Cross-National Policy Diffusion in States and Provinces

by

Alison Beatty

A dissertation submitted in partial fulfillment
of the requirements for the degree of
Doctor of Philosophy
(Public Policy and Political Science)
in the University of Michigan
2020

Doctoral Committee:

Professor Elisabeth Gerber, Chair
Professor Barry G. Rabe
Professor Charles R. Shipan
Professor Stuart Soroka

Alison Z. Beatty

azbeatty@umich.edu

ORCID iD: 0000-0003-2094-6162

DEDICATION

Dedicated to my father and my sister. With love and thanks.

This dissertation is also dedicated to the people of Michigan, who made it possible for me to undertake this challenging and fulfilling program that has equipped me to search for and discover truths with which I can help society in return. I am grateful for the chance I have been given, and ready to use the skills I have learned to ask and answer ever more difficult and relevant questions about our complex world.

ACKNOWLEDGEMENTS

It has been a pleasure to write small portions of this Acknowledgments section over the past few months because envisioning how very thankful I am for the colleagues, friends, and family members who have gone out of their way to help me has always driven me to work harder and do a good job for them. First and foremost, I would like to express profound gratitude to the incredible professors on my Committee. Whether I am scouring one of their papers, talking to them during office hours, or reading their public statements in the news, their unwavering commitment to asking and producing answers on the most important policy issues of the day redoubles my inspiration to ask ever more relevant questions and be more thorough in the process by which I answer them. I find it wonderful that I am learning about best scholarly research practices by writing a dissertation about best policy research practices, and I thank my Committee for every conversation that helped me discover a little bit more. On days when the work was most difficult, my gratitude at receiving advice from people so committed to making a positive contribution to the world motivated me to keep moving forward and figure out the answers.

Thank you, Stuart, for introducing me to the world of text analysis and helping me gain enough momentum to learn more on my own. I remember watching you coding legislator statements a couple of summers ago and feeling overwhelmed just trying to understand the figures you were presenting. I remain awed by your expertise to this day but, thanks to your helpful pointers I am firmly on the path of being able to ask and answer questions of my own. Thank you for introducing me to the ins and outs of this awesome method!

Thank you, Barry, for such terrific conversations about U.S. state and Canadian provincial policy. I also deeply appreciate all the excellent literature and references with which you have provided me over the years, including books and journal publications about Canadian provinces that I would never have found on my own. Similarly, I am grateful for all the professional contacts you put me in touch with to answer some of my questions about specific policies in Australian states and Canadian provinces. What I admire most about your work is that your masterful attention to complicated policy details is matched by your ability to summarize all of that complex policy information and its implications in such an accessible style for readers who are not industry experts. I shall keep this paradigm as my gold standard going forward.

Thank you so sincerely, Chuck, for your *incredibly* thoughtful comments at every stage of the process. Your calm and clear counsel when I was struggling to pull together a prospectus helped me find a way forward, and I am so happy that I did not give up. Your papers lay out crystal clear theories in the most concise and readable academic prose I have ever read. I am regularly reminded of this whenever I set out to revise a draft to be more like your papers and end up with a longer version than when I started. This skill of packing a lot of meaning into concise phrases also applies to your comments on my work, to the point where I know that a comment from you is not fully addressed until about three layers of nuance and complexity have revealed themselves in succession. My most frequent thought in addressing these comments is, "that was so hard to figure out and I can't even believe how much better this paper is for having fixed just that one tiny comment…Amazing!" I also sincerely appreciated the small words of encouragement included at the top or the bottom of those thoughtful feedback emails. They always helped!

And Liz, last and most, thank you so much for your outstanding stewardship of this dissertation as Committee Chair. Thank you for always respecting and looking out for my professional development enough to give me honest feedback at every meeting, both when you expected more that day, and when you thought I was really doing well. It pushed me to grow and improve as a scholar more than anything else. Thank you from the bottom of my heart for your guidance on the art of not getting lost in the details, as well as the skill of keeping the big picture in focus to keep moving ahead. You amaze me endlessly with your productivity and I will always wonder how you get twice as much done in 24 hours as everyone else.

Thank you for introducing me to Thad Kousser's book on the association between term limits and legislative professionalism. It was the turning point that finally brought me to the perplexing and endlessly fascinating realm of legislative studies that I do not think my World Politics training would have led me to in equilibrium. I so greatly admire the immediate relevancy of your work to policy outcomes and the many ways you use your training as a political scientist to ask questions and innovate, in everything from pedagogy to demography to transit, and all of the policy issues in between. I am inspired to find a way to do likewise. Your example has pushed me at every turn to be better, to cut through irrelevance, and to ask questions that make valuable contributions to the world. Thank you for showing me how to do it in style.

A special thank you to Michael Lerner, who introduced me to network analysis and who was more than generous with his time and explanations as I was starting the learning process. *Merci bien* for holding me to lofty expectations and for providing exceptional, detailed, and rigorous feedback! (Thanks is due here once again to Chuck for suggesting that I reach out to Michael, i.e., that I create an edge in my social network). Many thanks to Zach O'Keefe for doing so much to help me become proficient in R. Thanks also to Yunsieg Kim, Mike

Thompson, and the other comrades of the Summer 2019 State Street Espresso Royale Working Group. You guys really kept me motivated to be productive on Monday mornings and, with nontrivial effort, the habit has stuck!

Thank you very much to Skip Lupia for excellent conversations about public opinion and policymaking. These discussions helped me arrive at the puzzle that catalyzed the research question for the dissertation. More broadly, they have fundamentally shaped my views of what citizens need to know and how common ground can be found in the political process.

Extra thanks to Bruce Desmarais for a spectacular ICSPSR course on network analysis and so much friendly and helpful advice in the following months. I am also very grateful to Jeff Harden and Fred Boehmke for thoughtful conversations on policy diffusion pathways when I was first learning about the concept. Thank you additionally to Brendan Boyd, Katie Einstein, Sam McMillan, Craig Volden, Kate Crowley, Eric Hansen, Clint Peinhardt, Cameron Anderson, Geoff Lorenz, Vincent Arel-Bundock, Alton Worthington, Stephanie Leiser, Anita Ravishankar, Elizabeth Mann, Julia Kamin, Christina Kinane, Albana Shehaj, Fabian Neuner, Isaac Jenkins, Marc Levesque, Jesse Crosson, and many others who helped along the way with a conversation here or an email chain there. Your thoughts and feedback kept pushing me to revise and improve and I am grateful for your advice!

My deepest thanks to the coordinators in the Department of Political Science and the Ford School of Public Policy, especially Megan Gosling, Mim Jones, and Kathryn Cardenas. Your professionalism, resourcefulness and thoughtfulness are unsurpassed. Kathryn, I cheered when I found out you were moving to the Ford School! Thank you for all your swift replies and good advice. I would also like to say thank you to Brian Jacob, who is not only gifted at making Program Evaluation funny and straightforward, but who is also a wise and fair administrator. I

walked out of every meeting with you feeling like you put the utmost thought into our discussions and my wellbeing in the program, for which I am truly and profoundly grateful.

I am so thankful to the men and women who work at the University of Michigan Center for Statistical Research and Consulting for their comprehensive expertise and assistance on almost every modeling and statistical question I could come up with. Their staff displayed the utmost flexibility, ingenuity, professionalism, and most of all…patience! Special thanks to Kerby, James, Joe, Corey, Alex, and April. Programming and statistics are languages, and you helped me translate the thoughts in my head into language on paper. I was deeply honored to learn that my question about event history analysis with multiple policies sparked a productive conversation in the weekly group meeting. Perhaps someday I will remember what it was that I asked. May the number of employees in your organization multiply by a robust yet manageable growth parameter such that the eager math learners who will be taking my place do not have to wait a month for consults due to your popularity and proven ability to answer all our questions!

My deepest thanks to Catherine Morse for being able to procure virtually any source from the magnificent University of Michigan library in almost no time flat. She went above and beyond to help me find legislation of Australian states and Canadian provinces dating all the way back to when each jurisdiction was founded, in some cases over two hundred years. I will always be grateful for her assistance.

To Priyam Trivedi, my colleague and friend. You inspire me with your relentless quest for scholarly and human truth, your methodological prowess, and your wicked smart humor. You have pushed me to be a better researcher, inspired me with your own example, and impressed me very much with your unsurpassed networking skills. I hate that we are on separate continents these days. But I am so grateful for your professional and personal friendship!

Thank you Arjun Trivedi for your encouragement and for expressing faith in my capabilities at moments where I didn't quite believe in myself. Thank you also for advice and expertise in the eleventh hour. Looking forward to many interesting conversations in the future!

To Poonam, Ashook, and the Boisahabi Tea Plantation, which fueled my sleepy mornings and opened my mind to possibilities and opportunities. Cups of your hot tea warmed my fingers on chilly winter afternoons. There is most likely some on my desk right now as you read this. Thank you for steadying my thoughts and encouraging my creativity.

Thank you, Leanne, for your advice, superhuman editing skills, and your friendship. Thank you Matt, Mary, Karissa, Cyndi, Keir, Patsy, Ray, Bette, Claire, Deb, Eric, Tim, Dan, Jason, Aiden, Matt, Logan, Anthony, Ben, Tyler, Todd, Anna, Heidi, Max, Lindsey, Brandon, Marc, Megan, Duncan, Teddy, Michael, Pete, Barry, Matt, Rob, Aunt Cheryl, Aunt Nan, Tjet, and Dave for thousands of kindnesses large and small that have kept me physically and mentally healthy so I could rise every day ready to learn more and give back to the community.

It is often said that a dissertation can be a lonely business as few people outside your field have much interest in your topic. Therefore, in addition to all the colleagues within the discipline who were always willing to talk over ideas, I am thankful to have found exactly *one* person outside of the discipline in all these years who shares my enthusiasm in state legislative activities, and who was always amenable to a conversation on the topic. Major thanks to Dave Callanan for his tales about legislative and gubernatorial processes in the great state of Michigan, for introducing me to some of his colleagues from his days serving on legislative staffs, and for the intellectual esprit de corps that has generated many fun conversations.

To my Uncle Joe, who is legendary in the family for his opinion that seatbelts are optional accessories but who most unfortunately lives in what I learned was the first U.S. state

that made seatbelt use mandatory, all the way back in 1984! Sorry about that Uncle Joe. But thank you for making me smile many times throughout my research. If worst comes to worst, you can hightail it to New Hampshire, the only state where seatbelts are not yet mandatory.

Merci encore to my dear Aunt Lynn, who is my most enthusiastic cheerleader and does so much behind the scenes to keep the family shipshape. I love you! Thank you also to my brilliant and tech-savvy brother, who, upon discovering to his horror that I had been staring in ignorant bliss at a 6.5x11-inch laptop screen for 98% of my doctoral program, bought me my very own and first ever monitor. I can never go back. I am sincerely touched by your kindness and concern for my productivity, and I thank you deeply for all the ways you have pushed me to be logical and search for the simplest explanation.

To my mom, who has more grit and determination than anyone I have ever met and who always knows just how to impart an ounce or two of this feistiness when my spirits flag. Thank you above all for instilling in me your sense of perseverance so that I can surmount any challenge that arises in pursuit of a worthy goal. Thank you also for training my sense of humor to be compatible with yours. That was clever. Lastly, thank you for bestowing upon me your passion for *finding the answer* and your belief in the power of the written word. These gifts have made all the difference.

And above all to Ryan. You are my true love. Thank you for believing in me and for framing all the effort it was going to take along the way not as something to get to the end of but rather as endless small opportunities to develop resilience and expertise. Thank you for quietly deciding somewhere along the way that being the best wingman and supporter was a part of your vision for your own personal success and absolutely *owning* it. Thank you pushing me always to do a little bit more and work a little bit harder. I admire so much how, unlike me, you met every

tough moment of the saga with just as much calm, serenity, and optimism as you possessed in all the best moments. My attempts to emulate you have met with only mixed success. Fortunately, I have it on good authority that with proper study I can one day not merely emulate you but rather learn and borrow this and so many more of your best practices. I love you with all my heart and my gratitude is endless. Thank you for staying right by my side for every step of this worthwhile journey. I am glad I get to be there for yours too.

