

RESEARCH STATEMENT

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An open debate in the development of legal institutions is whether individuals obey the law because the law incentivizes or because the law has legitimacy. Much of my research in law and development seeks to understand how people form normative commitments and how they respond to these normative commitments. My early work traces the incentives that lead to what has now come to be viewed as human rights violations, such as religious, ideological, and gender violence, even though they derived their legitimacy from proto-legal sources and ultimately undermined that legitimacy. I examine how interpretations of religious and legal texts, particularly those associated with fundamentalism, interact with market forces. In two three-part studies, I investigate the economic forces underlying the religious provision of social insurance, social sanctions, and social conservatism and, turning to one dimension of social conservatism, the economic incentives that give rise to gender violence. In doing so, I provide an explanation for why church-state separation arose in the US but not in many European countries and develop a methodology for empirically evaluating the effects of interpretations and the law using the random assignment of interpreters, such as judges and doctors.

Evaluating legal rules with observational data provides only a black box on human behavior, but experimentally manipulating legal rules in contextualized field settings is practically infeasible because doing so often violates normative commitments. Using a disaggregated labor market and drawing on previous field experience in developing countries, my recent research conducts a series of field experiments in mechanism design to test behavioral economic theories of how individuals are incentivized in groups, a central assumption underlying the law and economics approach to law. This apparatus also provides a contextualized setting for conducting experiments in empirical moral psychology, philosophy, and interactive epistemology, central to exploring the transmission and persuasion process of normative ideas whose incommensurability lead to conflict. Concomitantly, using observational data on judges and courts where normative ideas incubate, I study incentives and market design for the formation of legal ideas, judicial innovation, and the production of justice.

The development of legal institutions is critical to implementing policy and business innovations designed to spur growth and help the poor in developing countries, but incentives to help members of shared identities frequently debilitate these initiatives. On a thick vein, I study the demographic laws and policies that aid discrimination. My research primarily draws on the empirical and experimental tools of modern development economics, though I also aim to use the structural and theoretical tools of modern microeconomics and macroeconomics, to broaden law and economics. If economics is the science of how individuals optimize to budget constraints, my research studies how societies optimize in response to textual constraints, from religion to constitution to the tax code.

Throughout my research, I have been motivated by an idea that can be broadly termed, hermeneutics, which is hermeneutics and econometrics, the economics of textual interpretation. Examples include modeling the economic incentives behind the shift from pro-welfare religious interpretations a century ago to the anti-welfare posture of today's religious right and why church-state separation arose when and where it did, measuring the effects of sexual harassment

law—an interpretation of anti-discrimination law—on gender inequality by exploiting the random assignment of appellate judges interpreting the facts and the law differently but in a predictable manner, using a particular instance of interpretive injustice where British capital cases during World War I were randomly executed or commuted to estimate the deterrent and delegitimizing effects of the death penalty, and studying how individuals misinterpret the law by manipulating tax schedules and contracts in contextualized labor market settings.

Job Talk

One of the more dramatic labor market changes in the past half-century has been making the work environment friendlier to women. Forbidding sexual harassment has been one of the key practical contributions of feminist legal theory. Yet economic theory suggests that forbidding sexual harassment is a form of mandated benefit and can actually backfire on the groups that it was meant to help. My job talk paper (“**Does Forbidding Sexual Harassment Exacerbate Gender Inequality?**” with Jasmin Sethi) empirically evaluates the effect of sexual harassment on gender inequality in the labor market and develops a new methodology to do so. We find that forbidding sexual harassment increased female employment status, hours worked, wages, and management status relative to males but that these ameliorative effects on gender inequality are reduced for women previously in the labor force.

