. Results generally mirror the full models, though the coefficient for the interaction between ranking and ZIP education level is functionally zero. The coefficients for NCI Cancer Center, ZIP % College Degree, and the interaction between the two are all in the expected direction and highly statistically significant.

The second robustness check was a structural equation model using patient characteristics to predict hospital characteristics, using only the "success" cases from my sample. The motivation for this robustness check is to directly assess the covariance between individual- and organization-level characteristics by directly predicting the latter with the former. Results from this model are in Table 1.9. Results support the conclusions of the multilevel models: ZIP education level is positive and significantly associated with both Inverse Rank and NCI CC status. Overall the robustness checks support the inferences from the original models, although there is mixed support for the interaction between ranking and ZIP education level.

1.6 Discussion

Patient use of information on provider quality is a growing area of interest in both health policy and clinical research. Using SEER-Medicare data, I have shown that patients with blood cancers use rankings when choosing hospitals during at least two stages in the hospital choice process: deciding whether to leave the state, and, for those who stay, deciding among in-state hospitals. In the former case, patients who leave near state borders appear to be most likely to leave the state. While status indicators are salient for those who leave the state, patients from well-educated ZIP codes are less likely to leave the state to receive care at high-status hospitals. The in-state models reveal that this is because they receive care from high-status in-state hospitals, and thus do not need to leave the state. In other words, patients from more well-educated areas are more likely to use high-status hospitals, while patients from less-well-educated areas are less likely to a hospital as its ranking increases, unless

that hospital is out of state. Similar effects are observed for a hospital's status as an NCI Cancer Center, which serves as another indicator of hospital quality.

These findings are consistent with past work on healthcare inequality, and reinforce the now-common refrain that healthcare benefits accrue to the already-privileged in the United States (Bruce G. Link and Jo Phelan 1995). They also begin to reveal the informational mechanisms underlying socioeconomic disparities in cancer incidence and mortality at both individual and neighborhood levels (Singer et al. 2016; Hastert et al. 2015; Wardle et al. 2004). Effective information seeking and use is necessary at every stage of successful cancer treatment, from understanding diagnosis and prognosis (LeBlanc et al. 2014; Lamont and Christakis 2001, 2003; LeBlanc et al. 2014; Blank et al. 2006; Gramling et al. 2016; M. A. Sekeres et al. 2004), to choosing treatments and providers (Barry and Edgman-Levitan 2012; Charles, Gafni, and Whelan 1997; Epstein et al. 2016), and successfully navigating a chosen treatment (LeBlanc et al. 2017; Gage-Bouchard 2017). Future research should investigate educational stratification at each of these points.

My findings also indicate a need for health policy scholars to more closely attend to sociological sources of inequality in medical treatments. Economic analyses of patient information use and hospital markets elide sociodemographic attributes of patients (Pope 2009; Dranove et al. 2003; Jha and Epstein 2006). In contrast, I find that patient characteristics, like sex and race, and neighborhood characteristics, like racial composition and education level, significantly affect a patient's propensity to seek treatment from hospitals. In addition, the education level of a patient's ZIP code also affects a patient use of information about provider quality. While clinical re-

searchers are increasingly attuned to racial and socioeconomic inequality in cancer treatment and outcomes (Bach et al. 1999; Elizabeth B Lamont et al. 2014; Wardle et al. 2004; Klein and Knesebeck 2015), my findings suggest health policy researchers would do well to follow suit.

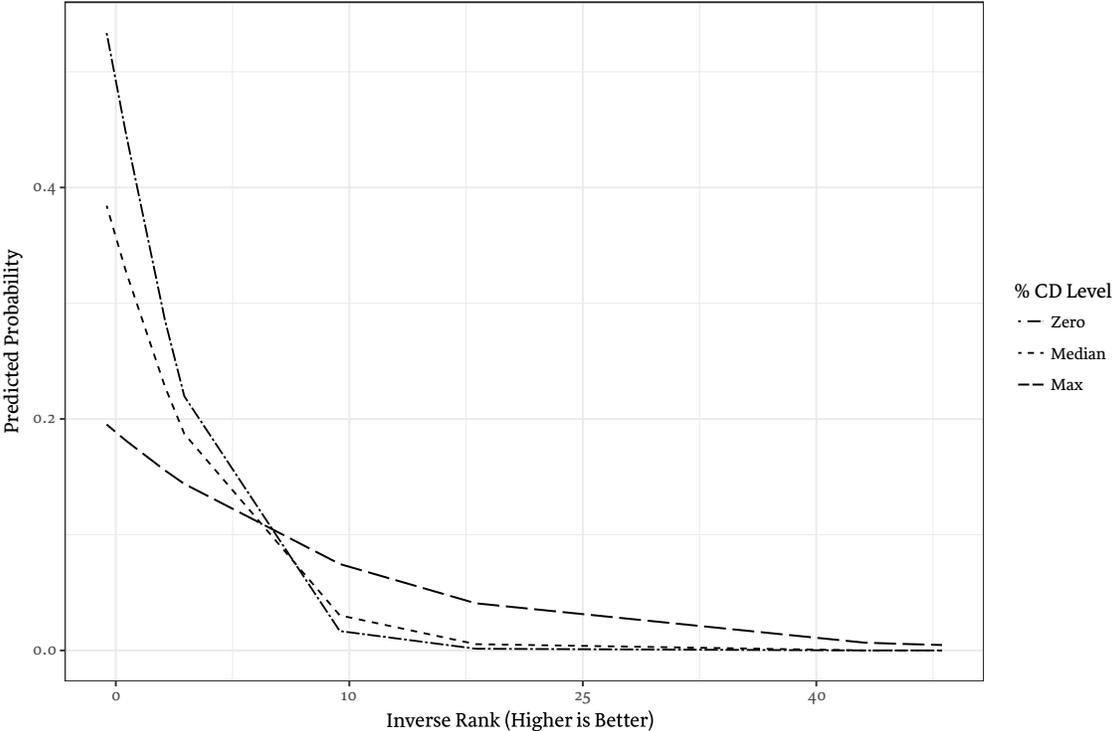
There are five limitations in my analysis. The first is that I have no measure of education and income at the patient level. As such, I cannot determine whether more well-educated patients are individually more likely to use rankings in hospital choice, only that patients from more well-educated areas are more likely to do so. This limitation is especially apparent in my out-of-state models, where a small sample size increases the chances of an ecological fallacy. Moreover, it makes interpretation of aggregate-level effects more difficult, by combining the “true” variances of actual individual- and neighborhood-level effects. As such, I have discussed possible mechanisms at both the individual and neighborhood levels, since the effects I demonstrate are likely a combination of the two. Second, I cannot say whether patients from well-educated areas patronize higher-ranked hospitals because they are more likely to seek out rankings information, or more capable of putting rankings information to use. Existing literature suggests it is likely both. Consequently, future research should investigate these mechanisms at the individual level. The third limitation of my work is that I examine only patients with blood cancers. Future work should expand my inquiry to other cancers. The fourth limitation is that my analysis includes only outpatient visits at hospitals. While the majority of cancer treatments are outpatient, it is possible that ranking use differs for patients who require inpatient treatment. Finally, given the limitations of my data, I am unable to determine

the salience of other factors for patient choice of hospitals, like physician or other network referrals and MediGap insurance coverage.

In conclusion, I have shown that not all patients are empowered equally as consumers. Sociodemographic factors have consequential effects on both baseline patient access to cancer treatment and on quality information use. Sociodemographic inequality remains a blind spot for health policy researchers and many clinical researchers. My findings reinforce the need for these scholars to pay increasing attention to sociological sources of inequality in treatment and care, and to work to design interventions aimed at leveling these discrepancies.

1.7 Figure

Figure 1.1: Marginal Effects of Rank on Probability of Visit, by ZIP % College Degree



1.8 Tables

Table 1.1: 10 Most Common Blood Cancers

Name	Aggression	Remission Rate	Relapse Rate	Possible Treatments	μ SEER Cases/Year
Diffuse Large B-Cell Lymphoma	high	high	low	Chemotherapy & antibody, optional radiation, stem cell transplant	5,387
Chronic Lymphocytic Leukemia/Small Lymphocytic Lymphoma	mild	high	high	Watchful waiting; chemotherapy, antibodies, and/or biologic drugs; bone marrow transplant; radiation; spleen removal	3,646
Acute Myeloid Leukemia	high	low	moderate	Chemotherapy; radiation; stem cell transplant; clinical trials	1,598
Marginal Zone B-Cell Lymphoma	mild	high	moderate	Antibiotics; chemotherapy, antibodies, and/or biologic drugs; surgery;	1,375
Non-Hodgkin Lymphoma**	varies	varies	varies	Varies	1,220
Nodular Sclerosis Hodgkin Lymphoma*	moderate	high	moderate	Radiation, Chemotherapy, stem-cell transplant	1,169
Small B Lymphocytic Lymphoma	mild	high	high	Watchful waiting; chemotherapy, antibodies, and/or biologic drugs; bone marrow transplant; radiation; spleen removal	995
Follicular Lymphoma (General)*	mild	high	high	Watchful waiting; radiation; chemotherapy or antibodies	953
Malignant lymphoma (General)**	varies	varies	varies	Varies	827
Follicular Lymphoma, Grade 1*	mild	high	high	Watchful waiting; radiation; chemotherapy or antibodies	798

Note: Diseases with matching * characters are combined when converting from ICD-O-3 to ICD-9

Table 1.2: Hospital Demographics (n = 343)

Statistic	Mean	St. Dev.	Min	Max
Inverse Rank	0.472	4.012	0	43
Ranked (Binary)	0.023	0.151	0	1
NCI Cancer Center	0.015	0.120	0	1
# of Beds	244.699	225.962	5	2,046
Med School Affiliated	0.088	0.283	0	1
Teaching Hospital	0.507	0.501	0	1
HSA % College Degree	29.533	14.967	3.440	76.915
HSA % Black	4.864	4.779	0.150	36.742
HSA Per-Capita Income (asinh)	10.985	0.361	9.799	11.984
Hospital Ownership				
Non-Profit	0.426	0.495	0	1
Church	0.120	0.325	0	1
Government	0.219	0.414	0	1
orgownProprietary	0.213	0.410	0	1
Missing	0.023	0.054	0	1

Source: SEER-Medicare

Table 1.3: Patient Demographics (n = 902)

Statistic	Mean	St. Dev.	Min	Max
Age	76.36	7.52	65	99
Has Acute Cancer	0.55	0.50	0	1
Male	0.53	0.50	0	1
ZIP % Black	4.34	7.35	0	86.34
ZIP % College Degree	35.49	19.57	0	83.51
ZIP Per-Capita Income (asinh)	11.11	0.53	9.55	12.63
Distance Traveled (logged)	2.19	1.28	0	6.29
Race				
White	0.80	0.40	0	1
Black	0.03	0.18	0	1
Asian	0.08	0.27	0	1
Hispanic	0.05	0.22	0	1
Other	0.04	0.20	0	1
Cancer				
Lymphoma (General)	0.01	0.11	0	1
Non-Hodgkin Lymphoma	0.08	0.27	0	1
Small B-Cell Lymphoma	0.04	0.19	0	1
Mantle Cell Lymphoma	0.05	0.23	0	1
Large B-Cell Lymphoma	0.39	0.49	0	1
Follicular Lymphoma (Grade 2)	0.04	0.20	0	1
Follicular Lymphoma (Grade 1)	0.03	0.18	0	1
Marginal Zone B-Cell Lymphoma	0.08	0.28	0	1
B-Cell Lymphocytic Leukemia	0.16	0.37	0	1
Acute Myloid Leukemia	0.10	0.30	0	1

Source: SEER-Medicare

Table 1.4: Results from a Logit Regressions of Seeking Any Treatment

Variable	β (S.E.)
ZIP % CD	-0.003 (0.003)
ZIP % Black	-0.017*** (0.005)
ZIP PCI (asinh)	0.129 (0.099)
Male	-0.131* (0.065)
Race (Ref: White)	
Black	-0.022 (0.173)
Asian	0.401** (0.136)
Hispanic	0.615*** (0.160)
Other	-0.083 (0.158)
Age	0.028*** (0.003)
Constant	-3.493*** (1.052)
Observations	3,991
Log Likelihood	-2,682.540
Akaike Inf. Crit.	5,389.079

Note: *p<0.05; **p<0.01; ***p<0.001
Source: SEER-Medicare

Table 1.5: Results from Logit Regressions of Leaving CA for Treatment

	(1)	(2)	(3)
PCI (asinh)	-0.279 (0.424)	0.102 (0.421)	0.026 (0.411)
ZIP % CD	0.002 (0.010)	0.013 (0.010)	0.014 (0.010)
ZIP % Black	-0.057** (0.018)	-0.057** (0.018)	-0.061*** (0.018)
Inverse Rank	0.016 (0.022)	0.054* (0.022)	0.023 (0.022)
NCI CC	2.328*** (0.180)	2.210*** (0.179)	3.107*** (0.249)
ZIP % CD x Inv. Rank		-0.001*** (0.0003)	
ZIP % x NCI CC			-0.022*** (0.005)
Male Patient	0.186 (0.173)	0.101 (0.176)	0.111 (0.176)
Race (Ref: White)			
Black	0.357 (0.403)	0.479 (0.395)	0.488 (0.389)
Asian	-1.299** (0.449)	-1.396** (0.452)	-1.416** (0.467)
Hispanic	-0.810 (0.493)	-0.645 (0.521)	-0.699 (0.525)
Other	-0.597 (0.596)	-0.621 (0.598)	-0.584 (0.612)
# of Beds (logged)	-0.591*** (0.139)	-0.681*** (0.134)	-0.668*** (0.135)
Med. Sch. Affil.	-4.549*** (0.383)	-4.323*** (0.370)	-4.595*** (0.380)
Teaching Hosp.	0.663** (0.255)	0.760** (0.255)	0.758** (0.255)
Ranked	0.691 (0.718)	0.926 (0.689)	0.414 (0.725)
Pt in Border Co.	0.965*** (0.225)	1.040*** (0.226)	1.017*** (0.224)
Constant	2.379 (4.502)	-1.649 (4.462)	-0.907 (4.357)
Observations	5,500	5,500	5,500
Log Likelihood	-617.571	-606.076	-606.893
Akaike Inf. Crit.	1,271.143	1,250.153	1,251.785

Note:

*p<0.05; **p<0.01; ***p<0.001

Source: SEER-Medicare

Table 1.6: Results from Mixed Logit Regressions of Patient Hospital Choice

	Model 1		Model 2	
	Beta	S.E.	Beta	S.E.
<i>Fixed Effects</i>				
% College Degree*	-0.335***	(0.072)	-0.476***	(0.067)
Inverse Rank*	-0.963***	(0.172)	-0.878***	(0.155)
%CD x Inv. Rank*	0.243***	(0.050)		
% CD x NCI CC			1.999***	(0.384)
Ranked	-0.509	(1.080)	1.271	(1.069)
ZIP % Black	-0.025***	(0.007)	-0.032***	(0.008)
ZIP PCI (asinh)	-0.146	(0.119)	0.073	(0.116)
Male	-0.051	(0.076)	-0.060	(0.075)
Age	-0.0003	(0.005)	0.002	(0.005)
Acute Cancer	-0.051	(0.076)	-0.113	(0.075)
Race (Ref: White)				
Black	0.010	(0.234)	-0.018	(0.235)
Asian	-0.136	(0.189)	-0.128	(0.184)
Hispanic	-0.275*	(0.137)	-0.330*	(0.138)
Other	-0.356*	(0.181)	-0.138	(0.171)
NCI Cancer Center	-0.191	(0.914)	-5.325***	(1.160)
Med. Sch. Affiliated	-0.112	(0.359)	-0.186	(0.352)
Teaching Hospital	-0.556*	(0.226)	-0.286	(0.219)
# of Beds (logged)	0.525***	(0.152)	0.436**	(0.147)
Ownership (Ref: Non-Profit)				
Church	0.389	(0.293)	0.081	(0.289)
Govt	0.485	(0.279)	0.593*	(0.273)
Missing	-60.245	(128.002)	-46.028	(128.014)
Proprietary	-1.315***	(0.294)	-1.095***	(0.286)
HSA PCI	-0.450	(0.309)	-0.404	(0.303)
HSA % Black	-0.081***	(0.024)	-0.072**	(0.023)
# of Sampled Patients Seen	0.149***	(0.014)	0.171***	(0.014)
Distance (logged)	-2.072***	(0.038)	-2.006***	(0.035)
Constant	-0.640	(1.577)	-3.180*	(1.529)
	S.D.		S.D.	
<i>Random Effects</i>				
Patient-Disease				
Intercept	0.23		0.03	
Inverse Rank	0.57			
% CD	0.22		0.22	
IR x % CD	0.29			
NCI CC			3.98	
NCI CC x % CD			1.28	
Hospital				
Intercept	1.36		1.33	
Observations	368,676		368,676	
Log Likelihood	-3,832.44		-3,826.73	
Akaike Inf. Crit.	7,742.89		7,731.45	
Bayesian Inf. Crit.	8,164.78		8,153.34	

* These variables are centered and SD-standardized in analyses
Source: SEER-Medicare

*p<0.05; **p<0.01; ***p<0.001

Table 1.7: Robustness Check 1. Bootstrapped Coefficients for Inverse Rank

	Mean	S.E.
(Intercept)	-3.10	0.12
ZIP %CD	-0.02	0.00
Inverse Rank	-0.09	0.00
Inv. Rank x ZIP % CD	0.00	0.00
Ranked	0.43	0.03
ZIP % Black	-0.03	0.00
ZIP PCI (asinh)	0.04	0.01
Male Patient	-0.02	0.01
Race (Ref: White)		
Asian	-0.45	0.01
Black	-0.40	0.08
Hispanic	-0.54	0.04
Other	-0.33	0.03
Age	-0.00	0.00
Hospital Characteristics		
NCI CC	-0.48	0.03
Med. Sch. Affil	-0.59	0.01
Teaching Hospital	-0.37	0.01
Beds (logged)	0.85	0.01
Ownership (Ref: Non-Profit)		
Church	0.17	0.01
Govt	0.18	0.01
Missing	-16.25	0.02
Proprietary	-0.87	0.01
HSA PCI (asinh)	-0.29	0.01
HSA % Black	-0.07	0.00
Patient Has Acute Cancer	-0.07	0.01
Patient Visits	0.02	0.00
Distance (logged)	-1.84	0.00

Source: SEER-Medicare

Table 1.8: Robustness Check 1. Bootstrapped Coefficients for NCI Cancer Center Status

	Mean	S.E.
(Intercept)	-2.67	0.12
ZIP % CD	-0.02	0.00
NCI CC	-2.10	0.05
ZIP % CD x NCI CC	0.04	0.00
Inverse Rank	-0.07	0.00
Ranked	0.54	0.03
ZIP % Black	-0.03	0.00
ZIP PCI (asinh)	0.02	0.01
Male Patient	-0.03	0.01
Race (Ref: White)		
Asian	-0.44	0.01
Black	-0.34	0.07
Hispanic	-0.51	0.02
Other	-0.38	0.04
Age	-0.00	0.00
Hospital Characteristics		
Med. Sch. Affil.	-0.57	0.01
Teaching Hosp.	-0.40	0.01
Beds (logged)	0.85	0.01
Ownership (Ref: Non-Profit)		
Church	0.16	0.01
Govt	0.20	0.01
Missing	-16.23	0.02
Proprietary	-0.90	0.01
HSA PCI (asinh)	-0.31	0.01
HSA % Black	-0.07	0.00
Acute Cancer	-0.06	0.01
Unique Patients	0.02	0.00
Distance (logged)	-1.85	0.00

Source: SEER-Medicare

Table 1.9: Robustness Check 2. Structural Equation Model.