Table of Contents

Dedication ii

Acknowledgements iii

List of Tables xiv

List of Figures xvi

List of Appendices xviii

Abstract xix

CHAPTER I: Introduction 1

Research Question and Current Answers 14

Explaining and Investigating Cross-National Sub-National Policy Diffusion 21

Comparing Cross-National Diffusion to Same-Country Diffusion at the Sub-National Level 29

CHAPTER II: Network Analysis of Cross-National Policy Diffusion Among States and Provinces 33

Abstract 33

Introduction 34

Potential for Cross-National Diffusion 35

Data 43

Methods 45

Results 52

Conclusion 64

CHAPTER III: Term Limits, Legislative Institutions, and Cross-National Policy Diffusion 69

International Sub-federal Policy Diffusion 70

The Effect of Term Limits on Legislator Incentives and Cross-National Sub-National Policy Diffusion 72

Data 78

Model Specifications 83

Results 85

Predicted Probabilities 92

Conclusion 98

CHAPTER IV: Text Analysis of Legislation in Australian States, Canadian Provinces, and U.S. States 102

Introduction 103

Drivers of Policy Content in the Foreign Context 105

Data 111

Method 121

Results 124

Conclusion 133

CHAPTER V: Conclusion 139

Research Question and Summary of Findings 143

External Validity 148

Opportunities for Future Research 153

Contributions 157

Implications 159

Policy Recommendations 163

Concluding Remarks 168

Appendices 171

Bibliography 226

LIST OF TABLES

Table 1: Properties of Largest and Smallest Jurisdictions in Sample 23

Table 2: Tie Statistics 55

Table 3: Exponential Random Graph Modeling (ERGM) Results 62

Table 4: Domestic-Only and Foreign-Only Dataset Models 86

Table 5: Association Between Term Limits and Policy Adoption 87

Table 6: Effect of Foreign Adoptions when Term Limits are in Place (Active Years Only) 89

Table 7: Policies in the Dataset 114

Table 8: Textual Similarity and Legislative Professionalism 125

Table 9: Individual Selection Models (Policies of Foreign Origin) 131

Table 10: Potential Relationships between Professionalism, Adoption Timing, and Similarity for Subsequent Research 132

Table 11: Policies Used in Network Analysis (Boehmke and Skinner 2012) 183

Table 12: Years of Impact and Severity of Term Limits by State 187

Table 13: Policies and First Adopters in Foreign Locations 188

Table 14: Descriptive Statistics (All Policies) 190

Table 15: Descriptive Statistics (Domestic and Foreign-Origin Policies) 191

Table 16: Correlations 192

Table 17: Domestic Policies Only and Foreign Policies Only (Australian and Canadian Adopters) 193

Table 18: Association Between Term Limits and Policy Adoption 194

Table 19: Effect of Foreign Adopting when Term Limits are in Place (Domestic) 195

Table 20: Effect Foreign Adopting when Term Limits are in Place (Foreign) 196

Table 21: Token Descriptive Statistics 210

Table 22: Words Changed to American English 211

Table 23: Most Frequent Words by Policy, Ranked 214

Table 24: Descriptive Statistics for Chapter IV (Text Analysis) 219

Table 25: Correlations for Chapter IV (Calculated using the Spearman Method) 220

Table 26: Results of Chapter IV Analysis with Non-Outliers 223

Table 27: Individual Policy Models (Domestic Origin) 224

Table 28: Individual Policy Models (Foreign Origin) 225

LIST OF FIGURES

Figure 1: 55-Policy Network (All States and Provinces) 53

Figure 2: 55-Policy Dataset (Cross National Ties Only) 58

Figure 3: Policy Adoptions by Year (1979 - 2010) 84

Figure 4: Predicted Probabilities for Probability of Adoption when Term Limits are in Place (Domestic-Origin Policies Only) 93

Figure 5: Predicted Probabilities for Probability of Adoption when Term Limits are in Place (Foreign-Origin Policies Only) 94

Figure 6: Predicted Probabilities for Proportion of Neighbors Adopting (Domestic Policies) 95

Figure 7: Predicted Probabilities for Proportion of Neighbors Adopting (Foreign Policies) 97

Figure 8: Interaction Effects for Professionalism and Staff Levels When Policy Is Foreign 129

Figure 9: Goodness of Fit Statistics for Model 2 (55 Policies) 172

Figure 10: Goodness of Fit Statistics (Cross-National Ties Only) 173

Figure 11: States with Term Limits (Lifetime Ban, Consecutive Ban, and Repealed) 186

Figure 12: Top Words in Common Between Foreign Originator and U.S. Borrowers Over Time 204

Figure 13: Keywords for Mandatory Bicycle Helmets for Minors (Victoria) 212

Figure 14: Keywords for Graduated Drivers Licensing (Ontario) 213

Figure 15: Cosine Similarity for All Adopters by Years Since First Adoption (Foreign Policies) 216

Figure 16: Cosine Similarity for All Adopters by Years Since First Adoption (Domestic Policies) 217

Figure 17: Outliers for Textual Similarity (Left) and Professionalism (Right) 218

LIST OF APPENDICES

Appendix I: Goodness of Fit Statistics …….. 172

Appendix II: Edge Lists (55-Policy Networks Only) ……..... 174

Appendix III: List of Policies Collected for Chapter II ……. 183

Appendix IV: Discussion of In-Degree ……. 184

Appendix V: States with Term Limits ……... 186

Appendix VI: Description of Policies in Dataset for Generalized Linear Mixed Models ……. 188

Appendix VII: Descriptive Statistics for Chapter III ……. 190

Appendix VIII: Tables for Proportions of Foreign Adoptions by Country ……...…… 193

Appendix IX: Policy Details …….. 197

Appendix X: Textual Diagnostics by Policy ……..... 210

Appendix XI: Descriptive Statistics and Correlations ……... 218

Appendix XII: Suitability of the Heckman Selection Model ……..... 221

Appendix XIII: Robustness Checks ……..……. 223

ABSTRACT

Cross-national policy sharing between legislatures of states in different countries is not well studied, possibly due to the existence of many domestic peer states whose laws provide the most frequently studied examples of cross-state borrowing.[1] But in addition to these domestic examples, instances of cross-national policy transfer continue to arise. The theories that explain state-level policy diffusion among actors in the same country have not yet been extended to instances of cross-national policy proliferation. Therefore, this phenomenon of cross-national sub-national policy diffusion continues to play a role in legislative outcomes yet remains largely unexplained.

This dissertation builds on the policy diffusion literature to investigate why cross-national learning occurs and under what conditions is it expected. It theorizes that legislators are motivated to study policies from states in other countries when lawmakers in those foreign states produce novel or innovative policies, or when legislators choose to undertake more thorough research to improve a policy that is not performing well at home. It further theorizes that state-level institutions and attributes associated with legislative professionalism affect capacity to research policy in states in other countries and synthesize best practices into new legislation in the home state. Hypotheses are tested using network analysis, generalized linear mixed models, and text analysis.

Results suggest that many states of varying levels of professionalism and economic size are included in cross-national policy networks and that the state-level attributes of legislative

[1] In this dissertation the word "state" will only ever refer to a sub-national unit of government. It will never refer to a sovereign nation.

professionalism, particularly staff levels, are important to providing the capacity to research foreign policies. However, these attributes are negatively associated with levels of textual similarity between the foreign policy originator and the domestic policy borrower. This indicates that professionalism attributes enable state policymakers to collect more best practices to synthesize into final policy documents and laws. Text analysis detects a reduced but meaningful level of textual similarity between the text of foreign policy originators and subsequent domestic borrowers, as compared to the level of policy similarity detected between two states in the same country.

These findings propose answers to why legislators might opt to learn from states in other countries in addition to peers at home and provide insight into the conditions under which cross-national sub-national policy diffusion is more likely to occur. Examples of cross-national policy diffusion such as public bike sharing programs and primary seatbelt legislation suggest that many policies that lawmakers borrow from across international borders provide quantifiable benefits to the jurisdictions that adopt them. As public servants in states and provinces around the world continue to tackle similar policy issues, networks that foster the sharing of best practices have the potential to enhance cross-national learning and improve citizen quality of life more rapidly than when sub-national policymakers work in isolation.

CHAPTER I
INTRODUCTION

Cross-national lesson drawing between policymakers at local, state, and national levels was evident in 2020 as political leaders raced to identify the policies that could best protect their jurisdictions from the COVID-19 virus while simultaneously minimizing economic impact. Often learning occurred in terms of lawmakers sharing information with foreign jurisdictions, as well as studying and sometimes borrowing successful policies. For example, the Global Initiative on Sharing All Influenza Data, founded in 2008, has become a central repository for COVID-19 genomic sequences from around the world,[2] greatly facilitating scientific understanding of the virus' spread over the planet and enhancing society's ability to detect mutations. Analysis of this sort of genomic data helped shift policymakers in Washington state to the mindset that the virus spread through the state via multiple points of transmission instead of a single point of contact. (Boyle 2020) This seems likely to have contributed to accelerating the deployment of Washington state's containment strategy, which was considered more aggressive and ultimately more successful than that of other jurisdictions such as New York City. (Duhigg 2020)

Other examples of cross-national learning and sharing of best practices during the pandemic are also of note. U.S. medical universities held Zoom meetings with Chinese doctors to get a better understanding of how they could help treat patients. (Begley 2020) The Wall Street Journal reports that "more than 50 governments have expressed interest in learning about

[2] Over 58,000 COVID-19 genomic sequences from over 450 laboratories around the world have been uploaded as of June 2020. (GISAID 2020 and Boyle 2020)

Singapore's [contact tracing] app and the city-state has open-sourced the code." (Lin and Koh Ping 2020) Along these same lines, U.S. city and state leaders are unveiling plans that feature contact tracing due to its observed effectiveness in China, South Korea, Singapore, New Zealand, Iceland, and elsewhere. (Rayasam 2020)

In some cases, leaders have expressed regret at the consequences from failing to heed cross-national lessons. "We should have learned right away from the Asian experience, that was a huge mistake," said Italian immunologist Sergio Romagnani on Italy's delay in requiring all citizens to wear masks. Though the delay was only a few weeks, it is likely to have played a significant role in Italy having the sixth highest death toll per million residents in the world.[3] (Engelberg et al. 2020) Similarly, state epidemiologist Anders Tegnell of Sweden's National Institute of Public Health stated of the country's policy to avoid lockdown (which has resulted in the seventh highest death rates in the world[4]) stated that "if we were to encounter the same disease again, knowing exactly what we know about it today, I think we would settle on doing something in between what Sweden did and what the rest of the world has done," specifically by testing more and greatly increasing protection of seniors. (Nikiforuk 2020) Occasionally a lack of information available about COVID-19 success outcomes in foreign jurisdictions has even given rise to complaint due to a desire to use data from foreign outcomes to guide policy choices at home. Of Sweden's decision not to study infection rates in its school system (one of the only school systems in the world to remain open), Deputy Director for Johns Hopkins Center for Health Security Anna Cicero lamented that "in Sweden, they have had a rare opportunity to understand [school] transmission chains better. But you can't find what you don't look for. The

[3] Italy's death rate from COVID-19 as of June 28th, 2020 is 574.5 deaths per million residents, behind only San Marino, Belgium, Andorra, the United Kingdom, and Spain. (Johns Hopkins University of Medicine Mortality Analyses)
[4] Ibid

U.S. and other countries with closed schools would certainly benefit from that research." (Vogel 2020)

Overall, the unfolding of COVID-19 has shown that citizens in what seem like far-flung and isolated parts of the world are connected and sometimes put at risk by events unfolding thousands of miles away. Yet it has also shown that policymakers around the world are connecting in their search to find solutions to these shared problems of great urgency. Policymakers who studied best practices abroad carefully and who selected policy instruments that were feasible and sensible for their community have been able to save more lives while minimizing damage wrought by the pandemic on unemployment levels and the economy. The progression of the situation has also shown in an unusually brief time span that many areas around the world can develop policies that are useful for other parts of the world, and that foreign ideas developed abroad can be applied successfully in the United States. This case of widespread cross-national study and policy diffusion poses many fascinating questions. For example, how did policymakers determine when they would look to policy prescriptions from governments within the same country or when they would look abroad? When they decided to look abroad, who did they look to? How did they decide which lessons to borrow, and which analytical tools and resources were useful in their ability to assess that question? The urgency of the situation, which likely accelerated the spread of policy ideas around the world, also brings into sharp focus many intriguing questions about the nature of cross-national policy diffusion itself.