- State variation in policy regimes is rarely completely random, so we use the random assignment of appellate judges together with the fact that Democratic appointees and female judges tend to decide favorably for sexual harassment plaintiffs to identify the effect of forbidding sexual harassment on employment outcomes. I am employing this methodology in other areas of the law and developing other empirical methodologies that can be used by students, practitioners, and legal academics.
- We find that sexual harassment law delivers its impact through the number of plaintiff cases, not damages awarded. An open debate in the development of legal institutions is whether individuals obey the law because the law deters through monetary sanctions or because the law has moral legitimacy. I am conducting experiments manipulating rules in contextualized field settings that test behavioral law and economics assumptions regarding individual rationality and morality.
- One of the more surprising results is that the positive effect on female outcomes comes primarily from sexual harassment law, not gender discrimination law, highlighting a key contribution of feminist interpretation to the workplace. Using economic theory and methods to study how interpretations evolve, I am investigating the broader claims of legal realism.
- These results contrast with recent empirical literature findings that the ADA and maternity mandates had detrimental effects, a puzzle we resolve with an insider-outsider model of involuntary unemployment. The development of legal institutions is critical to economic growth, but incentives to help members of shared identities frequently debilitate these initiatives. I build models to trace the incentives that lead to what has now come to be viewed as human rights violations in order to suggest remedies to address them.

Secondary Job Talk

Capital punishment is viewed as a human rights violation in some countries but not others. It is often justified on utilitarian grounds. Whether the death penalty deters is a classic legal and economic question that has been unable to be answered convincingly with any available data. During World War I, the British military condemned over 3,000 soldiers to death, but only executed approximately 12% of these soldiers; the remainder received commuted sentences. Many historians believe that the military command confirmed or commuted sentences for reasons unrelated to the circumstances of a particular case and that the application of the death penalty was essentially random – a “pitiless lottery.” Using a dataset on all capital cases during WWI, “**The Deterrent Effect of the Death Penalty? Evidence from British Commutations During World War I**” (with John Horton) statistically investigates this claim and finds that the data are consistent with an essentially random process. Using this result, we exploit variation in commutations and executions within military units to identify the deterrent effect of the death penalty, with deterrence measured by changes in the timing of subsequent absences within that unit. Absences are measured via “wanted” lists prepared by British military police units searching for deserters. We find limited evidence that executing deserters deterred absences, while executing non-deserters and Irish soldiers, regardless of crime, spurred absences, particularly Irish absences. This provides causal evidence of minorities reacting negatively to state-imposed sanctions and novel evidence of individuals responding to the legitimacy of the law.

Tax

Insights from behavioral law and economics require a fundamental reorientation of current tax law. High marginal tax rates from redistributive programs may be less costly than previously thought in terms of labor supply responses if people confuse average and marginal tax rates.¹ Moreover, the elasticity of labor supply may be highly dependent to justifications for tax changes.² If matching grants encourage charitable donations, then charitable tax deductions for private redistribution may be more effective than previously thought.³

The interaction between public and private redistribution is an important topic for tax law. Without redistribution, private groups may step in to provide social insurance.⁴ Depending on the mechanism guaranteeing repayment in private social insurance schemes,⁵ private redistribution can have positive or negative externalities.⁶ Public redistribution crowds out private redistribution.⁷ Crowding out helps explain why some tax laws are viewed as less legitimate by some parts of the population.⁸

Understanding how the cost and benefits of public goods are borne by the population may

¹ “Do People Confuse Average and Marginal Tax Rates? Evidence From a Field Experiment” (with John J. Horton)

² “Pricing Wage Cuts: Evidence From a Field Experiment” (with John J. Horton)

³ “Charitable Tax Deduction Experiments”

⁴ “Club Goods and Group Identity: Evidence from Islamic Resurgence During the Indonesian Financial Crisis” (revise and resubmit, **Journal of Political Economy**)

⁵ “Does Economic Distress Stimulate Religious Fundamentalism?”

⁶ “Islamic Resurgence and Social Violence During the Indonesian Financial Crisis” (in **Institutions and Norms in Economic Development**, MIT Press, ed. M. Gradstein and K. Konrad, 179-200, 2007.)