Variable	Inverse Rank Neg Bin (log)	Med. Sch. Affil. Binomial (logit)	Ranked Binomial (logit)	NCI CC Binomial (logit)	Beds (log) Gaussian (mean)
ZIP % CD	0.027*** (0.006)	0.016** (0.006)	0.027*** (0.006)	0.026*** (0.002)	0.011*** (0.001)
Male Patient	0.097 (0.145)	0.067 (0.134)	0.097 (0.145)	-0.14 (0.212)	-0.005 (0.038)
ZIP PCI (asinh)	0.238 (0.223)	0.102 (0.205)	0.238 (0.223)	0.826*** (0.199)	-0.064 (0.059)
Age	-0.059*** (0.010)	-0.041*** (0.009)	-0.059*** (0.010)	-0.018 (0.014)	-0.0093*** (0.002)
Race (Ref: White)					
Black	0.327 (0.435)	-0.229 (0.445)	0.327 (0.435)	0.846 (0.520)	0.139 (0.109)
Asian	-0.203 (0.388)	-0.162 (0.352)	-0.203 (0.388)	-1.338 (1.019)	-0.0163 (0.0930)
Hispanic	0.636* (0.252)	0.987*** (0.229)	0.636* (0.252)	1.039*** (0.309)	0.311*** (0.0717)
Other	0.305 (0.397)	1.351*** (0.295)	0.305 (0.397)	0.060 (0.622)	0.254** (0.092)
Acute Cancer	-0.148 (0.144)	-0.136 (0.133)	-0.148 (0.144)	-0.287 (0.211)	-0.003 (0.038)
ZIP % Black	0.016 (0.009)	0.017 (0.009)	0.016 (0.010)	0.025* (0.011)	
Constant	-0.576 (2.458)	0.193 (2.248)	-0.576 (2.458)	-10.300*** (2.459)	7.488*** (0.642)
Observations	1, 268	1, 268	1, 268	1, 268	1, 268

Standard errors in parentheses

*p<0.05; **p<0.01; ***p<0.001

Source: SEER-Medicare

Chapter 2

Racial Stratification in Access to High-Status Blood Cancer Treatment

The previous chapter demonstrated that neighborhood socioeconomic status stratifies the choice of treating hospitals for Californians. However, in the United States, socioeconomic status and race remain inextricably linked (though not reducible to each other), and this link extends to blood cancers (Patel, Johnson, et al. 2015). In addition to ongoing racial prejudice and bias, histories of racial segregation and discrimination leave their indelible marks on contemporary life. These inequalities are especially visible in health outcomes, generally, and cancer outcomes, specifically (Gee and Ford 2011; Bailey et al. 2017).

Racial minorities, and especially blacks, consistently experience worse cancer outcomes as compared to non-Hispanic whites (Shavers and Brown 2002), and there is evidence these inequalities are increasing (D. Pulte et al. 2012; Dianne Pulte et al. 2013).¹ Those suffering from blood cancers are not immune to these outcome inequalities, even controlling for prognostic or genetic factors (Mikkael A. Sekeres et al. 2004; Patel et al. 2012; Byrne et al. 2011).²

A large portion of differences in blood cancer outcomes appears to be due to

1. The Hispanic/Latino Paradox, wherein Hispanics experience favorable outcomes as compared to non-Hispanic whites, is evident in some cancers (Patel et al. 2013, 2016), but not for most outcomes.

2. In fact, many racial minorities actually have *better* prognoses than white patients, but suffer worse outcomes nonetheless (Patel et al. 2015a).

variation in treatments across racial groups, with minority patients receiving fewer standard-of-care treatments (Patel et al. 2015b). For most cancers, and especially for blood cancers, treatment availability is a function of access to specific hospitals; potentially life-saving treatments like hematopoietic stem cell transplants are knowledge- and resource-intensive, restricting them to well-funded, high-status hospitals (Patel 2016). The variation in treatments, and thus outcomes, for racial minorities may therefore be partially mediated by geography and travel resources (Huang et al. 2014; Onega et al. 2009), which are themselves shaped by long histories of geographic and social segregation in the United States (Williams and Collins 2001; Dimick et al. 2016).

However, recent evidence from patients with a variety of cancers suggest that minority patients may be surmounting some of these barriers. Racial minorities in urban areas, and especially black patients, appear to be *more* likely to seek treatment at high-quality, high-status NCI-designated Cancer Centers as compared to whites (Huang et al. 2014; Onega et al. 2009).

This chapter investigates these divergent claims about the relationships of individual and neighborhood race with proximity to and use of high-status hospitals (defined as highly-ranked hospitals) for blood cancer treatment. Using data from the SEER-Medicare linked claims database, I find that, while neighborhood race is not predictor of either proximity to high-status hospital or use of high-status hospital, individual-level race is. I contextualize these findings using both existing literature and findings from Chapter 1.

2.1 Evidence for and Mechanisms of Racial Inequalities in Cancer Treatment

Racial inequalities in health are significant and growing. Racial minorities, and especially blacks, experience worse health outcomes across almost the entire life course (Gee and Ford 2011; Bailey et al. 2017; Ng-Mak et al. 1999). These disparities exist in nearly all cancers (Shavers and Brown 2002), and may actually be worsening over time (D. Pulte et al. 2012; Dianne Pulte et al. 2013). Within blood cancers, specifically, black patients exhibit better initial prognoses (Mikkael A. Sekeres et al. 2004; Patel et al. 2015a), but worse treatment adherence and response (Mikkael A. Sekeres et al. 2004; Patel et al. 2015b), and mortality (Patel et al. 2015a, 2012).

Clinical investigations suggest that differences in treatment regimes may explain a significant portion of disparities in survival. Black and Hispanic patients are significantly less likely to receive chemotherapy or stem cell transplants, the two standard treatments for most blood cancers. Once treatment regimes are equalized across races, mortality rates converge (Patel et al. 2015b). Some of the discrepancies in treatment occur in biased treatment recommendations at the individual level, when physicians decline to refer minority patients to stem-cell transplants (Pidala et al. 2013). However, a more significant portion of the disparity in treatment may result from inequalities at the organization/hospital level.

2.1.1 Cancer Treatment and Racial Segregation

Targeted chemotherapy and hematopoietic stem cell transplants are costly procedures. They require significant time, knowledge, and resource investments that are

not possible for all hospitals. Consequently, these procedures tend to be clustered at well-funded, high-status institutions (Patel 2016). This type of geographic clustering bodes poorly for minority patients, who have historically been marginalized from these hospitals.

Even in geographically-compact urban areas, geographic and social segregation along racial lines has long excluded racial minorities, and especially black residents, from preferable institutions (Massey and Denton 1993; Grigoryeva and Ruef 2015). These structural barriers affect every area of life for those segregated, and especially health (Gee and Ford 2011; Bailey et al. 2017; Williams and Collins 2001). It is no surprise, then, that racial segregation has been directly linked to cancer outcomes (Haas et al. 2008).

This link may be partially explained by the relationship between racial segregation and hospital quality. In short, black residents in racially-segregated areas tend to live closest to, and subsequently patronize, low-quality hospitals (Dimick et al. 2016). The neighborhood-level mechanisms discussed in Chapter 1, namely reduced access to secondary institutions that provide information and services in historically-disadvantaged areas, likely exacerbate these inequalities (Sampson, Morenoff, and Gannon-Rowley 2002; Small 2009).

In sum, legacies of racial segregation in the United States likely restrict the access of patients in racially-segregated areas to high-status hospitals. While variation in types of racial segregation may mitigate the explicit *geographic* hurdles to hospitals (Grigoryeva and Ruef 2015), we would still expect overall lower rates of use of high-quality hospitals by patients from predominantly black neighborhoods:

- *Hypothesis 1:* Patients from predominantly-black neighborhoods, regardless of race, will patronize high-status hospitals at lower rates than patients from predominantly-white neighborhoods.

2.2 Evidence and Mechanisms for Racial Parity in Cancer Treatment

In spite of the negative consequences of neighborhood-level racial segregation, the relationship between race and cancer treatment is more complicated at the individual level, in two ways. First, cancer services do not appear to be restricted in otherwise under-resourced urban areas (Elizabeth B. Lamont et al. 2012), despite the overall lower quality of those hospitals (Dimick et al. 2016). Second, recent work has demonstrated that minority patients may actually be *more* likely than whites to seek treatment from high-status, NCI-designated Cancer Centers (Huang et al. 2014; Onega et al. 2009).

2.2.1 Area-Level Parity in Cancer Service Supply

Area-level variation persists across the spectrum of cancers, including blood cancers (Ward et al. 2004; Menzin et al. 2002; Hastert et al. 2015). The most obvious discrepancy in treatment occurs between urban and rural patients, the latter of whom often live much further from any hospital (Bonsignore et al. 2018), let alone hospitals with cutting-edge treatments (Medeiros et al. 2015; Patel 2016). However, investigations of cancer supply and adherence in urban settings give a more mixed picture of inequality. A large-scale study of the supply of cancer “services,”

defined as a range of hospital attributes and accredited physicians in crucial components of oncology treatment, found that traditionally under-resourced urban areas exhibited no significant paucity of cancer service supply (Elizabeth B. Lamont et al. 2012). However, both Lamont et al. (2012) and a similar study of patients from Wisconsin find that *screening* services and rates are greatly reduced in impoverished and perceptibly-disordered neighborhoods (Beyer et al. 2016). This type of inequality likely leads to overall lower rates of diagnosis in predominantly-black, under-resourced areas. However, those who are successfully diagnosed, such as the patients in my sample, appear to have adequate access to treatment services.

2.2.2 Racial Inequality in NCI Cancer Center Treatments

Neighborhood-level features systematically disadvantage patients from minority-predominant areas, but the individual-level choice process appears to operate differently. Among patients with colorectal cancer in California, blacks, Hispanics, and Asian/Pacific-Islanders were all more likely to use NCI-designated cancer centers than whites, controlling for a variety of individual and neighborhood factors (Huang et al. 2014). In fact, controlling for neighborhood factors reversed the relative probabilities between these racial groups and whites, providing further support to the mechanisms described in the previous section. A second study demonstrated similar results to Huang et al. (2014), using SEER-Medicare data from patients with lung, breast, colorectal, and prostate cancer. Among these patients, urban black patients were 1.5 times more likely to seek treatment from an NCI Cancer Center than urban white patients (Onega et al. 2009, p. 207).

These findings deviate sharply from neighborhood-level expectations. However, this type of individual-level racial parity is plausible for three reasons. First, Medicare equalizes differences in insurance coverage that exacerbate racialized health inequalities earlier ages (VanGarde et al. 2018). Second, minority patients who are seeking treatment have necessarily surmounted the screening hurdle, which appears to be a significant mechanism in racialized cancer inequality (Dimick et al. 2016; Elizabeth B. Lamont et al. 2012). Together, these studies suggest a separate hypothesis about individual-level race:

- *Hypothesis 2*: Controlling for neighborhood effects, minority patients will seek treatment at higher rates from high-status hospitals as compared to whites.

2.3 Data and Methods

The data and main analytical approach (i.e. geographic restriction) are identical to those used in Chapter 1, so I do not discuss them again here. A notable divergence from the method used in Chapter 1 is that I do not use the full imputed patient-visit matrix. The reason for this is that my dependent variables in the following are features of the hospitals themselves, so using the full matrix, and the requisite hospital-level random effects, washes out variation in the dependent variable. Instead, my data represent the “successes” from the full matrix, meaning each chosen patient-disease/hospital pairing, without zero-imputation.

I also further subset my data to include only patients who live in urban areas. I define this condition as a function of the urban/rural variable in the Area Resource

File (ARF).³ The ARF codes a patient's urban setting as Big Metro, Metro, Urban, Less Urban, and Rural. For my analyses, a patient must be in a Big Metro, Metro, or Urban setting. This subset enables me to more accurately follow existing studies when producing my results. The condition removed only 28 cases from the data (1245 vs 1272 cases), and models using the full data produce near-identical results.

2.3.1 Dependent Variables

My dependent variables measure the status of a chosen hospital on two binary dimensions: whether the hospital is ranked in the *U.S. News and World Report*, and whether the hospital is an NCI-designated Cancer Center.⁴ These variables are produced using the method in Chapter 1. These two variables are nearly identical; only one hospital, Cedars-Sinai Medical Center in Los Angeles, is ranked and not an NCI-designated Cancer Center. However, I include both measures to exploit Cedars-Sinai's unique status, as its geographic location may influence patterns of use by race.

2.3.2 Focal Variables

My focal variables in this chapter are (1) an individual-level measure of patient race, and (2) the percentage of black respondents in a patient's census tract. Individual-level race comes from a patient's Medicare record, and is measured as White, Black, Asian, Hispanic, or Other. The percentage of black residents in the patient's census tract comes from American Community Survey 2008-2012 estimates.

3. For more on the Area Resource File, see <https://data.hrsa.gov/topics/health-workforce/ahrf> and Stambler (1988).

4. Ranking is the same as Chapter 1, meaning the hospital is matched to 2010 rankings for visits before July 19, 2011, and 2011 rankings thereafter.

2.3.3 Controls

At the individual level I control for a patient's age and sex. At the level of the patient's census tract, I control for the percentage of residents with a college degree and the per-capita income (hyperbolic arcsine-transformed). At the hospital level I control for whether the hospital is affiliated with a medical school, the number of beds in the hospital (logged), whether the hospital is a teaching hospital, and the percentage of black residents in the hospital's Dartmouth Health Service Area.⁵ At the level of patient-hospital pairing, I control for the distance between the patient and the chosen hospital's ZIP code centroid.

2.3.4 Models

I use standard logit models for both dependent variables. A negative-binomial using the full numeric inverse rank dependent variable produces substantively identical results.

2.4 Results

2.4.1 Descriptive Statistics

Tables 1 and 2 present descriptives for patients and hospitals, respectively. There are 882 patients who meet the rurality cutoff. Of those patients, ~69% live in a Big Metro locale, ~28% live in a Metro locale, and ~3% live in an Urban locale. Racial breakdown mirrors the full sample from Chapter 1, with white patients as the great majority

5. See Chapter 1 for more details.

of the sample (~80%). Just over 3% of the sample is black. Average percentage of black residents across patient's census tracts is 4%, and average percent with a college degree is 37%. Note that the small samples of black patients and patients from black neighborhoods may reduce the statistical power available for my analyses, especially given the correlation between the two measures. Average age of patients is 76, and slightly more than half of patients (~54%) are male.

Eight hospitals in this chapter's sample are ranked, and seven of the eight NCI-designated Cancer Centers in California are in my sample.⁶ The average number of beds among hospitals in this chapter's sample is 292. 11% of hospitals are affiliated with a medical school, and over half (52%) are teaching hospitals. The average percentage of black respondents in hospital HSAs is 4.9%.

2.4.2 Average Distance to Hospitals

Table 2.3 presents average distances in miles, by race, to the closest ranked hospital and closest hospital of any kind, respectively. These distances are calculated using the full population of California hospitals, not just those that appear in this chapter's subset. Note that (1) these distances are "as the crow flies," so actual distances may be even longer, and (2) these distances are only for patients who meet the rurality cutoff, so they represent distances for those who at least live in an "Urban" locale.

White patients are farthest from both ranked hospitals and any hospital, needing to travel more than 41 miles to a ranked hospital and 3.3 miles to reach any hospital.

6. The SEER-Medicare hospital file does not include data on City of Hope, which is PPS-Exempt Cancer Hospital. For more on PPS-Exempt Cancer Hospitals, see <https://www.cms.gov/Medicare/Quality-Initiatives-Patient-Assessment-Instruments/HospitalQualityInits/PCHQR.html>.

Hispanics, Other races, blacks, and Asians are respectively closer to each type of hospital in a relatively stepwise way; patients of each race are, on average, about 5 miles closer to a ranked hospital, and 0.5 miles closer to any hospital, than patients of the preceding race. Asian patients are the closest to both hospital types, and need only to travel 21 miles, or about half the distance of white patients, to reach a ranked hospital.

2.4.3 Regressions

Tables 4 and 5 present results from logit regressions of receiving treatment at an NCI-designated Cancer Center and from a ranked hospital, respectively. Standard errors are in parentheses. In both models, the racial composition of a patient's neighborhood is not a significant predictor of whether a patient receives treatment at a hospital with the given attribute. Moreover, the effects (though not statistically significant) are positive in both models. These results lead us to reject Hypothesis 1, which predicted that minority-predominant neighborhood composition would have a negative effect on a patient's propensity to receive treatment from a high-status hospital.

Other similarities between the models are (1) age, which is a significant negative predictor of receiving treatment from both types of hospital, and (2) distance, which is significant and positive for both hospital attributes. These results are unsurprising, since (1) a patient's ability to travel longer distances likely declines with age, and (2) all races need to travel much further to reach hospitals of each type than to reach their closest hospital.

Individual-level patient race has a notably different effect from neighborhood racial composition in both models. Black patients are significantly more likely than white patients to receive treatment from both ranked hospitals, and though the effect is positive in the model for NCI CC use, it is not statistically significant. I discuss this result, and the discrepancy across the two models, below.

Other differences between models are the differential statistical significance of education level and per-capita income of a patient's census tract. However, the effects are positive for both predictors in both models, and the effect for census tract education level approaches significance in the ranked hospital model ($p < 0.1$).

2.5 Discussion

Race plays a crucial role in stratifying health outcomes across the life course. My findings echo this, but in somewhat surprising ways. First, the racial composition of a patient's neighborhood is not a significant predictor of that patient's propensity to use a high-status hospital. However, it is important to remember that my sample is unique in that it consists of patients who have *already received* a diagnosis of cancer. As Lamont et al. (2012) and especially Beyer et al. (2016) discuss, inequality in cancer care in these neighborhoods appears to be a function of *screening*, not of services.

This phenomenon is also reflected in the model predicting "any" treatment in Chapter 1; patients from black neighborhoods are significantly less likely to seek "any" treatment, as an increasing function of the "blackness" of the neighborhood. In addition, Hispanic and Asian patients are more likely than white patients to seek

treatments, while black patients are not.⁷ Thus, black patients in my sample appear to have already surmounted the barrier of cancer screening, and likely enjoy persistently-elevated access to cancer care compared to others in their neighborhood.

The effects of individual-level race, despite mirroring past findings (Onega et al. 2009; Huang et al. 2014), are still surprising from a sociological perspective. The seemingly-small difference between the two dependent variables, namely Cedars-Sinai Medical Center's position as a *U.S News* ranked hospital that is not an NCI-designated Cancer Center, is analytically advantageous in understanding the effect of individual-level race. Cedars-Sinai is in West Hollywood, putting it in closer proximity to historically-black neighborhoods in Los Angeles, which are located in South-Central LA. Especially notable is historically-black neighborhood Crenshaw, which is accessible to Cedars-Sinai via a direct bus route.⁸ Service to this neighborhood, which is both densely-populated and predominantly black, may be enough to explain the difference in statistical significance between the ranked hospital and NCI CC models. To the extent that it does, this phenomenon illustrates a more general point: at least in California, black patients appear to accrue an advantage in access to high-quality cancer treatment because of their location in urban neighborhoods, as demonstrated by past research (Huang et al. 2014).

However, to the extent that the following discussion is accurate, my findings are also of increasing concern, because they suggest treatment differences between

7. The coefficient is negative, but not statistically significant

8. <https://media.metro.net/documents/1e1822f1-9571-4f2b-8495-4fcc3dd87814.pdf>

blacks and whites are not necessarily a function of access to high-quality treatment (Patel et al. 2015b). Instead, they imply that treatment differences occur *within hospitals*, meaning minority patients receive systematically biased treatment recommendations (however implicit). Existing work on leukemia patients (Byrne et al. 2011) and parents of children with pediatric cancer suggests some of this variation may be due to patient socio-economic status (Gage-Bouchard 2017; Gage-Bouchard et al. 2015), but other studies suggest the variation is, at least in part, explicitly racial (Patel, Johnson, et al. 2015).