Cross-national policy diffusion is not merely a byproduct of emergency, however. On the contrary, sub-national state and local government officials have regularly looked abroad for policy ideas and have borrowed policies with wide ranging implications as a result. One example

of a policy that started slowly but has since grown to global prominence is public bike sharing programs. The first public bike sharing program arose in Amsterdam in the 1960s through unconventional means. A radical anarchist activist group Provo (short for Provocation)[5] gained one seat on the Amsterdam city council. The group's elected representative to the council, Luud Schimmelpennink, submitted a proposal for 10,000 bicycles to be purchased by the city, painted white for easy identification, and left unlocked at various points throughout the metroplex for use by anyone who wished to use them. (van der Zee 2016) When the *Witte Fietsenplan*, or White Bicycle Plan, was voted down by other members of the council, Provo decided to carry out the plan without city approval. They acquired fifty bicycles, which they painted white and distributed around the city.[6] (Gallagher 2015)

The bicycles were quickly impounded by police for failure to comply with city requirements that all bikes have a lock. Provo managed to extend the longevity of the program by reclaiming the bicycles and fitting them with combination locks and painting the lock combination on the side of the bicycles. Ultimately, the activist group did not succeed in gaining official status for the White Bike Plan. But in the short time in which it was in operation, it attracted the attention of policymakers in many other cities and initiated what is considered the first generation of bike sharing programs. It was soon followed by programs such as the *Vélos Jaunes* or Yellow Bikes program introduced in La Rochelle, France, in 1974. (Shaheen et al. 2010) In a clear example of cross-national learning at the city level, two policymakers in

[5] The group described what it stood for as "Provo has something against capitalism, communism, fascism, bureaucracy, militarism, professionalism, dogmatism, and authoritarianism. Provo has to choose between desperate, resistance and submissive extinction. Provo calls for resistance wherever possible. Provo realizes that it will lose in the end, but it cannot pass up the chance to make at least one more heartfelt attempt to provoke society. Provo regards anarchy as the inspirational source of resistance. Provo wants to revive anarchy and teach it to the young. Provo is an image." (Gallagher 2015)

[6] van der Zee (2016) notes that Provo insisted on painting the bicycles because "the white bike symbolizes simplicity and hygiene as opposed to the gaudiness and filth of the authoritarian car."

Copenhagen subsequently reached out to Schimmelpennink, the activist city councilmember from Amsterdam to ask for feedback on the Dutch program and advice for a similar program in Denmark. (van der Zee 2016)

The result was Copenhagen's "Bycyken" (City Bike) program, unveiled in 1995 and hailed as the program that launched the second wave of bike sharing programs. These were distinguished by the innovation of housing bikes in specifically designed docking platforms which can be unlocked with a coin deposit that can be retrieved when the bicycle is replaced at a different dock. (Shaheen et al. 2010) Thus a direct lineage can be traced from how the original bike sharing program started as a radical idea in Amsterdam, provided inspiration and in some cases direct guidance to policymakers in foreign jurisdictions who were studying the outcome, and catalyzed the second wave of programs in this policy area.

With over 1,600 programs and over 18.2 million public bicycles in use in the world today, public bike sharing provides a clear case study of the extent to which ideas can proliferate around the world and take root in jurisdictions far from where the policy originated. In addition to demonstrating how policymakers can spread an idea all the way around the globe, this also provides an example of clearly calculable benefits that can be gained from borrowing policies that originate abroad. Bike sharing programs have been shown to increase spending at local businesses, decrease traffic and congestion, improve air quality, decrease commute times, and provide health benefits to those who participate who would have used a car or passive public transportation (such as bus or subway) to travel to work. (Buehler and Hamre 2014, Qiu and He 2018) Bullock et al. 2016 found that Dublin's *dublinbike* program provided a 6.4-to-1 benefit to cost ratio in terms of return on the city's investment when comparing the cost of implementation and the cost of injuries sustained in accidents to the monetized benefits of the categories

mentioned in the previous sentence. Through studying the success outcomes of public bike sharing programs around the world, city officials have likely been inspired to borrow best practices and bring some of these benefits to their home jurisdictions. Thus, public bike sharing policies present an interesting opportunity to better understand the conditions under which a policy can propagate so successfully between cities in so many states, provinces, and countries.

In a remarkable demonstration of the importance of cross-national policy learning, lesson drawing from these two case studies is beginning to overlap as policymakers incorporate bike sharing programs into their COVID-19 responses. Global communication between bike sharing policymakers has likely increased in the past several months to share best practices for handling the substantial rise in ridership that is occurring worldwide due to the virus.[7] However, these policymakers may also have relied on the cross-national connections they originally fostered over bike sharing programs to consult with their colleagues on coronavirus topics unrelated to bike sharing. A potential example would be whether the delegates from other countries who visited Hangzhou in previous years to study their exemplary bike sharing program (Ma 2017) reached out in 2020 to the contacts they made on their bike sharing study to ask for best practices in managing coronavirus when China was still the only country with practical experience. If such policy connections are occurring, it would suggest that cross-national learning may beget more learning on more topics than policymakers originally envisioned when making the initial overture to learn about a policy topic. This type of policymaker interdependence and its capacity to encourage policy diffusion is discussed further in Chapter II.

[7] Ridership in Las Vegas' public bike sharing program increased by 97% in April 2020 (Akers 2020), bike share demand has risen 150% in Beijing since stringent lockdowns have relaxed, and bike share company Nextbike announced a 35% increase in April and May in its European programs compared to the same time last year. (Morris 2020) At least ten cities have made bikeshare programs free during the pandemic, and global cities like New York, Bogotá, Mexico City, and Berlin have all expanded bicycle lanes during the pandemic in an effort to both accommodate increased ridership as well as further promote socially-distanced transportation. (Carey 2020, Bliss 2020)

The rapid rate at which policymakers borrowed and shared COVID-19 policies across international borders in 2020, and the diffusion of public bike sharing programs over the past fifty years are both modern examples of cross-national policy diffusion. Yet policymakers have been observing the actions of their counterparts in other countries for much longer, even when it was presumably much more difficult to learn about current events around the world. Rose 2005 points out that Plato encouraged cross-jurisdictional learning in 360 B.C.E. in his *Laws* dialogue, stating that:

> "*The citizens of a well-ordered city should be ever seeking out, going forth over sea and over land to find him who is incorruptible – that he may establish more firmly institutions in his own state which are good already, and amend what is deficient; for without this examination and enquiry a city will never continue perfect any more than if the examination is ill-conducted.*" (Rose 2005, Jowett 2008)

Plato himself came from Athens, the city-state most commonly credited with first formalizing the policy concept of democratic government, which subsequently spread around the world. (Desjardins 2019) Citizens of twenty-first century democracies might assume that the right to cast a ballot in secret is another byproduct of the ancient Athenian democracy. But in fact this policy concept was not formally written into state electoral policy until the nineteenth century. The innovation developed out of a need in the states of Australia to maintain order among the number of "gold-seekers," criminals, and "rowdy" and "troublesome" elements more common to Australia (owing allegedly to its origins as a penal colony) who created "raging mobs" during elections. (Evans 1917)

The states of Victoria and Tasmania each created legislation in 1856 to address this situation. Tasmania's Electoral Act of 1856 stated that

> *"No person other than the Elector who shall for that time be tendering his vote shall be entitled to be present in the inner room in which the Ballot-papers are filled up by the Electors…and any person other than such Elector actually recording his vote who shall intrude into such room, shall be deemed guilty of a misdemeanor."*

Victoria's Electoral Act of 1856 had similar provisions and stated that

> *"At every booth or polling place there shall be one or more compartments or ballot rooms provided with ink and pens for the purpose of enabling the elector to mark the ballot…in which room no person other than the returning officer or his deputy, the poll clerk, and the scrutineers of the several candidates…and the electors who shall for that time be tendering their votes shall be entitled to be present."*[8]

Voting by secret ballot proved effective at quelling the mobs that gathered around polling places. It soon became such a popular method of conducting elections that it spread from what was then considered a global backwater territory to every democracy in the world. Today the right to vote in secret is taken for granted with little thought to how this policy innovation arose out of a need to keep order among Australian frontiersmen.

[8] The Victorian Electoral Act of 1856 also includes a section entitled "Proceedings in case of riot violence &c." to counter the mobs described in Evans 1917. The provision includes detailed instructions for how to postpone and resume any election that is "interrupted or obstructed by any riot or open violence," and which also authorizes officers of the law "to cause to be arrested and taken before a justice of the peace any person…who shall cause a disturbance and the persons so respectively offending shall be deemed guilty of a misdemeanor and punished by fine or imprisonment."

Examples of state lawmakers learning from other states continued to arise in the nineteenth and into the twentieth centuries. Quebec and British Columbia were the first sub-federal units in North America to set up state liquor boards in 1921. (Dupré 2008, 8) This system was publicly admired and eventually emulated in many U.S. states. Learning was evident in both executive and legislative channels. For example, the *Fairfield Daily Ledger* wrote on June 23, 1933, that "Governor Herring, as an answer to the belief of the dry forces that to do away with the eighteenth amendment is to restore an unbridled liquor traffic, has announced that the Iowa control program will be modeled after the Quebec plan." And the *Olean Times* of western New York wrote on June 11, 1926, that:

> *"One could expect Senator James W. Wadsworth to say, in clear, unequivocal language, just where he stood on the prohibition question. One can always rely on the New York Senator to talk plainly. There is never any doubt as to his views on any subject...So far as Senator Wadsworth's solution of the liquor problem is concerned, it is interesting to note that he strongly advocates what this newspaper has, on several occasions, put forward as the best means yet devised to handle it - a form of government sale and limitation based on the Quebec plan."*

Though Wadsworth's preferences had yet to be confirmed as law at the time of that article, an article from the *Escanaba Daily Press* on June 30, 1933, says that "licenses in Delaware are issued by Pierre S. DuPont, liquor commissioner, and multi-millionaire anti-prohibition leader, under a law based mainly on the Quebec system." This was a strong example of policy transfer between states in different countries in the interwar years.

More modern examples abound as well. The Missouri Plan of electing judges instead of appointing them originated in 1940 and was subsequently adopted by various states and countries around the world. A research project from Manamela 2012 (80, 100) reported that the Limpopo legislature in South Africa sent legislative delegates on study tours to ten countries between 2004 and 2009 to learn about improving legislative committee oversight. The study found that, while much more *a priori* research was needed for trips to provide maximum benefit to delegates, that the Standing Committee on Public Accounts (SCOPA), as well as the Agriculture, and Public Works Committees were able to implement some oversight practices that they found on their trips. A trip delegate noted that "SCOPA went to Malawi and ever since that study tour, it called police officers to form part of oversight [proceedings]", ostensibly to "ensure that officials who are found guilty of corrupt activities during oversight are arrested on the spot." Legislation delineating the rights of victims of crimes, as well as legislation allowing for post-conviction DNA motions both originated in U.S. states and subsequently were adopted by legislatures in other states around the world, as were dozens of other policies.