⁷ “Religion, Welfare Politics, and Church-State Separation” (**Journal of Ecumenical Studies**, 42(1), 42-52, 2007, with Jo Lind)

⁸ “The Political Economy of Beliefs: Why Fiscal and Social Conservatives (Liberals) Come Hand-in-Hand” (with Jo Lind)

suggest tax laws that more finely assign specific taxes for public goods provision to those who benefit from them. Tax policy is rarely randomly assigned, however. Assuming that the tax incidence of public goods is the same regardless of the source of policy variation, the incidence of environmental public goods can be investigated in labor market outcomes⁹ as well as property prices.¹⁰ Labor market regulation¹¹ might have adverse consequences for the intended beneficiaries or positive consequences if they prevent involuntary unemployment.¹²

Population has always factored into tax law, and indeed, was one of the prime reasons for some of the earliest tax laws.¹³ Such tax laws have had ethically ambiguous redistributive consequences as have their modern-day counterparts.¹⁴ Models incorporating demographic forces into tax policy suggest that even temporary redistribution, such as increasing opportunities for the poor, could permanently reduce inequality.¹⁵

Selected abstracts:

“Do People Confuse Average and Marginal Tax Rates? Evidence from a Field Experiment” (with John Horton) offers a kinked wage schedule that reflects higher marginal tax rates vs. a constant high marginal tax rate schedule and examine whether labor is curtailed in the kinked schedule beyond where it is curtailed in the constant schedule. The income effect from pre-kink wages would curtail labor earlier, making the effect harder to find. We also manipulate context to see what causes this confusion to occur, e.g. inform wage-to-date cumulative payroll or give complete information on schedule of marginal or average wages. We find that the workers who saw the average payment schedule do significantly more work than the workers who saw the marginal payment schedule. When workers are not primed with average or marginal payment rates, they do significantly more work. These results suggest that workers may be less responsive to marginal rates than previously thought, eliminating some of the deadweight loss from high marginal taxes. If people confuse average and marginal tax rates, it requires a fundamental reorientation of current tax law.

“Pricing Wage Cuts: Evidence from a Field Experiment” (with John Horton) conducts a field experiment to understand why firms rarely cut nominal wages, a central tenet of macroeconomics, and poorly understood due to the difficulty of observing plausibly exogenous wage reductions in actual labor market settings. We hired workers for a data entry task, paid them a high wage and then offered some of the workers the opportunity to keep working, albeit for a lower wage. Offers were framed differently across groups. Workers were more likely to reject lower offers, but “reasonable” justifications eliminated this effect. Yet not all justifications were effective---suggesting the cut would improve our profits increased quits. We also measured whether the treatments affected quality, trust and cooperation. The “profits” treatment reduced cooperation and possibly reduced quality; the other treatments had generally weak effects. Our auxiliary results are more consistent with theories of negative reciprocity,

⁹ “Who Bears the Cost of Environmentalism? The Incidence of the Environmental Protection Act and National Environmental Policy Act on Wages, Unemployment, and Growth”

¹⁰ “Do Regulatory Takings Increase Property Values?”

¹¹ “Labor’s Burden? The Effects of National Labor Review Board Decisions on Wages, Unemployment, and Growth”

¹² “Does Forbidding Sexual Harassment Exacerbate Gender Inequality?” (with Jasmin Sethi)

¹³ “Can Countries Reverse Fertility Decline? Evidence from France’s Marriage and Baby Bonuses, 1929-1981”

¹⁴ “Trading Off Reproductive Technology and Adoption: Do IVF Subsidies Decrease Adoption Rates?” (with I. Glenn Cohen)

¹⁵ “Income Distribution Dynamics with Endogenous Fertility” (*Journal of Economic Growth*, 7(3), 227-258, 2002, with Michael Kremer, and *American Economic Review Papers and Proceedings*, 89(2), 155-160, 1999, with Michael Kremer)

where firms are reluctant to reduce wages for fear of worker retaliation, than with theories of gift exchange or adverse selection. In a follow-up experiment, we measure the value of different framings for wage cuts.

Religious intensity as social insurance may explain why fiscal and social conservatives and fiscal and social liberals tend to come hand-in-hand. **“The Political Economy of Beliefs: Why Fiscal and Social Conservatives (Liberals) Come Hand-in-Hand”** (with Jo Lind) finds evidence that religious groups with greater within-group charitable giving are more opposed to the welfare state and more socially conservative. The alliance reverses (social conservatives become fiscal liberals) for members of a state church. Increases in church-state separation, measured by US judicial decisions and the 2000 Swedish separation of church and state, precede increases in the alliance between fiscal and social conservatism. The theory provides a novel explanation for religious history: as elites gain access to alternative social insurance, they judicate increasing church-state separation to create a constituency for lower taxes. This holds if religious voters exceed non-religious voters; otherwise, elites prefer less church-state separation in order to curb the secular left, generating multiple steady states where some countries sustain high church-state separation, high religiosity, and low welfare state, and vice versa. We use this framework to explain the changing nature of religious movements, from Social Gospel to the religious right, and why church-state separation arose in the US but not in many European countries.