There are three main limitations in my analysis, which also apply to the previous chapter. The first is that I examine only patients with blood cancers. The second limitation is that my analysis includes only outpatient visits at hospitals. The majority of cancer treatments are outpatient, but it is possible that ranking/NCI CC use differs for patients who require inpatient treatment. Finally, given the limitations of my data, I am unable to determine the salience of other factors for patient choice of hospitals, like racialized physician referrals.

Overall, my results reinforce the need to pay attention to race as an additional “fundamental cause” of disease, in addition to socioeconomic status (Gee and Ford 2011; Bailey et al. 2017; B G Link and J Phelan 1995). Further research should closely attend to two factors highlighted by my results. First, it is becoming increasingly important to specify the specific mechanisms by which racial inequality is occurring in cancer treatment. This work is underway among clinicians, but sociologists have much to offer the discussion, especially in terms of theoretical framing. Second, and more specifically, my findings suggest that investigations of within-hospital varia-

tion in cancer treatment are particularly urgent (Patel et al. 2015b). Especially given favorable prognoses of racial minorities with acute myeloid leukemia (Patel et al. 2015a), racialized inequalities in treatment and mortality are very concerning in light of the fact that differences in access to high-status hospitals does not appear to explain differences in treatment.

2.6 Tables

Table 2.1: Patient Demographics (n = 885)

Variable	Mean	St. Dev.	Min	Max
Age	76.358	7.534	65	99
Male	0.536	0.499	0	1
Race				
Asian	0.078	0.268	0	1
Black	0.033	0.178	0	1
Hispanic	0.054	0.227	0	1
Other	0.038	0.192	0	1
White	0.794	0.404	0	1
Locale				
Big Metro	0.687	0.464	0	1
Metro	0.277	0.448	0	1
Urban	0.036	0.187	0	1
Census Tract Attributes				
% Black	4.04	8.10	0.00	89.04
% College Degree	37.35	21.22	1.03	89.50
Per-Capita Income (asinh)	3.10	0.05	2.95	3.23

Source: SEER-Medicare

Table 2.2: Hospital Demographics (n = 189)

Variable	Mean	St. Dev.	Min	Max
Ranked	0.04	0.20	0	1
NCI CC	0.04	0.19	0	1
# of Beds	291.85	198.40	10	1,395
Med School Affiliated	0.12	0.32	0	1
Teaching Hospital	0.52	0.50	0	1
% Black in HSA	4.89	5.03	0.15	36.74

Source: SEER-Medicare

Table 2.3: Distances to Hospitals in Miles, by Race

Race	Ranked Hospital	Any Hospital
Asian	21.15	2.17
Black	26.97	2.86
Hispanic	36.12	3.07
Other	31.73	3.58
White	41.31	3.31

Source: SEER-Medicare

Table 2.4: Results from a Logit Regressions of Seeking Treatment at an NCI Cancer Center

Race (Ref: White)	
Asian	0.522 (0.526)
Black	3.106 (1.997)
Hispanic	0.668 (0.749)
Other	-0.270 (0.899)
Tract % Black	0.021 (0.027)
Tract % CD	0.058** (0.022)
Tract PCI (asinh)	0.783 (0.806)
Male	0.049 (0.356)
Age	-0.057* (0.026)
Urban Locate (Ref: Big Metro)	
Metro	-0.135 (0.562)
Urban	3.731 (3.094)
Hospital Attributes	
Med School Affil.	7.179*** (0.859)
Beds (logged)	2.168*** (0.469)
Teaching Hospital	17.743 (1, 023.922)
HSA % Black	-0.074 (0.049)
Distance (logged)	1.547*** (0.227)
Constant	-49.646 (1, 023.963)
Observations	1, 245
Log Likelihood	-111.139
Akaike Inf. Crit.	258.279

Note: *p<0.05; **p<0.01; *** p<0.001
Source: SEER-Medicare

Table 2.5: Results from a Logit Regressions of Seeking Treatment at a *U.S. News* Ranked Hospital

Race (Ref: White)	
Asian	0.084 (0.432)
Black	1.994* (1.003)
Hispanic	0.221 (0.693)
Other	0.501 (0.765)
Tract % Black	0.001 (0.022)
Tract % CD	0.024 (0.015)
Tract PCI (asinh)	1.269* (0.594)
Male	0.170 (0.282)
Age	-0.043* (0.020)
Urban Locate (Ref: Big Metro)	
Metro	-0.234 (0.483)
Urban	3.142 (1.644)
Hospital Attributes	
Med School Affiliated	3.003*** (0.339)
Beds (logged)	4.797*** (0.634)
Teaching Hospital	17.122 (622.358)
HSA % Black	0.065 (0.036)
Distance (logged)	1.045*** (0.167)
Constant	-68.069 (622.419)
Observations	1,245
Log Likelihood	-171.826
Akaike Inf. Crit.	379.652

Note: *p<0.05; **p<0.01; ***p<0.001
Source: SEER-Medicare

Chapter 3

The Value of Categorical Ambiguity for Religious Organizations

For much of Western history, the Christian church market has been organized around clear, highly-institutionalized categories: denominations. Denominational affiliation has long marked the topography of congregational competition and collaboration (Chaves and Sutton 2004; Sutton and Chaves 2004), legitimated congregational claims (Hillerbrand 2009; Noll 1992), and, consequently, driven constituent affiliation (Weber 1946, 2005). However, over the past thirty years, a new organizational form has emerged in the church market, consisting of churches that outright reject and avoid denominational classification. These idiosyncratic, “nondenominational” churches have flourished, even as denominational giants have begun to falter (Chaves 2011).

The success of nondenominational churches is a puzzle for prevailing theories of market order, which argue that market categories organize and coordinate market exchange, and thereby drive organizational legitimacy. Neoinstitutional versions of this approach argue that market audiences employ a small number of socially-constructed, organizing categories when making market choices (Powell and DiMaggio 1991, Introduction). In established markets, categorically-ambiguous candidates increase transaction costs, and consequently suffer audience discounts for illegitimacy (Zuckerman 1999, 2004, 2000). Nondenominational

churches reverse these expectations about ambiguity and legitimacy, and reveal the need for a closer look at market-ordering phenomena.

The approach taken in this chapter expands existing theory about market categories in two new dimensions. The first is temporal: audience preferences about the categorical conformity of market candidates can change over time. The second is normative: I show that organizations can derive legitimacy from *normative* resonance, which may or may not include conformity to market categories. This approach integrates insights from both “old” and “new” institutionalism, economic sociology, the history and sociology of religion, and the study of modernity to questions in organizational and economic sociology. I argue that growing dissatisfaction with organized religion among contemporary churchgoers has severed the link between categorical conformity and normative resonance (Giddens 1990; Chaves 1994, 2011). Consequently, I show that nondenominational churches can produce stronger normative resonance with their audience by explicitly distancing themselves from established categories, and that this normative resonance leads to increased returns in both affiliation and tithing as compared to their denominational peers. I argue that the normative success of nondenominational churches derives directly from their ambiguity, which allows them to meet a wider range of normative expectations by maintaining flexible identities and formal structures (Packard 2011, 2012; Marti and Ganiel 2014). In other words, legitimacy-building in the church market is a distinct process from categorical institutionalization (Jepperson 1991).

I demonstrate support for this argument across time, levels of analysis, and three datasets with nationally-representative samples: the National Congregations Study,

the Religious Life/Faith in Flux Study, and the Congregational Life Study. The paper has four parts. The paper's first section discusses extant theories of market categories and market order. The second section details my empirical case: the American church market. The third section describes the data and methods used in analyses. I then present results at both the organizational and individual level. I close by discussing the implications of my results for existing hypotheses about market categories and order.

3.1 Market Categories and Market Order

Contemporary theories about organizational markets treat market order and market valuation as synonymous. The most explicit formulation of this view comes from neoinstitutional theory (Zuckerman 1999), but it is not limited to the neoinstitutional approach (Carroll 1985; Hannan and Freeman 1984; White 1981). Each of these approaches uses a particular ordering attribute of the market to predict organizational survival and valuation, but they differ on which attribute is primary. Organizational ecologists prioritize firm size, age, and product specificity (Hannan and Freeman 1977, 1984; Carroll 1985), and network analysts prioritize the arrangement of firms in physical or competitive space (White 1981, 2002; Powell et al. 2002, 2005).

The neoinstitutional view argues that audience members rely on socially-constructed categories to simplify the menagerie of organizational candidates and thereby reduce transaction costs. Neoinstitutionalists assume that biological constraints on cognition limit the number of prevailing categories that audiences can

use at any given time (Powell and DiMaggio 1991, Introduction; DiMaggio 1997). The diverse field of market candidates is thus reduced along a few categorical eigenvectors (Zuckerman 2000). Because audiences rely on categories to navigate their market behavior, audiences tend to de-legitimize, or at least underprice, organizations that either do not conform to established categories or participate in multiple categories at once (Zuckerman 1999). The penalties for categorical nonconformity can sometimes be mitigated: candidates that participate in multiple categories are penalized less when either the candidate actors or the market categories themselves are nascent (Ruef and Patterson 2009; Zuckerman et al. 2003), but penalties increase as markets institutionalize. Candidates that diverge from traditional categories can sometimes outperform rank-and-file candidates if their rogue trajectory leads to increased returns for investors (Smith 2011). Nevertheless, organizations generally tend to heed the “categorical imperative,” or risk penalties to their legitimacy.

The strong link between market order and candidate legitimacy in existing approaches means that constituent studies operationalize organizational legitimacy in pragmatic terms, most commonly as organizational survival or centrality. However, the recent neoinstitutional work in this area has tended to treat legitimacy in more narrowly-economic terms, as organizational *pricing* (Zuckerman 2000, Zuckerman 1999, 1431;; 2004; Smith 2011; Pontikes 2012; Ruef and Patterson 2009, c.f.,;). In other words, the benefits and penalties incurred along categorical lines are explicitly monetary, in the form of firm investments. Thus, a “devalued” firm is synonymous with a “discounted” or “underpriced” one.

The conflation of legitimacy and pricing is curious, especially when viewed against the rich history of normative approaches to legitimacy in both institutional theory and economic sociology. Though the two processes are correlated, these views all draw an (at least analytical) distinction between legitimacy and market pricing. So-called “old” institutionalists were the first to articulate the normative view in organization studies, and generally argue that audience norms/morals/values shape organizational outcomes (Selznick 1938, 1949; Merton 1936; Selznick 1996, 1957). Contemporary work supports these “early” institutionalist insights, by demonstrating normative mechanisms for organizational legitimation, albeit for organizations outside of the financial sphere that is often central to categorical work (Ruef 2004; Turco 2012; Carroll and Swaminathan 2000). For example, Reich (2014a) argues that the demise of PubliCare, a hospital in the San Francisco area, resulted from a mismatch between the norms of employees and the new administration.

These studies suggest there is good reason to believe different normative schemes lead not only to variance in organizational affiliation, but also are central to audience investment in organizations and organizational products (Pontikes 2012; Healy 2006). Norms are often the primary mover in a market (Fourcade and Healy 2007). They are therefore independent of market categories, and may thus moderate the relationship between an organization’s adherence to a market’s categorical scheme and its ability to win affiliates and investments in the market.

3.2 The Church Market

To many, churches are special kind of organization. This is certainly true in terms of the goods offered: churches deal in the supernatural, which is not the case for other organizations. Despite their unique nature, we should nevertheless expect the categorical imperative to apply to churches for two reasons. First, the hypothesis does not contain any scope conditions that would limit its application to either non-profits generally or churches specifically (Zuckerman 1999). Second, the church market contains the same attributes, at least formally, as markets in existing literature on the categorical imperative. Churches, like all audience-dependent organizations, primarily depend on the same three resource types: “members, money, and leaders,” and churches are no different (Chaves 2004, 17). Without a constituency and the income it provides, churches cannot survive. At least in the United States, churches are perhaps *more* financially dependent on audience support than other organizations; the US Government cannot finance an overtly religious organization, so political interventions like “bail-outs” are unavailable.¹

Financially-contributing congregants are not easy to come by, either. Churches compete not only against each other, but also against a wide range of other voluntary organizations for constituents (McPherson 1983; Chaves 2004; Chaves and Gorski 2001). Consequently, churches are quite functionally similar to publicly-traded companies: they seek financial investments from an audience, and compete in a highly-institutionalized market against each other, and a wide range of alternative organizations, for that investment. We should therefore expect hypotheses

1. *Everson v. Board of Education*, 330 U.S. 1, 63

about the role of market categories in organizational valuation to apply to the church market.

3.2.1 Church History and Denominational Proliferation

For the bulk of Western history, church market audiences demanded the same commodity: salvation. From the early 1st through the early 16th century, the Catholic Church exercised monopolistic control over salvation.² Salvation was always indirectly tied to financial contributions, but it became increasingly commercialized under Catholic control as indulgences, which allowed the direct purchase of tangible salvific tokens (MacCulloch 2005). Protestant Reformers, in contrast, maintained that salvation was obtained through faith alone, de-legitimizing Catholic and papal control over salvation. The bifurcation of salvation and indulgences made salvation more accessible in principle, but it also removed the means by which individuals could be sure that they were saved. The accessibility of salvation was at an all-time high, but the means for its acquisition were murkier than ever. Unsurprisingly, the articulation of new salvific benchmarks quickly became the principal concern of Protestant leaders (Hillerbrand 2009). Max Weber puts it succinctly: “the question could not be suppressed whether there were any infallible criteria by which membership in the electi could be known” (Weber 2005, 66).

In sum, Christian believers placed a high value on salvation, which drove demand for clear criteria by which to acquire it. This demand, coupled with the newly-

2. There was a single church, The Church, until the Great Schism in 11th century. The Roman Catholic Church did not go by that name until after the Protestant Reformation. I refer to the pre-Schism Church, the subsequent Western Christian Church, and the Roman Catholic Church using the latter name for clarity's sake.

competitive field of religious leaders, ignited the beginnings of a massive proliferation of denominations (Noll 1992, 169).³ It did this by leading audience members to seek denominationally-affiliated congregations, because a congregation's denominational affiliation served as tangible proof of its conformity with the prevailing normative scheme, and thereby legitimated that particular congregation's claim to religious authority.

Denominational tendencies strengthened in the American Colonies, both due to the intermingling of diverse colonists and due to the Founding Fathers' construction of novel, democratic governance structures. Denominations quickly followed suit, beginning a period of tight coupling between denominational categories and formal structures that persisted for several decades (Noll 1992, 148-149; Chaves and Sutton 2004; Sutton and Chaves 2004). Years of fine-tuning have created contemporary denominations that are so well-articulated and well-structured as to be organizations in their own right (Chaves 1993; Scherer 1977). The consequence of this evolutionary path is that denominations mark clear, highly-institutionalized categories in the Christian church market. For several decades, these denominational categories shaped market activity and organizational competition (Chaves 1993; Chaves and Sutton 2004; Sutton and Chaves 2004).⁴ The highly-articulated denominational structures of American Christianity are still a tremendous force.

3. For simplicity, I call both early Christian sects and later formal denominations by the latter name.

4. There is certainly loose coupling among churches of a particular denomination, but the common institutional elements are more than nominally shared thanks to denominational features like annual conferences, formal ordination processes, and denominational oversight in leadership appointments.

3.2.2 Contemporary Churches and Congregational Audiences

However, denominational religious authority, like many other traditional power structures, has not fared well in modernity and post-modernity (Giddens 1990). The same modernistic principles of individual autonomy and a distrust of authority that initially drove the creation and expansion of denominations has, in its more secular and advanced contemporary incarnation, begun to erode their legitimacy. Modernity was slower to reach the church, particularly in America, but its effects for religious authority are now apparent (Chaves 1994, 2011).

(Post)modernity has damaged religious authority, but has (for now) proven less harmful to rates of religious belief and practice (Voas and Chaves 2016). However, many contemporary believers reflect their current postmodern environment, by seeking a highly-individualistic version of religiosity (Bellah et al. 1985; Roof 2001; Greer and Roof 1992; Bender 2010, 9-12). Contemporary audiences are increasingly seeking affiliation with those who share or accept their already-existing views (Himmelboim et al. 2014; Colleoni, Rozza, and Arvidsson 2014), and churches are often the sites where this affiliation occurs (Chaves 2011). In addition, church audiences want to be celebrated, both through emotive support of their identities, wherein individuals are made to feel welcome and celebrated, and freedom from perceived over-regulation of particular behaviors and identities (Ammerman 2013; Roof 2001). This new breed of postmodern demands has instead paved the way for an entirely new, historically-unthinkable organizational form: the nondenominational church.

3.2.3 What is a Nondenominational Church?

For the purposes of this paper, a nondenominational church (NDC) is an analytical term referring to members of a new organizational form in the Christian church market. By organizational form, I mean a common method of formal organization that is (at least analytically) shared by a number of independent organizations (Ruef 2000). New NDC congregations are marked by an explicit rejection of existing denominational categories (and often the process of categorization itself) in pursuit of an idiosyncratic approach to liturgy, belief, and/or practice (Packard 2011; Driscoll 2006; Jones 2011; Bell 2006; Packard 2012). Though NDCs are distinctly Christian congregations, they do not formally share any positive attributes, let alone a common coordinating or governing structure. Instead, they are unified analytically by what they lack: a clear denominational affiliation.

I use “denominational affiliation” in the strongest sense, to mean both ties to a formal organizing body, and the assent to a particular sectarian tradition within Christianity. This distinguishes NDCs from congregational churches within sectarian traditions, like independent Baptist congregations or Churches of Christ. Congregational churches exercise autonomy and individuality in church governance, but nonetheless admit commonality of beliefs through their mutual assent to a shared sectarian tradition. It is important to remember that the mere act of assenting to a shared sectarian category is consequential in the church market, because of the highly-salient, highly-institutionalized nature of these categories (Chaves and Sutton 2004; Sutton and Chaves 2004). NDCs therefore represent the strongest form of congregationalism, by rejecting both denominational coordination and sectarian

categorization altogether.

In fact, qualitative studies of NDCs find that they actively resist any kind of institutionalization, seeking instead to maintain a fluid, open identity (Packard 2011, 2012). This explains why even sociologists of religion disagree on the basic traits of NDCs, like their political and religious identities: because NDCs have no attribute to reliably generalize upon (Chaves 2004; Marti and Ganiel 2014). Instead, NDCs avoid association entirely, both with other, denominationally-affiliated churches, and, importantly *with each other*.⁵

NDC's analytical union through intentional disunity is exemplified not just in the contradictory and unclear academic literature on NDCs, but also in the words of NDC founding pastors themselves:⁶

“Individuals are drawn to [NDCs] out of frustration with conventional models of church and conservative theologies, as well as for other reasons, and this sense of frustration is more often than not which defines the movement.” - Jones (2011, Introduction)

“[What ties NDCs] together is a missiological conversation about what a faithful church should believe and do to reach Western culture. However, beyond that there is little unity because there is widespread disagreement on

5. There are some informal collectives of NDCs who collaborate and coordinate, but the vast majority do not. Even in these cases, the collaborations are post-hoc homophily, rather than primary to each church's formation.

6. I have quotes from these sources by replacing “Emerging Church” with “NDC.” The relationship between the Emerging Church and NDCs is too complicated to detail here. Nonetheless, the selected quotes refer to the early movement away from denominational affiliation, not the more recent liberal contingent of NDCs sometimes called the “Emergent” church.

what counts as faithful doctrine and practice.” (Driscoll 2006, 90)

These quotes reinforce that NDC churches are unified not by what they stand *for*, but by what they stand *against*; what NDCs stand against are established Christian church institutions, liturgies, practices, and beliefs. NDCs are otherwise a menagerie of sizes, theologies, political views, and styles. This patterned idiosyncrasy can be rephrased as a second analytical commonality among NDCs: the celebration and emphasis of individuality (Marti and Ganiel 2014). In an environment with ever-diminishing religious authority (Chaves 1994), non-denominational churches and members are free to cast off unwanted elements of stuffy, constraining categories in pursuit of their own variant on the truth.