Evidence abounds that U.S. state legislatures are frequently studied by smaller and less sophisticated state legislatures abroad. But just as with the Australian Ballot System and the Quebec Plan, the flow of information continues to travel in the other direction as well, i.e., U.S. state legislators seem to gather policy ideas from abroad on a regular basis. Legislation mandating that refusal to wear a seatbelt can be a ticketable offense originated in Victoria, Australia in 1970, and several studies found it to be successful at reducing both injuries and fatalities in crashes (see Conybeare 1980 for examples). The policy made its way around the world in the next fifteen years by spreading to New Zealand, Europe, and Canada. A report prepared for the Virginia Highway and Transportation Research Council directly references the

law's Australian roots by stating "in 1970, Victoria became the first state in Australia to enact a mandatory seat belt use law. This law was so successful that by 1982 every state on the continent had passed similar legislation." (Grey 1985) The publication goes on to link Victoria's success at reducing fatalities to its rigorous enforcement of the law, and to credit the public awareness campaigns undertaken in Australia for helping citizens to transition to the new system. It concludes that "a mandatory restraint use law in Virginia, coupled with public education and enforcement programs, will save accident victims and their families from needless pain. In turn, the Commonwealth will recover from the cost of implementation many times over." (Grey 1985) Virginia would pass primary seatbelt legislation two years later and, despite stringent arguments over personal freedoms that characterized the debate on this legislation in the United States, every U.S. state except New Hampshire had a primary seatbelt law in place by 1994.

To date, U.S. state-level legislatures and executive branches have signed hundreds of agreements, memoranda of understanding, and compacts with foreign governments, including over one hundred sister state agreements with peers from states in other countries around the world. (Hollis 2008, 1079) The formality and impact of these agreements vary widely, from more symbolic and less formal expressions of friendship and political statements of solidarity where no tangible objectives are set forth, to trade agreements, to pacts to work together on political issues that create firm commitments for concrete outcomes between signatories. The many pacts expressing friendship between U.S. states and Taiwan are examples of less formal and more symbolic relationships.[9] On the other hand, many agreements focus on tangible

[9] One such agreement is West Virginia's 2018 resolution renewing its 38-year sister state relationship with Taiwan, which does not announce any plans for specific projects and goals but affirms its political support for Taiwan by noting that "Whereas, Taiwan has been proven to be a very valuable contributor in a broad range of global issues and is necessary to be granted access to meaningfully participate in various international organizations…..therefore, be it resolved by the Senate: that the Senate hereby reaffirms the sister-state relationship between the State of West Virginia and Taiwan."

objectives and knowledge transfer and have resulted in visible accomplishments. Sister State Agreements leading to trade and investment promotion, which date back to the 1950s and therefore represent one of the oldest types of legally established cross-national state agreements, prove perennially popular with executive branches.[10] (McMillan 2012) Ralston 2013 and Steinbacher 2018 lay out several instances of sister state agreements between U.S. states and German *Länder* that resulted in meaningful energy policy changes for all parties. Lastly, although not specifically an example of U.S. cross-national relations, several states in South Africa have signed agreements with Canadian provinces and German *Länder* that were narrowly focused on building legislative capacity and training public servants, such as the Renewed Agreement on Governance and Economic Development between North West and Manitoba, and similar agreements between Western Cape and Bavaria and between Mpumalanga and North Rhine-Westphalia. (Geldenhuys 1998, 37) The popularity of sister state agreements between sub-national states and provinces around the world suggests that they are an example of how cross-national sub-national agreements provide benefits to both legislators and constituents while fostering global connections.

U.S. state governments have also entered into many international compacts that include multiple cosignatories. Compacts with Canadian provinces and Mexican states are often targeted at solving a specific issue that is relevant to all parties because of their proximity, such as the Great Lakes Basin Compact, the Northeastern Interstate Fire Protection Compact (Hollis 2008), and the joint declarations related to trade and border security that emerge from the annual United

[10] Anecdotal evidence suggests that cross-national trade partnerships formed at the sub-national level may increase during the Trump administration due to the federal government's unpredictable stance on tariffs and trade. Scott Pattison, Executive Director of the National Governors Association noted in 2018 that "the international community is reaching out in a way that has never happened…you've got premiers calling and talking to governors like never before. I have CEOs of foreign companies wanting to know how they can meet with governors. I've got ambassadors calling me." (Greenblatt 2018)

States-Mexico Border Governors Conference. (Texas Secretary of State) The three-way sister state agreement between the U.S. state of Maryland and Bong County and Maryland County in Liberia have outlined several areas for collaboration since establishing a sister state relationship in 2007. The website for the agreement highlights several examples of concrete outcomes generated from the partnership in health and sanitation, education, port authority best practices, and networking with other sister states. (SisterStates Maryland)

More aspirational examples of cross-national sub-national state compacts between states that do not share borders can be found in multistate climate agreements, including the Montreal Declaration of Federated States and Regions, the 2008 Poznan Statement of Action, and the Under2Coalition (formerly the States and Regions Alliance) formed to help foster a sub-national community of states committed to fighting climate change. (Hollis 2008, "The Real Deal" 2009, The Climate Group) It should also be noted, however, that at least one formalized interstate compact exists with tangible goals that have produced results: the Western Climate Initiative (WCI), which is a regional carbon cap-and-trade program that has resulted in lower greenhouse gas emissions among cosignatories. Although the number of states and provinces participating in the Initiative currently includes only California, Quebec, and Nova Scotia, the WCI represents one of the most successful formalized partnerships to date between states in different countries in terms of setting tangible goals that drive change within members.[11] Taken together, the volume of both formalized and nonformal agreements with both aspirational and very specific objectives indicates that U.S. states consider foreign counterparts important peers in their network of sub-national policymaking entities and that there are benefits to be gained through partnership.

[11] Examples of requirements that participating jurisdictions must meet include adopting reduction targets, implementing an action plan, adopting California's vehicle emission standards, etc. (Wincele 2019)

Research Question and Current Answers

How have policymakers in far flung and disparate states found each other's policies for over 150 years, and why have they chosen to borrow and adapt them for use at home? The research on policy transfer and policy diffusion suggests that momentum for policy inspiration rests with sources closer to home rather than further from it. On the surface there appear to be many key differences between the same-country and cross-national contexts that would suggest that looking abroad is a more intensive process for borrowing legislation. There is, for example, decreased opportunity for frequent contact between policymakers in states in different countries, and Mooney (1991) finds that legislators often rely heavily on their peers for policy information. Less contact suggests it is more difficult legislators to learn about policies that are being passed in foreign jurisdictions. Another example of how the foreign context is distinctive is that any policies borrowed from abroad must be adapted to comply with federal regulations in the borrowing country. Legislators have been shown to take care to craft policies that can withstand potential lawsuits. (Bogenschneider et al. 2019) This suggests that borrowing policy from a foreign peer may require extra vetting to be certain it will comply with relevant federal legislation at home. In contrast, policies borrowed from neighboring states have a higher chance of being compliant not only with federal laws but also with a state's own laws due to the number of interstate compacts that U.S. lawmakers have created.[12]

If this is the case, why does long distance policy transfer happen at all? A lesser but related question is, if cross-national policy transfer is so beneficial, why do we not observe it more often? The motivating examples described at the beginning of this chapter suggest that cross-national policy diffusion exhibits some similarities to same-country policy diffusion but is

[12] For example, any legislation about standardizing radioactive waste procedures, high speed rail networks, highway transportation and policing, etc. would likely be comparable with neighboring states due to the number of interstate compacts signed on these topics. Source: National Center for Interstate Compacts

also unique and distinctive in some important ways. Something that seems to apply to both domestic and cross-national policy diffusion is that policymakers in U.S. states do seem interested in policies where success can be measured more easily, and they seem willing to study and sometimes adopt policies that are considered successful from both in-country and cross-country sources. Just as states tend to adopt ideas that come to be considered successful (such as antismoking policies that clearly lower the youth smoking rate) from domestic counterparts, states seem to be able to learn from foreign counterparts and adopt policies that clearly achieve some objective (like contact tracing and primary seatbelt laws).

However, it is not clear whether the processes by which state policymakers learn about successful policies from domestic neighbors are the same as the processes used to learn about successful policies in foreign counterparts. Research suggests that legislators most often consult outside sources when drafting policy, but very little consensus has emerged about which sources are favored and prioritized. (see Mooney 1991, Gray and Lowery 2000 and Bogenschneider et al. 2019) Do the same investigative processes used when studying domestic counterparts reveal useful information about successful foreign policy ideas, or are different methods required? It seems likely that legislators may rely on different resources for gathering information in the foreign context, which may lead to a different policy formation process. For example, it may be the case that professional organizations and interest groups are comparatively more important in delivering information about foreign policy initiatives, or that personal connections with foreign policymakers met through trips and conferences are disproportionately more important for learning about foreign-origin policy.

The motivation for states to copy ideological counterparts in foreign countries also likely differs between the in-country and cross-national contexts. Evidence exists of states cooperating

with foreign states or provinces of similar political ideology (such as California and Quebec partnering on the Western Climate Initiative), but examples also examples such as Alaska and North Dakota (two states that have consistently voted for Republican presidential candidates) working with the classically left-wing Scandinavian country Norway on prison reform, severance tax allocation, and methane emission policies suggests that ideology may not be as important in the cross-national context. Physical characteristics, resource allocations, and economic considerations may transcend political ideologies in cross-national circumstances. Therefore, it seems that the borrowing of policy from states and countries that are not ideologues points to an additional driver of cross-national diffusion beyond the importance of ideology at the in-country level. Additionally, the extent to which legislators feel confident that an ideologically similar counterpart in a different country can provide information about whether a policy will be successful at home is yet unknown compared to the information they can get from a policy passing in an ideologically similar state in the same country. This is a potentially important difference separating the drivers of cross-national policy diffusion from domestic policy diffusion.

Although the literature specifically related to cross-national sub-federal policy diffusion is quite limited, the fields of policy transfer and policy diffusion provide suggestions for how to answer this question. The cross-national policy transfer literature primarily espouses an agent-based explanation for how actors bring policies across international borders at any level of government. (Marsh and Sharman 2009) It focuses on how individual actors within parties, interest groups, and government institutions look abroad for policy inspiration, either to find a best practice or justify an intended policy direction. (Dolowitz and Marsh 1996, 347) An explanation rooted in the policy transfer literature for why policymakers in states in one country

borrow policy from lawmakers in a state in a different country would likely follow this line of reasoning.

However, to a large extent the policy transfer literature overlooks the structural factors that influence policy diffusion and does not scale very well to a "general explanatory theory of policy change." (Stone 2012, 490) Very few studies of policy transfer focus on cross-national learning at the state level (some examples include Ralston 2013 and Steinbacher 2018), and even fewer emphasize state legislative policy transfer (see Rabe 1991, and Boyd 2017 for two exceptions). However, extrapolating the policy transfer literature theories of national and municipal policy transfer to the state level suggests that policy diffuses cross-nationally between states because of isolated actors akin to the policy entrepreneurs espoused by Mintrom 1997. These actors either work to bring policy innovations to their home jurisdiction or work to share and spread best practices to systems beyond where they started to many other places where they could be beneficial. An example of this type of policy transfer is highlighted in Dolowitz and Medearis 2009:

> *"Moved by the crisis of cholera outbreaks in New York City, Benjamin Marsh deliberately moved to Germany to understand city planning practices that emphasized human health and hygiene. Marsh considered German urban planning systems in general, but the concept of zoning in particular, to be a model for public health planning practices for the US, and introduced the nation's first comprehensive zoning regulations."*

However, actor-based theories of policy transfer face difficulties in developing generalizable conclusions about when diffusion is likely to occur and what structural features hinder or promote it. In short, they identify the key features that lead to transfer in any one

particular instance, but do not provide a way to answer broadly the question of why policymakers might generally be interested in learning from abroad when closer options are available. To answer this question requires a broader investigation of the structural elements of state governments that would make them more or less likely to adopt.