Concerned about fertility differentials between the rich and poor, during the early 20th century, France initiated an unusual tax policy to promote marriage and fertility, regressive in that fertility incentives were so large and greatest among the rich. Eugenic interest in family allowances was substantial during this time due to fear of depopulation and changing ratios of uneducated to educated. Family incomes were divided by family size to determine a final tax bracket. A number of countries have begun promoting similar tax incentives. In **“Can Countries Reverse Fertility Decline? Evidence from France’s Marriage and Baby Bonuses, 1929-1981,”** I use variation in tax policy with differential impact for different population groups to disentangle economic incentives from propaganda that often accompany such country-wide initiatives. Evidence using synthetic cohorts constructed from aggregate tax return data suggests a large and significant elasticity of fertility and marriage with respect to tax incentives exists, which may partly explain France's higher post-war fertility relative to other European countries.

Methodology

Which legal rules and interpretations are socially beneficial? Random assignment of judges with different but predictable decision-making tendencies allows the evaluation of rules and interpretations. Using the random assignment of appellate judges, I consider the causal impact of appellate law on economy-wide outcomes, following the methodology laid out in “Does Forbidding Sexual Harassment Exacerbate Gender Inequality?” and elaborated upon below.

To test whether sexual harassment law affects labor market inequality, we begin our analysis by exploiting variation over time and across federal appellate circuits in the common law’s permissive treatment of sexual harassment. We begin with appellate decisions rather than Supreme Court decisions because we feel the latter are less exogenous - momentous judicial decisions may be caused by rather than be causes of political or socioeconomic changes. The basic specification considers changes in sexual harassment law in each circuit and year and their

effects on individuals living in those circuits over time.

To measure changes in each circuit's sexual harassment jurisprudence, we examine the number of pro-plaintiff decisions per year. We should expect to see an effect if 1) firms respond to appellate decisions, 2) judges follow precedent, and 3) pro-plaintiff decisions in appellate courts expand or maintain the definition of what constitutes sexual harassment. We explore the impact of pro-plaintiff decisions on individual employee outcomes such as employment status, hours worked last week, weekly real earnings, or management status.

In order to ascertain causality as opposed to a spurious correlation, we need to control for factors that might be correlated with both gender inequality and sexual harassment law. We control for individual demographic characteristics as well as circuit and year fixed effects to address fixed factors such as plaintiff-friendliness of trial and appellate courts. We also control for legal institutions, such as the availability of female judges and Democratic appointees that can vary across time and region and may be correlated with case availability and employment outcomes. In particular, we control for the probability of a panel being assigned a female judge and the probability of a panel being assigned a Democratic appointee. Because underlying differences in other factors may contribute to the quantity of litigation, we include a proxy for docket size and, as a specification check, use the number of pro-defendant decisions to see if they have the opposite effect.

Responses to changes in the law may vary over time. It may require some time for people to adjust to a new legal regime; alternatively, the effects of a law change may fade away as people's expectations and perceptions adjust. We therefore include five years of lags of the law. We also include one or two years of leads to help assess whether changes to the common law affect firm behavior before they occur or whether trends in labor market inequality precipitate changes in common law. If so, any estimates of the beneficial effects of the law could be due to underlying improvements in gender inequality and not the law itself.

Studies evaluating the effects of law based solely on differences across time and space face important limitations. Multiple political and socioeconomic factors drive the passage of state law and even judicial decisions such as those on the Supreme Court, making it difficult to ascertain causality. It is just as easily plausible that trends in or anticipated gender inequality motivate changes in sexual harassment law. Furthermore, what constitutes sexual harassment may very well rely on community standards, and decisions could depend on social behaviors and attitudes or decisions in other circuits. As such, one should not expect to identify effects of the law based solely on the differences across time and space.