Figure 3.1 provides more support for NDC’s ambiguity, by plotting the distributions of NDCs and five well-known denominations on the axes of theological and political conservatism in both 1998 and 2012. These measures are aggregated from the churches in the NCS sample that claim these denominations. In this figure, letters represent denominational means, and error bars represent denominational standard deviations. Error bar boundaries consequently illustrate the total niche space for Christian churches. Unitarian Universalist churches, who are religious generalists, occupy a small liberal niche within the denominational market. Denominational generalism is instead dominated by Episcopalianism, United Methodism, and Catholicism. Episcopalianism appears to be the **most** generalist denomination, with means almost exactly in the middle, and standard deviations spanning most of the space. Southern Baptist churches are the most conservative. Ideologically, NDCs cover a total area similar to that of other denominational generalists. Though

the area occupied is more generally more conservative than Episcopalian or United Methodist churches, the relatively wide range of ideologies reinforces NDC's ambiguity, especially when combined with NDC's other ambiguous traits.

This discussion of NDC idiosyncrasy and independence raises an important question: why group these churches together at all? The answer is twofold. First, NDC rejection of categorization marks a novel type of organizational form in the Christian church market, both in content and structure. The second is because the NDC form is not only distinct and historically important, but also responsible for these congregations' unique success in the contemporary church market.

3.2.4 Modes and Organizational Mechanisms for NDC Success

I argue that NDC's purposive ambiguity allows these organizations to better meet modern churchgoers' individualistic norms better than denominationally-affiliated churches. Extant qualitative studies reveal some of the organizational mechanisms by which NDCs meet individualistic demand. First, many churches publicly maintain pluralist theologies, encouraging individuals from diverse backgrounds to talk about their beliefs and assumptions (Marti and Ganiel 2014). This creates at least the ideas that all views are welcome, and that other constituents also hold conflicting views. Second, many employ a "flattened" and/or conversational leadership structure, meaning that church leaders are not arranged into a rigid hierarchy, but instead directly and casually engage with congregants (Packard 2011, 2012). Finally, NDCs often dispense with the traditional trappings of liturgy, swapping stained glass, pews, organs and choirs for rented spaces, folding chairs, drums and gui-

tars (Marti and Ganiel 2014; Chaves 2004). Together, these ambiguous, tradition-rejecting theologies and formal structures give a welcoming, idiosyncratic identity to NDCs, which is a perfect match for contemporary norms (Bielo 2009; Roof 2001).

In sum, the norms of contemporary church audiences render denominational affiliation disadvantageous for congregations, because denominational congregations are perceived as comparatively less able (or even outright unwilling) to respond to individual concerns. By throwing off the weight of denominational lineages, NDCs render themselves both structurally and ideologically flexible to either respond to or take on the norms of their constituents.

3.2.5 Operationalizing Audience Norms

In this study, I operationalize the the norms of modern churchgoers in three modes. The first mode is belief reinforcement. Individuals are increasingly seeking affiliation with those who share or accept their already-existing views (Himmelboim et al. 2014; Colleoni, Rozza, and Arvidsson 2014), and churches are often the sites where this affiliation occurs (Chaves 2011). NDCs should attract religious audience members who seek reinforcement for their individual religious beliefs:

Belief Congruence: NDC flexibility means they are better able to match individuals' idiosyncratic beliefs, and so belief resonance is a significant driver of NDC affiliation. Denominational churches, which are less flexible, will attract fewer affiliates on this dimension.

The second mode is expressive celebration (Marti and Ganiel 2014; Ammerman 2013; Roof 2001). Individual celebration includes freedom from perceived

over-regulation of particular behaviors and identities (e.g. condemnations for being homosexual or drinking alcohol), and also more emotive, supportive component of individualism, wherein individuals are made to feel welcome and celebrated. This mode does not necessarily conflict with the Belief Congruence mode in NDCs, because, as Marti and Ganiel explain: “[NDC congregants] continually balance the dual demands of deconstructing their individual faith and investing in cooperative congregational relationships...all the activities and beliefs of [NDCs] exist within an overarching religious orientation that is strategically deployed” (Marti and Ganiel 2014, 77). Denominational churches, whose rules and identities were largely formed before the individualism of modernity, will likely fare less well on this dimension:

Expressive Congruence: Individuals affiliate with NDCs because NDCs both present fewer restrictions on individual expression and promote collective effervescence. Denominational churches, which tend to be more rigid and extensive in their regulations, will fare less well on this dimension.

The third mode explicitly links individual norms with organizational identity and financial support. Both the identity ecology approach in sociology, and the person-organization fit approach in management studies expect an audience member to more readily support, through investments and participation, an organization that they see as having compatible normative commitments to their own (Edwards and Cable 2009; Carroll and Swaminathan 2000; Pontikes 2012). This mode

captures any elements of normative resonance not captured by the belief or expressive modes; it provides a general measure for any additional component that audience members think a church *should* have. This dimension should therefore be significantly associated with congregational investments. We should also expect NDCs to be successful on this dimension, since their lack of bureaucratic constraint on both governance structure and ideology allows congregations to more readily respond to constituent norms:

Goal Congruence: Individuals affiliate with and invest in NDCs because NDCs better match individuals' general norms and goals for congregations. Denominational churches receive lower levels of affiliation and investment on this dimension.

Overall, we should generally expect NDC's ability to meet audience demand on these three dimensions to be greater than denominational churches, as a direct product of their organizational form. In other words, it is precisely because NDCs have no complex, denominational structure that they are more freely capable of accentuating and embracing the contemporary idiosyncrasies of their members.

3.3 Data, Measures and Method for Congregations

In order to fully attend to the organizational and individual levels, and the interaction between them, I use three datasets with nationally-representative samples. I investigate organization-level outcomes using the National Congregations Study. Individual-level and individual-organizational mechanisms are measured using the

Religious Life/Faith in Flux Survey and the Congregational Life Study. In order to assess the effects of NDC status, my analyses compare nondenominational churches and their constituents (abbreviated NDCs) to denominational churches and their constituents (abbreviated DCs).⁷

3.3.1 Data

I investigate the organizational returns to non-denominational status using data from the National Congregations Study (NCS). The National Congregations Study is the first, and only, nationally-representative survey of religious congregations in the United States (Chaves et al. 1999; Chaves and Anderson 2014). The NCS obtained a nationally-representative congregational sample from GSS respondents using hypernetwork sampling, which solicits organizational memberships from a representative sample of individuals and weights organizations according to size (McPherson 1982).

The study contains three waves of data (1998, 2006, and 2012), each of which collected congregational information from a key informant in a congregation (usually a clergyperson) through a phone interview lasting 45-60 minutes. The 2006 wave used a different sampling technique than the 1998 and 2012 waves, rendering this less comparable to the 1998 and 2012 samples, so I omit it from analysis (Chaves and Anderson 2014). Response rates were 80% for the 1998 Wave, and 73% for the 2012 Wave. The resulting dataset I use contains 2,039 unique congregations (1066 in 2012, 973 in 1998).

7. see above for a discussion about my analytical definition of NDCs.

3.3.2 Methods and Measures

I estimate the effects of NDC status on church attendance and tithing income using standard OLS models. The models include dummy variables for region, so they can also be thought of as multilevel models with a fixed effect for region (Gelman and Hill 2007). These are standard models in sociological research, so I do not detail them here. A set of files that reproduces the paper in its entirety from raw versions of the data is available by request, and will be made publicly available upon the chapter's publication.

My congregation-level dependent variable for tithing is the dollar amount of income a congregation received from “individuals’ donations, dues, or contributions” in the previous fiscal year.⁸ My congregation-level dependent variable for attendance is the number of people over the age of 18 who “regularly participate in the religious life of [the] congregation.” Both measures are normalized by hyperbolic arcsine transformations, which is similar to the log scale, but can accommodate zero values (Pence 2006; Burbidge, Magee, and Robb 1988).

My independent variables are the age of the congregation, the tenure of the senior pastor, whether or not the congregation owns its own building, the number of services the congregation holds each non-holiday weekend, the urbanity of the church (Urban, Suburban, Rural), a measure of whether at least 30% of the people in the church's census tract are below the official poverty level, the church's endowment size (hyperbolic arcsined), whether the church believes the bible is “the literal and inerrant word of God,” a self-rated measure of theological conservatism (Lib-

8. Quoted phrases come from the NCS questionnaire.

eral, Moderate, Conservative), and region.

It is important to note that the sampling procedure of the NCS creates some difficulty for estimating the effects of NDC status on attendance and income. Larger churches are more likely to be named by constituents in a hypernetwork sample, so analysts usually achieve nationally-representative samples by weighting congregations using the inverse of their size (or a function of it). In short, since NDC status is correlated with size, it is also with NCS weights. Consequently, weighting my regressions produces underestimates of the effect of NDC status, particularly on congregation size. As a result, I present unweighted estimates. However, it is worth noting that even the weighted, underestimated effects are substantively identical.⁹

3.4 Data, Measures and Method for the Church Market Audience

3.4.1 Religious Life/Faith in Flux

The Religious Landscape Survey (RLS) was a nationally-representative, random-digit-dial telephone survey of 35,556 US adults, conducted by Princeton Survey Research Associates International on behalf of the Pew Forum on Religion & Public Life in 2007.¹⁰ The survey asked respondents several questions about their religious affiliation and attitudes, along with a standard suite of demographic questions. The Faith in Flux Survey (FF) was a follow-up to the RLS in 2008, focusing on a subset of RLS respondents who reported changing their religion at least once in their life-

9. These results are available upon request.

10. For more information on the study, see <http://www.pewforum.org/religious-landscape-study/>.

time. The survey contains 2,867 respondents, and focuses mainly on respondents who switched either direction between Catholic and Protestant, or between affiliation and non-affiliation (The Pew Forum on Religion and Public Life 2009). Both the RLS and the FF contain a linking identification variable, allowing the surveys to be combined (RL/FF).

3.4.2 RL/FF Measures and Methods

The Faith in Flux survey asked participants open-ended questions about their reasons for leaving their old religion or denomination, and for joining their new religion or denomination. The question about leaving was phrased as follows:

“And just in your own words, what is the main reason that you are no longer [former religion/denomination]?”

The question about joining was phrased as follows:

“And just in your own words, what would you say is the main reason that you became [current religion/denomination]?”

Participant answers were then grouped into loose categories, for example:

“Liked current religion’s beliefs about God / because of belief in God or Jesus or higher being / because of faith / found the truth / like teachings of current religion / became closer to God / current religion made sense”

and

“Convenience / location / availability / local church / only church in town / no churches available of a particular denomination”

I treat these responses as semi-qualitative data, due to the open-ended nature of the answers, and tabulate proportions of loosely-grouped responses groupings by present denominational affiliation. Respondents could give up to three reasons, but many only gave one. In order to capture the range of responses, however, the denominator for my proportions is all responses given, rather than individuals. Percentages can thus be read as: “X reason made up N percent of all answers given by current (non)denominational affiliates.” In order to make the results nationally representative, I calculated proportions through a weighted bootstrap of 1000 iterations each using the provided national weights.

3.4.3 Congregational Life Study

The US Congregational Life Study was a two-wave study (2001 and 2008/2009) of US congregations and their constituents. The study was comprised of three surveys: a congregational profile, a leader survey, and an attender survey. Each participating congregation completed one profile, one leader survey each for the principal and associate leader, and as many attender surveys as possible. The survey used a suboptimal method of soliciting denominations, by allowing respondents to both claim denominational independence and to name a denominational affiliation. I therefore use a conservative sample of NDCs, filtering congregations using (1) all available questions about denominational affiliation from the publicly-available congregational profile and leader surveys, and (2) congregational indicators received di-

rectly from the CLS research team.¹¹ My strong definition of NDCs mean that independent, sectarian congregations are included in the denominationally-affiliated category.

Each wave of the study included both a random sample of churches, and several subsamples of denominations that sponsored representative samples of their congregants. I use data only from the congregations in the random sample. I link data from the attender surveys to congregations through a unique congregation ID in the data. The Wave 1 random sample includes 424 congregations, and 122,494 congregants. The Wave 2 random sample includes 251 churches, and data for 64,574 individual congregants.¹²

3.4.4 CLS Measures and Methods

I model individual-level tithing rates using random-effects models that include both individual characteristics and separate random intercepts for congregation and year. I pay attention only to the individual-level fixed effects, which I take as decent estimates for affiliates of a particular denominational group, with the influence of particular congregations removed.

Importantly, these are not nationally-representative samples of the constituents of each congregation or denominational group, though the sample of congregations itself is nationally-representative. This is sub-optimal. However, the CLS provides two distinct advantages that outweigh the costs of its non-random constituent sam-

11. The obtained congregational indicators are not restricted, and will be made available upon publication of the chapter.

12. For more information, see <http://www.uscongregations.org>.

ple. First, it affords the ability to include congregational information alongside congregant responses. Second, using the CLS sample also provides, by far, the largest sample of NDC affiliates, who still make up a relatively small proportion of all religious attenders. Consequently, available nationally-representative surveys of individuals lack the statistical power to provide realistic estimates for NDC affiliates.

Dependent Variable

My dependent variable is respondents' self-reports of tithing as a percent of their income. The question, and possible answers, are worded as follows:

About how much do you give financially to this congregation?

- *I give 10% or more of net income regularly*
- *I give about 5% to 9% of net income regularly*
- *I give less than 5% of net income regularly*
- *I give a small amount whenever I am here*
- *I do not contribute financially here*

Though we might usually have reason to be wary of self-reported contributions, particularly as a percent, there is good reason to believe that religiously-affiliated individuals more accurately report their contributions, if only due to the Biblical imperative to give 10% of income as a tithe.¹³ This measure is also advantageous because it asks respondents to estimate *percentage* rather than *amount*. This measure

13. Respondents may also have been deterred from lying since their church administered the survey, offering the implicit possibility of validation.

therefore allows comparisons of individual financial commitments across income levels, and does not privilege wealthy donors who may give a small percentage that is still a substantial overall amount. I transform the resulting 5-point variable by squaring and rescaling it from 0-10, so that effect sizes roughly correspond to percentage increases in tithing.

Key Independent Variables

For concision, I only detail my two key independent variables. Descriptive statistics for all independent predictors is in Table 3.1. A set of files that reproduces the paper in its entirety from raw versions of the data is available by request, and will be made publicly available upon the chapter's publication.

Belief Congruence. I measure belief resonance using answers to the following question:

Does this congregation have a clear vision, goals, or direction for its ministry and mission?

- *I am not aware of such a vision, goals, or direction*
- *There are ideas but no clear vision, goals, or direction*
- *Yes, and I am strongly committed to them*
- *Yes, and I am partly committed to them*
- *Yes, but I am not committed to them*

I compare respondents who selected item 3, “Yes, and I am strongly committed to them,” to all other responses.

Sense of Belonging. I measure expressive resonance using answers to the following question:

Do you have a strong sense of belonging to this congregation?

- *Yes, a strong sense of belonging that is growing*
- *Yes, a strong sense—about the same as last year*
- *Yes, but perhaps not as strong as in the past*
- *No, but I am new here*
- *No, and I wish I did by now*
- *No, but I am happy as I am*
- *Not applicable*

I combine the three “Yes” answers into “Strong Belonging,” the three “No” answers into “Weak Belonging,” and code the “Not applicable” answer as the reference category, “No Belonging.”

3.5 Results

3.5.1 NDCs and the Categorical Imperative

Do NDCs suffer penalties for their categorical ambiguity? Table 3.2 presents results from independent regressions of attendance and tithing income on a number of congregational traits from the 1998 and 2012 waves of the NCS. Coefficients can be interpreted as percent change in the dependent variable for a unit increase in the predictor.

Non-denominational congregations are larger than DC congregations in both waves, with an average difference of 34.70% more attenders in 1998 and 28.40% more attenders in 2012. This is despite an overall decrease in church attendance, indicated by the lower attendance intercept in 2012. NDC status is also associated with significantly greater income from individual contributions in 2012, but not 1998.¹⁴ On average, NDC congregations in the 2012 NCS can expect to earn about 22.50% more than DC congregations from individual contributions. The average (weighted) DC congregation in the United States has an annual tithing income of about \$233,000, so we would expect an otherwise-identical NDC congregation to roughly \$50,000 more income from tithing, for a total of \$280,000. Also of note is the fact that the intercept for attendance in 2012 is lower than it is in 1998, but the intercept for tithing is higher. This suggests a concentration of contributions, with fewer people giving more money. Finally, the adjusted R^2 values for the regressions are all near or exceeding 0.50, indicating that the variables in each model account for ~50% or more of the variance in congregational attendance and income.

Overall, these regressions demonstrate that NDCs present a strong counter-example to the categorical imperative (Zuckerman 1999). NDCs are also puzzling to the more recent clarifications to the categorical imperative, since they do not appear to derive their success from novel market categories (Ruef and Patterson 2009), novelty of the NDC form (Zuckerman et al. 2003), or past successes (Smith 2011). What, then, is driving NDC success? The following section investigates mechanisms

14. The Frontier matching models in the Appendix confirm the significant and positive OLS treatment effects of NDC status in 2012, even when comparing NDCs exclusively to conservative protestant churches, and also confirm the weak income returns to NDC status in 1998.

for NDC affiliation and donation at the individual level.

3.5.2 Audience-Level Normative Mechanisms of Valuation

Affiliation

The open-ended questions asked by the Faith in Flux survey can be thought of as directly measuring the normative dimension of audience members' valuation of DC and NDC congregations. Out of the 2,867 respondents in the FF follow-up survey, 813 had both changed their denomination within Christianity and attended a church at least once or twice a year. Of these 813 denominational converts, 159 individuals currently attended an NDC, and 655 individuals currently attended a DC.

Tables 3 and 4 report the reasons current denominational and current non-denominational affiliates, respectively, gave for *leaving* their previous denomination as grouped/reported by Pew. Tables 5 and 6 similarly report reasons given for *joining* their current denomination. Within each denominational form, respondents report similar reasons for both joining and leaving, but the differences across the two forms are striking. In each table, a single reason was given by more than 20% of respondents. For DC affiliates, the reason is that they got married, or joined their spouses' church (22.3%); for NDC affiliates, it is because they liked the beliefs of their new congregation (21.3%). Whereas convenience is the second most highly-cited reason by DC affiliates, it is only the ninth and tenth most-cited item, respectively, for NDC affiliates leaving and joining a new congregation (not shown in tables). Finally, NDC affiliates cited the flexibility of their current religion as a top reason for leaving/joining congregations, but DC affiliates did not. This gives credence to the claim

that NDCs' denominational ambiguity enables them to more readily match congregant normative schemes, by allowing them to be less constrained than denominational churches.

Overall, belief and expressive reasons account for three of the top five reasons both NDC and DC affiliates gave for leaving and joining congregations, though NDC affiliates reported them much more often. To get a better sense of the frequency of these reason families across both groups, Tables 7 and Table 3.8 report the frequency of each reason type by denominational affiliation for leaving and joining, respectively. The first thing to note is the importance of belief congruence in both sets of respondents' reasons for leaving a denomination. In both groups, beliefs account for one-quarter or more of denominational departures. For current NDC affiliates, beliefs are the most common reason for previous denominational departure (34.2%). For current DC affiliates, they are the second most common reason. Expressive and regulative reasons are also important across the two groups, but much more so for current NDC affiliates (40.8% and 12.1%) than DC affiliates (26.1% and 6.8%). Unsurprisingly, life-structural reasons affect a large proportion of both groups; a third of current DC affiliates and more than a quarter of current NDC affiliates left their previous denominations for these reasons (marriage, children, a move, etc.). Life-structural reasons are the most common reason for current DC congregant attrition, but are the third most common reasons for current NDC congregant attrition.