The policy diffusion literature is much better suited for this. One branch of the literature examines *why* legislatures might look abroad. The policy diffusion literature finds that learning, emulation, competition, and coercion are the four primary motives explaining why policymakers in one state examine policymaking in other states and sometimes borrow their policies. (Boehmke and Witmer 2004, Boehmke 2009, Shipan and Volden 2008, Berry and Berry 2018) From this perspective the literature offers answers as to what could drive examples of cross-national diffusion, as the first three of these could apply to states in different countries, just as they could motivate lawmakers from states in the same country. This is especially true as globalization increases the ease with which state actors can learn about and emulate each other. (West 2018) However, the literature says nothing about when or under what conditions we would expect state actors to prioritize learning from a peer state in the same country or to look abroad, or when they feel they are in competition with states in different countries and make policy changes that were influenced by a foreign sub-national state's actions.

Another part of the policy diffusion literature studies *whom* state policymakers learn from after deciding to study outcomes in other states. As mentioned earlier, the literature has found that actors in a state are likely to study another state if the state under observation shares similar characteristics, is close by, or is a worthy role model based on some characteristic that borrowing legislators would like to develop in the home state. Starting with Walker 1969, scholars have discovered that state lawmakers examine counterparts that are close in proximity (Berry and

Berry 1990, Boehmke and Witmer 2004), states with similar ideologies (Grossback and Peterson 2004), states perceived as leaders on certain topics (Boehmke et al. 2017), states with policies that have had more measurably successful results (Shipan and Volden 2014), states who share similar implementation environments (Nicholson-Crotty and Carley 2016), and model legislation from external sources. (Garrett and Jansa 2015)

These studies do much to elucidate the sources of policy inspiration for states in the same country. However, by limiting the universe of actors between which policies can diffuse to states in just one country, they are not able to fully answer which of these candidates would likely be studied by state legislators when the legislators are looking abroad to a state or province in a different country. It can be supposed that the literature's answer to the question of "whom do state policymakers look to when looking abroad?" would be that they look to states that fit into one of these categories – perhaps a state that is an ideological counterpart, has a similar implementation environment, or is a role model. However, this does not speak either to why a foreign role model or ideological counterpart would be prioritized over a domestic one, or which institutional features might predispose a state's policymakers to look abroad more or less than other state legislators would compared to the well-established theories that suggest reasons for looking to domestic ideological counterparts, neighbors, model legislation, and so forth. The question is left open whether the reasons for diffusion identified in the literature can or do apply to states in differing countries as well as same countries (for example, if shared borders predict policy diffusion, perhaps states like Tamaulipas, Baja California, and Ontario should be included in North American diffusion studies), or else whether state policymakers look abroad for different reasons all together.

Lastly, the literature on policy decision making processes at the legislator level contributes to a theory of *how* legislators conduct research for policy development. Detailed investigation in Mooney 1991 reveals that legislators are greatly time constrained and responsive to political considerations, yet they are still reliant on research when crafting bills, a fact corroborated in a survey of legislators conducted over twenty years later by Bogenschneider et al. 2013. This literature suggests that legislators use a vast range of sources to conduct research, and furthermore that a broad spectrum of thoroughness in research exists between different types of tasks, different institutional actors, and even among types of legislators themselves (see for example Gray and Lowery 2000 and Bogenschneider et al.'s 2013 categorization of legislators as low and high research users). Similar to the questions about why state policymakers look abroad and whom they look to, the question of how they look abroad as not been rigorously investigated in the cross-national context. How do legislators gather research from foreign sources and synthesize it into policies and legislation, and how are these processes similar or different to the processes used to learn about domestic policy examples?

Evidence indicates a wide array of research behaviors that might influence how legislators conduct research and whether they can find or utilize policy from states in other countries. Though a common research pattern that describes all legislators may not be realistic, vast potential exists for foreign research to be both possible and fruitful. For example, Bogenschneider et al. 2013 (269, 272) find that legislators were more likely than bureaucratic policymakers to agree that all necessary information must be collected before a decision is made. They also found that 46% of legislators and 50% of legislative staff surveyed were categorized as high users of research. However, this literature lacks any discussion of the conditions under which legislators may be expected to conduct foreign research. Is it, as advanced in the policy

transfer literature, a situation where individual policy entrepreneurs are responsible for bringing policies over from abroad on an ad hoc basis, or do institutions that promote thorough investigation lead some legislatures to systematically conduct more foreign research as a whole? And how are institutional features that boost research capacity associated with legislator ability to conduct these research processes in the cross-national context?

Explaining and Investigating Cross-National Sub-National Policy Diffusion

This dissertation supports the theoretical advancements of the literatures discussed here and bridges some of the gaps that currently exist in the realm of cross-national sub-national policy diffusion. I argue that, similar to same-country diffusion, cross-national sub-national policy diffusion is a logical extension and consequence of the theories of learning, emulation, and competition advanced to explain why state legislators borrow from *any* other state regardless of federal allegiance. This is because the benefits of learning from or emulating successful states transcend national boundaries, just as the threat of competition does. In bridging the gap of *whom* policymakers look to when considering borrowing a policy of foreign origin, I argue that it is primarily institutional factors related to professionalism which play an important role in determining whether legislators will look to states in other countries, since these factors affect capacity not only for looking abroad, but also the standard of evidence required to produce successful policies, and priorities for what legislators wish to accomplish during their time in office. In this way cross-national policy diffusion may be somewhat different from same-country policy diffusion, which occurs due to both institutional features like term limits and also frequently through non-institutional factors such as the policy actions of lawmakers in both neighboring states and regions. Lastly, I work to improve understanding of *how* legislators look abroad by theorizing that policies passed earlier in states in foreign countries provide more value

to time-constrained legislators due to ease of access and information on policy outcomes. Cross-national policy diffusion is therefore theorized to generally be a more difficult context for diffusion to occur due to the higher costs of research and policy formation. It is also theorized to rely on both some similar processes as same-country policy diffusion (for example, the motivations of learning and emulation and the institutional capacities related to policy formation) but may rely on those motivations and processes differently (i.e., a potentially decreased or changed reliance on ideological counterparts and more reliance on different research procedures or institutions).

To investigate this theory of cross-national diffusion I undertake three different analyses that each use a separate empirical method to test for the presence of systematic diffusion. These methods also examine what types of state-level institutions and attributes are associated with increased diffusion activity. The sub-national jurisdictions selected for this study are the seven states and territories in Australia, the thirteen provinces and territories in Canada, and the fifty states in the United States. These jurisdictions were chosen because they present wide variation in economic strength, legislative professionalism, degree of autonomy in the federal system, trade dependence, and geographic proximity to each other as shown in Table 1 below. Studying them thus provides valuable insight on how these factors may be associated with proclivity to observe or borrow from foreign counterparts.

Potential downsides of the sample selected for this study is that they are all commonwealth countries that speak the same language and rely on the common law system. These similarities introduce the possibility that cross-national diffusion between states and provinces in these countries is more likely than between jurisdictions that do not share a language or the same legal system. However, this project is primarily focused on whether

evidence of systematic cross-national diffusion exists at all, and an investigation of diffusion between Australian states, Canadian provinces, and U.S. states can serve to illuminate this. It provides a valuable baseline by which future investigations can compare levels of diffusion between states who do not share the same language or legal system. Therefore, the variation displayed by the jurisdictions in this study make them ideal for an initial foray, while the ways in which they are similar prompt future exploration while not greatly threatening the objectives of the present investigation.

Table 1: Properties of Largest and Smallest Jurisdictions in Sample

	Australian States		**Canadian Provinces**		**U.S. States**	
Characteristic	Smallest	Largest	Smallest	Largest	Smallest	Largest
	Northern Territory	New South Wales	Nunavut	Ontario	Vermont	California
Economic Strength[13]	$18.2 billion	$401 billion	$1.9 billion	$578 billion	$32 billion	$2.7 trillion
U.S. equivalent:	Gulfport-Biloxi, MS Metro Statistical Area	State of Maryland	Tifton, GA Micro Statistical Area	State of Georgia		
Sub-National Autonomy	Medium-High		Low-Medium		High	
Geographic Proximity	Separated by Pacific Ocean		Shares border with United States		Shares border with Canada	
Trade Dependence[14]	42% of national GDP		64% of national GDP		27% of national GDP	

The second chapter in this project contains exploratory research to determine whether there is evidence of systematic cross-national sub-federal diffusion that can serve as a basis for

[13] 2017 current USD, The U.S. Bureau of Economic Analysis, Statistics Canada, and the Australian Bureau of Statistics

[14] The World Bank, National Accounts Data. Trade as a Percentage of GDP. Accessed 22 August 2018.

further research. I theorize that policymakers borrow policies from sub-national units in different countries using the same types of network processes that operate in policy diffusion between states in the same country, for reasons that are both similar to and different from the reasons for same-country policy diffusion. Some of the similar motivations include a desire to learn and emulate, which may arise from knowledge that policymakers in other countries have developed a new and successful policy, whereas differing motivations may include a desire to fix a policy that has not had good results at home. Cross-national network connections can develop because states display patterns of interdependence from their legislators hearing of innovative new ideas, conducting focused searches for best practices, and having personal connections through shared policy interests and mutual contacts built through research, conferences, and trips. The chapter thus seeks to answer whether evidence for this exists in the pattern of policy diffusion between states in different countries, whether the patterns of diffusion vary by state size, and whether noticeable differences appear in state actors who are studied and actors who study others.

I find that patterns of sub-national cross-national diffusion are present and account for approximately 17% of the connections in a network of Australian states, Canadian provinces, and U.S. states. Each edge between actors in the network suggests a connection where one state has frequently adopted the same policy as another state in close enough succession often enough to suggest that adoption behavior is not independent and that the second state to adopt may be observing the first one on a regular basis for policy information. The patterns indicate that policymakers in innovative and economically powerful states have the most connections in the network and that cross-country connections are formed to these states primarily by large peer states in different countries and also to some extent by smaller, less economically dominant states. This suggests that the largest and most innovative states are most likely to practice cross-

national diffusion but that all states seem capable of conducting basic cross-national research, perhaps most frequently when a state or province in a different country shares similar characteristics.[15] However, it does not give any indication of the extent or reasons for which cross-national diffusion is easier or more difficult, only that it happens less often. It provides evidence that cross-national diffusion is a process that relies on interdependencies between actors but does not suggest which processes promote or hinder it, or whether those process are the same or different to the ones for same-country diffusion. This chapter therefore serves as a promising introduction which demonstrates the need to focus on investigating the institutional features which are associated with cross-national diffusion and the state-level attributes that might affect legislative proclivity to cross-national learning.

The third chapter in this project takes up this direction of focus by investigating how the institutional features of U.S. state legislatures affect their capacity for cross-national policy diffusion, and how these institutions' effect on cross-national diffusion differ from their effect on same-country diffusion. I focus therefore on the institution of term limits, which has been associated with increased policy diffusion in the United States (Miller et al. 2018) and theorize that term limits (notably associated with declining professionalism in states that have adopted them) should be associated with increased borrowing of policies originating in states in foreign jurisdictions. I theorize that term limits increase motivation to find policies that are unique and pre-formatted and can be easily pushed forward as a new and novel concept on which a legislator who is term-limited can point to as evidence of a successful career in the legislature. I also predict that, as adapting the legislation to fit domestic needs would be less important to legislators in term-limited states who are more concerned with passing the policy than ensuring

[15] Such as being heavily dependent on oil or fishing industries.

its long term success or compatibility, policies of foreign origin present unique policy ideas whose broad concepts legislators can obtain fairly easily through internet searches while avoiding the greater and sustained effort required to conduct a thorough investigation of a policy of foreign origin to assess its long-term suitability for the home state. I test this using event history analysis modeled with generalized linear mixed models and time splines, limiting my study to policies that originated in states and provinces in Canada and Australia and which were subsequently adopted by U.S. states.[16]

Although my results support the findings in Miller et al. (2018) about the effects of term limits on domestic policy diffusion, I find only limited evidence that *Term Limits* affect the likelihood of adopting a policy that originates in a state in a foreign country, and no strong evidence that *Term Limits* are associated with faster adoption of policies of *Foreign Origin*. Although I cannot fully reject the possibility that the conclusion may be driven by shortcomings with data collection and analysis, the results of this paper suggest that, while *Term Limits* seem related to the speed with which states adopt policies from their domestic counterparts, they do not have a clear association with cross-national borrowing. This points to meaningful differences in either the policy research process or the policy adoption process that legislators use for policies of foreign origin compared to the practices used for borrowing policies of domestic origin. One plausible difference along these lines might be that policies of foreign origin require more effort than previously theorized to make them compatible for adoption in the home state, and that therefore there is no way to simply pass these policies quickly, regardless of whether a state has term limits and legislators are incentivized to pass legislation as swiftly as possible.