Reverse causality - where the socioeconomic environment affects judicial decisions - may plague our estimates of the causal effects of judicial decisions on the socioeconomic environment. Past or anticipated gender inequality may motivate certain judges to select which cases or legal categories they want to influence and how they choose to vote. Moreover, if the number of pro-plaintiff sexual harassment decisions is correlated with the number of pro-plaintiff decisions in similar areas of law, we would overestimate the effect of sexual harassment law, attributing a larger employment effect to sexual harassment than is due.

Our main identification strategy therefore exploits the random assignment of judges to an

appellate panel and uses the predictive relationship between a judge's personal attributes and legal decision-making to instrument for changes in sexual harassment law in a circuit-year. We estimate the effect of sexual harassment law on gender inequality using only the variation in sexual harassment law that is due to the random draw of judges with particular characteristics. A number of papers have documented the effect female judges have on sexual harassment cases and similar effects are found for judges appointed by Democratic presidents. Controlling for the probability of a panel being assigned a female judge, the actual proportion of panels with a female judge is random and addresses remaining endogeneity concerns. The random draw of judges with a particular characteristic is not correlated with the random draw in another circuit or year. The random draw itself is not influenced by the socioeconomic environment such as trends in or anticipated gender inequality. Further, the random draw of judges to sexual harassment cases is unrelated to the random draw of judges to, say, gender discrimination cases.

This methodology can be replicated in other areas of law. Sexual harassment law reduced gender inequality, but the question remains whether this labor market regulation had ameliorative or detrimental effects for firms and whether it made it more difficult for firm entry. In the last year, a number of new datasets on firm well-being and firm entry have become publicly available (e.g. Business Dynamic Series), which I plan to link with my database of appellate opinions. I hope to study the impact of labor market and environmental regulation on firm entry. The legal database covers the following areas of law for which I plan to examine the effects of on firms. 1. Regulatory Takings, 2. Sexual Harassment and Gender Discrimination, 3. Affirmative Action and Title VII, 4. Americans with Disabilities Act, 5. National Labor Review Board Decisions, 6. Environmental Protection Act and National Environmental Policy Act, 7. Punitive Damages, 8. Piercing the Corporate Veil.

Other projects for which I have already obtained data on appellate decisions and judicial background characteristics include: "Do Campaign Contribution Limits Lead to Voter Apathy?"; "Do Homosexual Rights Have Adverse Consequences on Marriages and Children?"; "The First Amendment and the Marketplace for Ideas"; "Do Punitive Damages Reduce Accidents and Workplace Injuries?"; "Free Speech and Consumer Welfare: The Effects of Federal Communications Commission Decisions"; "Obscenity Law and the Commodification of Women"; "Does Segregation Influence Peer Effects in Crime and Voting Preferences?"; "The Effects of Standing on Litigation"; "The Criminal Effects of Criminal Appeals and Capital Punishment".

Judicial Discretion

"Electoral Cycles Without Electoral Incentives? Evidence from Appellate Judges" (with Carlos Berdejo) uncovers evidence that appellate judges are more likely to dissent in the three quarters leading up to a Presidential election, particularly in cases decided by ideologically divided panels. In addition, we find that appellate judges are less likely to voluntarily leave the bench in the three quarters preceding a Presidential election. This effect, which appears to be entirely driven by Democrat-appointed judges, is more pronounced when the party of the President at the time the judge leaves is different from the party of the President that appointed the judge. The electoral effects that we observe in both the propensity to dissent and retire are a relatively recent phenomenon, concentrated in the post-1980 period. Opinions written in the quarter before an election are longer and more frequently cited. These results shed light into the

causes and consequences of judicial polarization along political party lines and raise potential questions regarding the nature of the balance of power among the branches of government and the independence of the federal judiciary.

Whether judges make decisions based on their demographic characteristics is a subject of normative and positive debate. **“Priming Ideology: Is Judicial Bias Cognitive or Motivational?”** (with Carlos Berdejo) builds on previous studies documenting a correlation, by priming party affiliation and gender identity in subjects to ascertain the causal effect of social identity on decisions in sexual harassment and reversals. We examine how much of the observed correlation in previous studies is explained by social identity. If judges decide in a manner more like the non-primed control group, this suggests judicial decision-making is more similar to vestigial non-trained response to fact patterns. If judges decide in a manner more like the primed treatment group, this suggests that judges may be very conscious of their gender or party affiliation. The broader question is to examine whether judicial bias is cognitive or motivational.