The patterns in reasons given for joining mirror those in the reasons for leaving. As in the previous results, belief mismatch accounts for one-quarter or more of denominational departures across both groups. Belief mismatch is again the most

common reason given by NDC affiliates, but is the second most common reason given by DC affiliates. Expressive reasons also feature heavily in both groups, cited often by both DC and NDC affiliates. Expressive reasons are the most common reason given by NDC affiliates (41.5%), and the third most important reason given by DC affiliates (26.2%). Life structure again accounts for a large percentage of reasons in both groups, but is much larger for DC affiliates (44.6% DC, 28.3% NDC), and is again the most common reason given for DC affiliates' current affiliation. Similarly, network influence again plays a larger role in DC affiliation than NDC affiliation (3.5% DC, 2.6% NDC), but plays a smaller role overall.

As expected, NDCs are much better at matching audiences' normative evaluations on belief and individualistic (expressive/regulative) dimensions. These dimensions account for only 60.9% of past attrition by current DC affiliates, but account for an overwhelming 88% of current NDC affiliates past attrition. This suggests that current NDC affiliates prioritize their normative commitments over the categorical conformity of their congregation, and are thus willing to leave a category conformer for normative reasons. Moreover, belief and individualistic reasons were cited as reasons for joining their current denomination by the majority of both DC affiliates and NDC affiliates; specifically, belief and individualistic reasons comprise 60.8% of current DC affiliates' reasons and 87.1% of current NDC affiliates' reasons for joining their current denomination. Comparatively, structural explanations like network selection and influence were cited about 48% of the time by current DC affiliates and only about 31% of the time by NDC affiliates for both joining and leaving. These results demonstrate the influence of the market audience's normative concerns in the

church market, despite highly-institutionalized market categories.

Tithing

Normative schemes may drive congregational affiliation, but do they also drive congregational investment and, consequently, organizational pricing? Table 3.1 presents within-group NDC and DC affiliate means for all included CLS variables, along with *t*-values and t-Test *p*-values from tests of equivalence of means. Negative *t*-values indicate higher values for DC affiliates, positive *t*-values indicate higher values for NDC affiliates. These descriptive statistics provide further support for my hypotheses. DC and NDC affiliates exhibit significantly different values of nearly all variables.

Of particular note is strong vision commitment, expressed by 60% of NDC affiliates, but only 43% of DC affiliates. NDC affiliates also exhibit significantly higher rates of biblical literalism (62% vs 33%) and network orientation (69% vs 54%). DC and NDC affiliates do not differ on strong belonging (85% for NDC vs 86% for DC), which contradicts the Expressive hypothesis. However, those without a strong sense of belonging are likely to leave a congregation entirely, so we might therefore expect high rates of reported belonging given the congregationally-administered nature of the survey.

NDC affiliates also tend to be younger than DC affiliates, which is another sign that NDC congregations are attracting new affiliates, while DC congregations are benefiting from those who affiliated before the normative shift in audience sentiment. DC and NDC congregants also report similar numbers of friends at church,

and similar numbers of children. The similarity in numbers of children complicates the straightforward conservatism explanations suggested by strong biblical literalism and network orientation; instead, it provides further evidence that NDCs are idiosyncratic and hard to categorize.

Table 3.9 presents results from multilevel models of individual tithing on individual and church characteristics for NDC, MDC, CDC congregants, using combined data from the 2001 and 2008/9 CLS Waves. I use a ‘†’ symbol to indicate non-overlapping confidence intervals between NDC and DC protestants in an identical fashion to significance stars (for example, †† means significantly different effect sizes at $p < 0.01$).

There is a lot of information in Table 3.9, but the goal is to assess the effects of my two focal predictors on tithing across organizational forms. Strong vision commitment and a strong sense of belonging are positive and significant for both DC and NDC affiliates. When combined, these predictors result in 1.27% more giving for NDC affiliates, and 0.48% more giving for DC affiliates. This means that, net of a number of other predictors, alignment with audience members’ normatively-valuative scheme is associated with congregational pricing.

Moreover, the effect size of both strong vision commitment and a strong sense of belonging is larger for NDC affiliates than of DC affiliates, and the significance tests using bootstrapped confidence intervals indicate these differences are statistically significant across the two groups ($p < 0.01$ and $p < 0.05$, respectively). The point estimates for the NDC effect of strong vision commitment are about twice as large as the corresponding DC effect, and the effect of a strong sense of belonging is about

seven times larger for NDC affiliates. Thus, despite similar proportions of DC and NDC affiliates reporting a strong sense of belonging, the benefit to organizational pricing accruing from a sense of belonging is much higher for NDC congregations than DC congregations.

We may interpret other coefficients as adding additional credence to the claim that NDCs more readily promote collective effervescence. The effect of attendance frequency is significantly larger for NDC affiliates than DC affiliates. Thus, not only do NDC affiliates attend church more often than DC affiliates (see Table 3.1), but frequent attenders also invest more in the congregation. Similarly, congregational converts give more in NDC congregations (0.41% more than lifetime or first affiliates) than they do in DC congregations (0.22%). Finally, it is worth noting that the intercept for NDC giving still remains much higher (about 1.9%) than the intercept for DC giving, indicating that there may be additional unmeasured features of NDCs that promote giving.

In sum, NDC congregations both match or exceed DC congregations in matching audiences' normative schemes, and also reap higher rewards from this normative congruence. Moreover, the lack of consistent differences in effect sizes across other areas like sociodemographic characteristics and network influence suggests that normative concerns are driving a significant portion of the difference in audience investments. These results provide strong evidence for a normative dimension to audience valuation in the church market.

3.6 Conclusions

Results from the above analyses show that non-denominational churches demonstrate higher levels of affiliation and higher audience investments in 2012, despite their outright rejection of highly-institutionalized categories. Individual-level analyses show that both audience affiliation and audience investment are a function of the prevailing individualistic norms of contemporary churchgoers. As predicted, audiences invest in NDCs because NDC congregations are better at meeting their normative concerns. NDCs thus reap legitimacy and investment benefits to a greater degree than denominational churches, which is a strong counter-example to the categorical imperative hypothesis. The findings promote several areas for future inquiry.

First, scholars of organizations and religion will want to more closely examine the mechanisms that link NDC status to normative resonance. Existing research indicates that NDCs' superior normative commensuration almost certainly derives from their maintained ambiguity (Packard 2011, 2012; Marti and Ganiel 2014). In the contemporary church market, highly-institutionalized denominational categories appear to come with a significant amount of constraining baggage. Thus, denominational affiliation increasingly serves as an indicator that a congregation lacks the flexibility to adapt and meet prevailing norms. NDC intentional maintenance of institutional ambiguity allows them considerable leeway in both formal governance structures and ideological commitments. NDCs likely exploit this ambiguity, by offering vague statements of beliefs or policies in order to appeal to a wider range of individuals. Organizational sociologists have largely ignored religious organizations,

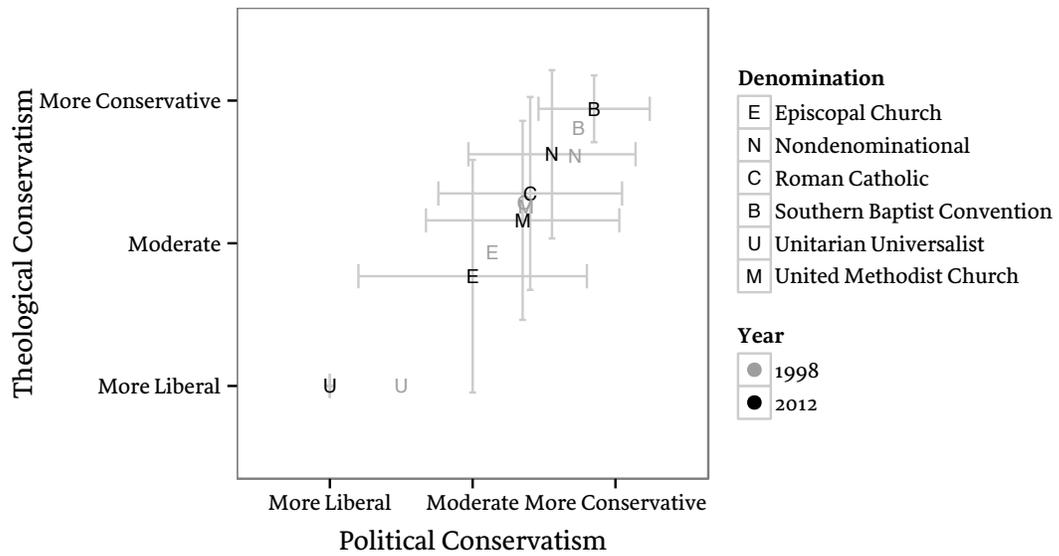
but these organizations are more relevant and instructive than ever. Strategies of religious organizations likely offer insights to all scholars of organizations, and deserve closer scrutiny.

Second, my analyses suggest that existing research on organizational market categories may have produced idiosyncratic expectations by focusing exclusively on financial markets. The normative scheme of financial markets is inherently comparative, relying on arbitrary distinctions about performance *relative to* a company's competitors. Organizational investment is therefore not exclusively a function of pure investor return, as one might expect. Instead, the demand for comparatively-profitable organizations drives the salience of market categories, which signal an organization's ability to conform to the prevailing normative scheme. Emphasis on portfolio diversification further entrenches established categories and norms. However, even these institutions are susceptible to change over time, which in turn alters product pricing (MacKenzie and Millo 2003; MacKenzie 2006). By drawing a distinction between categorical conformity and normative resonance, and illustrating how that relationship can change over time, my study suggests that organizations research should continue to expand its purview beyond financial markets. In addition, future research may want to investigate whether normative schemes from other social domains can spill across social sectors, and specifically into organizational pricing on the stock market (a discount for law-breaking, environmental damage, or violations of personal privacy, for example). Variance in the effects of normative breaches may reveal a consequential mismatch between moral expectations and existing market categories.

Finally, perhaps the largest consequence of this paper is its illumination of the need to investigate the empirical relationship between the normative and categorical dimensions in audience-driven markets. My results suggest a need to move beyond categorical definitions of identity (Smith 2011), and instead give priority to the normative/moral expectations of and for market actors (Pontikes 2012; Carroll and Swaminathan 2000). Particular attention should be given to two processes in light of these findings. First, organizations may draw on normative expectations from two seemingly-distinct categories to exploit the resultant ambiguous standards of evaluation. Examples of this strategy are likely pursued by private military contractors and NCAA “student-athletes,” but there are many more examples. Second, categorical ambiguity may allow an organization to distance itself from unpopular moral claims or assessments of a particular organizational category. This second process is illustrated by the market for congregations discussed here, but it can also be used opportunistically by unpopular organizations. For example, oil companies increasingly play up their efforts in renewable energy, and investment conglomerates do the same for their local bank branches. Both of these moves have the effect of distancing an organization from its main, morally-dubious identity, which is often tied to its most profitable activities. Whether these obfuscatory efforts are successful at increasing legitimacy and investment, and how they interact with structural obfuscation (Rossman 2014), are open questions for future research. In short, markets themselves are saturated with normativity and history, and sociological studies of markets and categories would do well to follow suit.

3.7 Figure

Figure 3.1: Mean/SD Denominational Political and Theological Conservatism by Year (NCS 1998 and 2012)



3.8 Tables

Table 3.1: Within-Form Means and T-Tests for Individual Tithing Predictors

Variable	Min	Max	NDC Mean	DC Mean	T	sig
Tithing Percentage	0.00	10.00	7.95	6.68	23.36	***
Vision - Strongly Committed	0.00	1.00	60%	43%	18.66	***
No Belonging	0.00	1.00	3%	3%	0.91	
Weak Belonging	0.00	1.00	12%	12%	0.83	
Strong Belonging	0.00	1.00	85%	86%	-1.18	
Christian Singularist	1.00	5.00	3.92	3.15	32.56	***
Biblical Literalist	0.00	1.00	62%	33%	31.56	***
Excitement About Future	0.00	4.00	3.49	3.14	26.12	***
Future Directions - Don't Know	0.00	1.00	17%	16%	2.51	*
Future Directions - Reverse Course	0.00	1.00	5%	8%	-6.01	***
Future Directions - Maintain	0.00	1.00	16%	11%	8.12	***
Future Directions - Innovation	0.00	1.00	61%	66%	-5.20	***
Encouraged to Use Gifts	0.00	4.00	3.13	2.91	10.24	***
Teach About Everyday Living	0.00	3.00	2.72	2.48	21.45	***
Friends at Church	1.00	4.00	2.76	2.78	-1.42	
Invite - Don't Know	0.00	1.00	2%	3%	-2.69	**
Invite - Definitely Not	0.00	1.00	2%	4%	-7.18	***
Invite - Probably Not	0.00	1.00	1%	2%	-5.42	***
Invite - Yes, Haven't in Past Year	0.00	1.00	25%	36%	-13.52	***
Invite - Have in Past Year	0.00	1.00	69%	55%	17.10	***
Came From Other Church	0.00	1.00	70%	65%	6.14	***
Attendance Frequency	-5.00	1.00	0.11	-0.2	16.00	***
No Group Involvement	0.00	1.00	12%	21%	-13.15	***
Duration of Affiliation	1.00	6.00	3.4	2.59	28.32	***
Member - Yes	0.00	1.00	71%	82%	-13.02	***
Member - In Process	0.00	1.00	4%	2%	4.70	***
Member - Regular Participant	0.00	1.00	18%	11%	10.28	***
Member - No	0.00	1.00	7%	5%	4.07	***
Black	0.00	1.00	35%	7%	32.41	***
HH Income	1.00	8.00	4.02	4.03	-0.43	
Age	18.00	89.00	45.35	51.26	-22.84	***
Education	1.00	8.00	5.57	5.93	-12.41	***
Married	0.00	1.00	63%	74%	-11.45	***
Number of Children	0.00	10.00	2.01	2.14	-4.37	***

Source: Congregational Life Study

Table 3.2: Coefficients from OLS Models of Attendance and Tithing Income, NCS 1998 & 2012

	Attendance		Tithing Income	
	1998	2012	1998	2012
NDC	0.347*	0.284*	0.110	0.225*
	(0.169)	(0.121)	(0.128)	(0.111)
No. of Adult Attenders (asinh)			0.997***	0.841***
			(0.027)	(0.031)
Congregation Age	0.001	0.0002	0.0005	0.002**
	(0.001)	(0.001)	(0.001)	(0.001)
Pastor Tenure	0.011*	0.018***	0.003	0.012**
	(0.005)	(0.004)	(0.003)	(0.004)
Own Church Building	0.603***	0.574***	0.298*	0.055
	(0.160)	(0.140)	(0.121)	(0.129)
Number of Services per Week	0.142***	0.143***	-0.068***	-0.042***
	(0.007)	(0.007)	(0.006)	(0.008)
Urbanity of Locale	0.340***	0.518***	0.135***	0.185***
	(0.046)	(0.049)	(0.036)	(0.048)
> 30% Poor in Census Tract	0.152	0.365***	0.238*	0.472***
	(0.123)	(0.098)	(0.093)	(0.091)
Endowment Size (asinh)	0.030***	0.053***	0.014**	0.031***
	(0.007)	(0.007)	(0.005)	(0.006)
Biblical Literalism	-0.103	-0.014	0.071	-0.022
	(0.083)	(0.091)	(0.063)	(0.083)
Theological Conservatism	-0.077	0.036	0.184***	0.085
	(0.059)	(0.056)	(0.045)	(0.052)
Region - Midwest	0.383***	0.471***	0.125	0.299**
	(0.113)	(0.119)	(0.085)	(0.110)
Region - South	0.258*	0.369**	0.428***	0.338**
	(0.109)	(0.115)	(0.081)	(0.106)
Region - West	0.282*	0.530***	0.074	0.004
	(0.125)	(0.131)	(0.093)	(0.121)
Constant	4.133***	2.885***	5.485***	6.597***
	(0.269)	(0.244)	(0.233)	(0.240)
Observations	775	909	756	909
R2	0.491	0.529	0.733	0.654
Adjusted R2	0.483	0.522	0.727	0.648
Residual Std. Error	0.978(df = 761)	1.026(df = 895)	0.724(df = 741)	0.940(df = 894)

Notes:

*p < 0.05, **p < 0.01, ***p < 0.001

Table 3.3: Reasons for Leaving Previous Denomination - Current DC Affiliates

Reason	Category	Percent
Marriage/because of spouse	Life Structure	22.3%
Convenience / location / availability / local church / only church in town / no churches available of a particular denomination	Life Structure	8.5%
Biblical or scriptural reason (respondent believes in Bible / former religion did not adhere closely enough / current religion adheres more closely)	Belief	6.5%
Do not believe in former religion/share the beliefs of former religion/any religion	Belief	6.4%
Just liked current religion / just wanted to go to church / just wanted to join religion / just started going / liked a particular church	Expressive	6.4%

Source: Religious Life/Faith in Flux Survey

Table 3.4: Reasons for Leaving Previous Denomination - Current NDC Affiliates

Reason	Category	Percent
Liked current religion's beliefs about God / because of belief in God or Jesus or higher being / because of faith / found the truth / like teachings of current religion / became closer to God / current religion made sense	Belief	21.3%
Marriage/because of spouse	Life Structure	8.5%
Looking for something/looking for answers / wanted to learn about God or religion / looking for something bigger than oneself / became interested in God or religion / felt a need / missing something / on a quest / wanted more / looking for something deeper /	Expressive	7%
Liked particular pastor / joined because of influence of particular pastor	Expressive	6.8%
Moved/relocated	Life Structure	6.5%

Source: Religious Life/Faith in Flux Survey

Table 3.5: Reasons for Joining Current Denomination - Current NDC Affiliates

Reason	Category	Percent
Liked current religion's beliefs about God / because of belief in God or Jesus or higher being / because of faith / found the truth / like teachings of current religion / became closer to God / current religion made sense	Belief	21.4%
Marriage/because of spouse	Life Structure	8.4%
Looking for something/looking for answers / wanted to learn about God or religion / looking for something bigger than oneself / became interested in God or religion / felt a need / missing something / on a quest / wanted more / looking for something deeper /	Expressive	7.1%
Liked particular pastor / joined because of influence of particular pastor	Expressive	6.9%
Moved/relocated	Life Structure	6.5%

Source: Religious Life/Faith in Flux Survey

Table 3.6: Reasons for Joining Current Denomination - Current DC Affiliates

Reason	Category	Percent
Marriage/because of spouse	Life Structure	22.3%
Convenience / location / availability / local church / only church in town / no churches available of a particular denomination	Life Structure	8.5%
Biblical or scriptural reason (respondent believes in Bible / former religion did not adhere closely enough / current religion adheres more closely)	Belief	6.5%
Do not believe in former religion/share the beliefs of former religion/any religion	Belief	6.5%
Just liked current religion / just wanted to go to church / just wanted to join religion / just started going / liked a particular church	Expressive	6.5%

Source: Religious Life/Faith in Flux Survey

Table 3.7: Generalized Reasons for Leaving Old Denomination, by Current Denominational Affiliation

	DC Affiliates	NDC Affiliates
Belief Mismatch	27.9%	34.2%
Expressive	26.1%	40.8%
Regulative	6.8%	12.1%
Cognitive Dissonance	1.7%	1.0%
Life Structure	44.6%	28.5%
Network Influence	3.6%	2.6%

Source: Religious Life/Faith in Flux Survey

Table 3.8: Generalized Reasons for Joining New Denomination, by Current Denominational Affiliation