[16] The difficulty of obtaining a comparable measure of professionalism for Canadian and Australian jurisdictions limited the scope of the project in Chapter III and Chapter IV to the diffusion of foreign text in U.S. states, but extending this to study adoption patterns in states in other countries is an avenue that can be pursued in the future.

On the other hand, the likelihood of adopting a policy of *Foreign Origin* is found to be positively associated with the *Proportion of Foreign Adopters* that have already adopted the policy. As the *Proportion of Neighboring Adopters* is commonly taken to be a sign of the extent to which states can learn about a policy (see Miller et al. 2018 for review of studies supporting this), it suggests that learning about the success outcomes of a foreign-origin policy may be important to all U.S. states considering adopting a policy of foreign origin regardless of term limit status. This indicates that some other institutional features may be very important in explaining the variation in cross-national policy adoption behavior in U.S. states and drives the direction of investigation in the next chapter.

The fourth chapter therefore reframes the investigation of which state-level institutional features are associated with cross-national policy borrowing by investigating how different aspects of legislative professionalism are associated with cross-national borrowing of policy content. I theorize that professionalism is associated with less policy similarity overall because more professional states display more innovative policymaking and are likely to pass policies that are less similar. I theorize that this should be even more true in the context of foreign cross-national searching because more professional states have more resources to aid lawmakers in collecting more best practices and synthesizing more different ideas into one document. On the other hand, actors in a less professional state conducting the same research may examine what was done by the policy originator and a few other sources and write a policy based on that more cursory research that investigates fewer actors due to the constraints of time and research capacity that characterize a part-time or citizen legislature. I therefore predict that the interaction of a policy being of *Foreign Origin* and a legislature being more *Professional* is associated with significantly lower policy *Textual Similarity* than when the policy is of domestic origin. I test

these hypotheses on a dataset of four policies of U.S. origin that were subsequently adopted by U.S. states and four policies of foreign origin that were subsequently adopted by U.S. states, modeling policy change by a measure of textual similarity between laws.

I find that, though a policy being of *Foreign Origin* is associated with a 30% reduction in *Textual Similarity* across states of all levels of *Legislative Professionalism*, there are still meaningful similarities between the text of foreign policy originators and subsequent borrowers in states in other countries. This supports the ideas introduced above, and developed further in Chapter IV, that policies borrowed from abroad require more effort to borrow than policies from domestic sources because they require more modification than policies borrowed from domestic counterparts, perhaps partially to adapt them for compliance with federal regulation. Nonetheless, the linguistic similarities that carry over from foreign-origin policies to U.S. policies suggest that state policymakers borrow policies from abroad for the same motivations of learning and emulation that drive them to borrow policies from their neighbors.

I find also that the results of the interaction of *Legislative Professionalism* and a policy being of *Foreign Origin* are mixed: higher *Legislative Professionalism* is associated with increased *Textual Similarity* for domestic policies, but both increased and decreased *Textual Similarity* for policies of *Foreign Origin*. This provides partial support for the theory that higher levels of professionalism suggest a better ability to find and study a wider range of policy examples that may in turn lead to synthesizing a wider range of ideas into a policy that displays low similarity to any of its predecessors. However, it also suggests that the association between *Legislative Professionalism* and policy *Textual Similarity* is more complex and that a more nuanced theory will not only clarify the conditions under which higher and lower similarity is expected in terms of borrowing from foreign sources and adding innovation. It will also enable a

better understanding of how the cross-national policy research and formation process differs from the same-country policy diffusion process. Lastly, a more complex theory will also illuminate whether the same legislative institutions are used for both types of diffusion or if different institutions are relied on more heavily for each type. This finding guides the development of a more complex theory of when high or low similarity to the policy originator should be expected based on professionalism, which can be tested in future research.

Comparing Cross-National Diffusion to Same-Country Diffusion at the Sub-National Level

Collectively, the three investigations in this dissertation present one of the first and most comprehensive forays into cross-national state-level policy diffusion research at the sub-national level, especially in terms of the state-level attributes and institutions associated with cross-national diffusion and how these processes compare to the processes used in same-country diffusion. The findings suggest that the resources that make it easier for policymakers to learn about policy innovations in states in other countries have become more accessible through globalization and that all states have the resources required to conduct at least basic research about policy innovations abroad. The findings also suggest that the same motivations of learning and emulation (and, to a lesser extent, competition) presented in Shipan and Volden 2008 not only drive neighboring and non-neighboring states in the United States but also seem to motivate cross-national study of non-neighboring counterparts abroad. Studies like Desmarais et al. 2015, Nicholson-Crotty and Carley 2016 and Bricker and LaCombe 2020 find that states quite often look for policy inspiration to states that are not their neighbors. From this perspective, the practice of looking to non-neighboring states in different countries for policy ideas is quite similar to what states are already doing with their own noncontiguous counterparts in their home country. Some of the institutional behaviors associated with policy diffusion in the same-country

context also appear to generalize to the cross-national context. For example, non-term-limited state behavior is consistent from the perspective that non-term-limited states regularly borrow policies adopted by their neighbors later than states with term limits do, and this behavior is evident in the foreign context as well when non-term-limited states are considering whether to adopt a policy of foreign origin.

At the same time, there appear to be some meaningful differences that make the cross-national policy diffusion process different from the same-country policy diffusion process. For example, though term-limited states tend to adopt policies of domestic origin sooner than their neighbors, their behavior with respect to policies of foreign origin matches that of their non-term-limited counterparts in terms of waiting longer to adopt. This suggests that the institution of term limits is more important in explaining in-country policy diffusion and is less important in the cross-national context and points to the cross-national research process being somewhat different.

Similarly, the decrease in similarity of policy content of policies borrowed from foreign origins compared to policies of domestic origins implies that greater effort is required at least to modify a policy of foreign origin for adoption in a home state. It also suggests therefore that legislative capacity is of even greater importance in the context of finding and adopting foreign policies, as more research time, resources, professional organizations, and site visits may be utilized to borrow policies of foreign origin than policies of domestic origin. This would separate more professional, wealthier, and innovative states from those that have fewer resources in terms of both being able to deeply and comprehensively investigate policy areas abroad and the extent to which they are modified for home use.

Together, these findings suggest that cross-national diffusion is driven by similar motivations to in-country diffusion, is accessible to all states at a basic level but requires more investment to do thorough research that may predispose more professional states to conduct the highest volume of cross-national diffusion, and is dependent on many similar institutional features and processes but with some key differences that invite further exploration. Although cross-national policy study and adoption may therefore be easier for larger states, it suggests that the ideas developed by states in other countries are accessible at least on a basic level to all states, and therefore present an opportunity for all states to improve life for their own citizens through implementation of innovative best practices discovered elsewhere. The examples listed above of public bike sharing, the secret ballot system, legislative training documents, contact tracing and mask wearing, sanitary urban planning systems, and more span decades and provide compelling evidence that cross-national policy diffusion has already contributed greatly and has rising potential to provide great benefit in real time, much as in-country diffusion has provided countless benefits to society over many years. Finding ways to facilitate cross-national diffusion and make it more efficient could therefore greatly improve outcomes in public wellbeing. These concepts are explored in more depth in Chapter V.

Although the case studies presented at the beginning of this chapter provide support for the existence, importance, and prevalence of cross-national diffusion, more systematic evidence is needed that policymakers adopt policies in a manner that is likely to be associated with studied learning and borrowing. A good first step is to use network analysis to see if states from multiple countries are connected in a policy network. If no cross-national network exists, analysis will show three independent clusters that represent the states in three different countries. On the other hand, cross-national diffusion networks would look different if, say, actors in all states learned

from each other versus only the legislators of one or two highly professional states doing the work required to discover and borrow policy from abroad, at which point the policy spreads to the rest of the actors in the home country. Evidence that cross-national sub-national policy diffusion is occurring will justify continued exploration of this topic in later chapters. Chapter II therefore makes the preliminary foray into investigating this concept.

CHAPTER II
Network Analysis of Cross-National Policy Diffusion Among States and Provinces

Abstract

Policymakers regularly adopt policies that originate in states and provinces in other countries, but little is known about how or why they proliferate. This chapter develops a theory for why state legislators might look abroad and contends that globalization has increased the number of policy areas for which legislators may benefit from looking to their counterparts in other countries. I test for the presence of a cross-national policy diffusion network with a dataset of fifty-five Canadian, Australian, and U.S. state-level policy adoption dates adapted from the dataset created in Boehmke and Skinner 2012. Approximately 17% of connections formed in the network are between states in different countries. Wealthy and innovative states are most commonly studied, both by their peers and also by smaller, less innovative states. Exponential Random Graph Models (ERGMs) are used to assess what motivates the relationships and reinforce these findings while also suggesting that states share best practices with each other and that successfully studying a state in the past increases the likelihood of observing other states in the future. The findings in this paper suggest that policymakers persistently look abroad to foreign counterparts as one of many potential sources of policy.

Introduction

What are the conditions under which legislators in sub-national units would be motivated to look beyond domestic borders for policy ideas? Anecdotal evidence indicates that learning from abroad does occur, from the proliferation of the Australian ballot system in the 19th and 20th centuries from its origin in Victoria and Tasmania in 1856, to the spread of anti-stalking legislation through states and provinces around the world in the 1990s after high-profile stalking murders in the United States captured global attention, (Watson 2005) to how delegates from Chinese states launching carbon emission trading systems (including Guangdong, the largest state in China's economy) signed agreements to receive technical assistance from both California and Quebec, (Narassimhan et al. 2018 p. 984) and to how a delegation of policymakers from North Dakota traveled to Norway to better understand the Norwegian system of controlling methane excesses.[17] (Rabe 2018)

Yet looking to foreign counterparts has rarely been cited as a source for learning or emulation. Linguistic, legal, and physical differences and distances make the cost of researching foreign legislation higher than researching legislation from states in the same country. What motivates state policymakers to look abroad for ideas when closer options are available? This chapter develops a theory of why cross-national state-level policy diffusion occurs and which policymakers lead their states in this type of policy research. I theorize that, in addition to the

[17] Lawmakers from the state of Alaska also carefully studied Norwegian methane emission policy and incorporated some of its elements into their own legislation. (Rabe et al. 2020)

sources mentioned most often in the policy diffusion literature, legislators in any state may choose to observe their counterparts in other countries when actors of those foreign jurisdictions develop new and successful policies or when legislators seek to improve on a policy already in place. I test for the presence of policy diffusion pathways using network analysis and find evidence that states are linked in a cross-national adoption network. Exponential random graph modeling suggests that actors in both small states learn from their counterparts in large states, though legislatures in large states do not seem to observe the work of legislatures in small ones, and that each connection has a positive effect on the likelihood of an additional connection being formed. These findings begin to solve the puzzle of why state legislators can be motivated to search abroad for policy solutions in addition to looking at same-country peers.

The structure of the chapter is as follows: I begin by outlining a theory to explain why cross-national diffusion occurs and offer some ideas about how globalization has influenced the phenomenon of cross-national sub-national policy diffusion. I then construct a network of states in three countries to test the hypothesis that systematic diffusion exists. I then use exponential random graph models to test hypotheses of whether and how state policymakers' adoption patterns demonstrate cross-national diffusion. I conclude with discussion of the results and avenues for further study that would be fruitful based on these findings.