Are certain judges more likely to innovate and are they rewarded or punished for innovation? **“Judicial Innovation”** (with Carlos Berdejo, Andrei Shleifer, and Georgios Theophanous) uncovers evidence that reversed cases, especially those with dissents, subsequently receive more negative citations. They are much more likely to be distinguished (receive a caution citation) than to be directly overruled (warning citation). Judges appointed by Democrats are more likely to overturn lower court decisions, especially those with dissents. When an appellate court reverses a lower court opinion by distinguishing it, our working hypothesis is that other appellate courts not ready to follow the example of the leading appellate court cite the case negatively. This treatment of judicial innovation holds across all case types.

The sale of litigation claims to third parties has historically been banned in almost every legal system. While this ban reduces the likelihood of frivolous, negative expectation suits, allowing such litigation may be welfare enhancing overall and may stimulate socially beneficial interpretations. A number of recent theoretical papers have proposed that the creation of a market for litigation would increase welfare, through the increased access to the courts for individuals who are risk averse or credit constrained. Until recently this question remained a theoretical one, as there was no venue to empirically test the impact of litigation sales. But recent court decisions in Australia have led to the formation of litigation funding corporations, which buy claims (or fractions) from third parties. **“A Market for Justice”** (with David Abrams) attempts the first empirical investigation into the impact of litigation funding. We analyze data obtained from the leading litigation funding firm in Australia, as well as from the Australian state and federal courts. Using this data we test several economic theories of litigation. If litigation trading alleviates credit constraints, litigation trading should stimulate the filing of more costly suits. If litigation trading allows the smoothing of risk, litigation trading should stimulate the filing of lower probability suits. We make use of the changes in the law in Australia as natural experiments, which alter the cost of litigation. Specifically, we examine the impact of litigation funding on settlement rates and amounts, time to settlement, volume of litigation, conditional fees, establishment of precedent, and development of law. The findings are important to understanding the welfare implications of liberalizing litigation funding laws and allowing law firms to go public, currently under consideration in a number of countries. In preliminary findings, litigation funding does appear to increase the number of suits filed and decrease the frequency of appearances before the court.

Religion and Morality

In **“Club Goods and Group Identity: Evidence from Islamic Resurgence During the Indonesian Financial Crisis,”** I present a model where group identity in the form of religious intensity represents the degree of social insurance in which people participate and social sanctions facilitate religion’s function as ex-post insurance. I exploit relative price shocks induced by the Indonesian financial crisis to demonstrate a causal relationship between economic distress and religious intensity that is weaker for other forms of group identity. Rapid inflation favored growers of staple crops and disfavored those whose wages were particularly sticky. I use pre-crisis wetland hectares and government occupation as instruments and dryland hectares and service occupation as “placebo instruments” to estimate the impact of economic distress on religious intensity. Households who experience a \$1 decline in monthly per-capita nonfood expenditures are 2% more likely to increase communal Koran study and 1% more likely to switch a child to Islamic school but are no more likely to increase other communal activities or secular school attendance. The average household suffered a \$4.70 decline in monthly per-capita nonfood expenditure. Consistent with predictions derived from the model, credit availability reduces the effect of economic distress on religious intensity by roughly 80%, religious intensity alleviates needing alms or credit to meet basic needs at the peak of the crisis, religious institutions reduce the spread of consumption shocks among villagers during the crisis, and religious institutions reduce the effect of income shocks on consumption shocks. These results provide evidence that religious intensity responds to economic forces and suggest alleviating risk may mitigate fundamentalist tendencies.