	DC Affiliates	NDC Affiliates
Belief Match	27.9%	34.4%
Expressive	26.2%	41.5%
Regulative	6.8%	12.1%
Cognitive Resonance	1.7%	1.0%
Life Structure	44.6%	28.3%
Network Influence	3.5%	2.6%

Source: Religious Life/Faith in Flux Survey

Table 3.9: Coefficients from a Multilevel Model of Individual Tithing

	NDC Affiliates	DC Affiliates
Goal Congruence		
Vision - Strongly Committed, ††	0.514*** (0.101)	0.281*** (0.024)
Sense of Belonging		
Weak Belonging	0.530 (0.283)	0.093 (0.072)
Strong Belonging, †	0.722* (0.282)	0.197** (0.073)
Religious Conservatism		
Religious Singularist	0.134*** (0.037)	0.206*** (0.009)
Biblical Literalist, †	0.432*** (0.092)	0.319*** (0.026)
Views on Congregation's Future		
Excitement About Future	0.071 (0.077)	0.088*** (0.017)
Future Directions - Reverse Course, ††	0.193 (0.214)	0.457*** (0.047)
Future Directions - Maintain	0.096 (0.160)	0.349*** (0.043)
Future Directions - Innovation	0.187 (0.129)	0.387*** (0.033)
Individual Support & Advice		
Encouraged to Use Gifts	0.125** (0.044)	0.130*** (0.011)
Teach About Everyday Living	0.182* (0.090)	0.181*** (0.018)
Network Orientation		
Friends at Church, †††	0.034 (0.055)	0.143*** (0.014)
Invite - Definitely Not	-0.333 (0.413)	-0.042 (0.078)
Invite - Probably Not	0.160 (0.461)	-0.030 (0.089)
Invite - Yes, Haven't in Past Year	-0.010 (0.291)	0.071 (0.061)
Invite - Have in Past Year	0.055 (0.288)	0.240*** (0.062)
No Group Involvement	-0.282* (0.141)	-0.399*** (0.029)
Demographic Controls		
Black, †	0.041 (0.146)	0.461*** (0.071)
HH Income	0.067*	0.099***

	(0.030)	(0.008)
Age	0.013***	0.033***
	(0.003)	(0.001)
Education	0.033	0.008
	(0.029)	(0.007)
Married	0.295**	0.349***
	(0.103)	(0.026)
Number of Children	0.011	-0.002
	(0.010)	(0.003)
Relationship to Current Cong.		
Came From Other Church, †	0.393***	0.213***
	(0.094)	(0.022)
Member - In Process, †	-1.167***	-0.667***
	(0.217)	(0.067)
Member - Regular Participant	-1.120***	-0.983***
	(0.129)	(0.037)
Member - No	-1.590***	-1.424***
	(0.209)	(0.059)
Attendance Frequency, ††	0.710***	0.519***
	(0.053)	(0.013)
Duration of Affiliation, ††	0.068*	-0.002
	(0.030)	(0.008)
Constant, †††	3.433***	1.835***
	(0.555)	(0.153)
Observations	3,041	44,486
Log Likelihood	-6,833.209	-96,551.400
Akaike Inf. Crit.	13,732.420	193,168.800
Bayesian Inf. Crit.	13,931.080	193,456.000
Random Effects		
Congregation, N	13.00	477.00
Congregation, SD	0.53	0.57
Year, N	2.00	3.00
Year, SD	0.00	0.15

Notes:

Source: Religious Life/Faith in Flux Survey

*p < 0.05, **p < 0.01, ***p < 0.001

Conclusion

This dissertation has articulated modes and mechanisms by which the process of choosing an organizational candidate is shaped by (1) the status of the organization, and (2) the attributes of the choosers. I have done this with three types of chooser attributes: demographics, neighborhood context, and cultural values; and two settings: choosing a hospital for cancer treatment and choosing a church to attend and contribute to financially. Chapters 1 and 2 used data from the SEER-Medicare linked database to demonstrate the relationship between chooser (patient) demographics, at both the individual and neighborhood levels, and the likelihood of choosing a “high-status” cancer hospital. Chapter 3 used data from multiple sources to describe the ways that congregants’ cultural values interact with organizational status (denomination) in the church choice process.

My results point to a few points of discussion and consideration for future sociological work. First, the variety of settings and attributes in my analyses allows me to articulate several of the specific ways an individual’s attributes can affect the salience of status in their choices. Second, my work demonstrates the analytical utility of examining individual choices as a sociologist, and suggests that sociologists as a whole must take individuals, and the choices that they make, more seriously. Finally, my results indicate that sociologists of all stripes, but especially medical and organizational sociologists, would benefit from expanding beyond some of their well-worn tracks of inquiry. I address each of these in order.

C.1 Linking Demand-Side Traits and Status Salience

I can now offer some insight into how and why demand-side traits affect the salience of organizational status. First, demand-side traits may affect status salience by moderating/indicating individual tolerance for uncertainty. For example, individuals may be less tolerant of uncertainty as they become more educated, or as they experience racially-coded treatment in the healthcare system, and thus more likely to use status indicators like rankings. Second, demand-side traits may affect status salience by moderating/indicating individual abilities to use and act on status indicators when making decisions. For example, the relationship between increased education and greater health literacy is well-established (Wagner et al. 2009; Nutbeam 2008; Shim 2010; Gage-Bouchard 2017), and we might therefore expect that more well-educated individuals to be more likely to understand and use status information like rankings. Third, individual attributes may themselves interact to produce even more varied responses to organizational status. For example, patient race is simultaneously predictive of both geographic proximity to high-status care, and lower health resource availability in the patient's neighborhood. In these cases, patients of certain races appear use hospitals at lower rates overall, because of the lower resources available to them, but seek high-status care more readily once diagnosed due to geographic proximity.

Finally, values are likely the strongest link between demand-side attributes and the salience of organizational status. This is because status indicators are themselves at least partially valuative; they inherently tell individual choosers what is important about various organizations, even if they are primarily categorical in nature. In the

church market, the denominational status categories suggest that choosers should value a highly-structured and clearly-articulated approach to Christianity. However, individuals who strongly value their individual beliefs and self-expression are willing to either ignore or reject the value system underlying denominational status categories, and instead seek organizations that conform to their individual preferences. Thus, individual values appear to almost completely mediate the salience of organizational status indicators in the church market, by providing individuals with an alternative (and, for them, superior) market sorting mechanism.

C.2 Sociologists and Individual Choices

The analysis of church choice also provides a clean example of endogenous preferences at work. Individual preferences and beliefs about God and Christianity are necessarily formed in, or at least in reaction to, social settings (Bellah et al. 1985; Durkheim 1995; Ammerman 2013). They therefore cannot be “exogenous” as economists often claim. However, individual values (preferences) still can provide the majority of the fuel for an individual choice, independently of and/or alongside other social connections and influences (Vaisey and Valentino 2018)Miles2013a.

Despite strong initial attempts (Parsons and Shils 1951), and a repeated insistence that individual choices are influenced by social networks and supra-individual groups (Granovetter 1985; DiMaggio 1988; Friedkin and Cook 1990; Liu, King, and Bearman 2010; Christakis and Fowler 2007, 2008; Powell and DiMaggio 1991; Pescosolido 1992), sociology has failed to produce any viable, analytically-rigorous alternatives to standard economic rational-choice models of individual decision-

making. In fact, the only programmatic statement on modeling individual choice in a sociology journal is by an economist (Durlauf 2001). Articulating such a model is a significant task, and to say that this dissertation does it is hyperbolic.

However, my results do show that social stratification does, at least sometimes, occur through individual choices. Disciplinary politics require that I ritualistically reinforce that I am not saying people “choose” things like poverty because they are somehow deficient, a straw man often leveled at people who make arguments like mine over the past 30 years (Lewis 1968; Swidler 1986). Instead, I merely suggest that individual choices are an important *mechanism* in the reproduction of inequality. In other words, individual choices are indelibly shaped by social factors: demographics, networks, values, and life chances on a number of dimensions (Fourcade and Healy 2013; Vaisey 2009; Miles 2015; McPherson 1983). The individual choice process presents a valuable and under-used analytical framework for sociologists to investigate concise distillations of these stratifying independent variables on various outcomes of interest (Vaisey and Valentino 2018).

More specifically, my work (alongside others) suggests that sociologists might benefit from a two-pronged approach to individual choices. The first prong would investigate the link between social conditions and certain individual values and beliefs in a given setting (e.g., Vaisey 2010). The second prong would investigate how these values influence individual choices, conditioned on the social conditions (e.g., Miles 2015). Together, these prongs would provide an analytically-rigorous account of the formation and deployment of endogenous preferences.

However it proceeds, my work here reinforces the growing sentiment that the

supply-side story of inequality deserves sociological attention, too. This suggestion applies more specifically to organization scholars, who largely examine consequences of choice process for candidates, and elide features of those choosing the organizations. It also applies to medical sociologists, who describe myriad social determinants of health, but pay less attention to how those social determinants play out in, and are mediated by, individual health decisions (c.f., Lutfey and Freese 2005; Gage-Bouchard 2017).

C.3 Expanding Horizons in Medical and Organizational Sociology

Finally, my dissertation suggests that “camped” sociologists would do well to move beyond their well-worn tracks of inquiry. For medical sociologists, my results suggest that an attention to organizational processes is essential. This insight has occurred to clinical scholars (Elizabeth B. Lamont et al. 2010; Keating et al. 2006, 2010), but has not yet been taken seriously by those who would describe themselves primarily as medical sociologists. Some organization scholars have articulated how organizational context shapes *practitioner* behavior (Barley 1990, 1986; Kellogg 2011; Menchik 2014; Reich 2014b), but examinations of patient experiences within organizations remains elusive.

My dissertation also demonstrates the value of extending the definition of “organization” beyond for-profit companies. Most organization scholars focus their attention on corporations. While these organizations certainly deserve attention, especially in a capitalist economy, they are hardly the only organizations individuals

interact with. Again, I am not the first to make this suggestion (Ruef 2000; Espeland and Sauder 2007, 2016; Koçak and Carroll 2008; Greve and Rao 2012), but merely add to the chorus of voices already doing so.

C.4 Parting Thoughts

Together, my dissertation shows that market choice processes are, in fact, “more complicated” than economists argue. At the same time, they articulate the specific modes and mechanisms of these complications more rigorously than some past sociological arguments have. The throughgoing conclusion is the same throughout all of them: chooser traits interact with organizational status to produce choice outcomes, and any serious sociological investigation of choice processes should include both kinds of attributes. Sociologists have largely ignored the choices individuals make in the banalities of their everyday lives, but these “banal” choices are deeply meaningful to the individuals we are lucky enough to study, and they deserve more respect and attention from us going forward.

Bibliography

- Akerlof, George A, and Rachel Kranton. 2010. *Identity Economics: How Our Identities Affect Our Work, Wages, and Well-being*. Princeton, NJ: Princeton University Press.
- Ammerman, Nancy T. 2013. "Spiritual But Not Religious? Beyond Binary Choices in the Study of Religion." *Journal for the Scientific Study of Religion* 52 (2): 258–278.
- Bach, Peter B, Lauda D Cramer, Joan L Warren, and Colin B Begg. 1999. "Racial Differences in the Treatment of Early-Stage Lung Cancer." *New England Journal of Medicine* 341 (16): 1198–1205.
- Bailey, Zinzi D., Nancy Krieger, Madina Agénor, Jasmine Graves, Natalia Linos, and Mary T. Bassett. 2017. *Structural racism and health inequities in the USA: evidence and interventions*. doi:10.1016/S0140-6736(17)30569-X.
- Barley, Stephen R. 1986. "Technology as an Occasion for Structuring: Evidence from Observations of CT Scanners and the Social Order of Radiology Departments." *Administrative Science Quarterly* 31 (1): 78–108.
- . 1990. "The Alignment of Technology and Structure through Roles and Networks." *Administrative Science Quarterly* 35 (1): 61–103. ISSN: 0001-8392 (Print).
- Barry, M.J., and S Edgman-Levitan. 2012. "Shared Decision Making — The Pinnacle of Patient-Centered Care." *The New England Journal of Medicine*, no. 366: 780–781. doi:10.1056/NEJMp1109283.
- Baum, Joel A C, and Christine Oliver. 1991. "Institutional Linkages and Organizational Mortality." *Administrative Science Quarterly* 36 (2): 187. ISSN: 00018392. doi:10.2307/2393353. arXiv: arXiv:1011.1669v3. <http://www.jstor.org/stable/2393353?origin=crossref>.
- Beaulieu, Nancy Dean. 2002. "Quality information and consumer health plan choices." *Journal of Health Economics* 21 (1): 43–63. ISSN: 01676296. doi:10.1016/S0167-6296(01)00126-6.
- Becker, Gary S. 1996. *Accounting for Tastes*. Cambridge, MA: Harvard University Press.
- Bell, Rob. 2006. *Velvet Elvis: Repainting the Christian Faith*. Grand Rapids, MI: Zondervan.

- Bellah, Robert N, Richard Madsen, William M Sullivan, Ann Swidler, and Steven M Tipton. 1985. *Habits of the Heart: Individualism and Commitment in American Life*. California.
- Bender, Courtney. 2010. *The New Metaphysicals: Spirituality and the American Religious Imagination*. University of Chicago Press.
- Beyer, Kirsten MM, Kristen M Malecki, Kelly A Hoormann, Aniko Szabo, and Ann B Nattinger. 2016. "Perceived Neighborhood Quality and Cancer Screening Behavior: Evidence from the Survey of the Health of Wisconsin." *Journal of Community Health* 41 (1): 134–137. doi:10.1007/s10900-015-0078-1. Perceived.
- Bielo, James S. 2009. "The "Emerging Church" in America: Notes on the Interaction of Christianities." *Religion* 39 (3): 219–232.
- Blank, Thomas, D Ph, Kristi Graves, Karen Sepucha, Hilary Llewellyn-thomas, and Ann Behav Med. 2006. "Understanding treatment decision making: contexts, commonalities, complexities, and challenges." *Annals of Behavioral Medicine* 32 (3): 211–217. ISSN: 0883-6612. doi:10.1207/s15324796abm3203_6. <http://www.ncbi.nlm.nih.gov/pubmed/17107293>.
- Bonsignore, Lindsay, Nicholas Bloom, Karen Steinhauser, Reginald Nichols, Todd Allen, Martha Twaddle, and Janet Bull. 2018. "Evaluating the Feasibility and Acceptability of a Telehealth Program in a Rural Palliative Care Population: Tap-Cloud for Palliative Care." *Journal of Pain and Symptom Management* 56 (1): 7–14. ISSN: 18736513. doi:10.1016/j.jpainsymman.2018.03.013. <https://doi.org/10.1016/j.jpainsymman.2018.03.013>.
- Bourdieu, Pierre. 1984. *Distinction: A Social Critique of the Judgement of Taste*. Harvard.
- Burbidge, John B, Lonnie Magee, and a Leslie Robb. 1988. "Alternative Transformations to Handle Extreme Values of the Dependent Variable." *Journal of the American Statistical Association* 83 (401): 123–127. ISSN: 01621459. doi:10.2307/2288929. <http://www.jstor.org/stable/2288929> <http://www.jstor.org/stable/2288929%7B%7D5Cnpapers2://publication/uuid/7AF972A2-C6D5-40B0-A391-B5BF2E01E97C>.
- Byrne, Margaret M., L. Jill Halman, Leonidas G. Koniaris, Peter A. Cassileth, Joseph D. Rosenblatt, and Michael C. Cheung. 2011. "Effects of poverty and race on outcomes in acute myeloid leukemia." *American Journal of Clinical Oncology: Cancer Clinical Trials*. ISSN: 02773732. doi:10.1097/COC.0b013e3181dea934.

- Carroll, Glenn R. 1985. "Concentration and Specialization: Dynamics of Niche Width in Populations of Organizations." *American Journal of Sociology* 90 (6): 1262–1283.
- Carroll, Glenn R, and Anand Swaminathan. 2000. "Why the Microbrewery Movement? Organizational Dynamics of Resource Partitioning in the US Brewing Industry." *American Journal of Sociology* 106 (3): 715–762.
- Charles, Cathy, Amiram Gafni, and Tim Whelan. 1997. "Shared decision-making in the medical encounter: What does it mean? (Or it takes, at least two to tango)." *Social Science & Medicine* 44 (5): 681–692. ISSN: 02779536. doi:10 . 1016 / S0277-9536(96)00221-3.
- Charron-Chenier, R., J. J. Fink, and L. A. Keister. 2016. "Race and Consumption: Black and White Disparities in Household Spending." *Sociology of Race and Ethnicity*. ISSN: 2332-6492. doi:10 . 1177 / 2332649216647748. [http : / / sre . sagepub . com / lookup / doi / 10 . 1177 / 2332649216647748](http://sre.sagepub.com/lookup/doi/10.1177/2332649216647748).
- Chaves, Mark. 1993. "Denominations as Dual Structures: An Organizational Analysis." *Sociology of Religion* 54 (2): 147–169.
- . 1994. "Secularization as Declining Religious Authority." *Social Forces* 72 (3): 749–774.
- . 2004. *Congregations in America*. Cambridge, MA: Harvard University Press.
- . 2011. *American Religion: Contemporary Trends*. Princeton, NJ: Princeton University Press.
- Chaves, Mark, and S L Anderson. 2014. "Changing American Congregations: Findings From the Third Wave of the National Congregations Study." *Journal for the Scientific Study of {...}* 53 (4): 676–686.
- Chaves, Mark, and Philip S Gorski. 2001. "Religious Pluralism and Religious Participation." *Annual Review of Sociology* 27:261–281.
- Chaves, Mark, Mary Ellen Konieczny, Kraig Beyerlein, and Emily Barman. 1999. "The National Congregations Study: Background, Methods, and Selected Results." *Journal for the Scientific Study of Religion* 38 (4): 458–476.
- Chaves, Mark, and John R Sutton. 2004. "Organizational Consolidation in American Protestant Denominations, 1890-1990." *Journal for the Scientific Study of Religion* 43 (1): 51–66.

- Chernew, Michael, Gautam Gowrisankaran, and Dennis P Scanlon. 2001. "Learning and the Value of Information: Evidence From Health Plan Report Cards." *NBER Working Paper 8589*.
- Chetty, Raj, Michael Stepner, Sarah Abraham, Shelby Lin, Benjamin Scuderi, Nicholas Turner, Augustin Bergeron, and David Cutler. 2016. "The Association Between Income and Life Expectancy in the United States, 2001-2014." *Jama* 315 (16): 1750. ISSN: 0098-7484. doi:10.1001/jama.2016.4226. arXiv: 15334406. <http://jama.jamanetwork.com/article.aspx?doi=10.1001/jama.2016.4226>.
- Christakis, Nicholas A, and James H Fowler. 2007. "The Spread of Obesity in a Large Social Network Over 32 Years." *New England Journal of Medicine* 357:370–379.
- . 2008. "The Collective Dynamics of Smoking in a Large Social Network." *New England Journal of Medicine* 358:2249–2258.
- Colleoni, Elanor, Alessandro Rozza, and Adam Arvidsson. 2014. "Echo chamber or public sphere? Predicting political orientation and measuring political homophily in twitter using big data." *Journal of Communication* 64 (2005): 317–332. ISSN: 00219916. doi:10.1111/jcom.12084.
- Cutler, David, Robert Huckman, and Mary Beth Landrum. 2004. "The Role of Information in Medical Markets: An Analysis of Publicly Reported Outcomes in Cardiac Surgery," no. 10489. doi:10.3386/w10489. <http://www.nber.org/papers/w10489%7B%7D5Cnhttp://www.nber.org/papers/w10489.pdf>.
- Datta, Geetanjali D., Graham A. Colditz, Ichiro Kawachi, S. V. Subramanian, Julie R. Palmer, and Lynn Rosenberg. 2006. "Individual-, neighborhood-, and state-level socioeconomic predictors of cervical carcinoma screening among U.-S. black women: A multilevel analysis." *Cancer* 106 (3): 664–669. ISSN: 0008543X. doi:10.1002/cncr.21660.
- DiMaggio, Paul. 1988. "Interest and agency in institutional theory." In *Institutional patterns and organizations: culture and environment*. Cambridge, MA: Ballinger.
- . 1997. "Culture and Cognition." *Annual Review of Sociology*: 263–287.
- Dimick, Justin B, Joel Ruhter, Mary Vaughan Sarrazin, and John D Birkmeyer. 2016. "Black Patients Are More Likely to Undergo Surgery at Low Quality Hospitals in Segregated Regions." 32 (6): 1046–1053. doi:10.1377/hlthaff.2011.1365. Black.