Potential for Cross-National Diffusion

State and provincial policymakers across the world grapple with many similar issues. They work to improve quality of life for their citizens by supplying public health and safety services, maintaining infrastructure, managing elections, providing public education, and more. Most states in foreign countries are more similar than different in terms of both the problems they face and the solutions they develop. Therefore, with varying degrees of modification, many

of the policy innovations and solutions that work in a state one country may also be of use to policymakers in the states and provinces of other countries. In addition to the vast literature on policy diffusion among U.S. states, scholars have conclusively shown that state policymakers around the world adopt policies that were first developed by other states in their own countries.[18] However, the literature has thus far limited its study of state-level diffusion to states that are all located in the same country.

One plausible reason for the absence of studies examining cross-national sub-national policy diffusion is that there are plenty of sources of policy inspiration among a state's peers in its home country. Studies identifying the importance of neighbors, regions, local governments, lobbyists, and more build a compelling case for many sources of policy inspiration much closer to home.[19] Another plausible reason is that there are barriers that deter lawmakers from bringing policies home from a state in a different country that do not hinder policy diffusion between states in the same country. Legislators trying to learn about policies in states in other countries have fewer conduits at their disposal with which to learn about foreign policies, especially if they are in a different language. Policies of foreign origin most likely need to be modified for domestic use in a way that similar policies from domestic peer states do not. Additionally, policies from states in other countries represent possible political risk, as citizen feedback to the policy cannot be assessed as easily as could a policy that was borrowed from a domestic counterpart with a similar political ideology. (Grossback et al. 2004, 525) With so many potential challenges involved, it is not surprising that scholars have focused on identifying targets of legislative study and observation that lie closer to home.

[18] Examples of studies finding evidence for diffusion in non-U.S. countries include Germany (Kern et al. 2007), Switzerland (Gilardi and Füglister 2008), China (Zhu 2014), and Brazil. (Sugiyama 2011)
[19] See for example Boehmke and Witmer 2004, Mooney 2001 (145), Gray 1973, Shipan and Volden 2006, and Haider-Markel 2001.

However, diffusion between states in different countries seems to be occurring despite the obstacles. The presence of similar policies in states in different countries implies that legislators are either developing dozens of the same ideas in perfect isolation or else studying their foreign counterparts on a regular basis. This suggests that policy diffusion between states in different countries does occur under at least some conditions. Cross-national diffusion between state legislatures seems most likely when a state's lawmakers in one country develop a novel policy that would also successfully solve problems in other states, or, as supported in the policy transfer literature, when legislators in the home country undertake a deliberate search for better solutions to a policy that is currently delivering less than satisfactory results at home and in any of the domestic counterparts that might normally serve as role models. (Dolowitz and Marsh 1996) Examples of the former motivation are the proliferation of the Australian ballot system and the spread of stalking and cyberstalking legislation, each of which were new policy concepts that were quickly deemed successful and soon replicated by policymakers of states in other countries. An example of the latter type of motivation would be the study undertaken by Maryland and the National Conference of State Legislatures (NCSL) to study best primary education practices in Alberta, Ontario, and additional foreign city-states and countries. This study was conducted find policy ideas more successful than those currently in place in the U.S. states.

Cross-national sub-national policy diffusion may also arise from policy exploration trips and networking opportunities. For example, the National Conference of State Legislatures leads regular trips for policymakers to visit other countries and exchange best practices.[20] However,

[20] Examples of state-level professional organizations that host trips in other countries include the Commonwealth Parliamentary Association, the National Union of State Legislators and Legislatures (Brazil), the Partnership of Parliaments (Germany), Secretaries Association of the Legislatures of South Africa, the Canada-U.S. Interparliamentary Group, and the National Council of Provinces (South Africa).

international trips seem to be the exception rather than the rule for state legislators, as they can face criticism for spending taxpayer dollars or neglecting their legislative duties at home. (Bader 2019) It seems therefore that the discovery of innovative new policies and the search for best practices to improve pre-existing policies are two of the most likely forces that motivate legislators to incorporate research of foreign policies into their standard policymaking process even in the presence of so many examples at home.

Given such examples and motivations for why state legislators might look beyond their domestic peers to their counterparts abroad, what are the patterns by which this behavior might be identified? I theorize that diffusion connections should be possible between states of all sizes and levels of global integration because all states should have at least the minimum infrastructure required to learn from their counterparts abroad. For example, Liu and Yuan (2015, 145) track the progression of information and communication technology used by governments over time and show how digital government services went from being almost nonexistent before 1990 to being almost fully integrated into daily use by 2010 (albeit more slowly in less developed countries). The rise of the internet and other forms of communication have made it less costly to for legislators to learn about foreign states who are handling the same problems. And in contrast to the argument that policies from foreign states might be a political risk based on an inability to forecast how a new policy direction will be received, there is some evidence that policies that come from third party or apolitical sources can sometimes be hailed as safer, more successful, or more sophisticated solutions merely by being from somewhere else.[21]

If foreign states are considered third-party or apolitical sources, this effect may apply to their policies and make them more attractive to legislators at home. I draw on these concepts to

[21] See, for example, Dolowitz and Marsh 1996 (346), Sugiyama 2011, and Parinandi 2020.

form a testable hypothesis about the prevalence of cross-national policy diffusion between states and provinces in different countries:

Hypothesis 1: Systematic cross-national state-level policy diffusion is possible and can exist between states of any size in different countries despite national barriers.

This hypothesis lays the groundwork to establish whether cross-national policy transfer is a persistent phenomenon or whether examples of policy transfer such as those mentioned in Chapter I are merely anecdotal and not elements of a larger, more systematic pattern. Testing this proposition is important to determine whether further study of cross-national policy diffusion is merited. Evidence that policies are consistently transferred between certain states or within certain amounts of time would invite further research into the characteristics of states that might promote or hinder cross-national policy diffusion.

Although globalizing forces enable legislators in all states to better scrutinize their foreign counterparts, not all states are likely to be examined equally. Studies of international policy diffusion at the country level and NGO level find that emulation is a frequent motivator for many types of global policy diffusion that are not necessarily at the state or province level.[22] Survey evidence from Einstein et al. 2017 finds that U.S. mayors sampled looked abroad for policy inspiration almost 10% of the time. The fact that U.S. cities generally look to foreign cities that are *larger* and famously vibrant (such as Bogotá and Paris) suggests that cities may be trying to emulate these jurisdictions because they aspire to be more like them.[23] Such aspirational

[22] See, for example, Börzel and Risse 2011, Hyde 2011, and Lee and Strang 2006.
[23] This fits the pattern for emulation outlined in Shipan and Volden 2006, where smaller cities emulate larger ones.

emulation may also occur at the state level as state actors become more aware of their counterparts in other countries.[24]

Following the concepts set forth about learning in Shipan and Volden 2008, the legislatures of more professional states should study each other due to their increased capacity for research and policymaking. However, I also posit that actors in smaller states are additionally highly incentivized to learn from larger states. Many small states do not have enough resources to enable their legislators to fully investigate all possible policy options before deciding on a course of action.[25] Instead, they rely on the policy innovation of larger states to avoid the cost of developing policy themselves. Actors in small states around the world can benefit from studying larger states in other countries as well. Most countries do not have many large states, which would result in minimal policy variance to study. Therefore, policymakers in small states may wish to research multiple large states to consider which policy outcomes are most successful on topics that can be applied to states of any size. This leads to Hypothesis 2:

Hypothesis 2: Policy ties between small and large states are more likely to show actors in small states observing large states than actors in large states observing small states.

It is also important to consider how the interdependencies between states affects the likelihood of policy diffusion. Many of the current studies about diffusion examine how

[24] The hypotheses in this chapter cannot ascertain whether states borrow due to learning or emulation; however, future studies can assess this. Like Shipan and Volden 2014, policies that are borrowed before any measurement of success is possible are more likely to be due to emulation as the borrower cannot know ahead of time whether the policy will work. However, policies adopted by foreign states immediately after the necessary time has elapsed for legislators to evaluate their success would indicate that policymakers waited long enough to learn whether the policy was likely to be successful and therefore worth borrowing.

[25] For example, citizen legislatures that only meet once every other year do not encourage lengthy policy research and are not likely to have as large of research staff as are often found in full-time legislatures.

exogenous actor attributes such as wealth and population affect policy adaptation.[26] However, a growing literature indicates that the interdependence between actors also influences actor behavior.[27] Desmarais et al. 2015 show that the U.S. states can be formed into a social network of diffusion ties based on patterns in the adoption dates of 188 policies. The authors test for some common policy diffusion variables such as ideology and proximity but stop short of testing whether any actor-interdependent variables such as reciprocity or transitivity affect the likelihood of an additional tie in the network.

The literature on social networks finds that actors in a network influence each other's likelihoods of forming connections to other members of the group. (Goodreau et al. 2009) State legislatures are a social network because, as by the majority of the policy diffusion literature, their behaviors influence each other and are thus interdependent. Therefore, the social network literature can inform the theory of cross-national state-level diffusion. State lawmakers are constantly innovating to create successful policies. (Maestas 2003; Butler and Nickerson 2011) When a legislator finds a policy outcome to be ideal given the opportunity cost of creating it, he or she may rely on similar tactics in the future in the hope that they yield comparable success. Therefore, if a state's legislators find that looking abroad was useful, they will seek more foreign policy solutions in the future. This leads to the following interdependence hypothesis:

Hypothesis 3 (Interdependence Hypothesis): States with cross-national policy adoptions are more likely to form additional cross-national policy adoptions than states who have no cross-national policy adoptions.

[26] See Mooney 2001, Buckley and Westerland 2004, Ducharme and Abraham 2008, Baybeck et al. 2011, and Karch et al. 2016

[27] This is certainly true in legislative politics, where actor interdependencies have been argued to influence such outcomes as voting turnout (McClurg 2003), vetoing European Commission proposals (Malang et al. 2017), and cosponsorship incentives in the U.S. House and Senate (Fowler 2006).

Lastly, the networks literature also suggests that reciprocity[28] is found more often in social networks than in networks of actors connected at random. (Snijders 2001) This concept is applicable to state governments as well. When actors in the home state reach out to their counterparts in a foreign state, the policymakers in the home state are not the only ones who have a chance to learn from the exchange. The lawmakers in the foreign state may become aware of the possibility of collaboration with the home state, and the benefits to be gained by studying its policy. As predicted by the network literature on reciprocity, lawmakers in the state that receives the request are more apt to look to the policies of the initiator for inspiration than they were before the request was issued, regardless of state size. This leads to Hypothesis 4:

Hypothesis 4 (Reciprocity Hypothesis): State actors are more likely to reciprocate ties that have been issued to them than they would be in the absence of a tie.

In summary, the effects of globalization suggest that geography, while important, is not as critical for policy diffusion as it once was. Instead, heightened technology and connectivity foster an environment where cross-national diffusion from learning, emulation, and economic competition is more possible than ever before. State lawmakers have an incentive to look to their foreign counterparts for policy ideas when a foreign state has passed a new and useful policy, as well as when policymakers in the home state are conducting an extensive search to find best practices to improve on a failing policy at home. These motivations to look abroad, coupled with the increased access to foreign information and contacts in foreign legislatures brought about through globalization, indicate that actors can conduct transnational research and may rely on it as one element of their policy development process.

[28] Reciprocity describes a network where there is a two-way connection between two of the actors, indicating that each sends a tie to the other and each receives a tie from the other.

Globalization also has implications for which states and policymakers participate in this process. The rise of internet research, telecommunications, and multinational organizations foster the ability to learn about foreign innovations and makes it possible for public servants in both wealthy and less wealthy states to learn from the most innovative states (though policymakers in large and professional states are not likely to learn from smaller, less sophisticated states). Lastly, as state legislator relationships fit the characteristics of a social network, cross-national sub-national diffusion networks should increase likelihood of future ties with the addition of every previous tie, as well as reciprocity between actors.