Whether social violence rises or falls with religious intensity is a subject of much debate. Economic theorists have wondered, why in the presence of economic inequality, does social conflict occur along religious lines instead of class lines? Theory suggests that groups with club goods provide resources for the poor to conduct conflict in a battle over resources. In **“Does Economic Distress Stimulate Religious Fundamentalism,”** I find that economic distress does not stimulate social violence by itself but stimulates it in the presence of religious institutions. I exploit differences in religious institutions across Indonesia before the Indonesian financial crisis and relative price shocks induced by the crisis to identify the effect of economic distress on the relationship between religious institutions and social violence. High religious intensity areas before the crisis have more social violence after the crisis. Stronger measures of religious intensity are more strongly associated with social violence. Social violence increases fastest where participation in Koran study also increases the fastest. Social violence is negatively associated with other social activities. Notably, social violence is more strongly linked with religious intensity in regions that are more economically distressed, while credit availability mitigates this effect. These results suggest that in a world of competing insurance groups, as volatility increases, religions with stronger sanctions or violence are more stable and successful, but as volatility declines, benign groups and religions become relatively successful.

In **“Gender Violence and the Price of Virginity: Theory and Evidence of Incomplete Marriage Contracts,”** I build and test a model of marriage as an incomplete contract that arises from asymmetric virginity premiums—the double standard placed on men and women at the time of marriage—and examine whether this can lead to social inefficiencies. Contrary to the efficient households hypothesis, women cannot prevent being appropriated by men once they enter marriage if they command lower marriage market opportunities upon divorce. Because

men cannot or do not commit to compensating women for their lower ex-post marriage market opportunities, marriage is an incomplete contract. Men may seek to lower women's ex-ante "market wages" in order to induce entry into joint production. Inefficient or abusive marriages are less likely to separate. Equalizing virginity premiums may reduce domestic and non-domestic violence. Female circumcision and prices women pay doctors to appear virgin before marriage in many countries suggest asymmetric virginity premiums continue to exist. Evidence from China and the US suggest asymmetric virginity premiums persist over economic development. Asymmetric virginity premiums are strongly positively correlated with female but not male virginity premiums. I use variation in religious upbringing to help isolate the effect of virginity premiums on gender violence in the US. The correlation between virginity premiums and female reports of forced sex may be biased downwards if shame is associated with abuse and this shame is greater for women with higher virginity premiums. But the correlation for males might not be biased downwards. Asymmetric virginity premiums are positively correlated with men forcing sex on women and paying women for sex. The model complements a growing empirical literature on inefficient households and human rights abuses, visible manifestations of female appropriability across time and space.

Moral intuitions underlie much of law and these studies investigate the malleability of those moral intuitions. Philosophers and economists hotly contest the proper scope of markets. While economists primarily focus on efficiency, philosophers speculate on how markets leave their mark on social norms. An oft-stated concern is whether people become corrupted or degraded if turned into commodities. To test these hypotheses, "**Markets and Morality: Do Free Markets Corrode Moral Character?**" exploits random assignment of wage contracts across workers to investigate how market interactions affect normative commitments. Workers who are assigned piece rate work become more utilitarian while workers who are assigned to tournaments become less utilitarian. Exposure to tournaments does not alter workers' donations to charity but it does reduce their error rates. Tournament winners, however, are more likely to donate to charity. American workers are less likely to be utilitarian in the piece rate condition. These results suggest that more competitive settings do not necessarily make individuals more utilitarian, that the commodification of labor may have effects on normative commitments heretofore unmeasured, and that the manner in which market forces shape normative commitments may be contingent on culture.

Do individuals have a moral duty to improve the life prospects of already existing children waiting for adoption rather than having genetically related children of their own? What role should the state play in mediating the claim of the infertile that they suffer an illness and merit state support to correct it, against the claim of adopted children? Should the state tip the balance by subsidizing the use of reproductive technology or should it remain neutral? Motivating these normative and legal questions is an omnipresent assumption in the literature that state subsidization of reproductive technologies will reduce adoption; that is, there is a trade-off between helping individuals conceive and helping adopted children in America. "**Trading Off Reproductive Technology and Adoption: Do IVF Subsidies Decrease Adoption Rates?**" (with Glenn Cohen) challenges that assumption. Using the differential timing of introduction of state-level insurance mandates in some states relating to In Vitro Fertilization (IVF), and differences in the form these mandates take, we find, contrary to the assumption in the literature, no strong evidence that state support of IVF crowds out adoption.