- Dranove, David, Daniel Kessler, Mark McClellan, and Mark Satterthwaite. 2003. "Is More Information Better? The Effects of "Report Cards" on Health Care Providers." *Journal of Political Economy* 111 (3): 555–588. ISSN: 0022-3808. doi:10.1086/374180. arXiv: arXiv:1011.1669v3.
- Driscoll, Mark. 2006. "A Pastoral Perspective on the Emergent Church." *Criswell Theological Review* 2/3:87–94.
- Dufny, Leemore, and David Dranove. 2005. "Do Report Cards Tell Consumers Anything They Don't Already Know? The Case of Medicare HMOs." *NBER Working Paper* 11420.
- Durkheim, Emile. 1995. *The Elementary Forms of Religious Life*. New Transl. Free Press.
- Durlauf, Steven N. 2001. "A Framework For The Study of Individual Behavior and Social Interactions." *Sociological Methodology* 31 (1): 47–87. ISSN: 1467-9531. doi:10.1111/0081-1750.00089.
- Edwards, Jeffrey R, and Daniel M Cable. 2009. "The value of value congruence." [In en]. *Journal of Applied Psychology* 94 (3): 654–677. doi:10.1037/a0014891. <http://doi.apa.org/getdoi.cfm?doi=10.1037/a0014891>.
- Ell, Kathleen, Robert Nishimoto, Linda Mediansky, Joanne Mantell, and Maurice Hamovitch. 1992. "Social relations, social support and survival among patients with cancer." *Journal of Psychosomatic Research* 36 (6): 531–541. ISSN: 00223999. doi:10.1016/0022-3999(92)90038-4.
- Epstein, Ronald M., Paul R. Duberstein, Joshua J. Fenton, Kevin Fiscella, Michael Hoerger, Daniel J. Tancredi, Guibo Xing, et al. 2016. "Effect of a Patient-Centered Communication Intervention on Oncologist-Patient Communication, Quality of Life, and Health Care Utilization in Advanced Cancer: The VOICE Randomized Clinical Trial." *JAMA Oncology* 10 (3): 728–740. ISSN: 2374-2445. doi:10.1001/JAMAONCOL.2016.4373.
- Espeland, Wendy Nelson, and Michael Sauder. 2007. "Rankings and Reactivity: How Public Measures Recreate Social Worlds." *American Journal of Sociology* 113 (1): 1–40.
- . 2016. *Engines of Anxiety: Academic Rankings, Reputation, and Accountability*. New York, NY: Russell Sage Foundation.

- Espeland, Wendy Nelson, and Mitchell L. Stevens. 2008. "A Sociology of Quantification." *European Journal of Sociology* 49 (03): 401. ISSN: 0003-9756. doi:10.1017/S0003975609000150. http://www.journals.cambridge.org/abstract%7B%5C_%7DS0003975609000150.
- Fourcade, Marion, and Kieran Healy. 2007. "Moral Views of Market Society." *Annual Review of Sociology* 33 (1): 285–311.
- . 2013. "Classification situations: Life-chances in the neoliberal era." *Accounting, Organizations and Society* 38 (8): 559–572. ISSN: 03613682. doi:10.1016/j.aos.2013.11.002. <http://dx.doi.org/10.1016/j.aos.2013.11.002>.
- Friedkin, Noah E, and Karen S Cook. 1990. "Peer Group Influence." *Sociological Methods & Research* 19 (1): 122–143.
- Gage, Elizabeth. 2010. "Examining the Most Relevant Conceptualization of the Socioeconomic Status Construct for Cancer Research." *Cancer Nursing* 33 (3): E1–E9. ISSN: 0162-220X. doi:10.1097/NCC.0b013e3181c29583. <http://content.wkhealth.com/linkback/openurl?sid=WKPTLP:landingpage%7B%5C&%7Dan=00002820-201005000-00011>.
- Gage-Bouchard, Elizabeth A. 2017. "Culture, Styles of Institutional Interactions, and Inequalities in Healthcare Experiences." *Journal of Health and Social Behavior* 58 (2): 147–165. ISSN: 0022-1465. doi:10.1177/0022146517693051. <http://journals.sagepub.com/doi/10.1177/0022146517693051>.
- Gage-Bouchard, Elizabeth A., Susan LaValley, Christina Panagakis, and Rachel C. Shelton. 2015. "The architecture of support: The activation of preexisting ties and formation of new ties for tailored support." *Social Science and Medicine* 134:59–65. ISSN: 18735347. doi:10.1016/j.socscimed.2015.04.003. <http://dx.doi.org/10.1016/j.socscimed.2015.04.003>.
- Gee, Gilbert C., and Chandra L. Ford. 2011. "Structural Racism and Health Inequities." *Du Bois Review: Social Science Research on Race*. ISSN: 1742-058X. doi:10.1017/S1742058X11000130. arXiv: NIHMS150003.
- Gelman, Andrew, and Jennifer Hill. 2007. *Data Analysis Using Regression and Multilevel/Hierarchical Models*. Cambridge Univ Pr.
- Giddens, Anthony. 1990. *The Consequences of Modernity*. Cambridge: Cambridge University Press.

- Gramling, Robert, Kevin Fiscella, Guibo Xing, Michael Hoerger, Paul Duberstein, Sandy Plumb, Supriya Mohile, et al. 2016. "Determinants of Patient-Oncologist Prognostic Discordance in Advanced Cancer." *JAMA Oncology* 05401 (11): 1–6. ISSN: 2374-2437. doi:10.1001/jamaoncol.2016.1861.
- Granovetter, Mark. 1985. "Economic Action and Social Structure: The Problem of Embeddedness." *American Journal of Sociology* 91:788–789.
- Greer, Bruce A, and Wade Clark Roof. 1992. "'Desperately Seeking Sheila': Locating Religious Privatism in American Society." *Journal for the Scientific Study of Religion* 31:346–352.
- Greve, Henrich R, and Hayagreeva Rao. 2012. "Echoes of the Past: Organizational Foundings as Sources of an Institutional Legacy of Mutualism." *American Journal of Sociology* 118 (3): 635–675.
- Grigoryeva, Angelina, and Martin Ruef. 2015. "The Historical Demography of Racial Segregation." *American Sociological Review* 80 (4): 814–842. <http://asr.sagepub.com/content/80/4/814>. short.
- Haas, Jennifer S., Craig C. Earle, John E. Orav, Phyllis Brawarsky, Marie Keohane, Bridget A. Neville, and David R. Williams. 2008. "Racial segregation and disparities in breast cancer care and mortality." *Cancer* 113 (8): 2166–2172. ISSN: 0008543X. doi:10.1002/cncr.23828.
- Hannan, Michael T, and John Freeman. 1977. "The Population Ecology of Organizations." *American Journal of Sociology* 82 (5): 929–964.
- . 1984. "Structural Inertia and Organizational Change." *American Sociological Review* 49 (2): 149–164.
- Hastert, Theresa A, Shirley A A Beresford, Lianne Sheppard, and Emily White. 2015. "Disparities in cancer incidence and mortality by area-level socioeconomic status: a multilevel analysis." *Journal of Epidemiology and Community Health* 69 (2): 168–176. ISSN: 0143-005X. doi:10.1136/jech-2014-204417. <http://jech.bmj.com/lookup/doi/10.1136/jech-2014-204417>.
- Healy, Kieran. 2006. *Last Best Gifts: Altruism and the Market for Human Blood and Organs*. Chicago, IL: University Of Chicago Press.
- Hibbard, Judith H., and Jacquelyn J. Jewett. 1996. "What type of quality information do consumers want in a health care report card?" *Medical Care Research and Review* 53 (1): 28–47. ISSN: 1077-5587. doi:10.1177/107755879605300102. <http://mcr.sagepub.com.ezproxy2.library.drexel.edu/content/53/1/28.abstract>.

- Hibbard, Judith H., and Jacquelyn J. Jowett. 1997. "Will Quality Report Cards Help Consumers?" *Health Affairs* 16 (3): 218–228. ISSN: 02782715. doi:10.1377/hlthaff.16.3.218.
- Hillerbrand, Hans J. 2009. *The Protestant Reformation*. Perennial.
- Himmelboim, I., K. D. Sweetser, S. F. Tinkham, K. Cameron, M. Danelo, and K. West. 2014. "Valence-based homophily on Twitter: Network Analysis of Emotions and Political Talk in the 2012 Presidential Election." *New Media & Society*: 1461444814555096–. ISSN: 1461-4448. doi:10.1177/1461444814555096. <http://nms.sagepub.com/content/early/2014/10/29/1461444814555096.abstract>.
- Hofferth, S L, and J Iceland. 1998. "Social capital in rural and urban communities." *Rural Sociology* 63 (4): 574–598. ISSN: 0036-0112. doi:10.5172/rsj.351.17.3.205.
- Hsu, Greta, and Michael T. Hannan. 2005. "Identity, genres, and organizational forms." *Organization Science* 16 (5): 474–490. ISSN: 1047-7039. doi:10.1287/orsc.1050.0151.
- Hsu, Greta, Özgecan Koçak, and Michael T Hannan. 2009. "Multiple Category Memberships in Markets: An Integrative Theory and Two Empirical Tests." *American Sociological Review* 74 (1): 150–169.
- Huang, Lyen C., Yifei Ma, Justine V. Ngo, and Kim F. Rhoads. 2014. "What factors influence minority use of National Cancer Institute-designated cancer centers?" *Cancer* 120 (3): 399–407. ISSN: 0008543X. doi:10.1002/cncr.28413.
- Jepperson, Ronald L. 1991. "Institutions, Institutional Effects, and Institutionalism." In *The New Institutionalism in Organizational Analysis*, edited by Walter W Powell and Paul J DiMaggio, 143–163. University of Chicago Press.
- Jha, Ashish K., and Arnold M. Epstein. 2006. "The predictive accuracy of the New York State coronary artery bypass surgery report-card system." *Health Affairs* 25 (3): 844–855. ISSN: 02782715. doi:10.1377/hlthaff.25.3.844.
- Jones, Tony. 2011. *The Church Is Flat: The Relational Ecclesiology of the Emerging Church Movement*. Minneapolis, MN: The JoPa Group, LLC.
- Keating, Nancy L., Mary Beth Landrum, Neeraj K. Arora, Jennifer L. Malin, Patricia A. Ganz, Michelle Van Ryn, and Jane C. Weeks. 2010. "Cancer patients' roles in treatment decisions: Do characteristics of the decision influence roles?" *Journal of Clinical Oncology* 28 (28): 4364–4370. ISSN: 0732183X. doi:10.1200/JCO.2009.26.8870.

- Keating, Nancy L., Mary Beth Landrum, Ellen Meara, Patricia A. Ganz, and Edward Guadagnoli. 2006. "Managed care market share and primary treatment for cancer." *Health Services Research* 41 (1): 9–22. ISSN: 00179124. doi:10.1111/j.1475-6773.2005.00463.x.
- Kellogg, Katherine C. 2011. *Challenging Operations: Medical Reform and Resistance in Surgery*. 230. Chicago, IL: Chicago University Press. ISBN: 0226430030. <https://books.google.com/books?id=jb8PpLnemi0C%7B%5C%7Dpgis=1>.
- Klein, Jens, and Olaf von dem Knesebeck. 2015. "Socioeconomic inequalities in prostate cancer survival: A review of the evidence and explanatory factors." *Social Science & Medicine* 142:9–18. ISSN: 1873-5347. doi:10.1016/j.socscimed.2015.07.006. <http://www.sciencedirect.com/science/article/pii/S0277953615300228>.
- Koçak, Özgecan, and Glenn R Carroll. 2008. "Growing Church Organizations in Diverse US Communities, 1890–19261." *American Journal of Sociology* 113 (5): 1272–1315.
- Kovacs, B., and a. J. Sharkey. 2014. "The Paradox of Publicity: How Awards Can Negatively Affect the Evaluation of Quality." *Administrative Science Quarterly* 59 (1): 1–33. ISSN: 0001-8392. doi:10.1177/0001839214523602. <http://asq.sagepub.com/lookup/doi/10.1177/0001839214523602>.
- Kovacs, Balazs, and Michael T Hannan. 2013. "The Space of Categories and the Consequences of Category Spanning": 1–48. ISSN: 23306696. doi:10.15195/v2.a13.
- Lamont, Elizabeth B, and Nicholas A Christakis. 2001. "Prognostic disclosure to patients with cancer near the end of life." *Annals of Internal Medicine* 134 (12): 1096–1105+I. ISSN: 00034819.
- . 2003. *Complexities in prognostication in advanced cancer: "to help them live their lives the way they want to"*. doi:10.1001/jama.290.15.2056.
- Lamont, Elizabeth B., Yulei He, S. V. Subramanian, and Alan M. Zaslavsky. 2012. "Do socially deprived urban areas have lesser supplies of cancer care services?" *Journal of Clinical Oncology* 30 (26): 3250–3257. ISSN: 0732183X. doi:10.1200/JCO.2011.40.4228.
- Lamont, Elizabeth B., Mary Beth Landrum, Nancy L. Keating, Laura Archer, Lan Lan, Gary M. Strauss, Rogerio Lilenbaum, et al. 2010. "Differences in clinical trial patient attributes and outcomes according to enrollment setting." *Journal of Clinical Oncology* 28 (2): 215–221. ISSN: 0732183X. doi:10.1200/JCO.2008.21.3652.

- Lamont, Elizabeth B, Alan M Zaslavsky, Subu V Subramanian, Ashley E Meilleur, Yulei He, and Mary B Landrum. 2014. "Elderly Breast and Colorectal Cancer Patients' Clinical Course: Patient and Contextual Influences." *Medical Care* 52 (9): 809–817.
- LeBlanc, Thomas W., CT Bloom, DM Davis, SC Locke, KE Steinhauser, PA Ubel, JA Tulsy, and AP Abernethy. 2014. "Prognostic Disclosure in Acute Myeloid Leukemia (AML): A Qualitative Study of Patient Preferences and Physician Practices." *BLOOD* 124 (21).
- LeBlanc, Thomas W., Nick Bloom, Steven P. Wolf, Sarah G. Lowman, Kathryn I. Pollak, Karen E. Steinhauser, Dan Ariely, and James A. Tulsy. 2017. "Triadic treatment decision-making in advanced cancer: a pilot study of the roles and perceptions of patients, caregivers, and oncologists." *Supportive Care in Cancer* in press. ISSN: 0941-4355. doi:10.1007/s00520-017-3942-y. <http://link.springer.com/10.1007/s00520-017-3942-y>.
- Lewis, Oscar. 1968. "The Culture of Poverty." In *On Understanding Poverty: Perspectives From the Social Sciences*, edited by Daniel P Moynihan, 187–200. Basic.
- Link, B G, M E Northridge, J C Phelan, and M L Ganz. 1998. "Social epidemiology and the fundamental cause concept: on the structuring of effective cancer screens by socioeconomic status." *The Milbank quarterly* 76 (3): 375–402, 304–5. ISSN: 0887-378X. doi:10.1111/1468-0009.00096. <http://www.pubmedcentral.nih.gov/articlerender.fcgi?artid=2751089%7B%5C%7Dtool=pmcentrez%7B%5C%7Drendertype=abstract>.
- Link, B G, and J Phelan. 1995. "Social conditions as fundamental causes of disease." *Journal of Health and Social Behavior* 35 (Special Issue): 80–94. ISSN: 00221465. doi:10.2307/2626958.
- Link, Bruce G., and Jo Phelan. 1995. "Social Conditions As Fundamental Causes of Disease." *Journal of Health and Social Behavior* 35:80. ISSN: 00221465. doi:10.2307/2626958. arXiv: arXiv:1011.1669v3. <http://www.jstor.org/stable/2626958?origin=crossref>.
- Liu, Ka-Yuet, Marissa King, and Peter S Bearman. 2010. "Social influence and the autism epidemic." *American Journal of Sociology* 115 (5): 1387–1434. ISSN: 0002-9602. doi:10.1086/651448.

- Lutfey, Karen, and Jeremy Freese. 2005. "Toward Some Fundamentals of Fundamental Causality: Socioeconomic Status and Health in the Routine Clinic Visit for Diabetes." *American Journal of Sociology* 110 (5): 1326–1372. ISSN: 0002-9602. doi:10.1086/428914.
- MacCulloch, Diarmaid. 2005. *The Reformation*. Penguin Books.
- MacKenzie, Donald. 2006. *An Engine, Not a Camera: How Financial Models Shape Markets*. MIT Press.
- MacKenzie, Donald, and Yuval Millo. 2003. "Constructing a Market, Performing Theory: The Historical Sociology of a Financial Derivatives Exchange." *American Journal of Sociology* 109 (1): 107–145.
- Ng-Mak, Daisy S., Bruce P. Dohrenwend, Ana F. Abraido-Lanza, and J. Blake Turner. 1999. "A further analysis of race differences in the National Longitudinal Mortality Study." *American Journal of Public Health* 89 (11): 1748–1751. ISSN: 00900036. doi:10.2105/AJPH.89.11.1748.
- Marti, Gerardo, and Gladys Ganiel. 2014. *The Deconstructed Church: Understanding Emerging Christianity*. Oxford University Press.
- Massey, Douglas S, and Nancy A Denton. 1993. *American Apartheid: Segregation and the Making of the Underclass*. Harvard.
- McFadden, Daniel, and Kenneth Train. 2000. "Mixed MNL Models for Discrete Response." *Journal of Applied Econometrics* 15 (November 1998): 447–470. ISSN: 1099-1255. doi:10.1002/1099-1255(200009/10)15:5<447::AID-JAE570>3.0.CO;2-1. [http://onlinelibrary.wiley.com/doi/10.1002/1099-1255\(200009/10\)15:5%7B%7D3C447::AID-JAE570%7B%7D3E3.0.CO;2-1/epdf](http://onlinelibrary.wiley.com/doi/10.1002/1099-1255(200009/10)15:5%7B%7D3C447::AID-JAE570%7B%7D3E3.0.CO;2-1/epdf).
- McPherson, J Miller. 1982. "Hypernetwork Sampling: Duality and Differentiation Among Voluntary Organizations." *Social Networks* 3:225–249.
- . 1983. "An Ecology of Affiliation." *American Sociological Review* 48 (4): 519–532.
- . 2004. "A Blau Space Primer: Prolegomenon to an Ecology of Affiliation." *Industrial and Corporate Change* 13 (1): 263–280.

- Medeiros, Bruno C., Sacha Satram-Hoang, Deborah Hurst, Khang Q. Hoang, Faiyaz Momin, and Carolina Reyes. 2015. "Big data analysis of treatment patterns and outcomes among elderly acute myeloid leukemia patients in the United States." *Annals of Hematology* 94 (7): 1127–1138. ISSN: 14320584. doi:10.1007/s00277-015-2351-x.
- Menchik, Daniel A. 2014. "Decisions about Knowledge in Medical Practice: The Effect of Temporal Features of a Task." *American Journal of Sociology* 120 (3): 701–749. ISSN: 00029602. doi:10.1086/679105. [http://www.jstor.org/stable/10.1086/679105?Search=yes%7B%5C%7DresultItemClick=true%7B%5C%7DsearchText=\(ti:\(knowledge%7B%5C%7DsearchText=base\)%7B%5C%7DsearchText=OR%7B%5C%7DsearchText=tb:\(knowledge%7B%5C%7DsearchText=base\)%7B%5C%7DsearchText=OR%7B%5C%7DsearchText=tb:\(knowledge%7B%5C%7DsearchText=base\)%7B%5C%7DsearchText=AND%7B%5C%7DsearchText](http://www.jstor.org/stable/10.1086/679105?Search=yes%7B%5C%7DresultItemClick=true%7B%5C%7DsearchText=(ti:(knowledge%7B%5C%7DsearchText=base)%7B%5C%7DsearchText=OR%7B%5C%7DsearchText=tb:(knowledge%7B%5C%7DsearchText=base)%7B%5C%7DsearchText=OR%7B%5C%7DsearchText=tb:(knowledge%7B%5C%7DsearchText=base)%7B%5C%7DsearchText=AND%7B%5C%7DsearchText).
- Menzin, Joseph, Kathleen Lang, Craig C. Earle, Donna Kerney, and Rajiv Mallick. 2002. "The Outcomes and Costs of Acute Myeloid Leukemia Among the Elderly." *Archives of Internal Medicine* 162 (14): 1597. ISSN: 0003-9926. doi:10.1001/archinte.162.14.1597. <http://archinte.jamanetwork.com/article.aspx?doi=10.1001/archinte.162.14.1597>.
- Merton, Robert K. 1936. "The Unanticipated Consequences of Purposive Social Action." *American Sociological Review* 1 (6): 894–904.
- Miles, Andrew. 2015. "The (Re)genesis of Values: Examining the Importance of Values for Action." *American Sociological Review* 80 (4): 680–704. ISSN: 0003-1224. doi:10.1177/0003122415591800.
- Mozaffarian, D., E. J. Benjamin, A. S. Go, D. K. Arnett, M. J. Blaha, M. Cushman, S. de Ferranti, et al. 2015. *Heart Disease and Stroke Statistics—2015 Update: A Report From the American Heart Association*, vol. 131, e29–e322. 4. ISBN: 0000000000000. doi:10.1161/CIR.000000000000152. <http://circ.ahajournals.org/cgi/doi/10.1161/CIR.000000000000152>.
- National Cancer Institute. 2015. *Surveillance, Epidemiology, and End Results (SEER) Program (www.seer.cancer.gov) Research Data (1973–2012)*, technical report. NCI DCCPS, Surveillance Research Program, Surveillance Systems Branch, based on the November 2014 submission.
- Noll, Mark A. 1992. *A History of Christianity in the United States and Canada*. Grand Rapids, MI: Wm. B. Eerdmans Publishing.

- Nutbeam, Don. 2008. "The evolving concept of health literacy." *Social Science and Medicine* 67 (12): 2072–2078. ISSN: 02779536. doi:10.1016/j.socscimed.2008.09.050. <http://dx.doi.org/10.1016/j.socscimed.2008.09.050>.
- Onega, Tracy, Eric J. Duell, Xun Shi, Eugene Demidenko, and David Goodman. 2009. "Determinants of NCI cancer center attendance in medicare patients with lung, breast, colorectal, or prostate cancer." *Journal of General Internal Medicine* 24 (2): 205–210. ISSN: 08848734. doi:10.1007/s11606-008-0863-y.
- Packard, Josh. 2011. "Resisting Institutionalization: Religious Professionals in the Emerging Church*." *Sociological Inquiry* 81 (1): 3–33.
- . 2012. *The Emerging Church: Religion at the Margins*. Boulder: Lynne-Reinner First Forum.
- Parsons, Talcott, and Edward Shils, eds. 1951. *Toward a General Theory of Action: Theoretical Foundations for the Social Sciences*. Cambridge, MA: Harvard University Press.
- Patel, Manali I. 2016. "Scientific Achievements May Not Reach Everyone: Understanding Disparities in Acute Leukemia." *Current Hematologic Malignancy Reports* 11 (4): 265–270. ISSN: 1558822X. doi:10.1007/s11899-016-0329-y. <http://dx.doi.org/10.1007/s11899-016-0329-y>.
- Patel, Manali I, Norman Johnson, Sean Altekruise, and Kim F. Rhoads. 2015. "Are Racial and Ethnic Disparities in Mortality from Acute Leukemia Due to Socioeconomic Status Factors? Data from the Surveillance Epidemiology and End Results Database Linked to the National Longitudinal Mortality Study." *BLOOD* 126 (23): 2101.
- Patel, Manali I, Yifei Ma, Beverly S. Mitchell, and Kim F. Rhoads. 2012. "Understanding disparities in leukemia: A national study." *Cancer Causes and Control* 23 (11): 1831–1837. ISSN: 09575243. doi:10.1007/s10552-012-0062-3.
- . 2015a. "Age and genetics: How do prognostic factors at diagnosis explain disparities in acute myeloid leukemia?" *American Journal of Clinical Oncology: Cancer Clinical Trials*. ISSN: 1537453X. doi:10.1097/COC.0b013e31828d7536.
- . 2015b. "How do differences in treatment impact racial and ethnic disparities in acute myeloid leukemia?" *Cancer Epidemiology Biomarkers and Prevention* 24 (2): 344–349. ISSN: 10559965. doi:10.1158/1055-9965.EPI-14-0963.

- Patel, Manali I, Clayton W. Schupp, Scarlett L. Gomez, Ellen T. Chang, and Heather A. Wakelee. 2013. "How do social factors explain outcomes in non-small-cell lung cancer among Hispanics in California? Explaining the Hispanic paradox." *Journal of Clinical Oncology* 31 (28): 3572–3578. ISSN: 15277755. doi:10.1200/JCO.2012.48.6217.
- Patel, Manali I, Ange Wang, Kristopher Kapphahn, Manisha Desai, Rowan T. Chlebowski, Michael S. Simon, Chloe E. Bird, et al. 2016. "Racial and ethnic variations in lung cancer incidence and mortality: Results from the Women's Health Initiative." *Journal of Clinical Oncology*. ISSN: 15277755. doi:10.1200/JCO.2015.63.5789.
- Pence, Karen M. 2006. "The Role of Wealth Transformations: An Application to Estimating the Effect of Tax Incentives on Saving." *Contributions to Economic Analysis & Policy* 5 (1): 1–24. doi:10.2202/1538-0645.1430.
- Pescosolido, Bernice A. 1992. "Beyond Rational Choice: The Social Dynamics of How People Seek Help." *American Journal of Sociology* 97 (4): 1096–1138. ISSN: 00029602.
- Pidala, J., B. M. Craig, S. J. Lee, N. Majhail, G. Quinn, and C. Anasetti. 2013. "Practice variation in physician referral for allogeneic hematopoietic cell transplantation." *Bone Marrow Transplantation* 48 (1): 63–67. ISSN: 02683369. doi:10.1038/bmt.2012.95. <http://dx.doi.org/10.1038/bmt.2012.95>.
- Podolny, Joel M. 1993. "A Status-Based Model of Market Competition." *American Journal of Sociology* 98 (4): 829–872.
- Pontikes, Elizabeth G. 2012. "Two Sides of the Same Coin: How Ambiguous Classification Affects Multiple Audiences' Evaluations." *Administrative Science Quarterly* 57 (1): 81–118.
- Pope, Devin G. 2009. "Reacting to rankings: Evidence from "America's Best Hospitals"." *Journal of Health Economics* 28 (6): 1154–1165. ISSN: 01676296. doi:10.1016/j.jhealeco.2009.08.006.
- Powell, Walter W, and Paul DiMaggio, eds. 1991. *The New Institutionalism in Organizational Analysis*. University Of Chicago Press.
- Powell, Walter W, Kenneth W Koput, James I Bowie, and Laurel Smith-Doerr. 2002. "The Spatial Clustering of Science and Capital: Accounting for Biotech Firm-Venture Capital Relationships." *Regional Studies* 36 (3): 291–305.

- Powell, Walter W, Douglas R White, Kenneth W Koput, and Jason Owen-Smith. 2005. "Network Dynamics and Field Evolution: The Growth of Interorganizational Collaboration in the Life Sciences." *American Journal of Sociology* 110 (4): 1132–1205.
- Pulte, D., M. T. Redaniel, H. Brenner, and M. Jeffreys. 2012. "Changes in survival by ethnicity of patients with cancer between 1992-1996 and 2002-2006: Is the discrepancy decreasing?" *Annals of Oncology*. ISSN: 09237534. doi:10 . 1093 /annonc/mds023.
- Pulte, Dianne, Maria Theresa Redanie, Lina Jansen, Hermann Brenner, and Mona Jeffreys. 2013. "Recent trends in survival of adult patients with acute leukemia: Overall improvements, but persistent and partly increasing disparity in survival of patients from minority groups." *Haematologica*. ISSN: 15928721. doi:10 . 3324/haematol . 2012 . 063602.
- Reich, Adam D. 2014a. "Contradictions in the Commodification of Hospital Care." *American Journal of Sociology* 119 (6): 1576–1628.
- . 2014b. *Selling Our Souls: The Commodification of Hospital Care in the United States*. Princeton, NJ: Princeton University Press.
- Roof, Wade Clark. 2001. *Spiritual Marketplace: Baby Boomers and the Remaking of American Religion*. Princeton University Press.
- Rossman, Gabriel. 2014. "Obfuscatory Relational Work and Disreputable Exchange." *Sociological Theory* 32 (1): 43–63.
- Rossman, Gabriel, and Oliver Schilke. 2014. "Close, But No Cigar: The Bimodal Rewards to Prize-Seeking." *American Sociological Review* 79 (1): 86–108. ISSN: 0003-1224. doi:10 . 1177 / 0003122413516342. <http://www.scopus.com/inward/record.url?eid=2-s2.0-84893415596%7B%5C%7DpartnerID=40%7B%5C%7Dmd5=8e7e0fe47d489a3e0ad7a02304150bb8>.
- Ruef, Martin. 2000. "The Emergence of Organizational Forms: A Community Ecology Approach." *American Journal of Sociology* 106 (3): 658–714.
- . 2004. "The Demise of an Organizational Form: Emancipation and Plantation Agriculture in the American South, 1860–1880." *American Journal of Sociology* 109 (6): 1365–1410.
- Ruef, Martin, and Kelly Patterson. 2009. "Credit and Classification: The Impact of Industry Boundaries in Nineteenth-Century America." *Administrative Science Quarterly* 54 (3): 486–520.

- Sampson, Robert J. 2012. *Great American City: Chicago and the Enduring Neighborhood Effect*. University Of Chicago Press.
- Sampson, Robert J., Jeffrey D. Morenoff, and Thomas Gannon-Rowley. 2002. "Assessing "Neighborhood Effects": Social Processes and New Directions in Research." *Annual Review of Sociology* 28 (1): 443–478. ISSN: 0360-0572. doi:10.1146/annurev.soc.28.110601.141114. arXiv: arXiv:1011.1669v3. <http://www.annualreviews.org/doi/10.1146/annurev.soc.28.110601.141114>.
- Sauder, Michael, and Wendy Nelson Espeland. 2009. "The Discipline of Rankings : Tight Coupling and Organizational Change." *American Sociological Review* 74 (1): 63–82. doi:10.1177/000312240907400104.
- Scanlon, Dennis P, Michael Chernew, Catherine Mclaughlin, and Gary Solon. 2002. "The impact of health plan report cards on managed care enrollment." 21:19–41.
- Scherer, Ross P. 1977. *American Denominational Organization: A Sociological View*. Minneapolis, MN: Fortress Press.
- Sekeres, M. A., R. M. Stone, D. Zahrieh, D. Neuberg, V. Morrison, D. J. De Angelo, I. Galinsky, and S. J. Lee. 2004. "Decision-making and quality of life in older adults with acute myeloid leukemia or advanced myelodysplastic syndrome." *Leukemia* 18 (4): 809–816. ISSN: 08876924. doi:10.1038/sj.leu.2403289.
- Sekeres, Mikkael A., Bercedis Peterson, Richard K. Dodge, Robert J. Mayer, Joseph O. Moore, Edward J. Lee, Jonathan Kolitz, et al. 2004. "Differences in prognostic factors and outcomes in African Americans and whites with acute myeloid leukemia." *Blood*. ISSN: 00064971. doi:10.1182/blood-2003-09-3118.
- Selznick, Philip. 1938. "Foundations of the theory of Organization." *American Sociological Review* 13 (1): 25–35.
- . 1949. *TVA and the Grass Roots: a Study in the Sociology of Formal Organization*. University of California Press.
- . 1957. *Leadership in Administration: a Sociological Interpretation*. Row, Peterson.
- . 1996. "Institutionalism and "Old" and "New"." *Administrative Science Quarterly* 41:270–277.
- Shavers, V. L., and Martin L. Brown. 2002. "Racial and Ethnic Disparities in the Receipt of Cancer Treatment." *Journal of the National Cancer Institute* 94 (5): 334–357. ISSN: 14602105. doi:10.1093/jnci/94.5.334. <https://academic.oup.com/jnci/article-lookup/doi/10.1093/jnci/94.5.334>.

- Shim, Janet K. 2010. "Cultural Health Capital." *Journal of Health and Social Behavior* 51 (1): 1–15. ISSN: 0022-1465. doi:10.1177/0022146509361185. <http://journals.sagepub.com/doi/10.1177/0022146509361185>.
- Singer, S., M. Bartels, S. Briest, J. Einkenkel, D. Niederwieser, K. Papsdorf, J.-U. Stolzenburg, S. Künstler, S. Taubenheim, and O. Krauß. 2016. "Socio-economic disparities in long-term cancer survival—10 year follow-up with individual patient data." *Supportive Care in Cancer*: 1391–1399. ISSN: 14337339. doi:10.1007/s00520-016-3528-0.
- Small, Mario Luis. 2009. *Unanticipated Gains: Origins of Network Inequality in Everyday Life*. New York, NY: Oxford University Press.
- Smith, Edward Bishop. 2011. "Identities as Lenses: How Organizational Identity Affects Audiences' Evaluation of Organizational Performance." *Administrative Science Quarterly* 56 (1): 61–94.
- Soares, A., I. Biasoli, A. Scheliga, R. L. Baptista, E. P. Brabo, J. C. Morais, G. L. Werneck, and N. Spector. 2013. "Association of social network and social support with health-related quality of life and fatigue in long-term survivors of Hodgkin lymphoma." *Supportive Care in Cancer* 21 (8): 2153–2159. ISSN: 09414355. doi:10.1007/s00520-013-1775-x.
- Stambler, Howard V. 1988. "The Area Resource File -a Brief Look." *Public Health Reports* 103 (2): 184–188. ISSN: 0033-3549. doi:10.1039/C0CC04295A. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC1477959/pdf/pubhealthrep00171-0082.pdf>.
- Sutton, John R, and Mark Chaves. 2004. "Explaining Schism in American Protestant Denominations, 1890-1990." *Journal for the Scientific Study of Religion* 43 (2): 171–190.
- Swidler, Ann. 1986. "Culture in Action: Symbols and Strategies." *American Sociological Review* 51 (2): 273–286.
- Tay, Abigail. 2003. "Assessing competition in hospital care markets: the importance of accounting for quality differentiation." *The Rand Journal of Economics* 34 (4): 786–814. ISSN: 0741-6261. doi:Article.
- The Pew Forum on Religion and Public Life. 2009. *Faith in Flux: Religious Affiliation in the US*. Technical report.
- Turco, Catherine. 2012. "Difficult Decoupling: Employee Resistance to the Commercialization of Personal Settings." *American Journal of Sociology* 118 (2): 380–419.

- Vaisey, Stephen. 2009. "Motivation and Justification: A Dual-Process Model of Culture in Action." *American Journal of Sociology* 114 (6): 1675–1715.
- . 2010. "What People Want: Rethinking Poverty, Culture, and Educational Attainment." *The ANNALS of the American Academy of Political and Social Science* 629 (1): 75–101.
- Vaisey, Stephen, and Lauren Valentino. 2018. "Culture and choice: Toward integrating cultural sociology with the judgment and decision-making sciences." *Poetics*. ISSN: 0304422X. doi:10.1016/j.poetic.2018.03.002.
- Valentino, Lauren. 2019. "What is a Good Job? Cultural Logics of Occupational Prestige." PhD Dissertation, Duke University.
- VanGarde, Aurora, Jangho Yoon, Jeff Luck, and Carolyn A. Mendez-Luck. 2018. "Racial/ethnic variation in the impact of the affordable care act on insurance coverage and access among young adults." *American Journal of Public Health* 108 (4): 544–549. ISSN: 15410048. doi:10.2105/AJPH.2017.304276.
- Voas, David, and Mark Chaves. 2016. "Is the United States a Counterexample to the Secularization Thesis?" *American Journal of Sociology* 121 (5): 1517–1556.
- Wagner, Christian von, Claudia Semmler, Anna Good, and Jane Wardle. 2009. "Health literacy and self-efficacy for participating in colorectal cancer screening: The role of information processing." *Patient Education and Counseling* 75 (3): 352–357. ISSN: 07383991. doi:10.1016/j.pec.2009.03.015.
- Ward, E., A. Jemal, V. Cokkinides, G. K. Singh, C. Cardinez, A. Ghafoor, and M. Thun. 2004. "Cancer Disparities by Race/Ethnicity and Socioeconomic Status." *CA: A Cancer Journal for Clinicians* 54 (2): 78–93. ISSN: 0007-9235. doi:10.3322/canjclin.54.2.78. <http://doi.wiley.com/10.3322/canjclin.54.2.78>.
- Wardle, Jane, Kirsten McCaffery, Marion Nadel, and Wendy Atkin. 2004. "Socioeconomic differences in cancer screening participation: Comparing cognitive and psychosocial explanations." *Social Science and Medicine* 59 (2): 249–261. ISSN: 02779536. doi:10.1016/j.socscimed.2003.10.030.
- Weber, Max. 1946. "The Social Psychology of the World Religions." In *From Max Weber: Essays in Sociology*, edited by H H Gerth and C Wright Mills, 267–301. New York, NY: Oxford University Press.
- . 2005. *The Protestant Ethic and the Spirit of Capitalism*. New York: Routledge.

- White, Harrison C. 1981. "Where Do Markets Come From?" *American Journal of Sociology*: 517–547.
- . 2002. *Markets From Networks: Socioeconomic Models of Production*. Princeton University Press.
- Williams, David R., and Chiquita Collins. 2001. "Racial residential segregation: A fundamental cause of racial disparities in health." *Public Health Reports* 116 (5): 404–416. ISSN: 00333549. doi:10.1016/S0033-3549(04)50068-7.
- Zuckerman, Ezra W. 1999. "The Categorical Imperative: Securities Analysts and the Illegitimacy Discount." *American Journal of Sociology* 104 (5): 1398–1438.
- . 2000. "Focusing the Corporate Product: Securities Analysts and De-Diversification." *Administrative Science Quarterly* 45 (3): 591–619.
- . 2004. "Structural Incoherence and Stock Market Activity." *American Sociological Review* 69 (3): 405–432.
- Zuckerman, Ezra W, Tai Young Kim, Kalinda Ukanwa, and James von Rittmann. 2003. "Robust Identities or Nonentities? Typecasting in the Feature-Film Labor Market." *American Journal of Sociology* 108 (5): 1018–1074.

Biography

Nick Bloom has been in school since he was five years old. Though he will remain a student in an informal capacity, this document marks the end of his formal training for the foreseeable future. Along the way, he studied design, chemistry, biology, international development, philosophy, theology, anthropology, psychology, and sociology in South Bend, IN; San Diego, CA; and Durham, NC. Shortly after defending the ideas in this document, he will move to Washington, DC to begin work as a public sector design researcher at Deloitte in Rosslyn, VA. For now.