Data

To test these hypotheses, I create a network of policy adoption dates of Australian, Canadian, and U.S states and provinces, as explored in Chapter I. The provinces and states from these countries vary widely in economic strength and trade dependence, meaning there is useful variety in actors on two characteristics that may affect propensity for cross-national diffusion. Additionally, the sub-national units in these countries operate under different levels of federalism, with the U.S. being the most devolved and Canada the most centralized. Centralization of federal power is seen as inversely proportional to policy experimentation (see Shipan and Volden 2012), so this variety will help the analysis of whether federalism encourages or deters cross-national policy diffusion. This results in a network of 70 actors (50 U.S. states, 13 Canadian provinces, and 7 Australian states). The data used are a list of when 55 different policies were first adopted in the Australian, Canadian, and American states and provinces. The policy adoptions in U.S. states come from a dataset compiled in Boehmke and Skinner 2012. The

Canadian and Australian data were collected by hand from June 2018 to September 2018, for a total of 2,344 adoption dates across all states.[29]

Two potential biases in the data are of note. First, although the policies drawn from the Boehmke and Skinner 2012 dataset were drawn at random, it is possible that they are in some way unrepresentative of all types of policy adopted in the U.S. states at large. If this were true, it might mean that the networks uncovered in this study are not accurate when the universe of policy adoptions is considered, i.e., that the connections found between states and provinces in this network are different than the linkages that would be found in the true network. However, the large number of policies used and the fact that Desmarais et al. 2015 do not find evidence of policy networks for U.S. states differing substantively by policy category suggest that bias from unrepresentative policy selection is low.

Second, this dataset may exhibit bias in that it was drawn from a database of policies passed in U.S. states and therefore is likely missing policies that are not relevant to U.S. states but may be relevant elsewhere. Any type of legislation that is regularly passed in parliamentary systems but not in presidential systems (such as procedures for dissolving state or provincial parliaments or legislation about the powers of the premier) will not appear in this dataset because no U.S. state will have passed legislation on any of these topics. Consequently, this dataset likely underestimates the number of policies that originated in Canadian provinces and were subsequently adopted in Australian states, and vice versa. This is likely to affect the analysis in this paper by generating networks with fewer connections than likely exist between Australian states and Canadian provinces than likely exist.

[29] The data were collected with the help of two trained undergraduate coders. No formal inter-coder process was developed but the accuracy of each date was verified by the author.

Although a better understanding of the cross-national networks between the states and provinces that properly accounts for connections between Australian and Canadian jurisdictions is desirable, this study will still be able to accurately test the four hypotheses above with respect to policies flowing between foreign jurisdictions and U.S. states, and will still provide a limited look at the policy flow between parliamentary jurisdictions on topics not related to governmental structure. Future studies should correct for this bias by compiling the dataset not from a list of policy topics on the NCSL website but rather by noting all laws passed in each sub-national jurisdiction for as many years as covariate data are available, and then identifying the adoption dates for every state for each policy on the list. This would capture the entirety of policy flow between both parliamentary and presidential systems and has the added benefit of reducing the risk of the first source of bias mentioned above, that is, inaccuracy due to sampling.

Methods

To test the theory of cross-national diffusion in Hypothesis 1, I create a network of states and explore whether there are plausible diffusion connections between them. To do this I use the Network Inference (NetInf) algorithm pioneered by Gomez-Rodriguez et al. 2010 and adapted to state-level policy diffusion by Desmarais et al. 2015. The actors of the network are the states in the dataset, and the connections between the states represent evidence for a tie based on repeated patterns of policy adoption sequences. If State A frequently adopts the same type of policy as State B but always adopts a few years later, over time it is less likely that this happens by chance and more likely that there is a specific reason that A always adopts after B. This will test Hypothesis 1 by indicating the likelihood of cross-national diffusion between states.

The algorithm takes a list of policy adoption dates for all states in the dataset and computes which sequences of state-level policy adoption happen more often than what is

expected if policies were adopted at random. If policies are consistently passed in one state soon after they are passed in another, some latent factor is likely driving this behavior. If the algorithm detects this process, it will suggest that a connection (known as a tie or an edge) representing a potential policy pathway be placed between the two states. It calculates the likelihood of a diffusion edge using the following primary factors: the total number of other states that have adopted the policy before a specific state, the number of states where the policy has already been adopted who have a plausible tie to the state in question, and the estimated rate of adoption for each policy (also known as a rate parameter). (Desmarais et al. 2015, 6)

The rate parameter predicts an exponential adoption rate, to model the expectation that the chance of state A adopting from state B decreases exponentially as time passes between the two adoptions. This is set so that an average of two years is the normal length of time in the model for policies to diffuse from one state to another. The first edges it calculates are ties between states that score very well on these three conditions and that are therefore likely connected. An example might be the tie from California to Massachusetts, if Massachusetts tends to adopt the same type of policies that California adopts but consistently does so just a few years later. The algorithm adds edges iteratively based on how well they explain the policy adoption dates in the dataset (calculated using the BIC statistic), and stops adding edges when there are no more connections that would improve model fit by better explaining the adoption dates.

The result is a network of what Desmarais et al. 2015 describe as "persistent policy pathways." These are edges between states representing that more policies were passed sequentially (i.e., persistently) between two states than would be expected if policy adoption were completely random. The edges are "directed," meaning that they flow from one state to another and imply that, if diffusion is happening between two states, it is flowing from the first

state to the second, not that information is flowing both ways. This method will therefore test both the second and fourth hypotheses. The direction of the edges will test whether actors in small states are predominantly learning from large states, as Hypotheses 2 predicts. If reciprocity is present and lawmakers in large states observe small states in return, as predicted in Hypothesis 4, NetInf will place edges going in both directions between the two actors.

There is a risk of bias if there is not enough data to perform the test. NetInf works best with at least two transmission events for every potential edge.[30] There are 2*(n*(n-1))/2) potential edges in every directed network, meaning there are 9,660 potential edges in a network with 70 Australian, Canadian, and U.S. states and provinces. If all states were connected this dataset would require 19,320 adoption dates to be confident that NetInf is returning likely edges. Fortunately, most of those edges are so unlikely (for example, Nunavut to Alabama) that model design is not improved by adding them. Many social networks are a fraction of their potential size, and density tends to decrease as the number of actors increases. (Faust 2006) Analyzing the percentage of potential ties that the algorithm finds will reveal if there is cause for concern.

The existence of a tie in the network generated by the Network Inference algorithm does not prove that there is diffusion between the two states. The algorithm returns a network of which states most frequently follow each other in policy adoptions, in a way that accounts for the passage of time and who their sources might be based on previous adoptions. It is not capable of showing that the reason for those ties is that diffusion has occurred and a legislator in one state studiously examined the policies in another state on a regular basis. It merely indicates that there are latent variables driving sequences of policy adoptions to manifest in ways that do not resemble what they would look like if they happened by chance.

[30] Gomez-Rodriguez et al. 2010 p. 24

However, the parameters that NetInf uses to find patterns account for the factors that would most likely represent policy diffusion, should it be occurring. One factor it considers - how many other states have already adopted - matches the theory of learning as described at the city level in Shipan and Volden 2008 (842), where they hypothesize that "the likelihood of a city adopting a policy increases when the same policy is adopted broadly by other cities throughout the state." The number of other jurisdictions that have passed a policy is considered an important potential driver of diffusion, and the edges that NetInf returns are calculated with respect to this factor.

The algorithm also accounts for how many adoptions have occurred among the states that might be considered "favored" sources have adopted, i.e., sources more likely to be within the state's network based on previous patterns. States might either learn from these more common sources or see them as producers to be imitated. This resembles the description of policy diffusion via imitation from Shipan and Volden 2008 (843), as described at the city level, of how policymakers of smaller cities hope that "such imitation will raise their profile and make [their cities] more attractive places to live, like their larger, wealthier, and more cosmopolitan neighbors."

Finally, NetInf takes the amount of time between each policy passage into account in a way that penalizes longer time spans that are less likely to be linked to diffusion. It does not assign equal weight to a policy passed fifty years after the first state versus five years after the first state; it favors policies that were passed in shorter time frames to model the possibility that one state's adoption of a policy prompted another state to change the status quo. This provides a more difficult test for cross-national ties, in that even with globalization it still takes more time for policies to be studied across countries than it does to be observed locally.

By taking these steps, the algorithm is constructed to favor only those edges for which the conditions exist for policy diffusion to have created them. It is certainly possible that some of these edges develop for completely unrelated reasons -- for example, perhaps lawmakers in large states simply pass policies first and actors in small states follow after learning about it independently. However, when considered in the aggregate, the parameters by which NetInf searches for adoptions recover the edges most plausibly generated by nonrandom patterns of sequential policy adoption.

Hypotheses 3 and 4 predict that a state legislature's adoption of a policy is in some way dependent on the adoption behavior of other states in the network. Exponential Random Graph Models (ERGMs) are a useful method to test for these patterns. If the sequence of policy adoptions is influenced by diffusion, then the edges between actors capture some likeness of that diffusion process. And if those edges represent some of the diffusion happening between states, then ERGMs model which actor-interdependent factors increase the likelihood of an additional edge being formed, i.e., an additional instance where diffusion is likely.

It is optimal that ERGMs can model actor-interdependent drivers of edge formation because diffusion is theorized to occur because actors influence each other through interdependent behavior. For example, the process of learning is posited to be dependent on geography because the states most often observed "are most likely to be nearby states, for reasons of political and demographic similarity, political networking, and overlapping media markets." (Boehmke and Witmer 2004, 40) Political networking and overlapping media markets are quintessential examples of influential interdependence factors driven by institutions in the policy-spreading state, and not driven by exogenous attributes of the policy-adopting state. Thus,

ERGMs are helpful for testing theories of how diffusion occurs in a way that linear regression cannot always investigate.[31]

Hypothesis 3[32] can be tested using the ERGM concept of in-degree, where each additional inbound tie an actor has increases the likelihood of an additional edge being added.[33] In terms of diffusion this means that policymakers who discover that borrowing from abroad can result in policies that suit constituent preferences have a greater chance of doing it again compared to those who never look abroad and who are therefore less likely to try to reach out for a first time. This creates more incoming ties that represent borrowing policies from some other jurisdiction.

Hypothesis 4 (reciprocity between actors) can be examined by observing the number of reciprocal ties in the network and using ERGMs to see if mutual connections persist in simulations. A network will have meaningful reciprocity if it exhibits several actors who have both a tie coming to them from another state, and a tie leading from them back to that same state (i.e., a tie from B to A, and also from A to B). This would indicate that State A adopts policies that State B has passed, but also that State B adopts policies that State A has passed in a pattern that is not random.

Creating an ERGM consists of running thousands of simulated models to show what network attributes can, in combination, reproduce a network like the one created by the data. Applied to this context, it means that an ERGM will show what exogenous and endogenous factors create simulated networks of state edges that are similar to the observed network. It

[31] Another good description of how the literature on policy diffusion theory features interdependent mechanisms is found in the explanation of competition offered by Shipan and Volden 2008 (242): "In each instance, policymakers consider the economic effects of adoption (or lack of adoption) by other governments. If there are negative economic spillovers...then it will be less likely to adopt the policy itself."
[32] The interdependence hypothesis: states with adoptions are more likely to add edges than those without edges
[33] See explantation in De la Haye et al. 2010 p. 164

therefore shows what factors are associated with an increased likelihood of a tie being formed, representing an above-average frequency of relatively rapid sequential policy adoption.

ERGMs use a Monte Carlo Markov Chain algorithm to simulate large numbers of networks with the properties predicted to define the observed network structure. This is a way to stochastically approximate maximum likelihood. The success of these simulations at recreating networks like the observed network inform how likely it would be that the observed network could have been generated with the properties theorized to define it. If the observed network is not statistically significantly different than the simulated networks, it means the network properties predicted and used to generate the simulations probably do describe the attributes of the network. However, if the observed network's properties are different from the properties of the simulated networks, it is unlikely that the observed network embodies the properties that were used to simulate the networks.

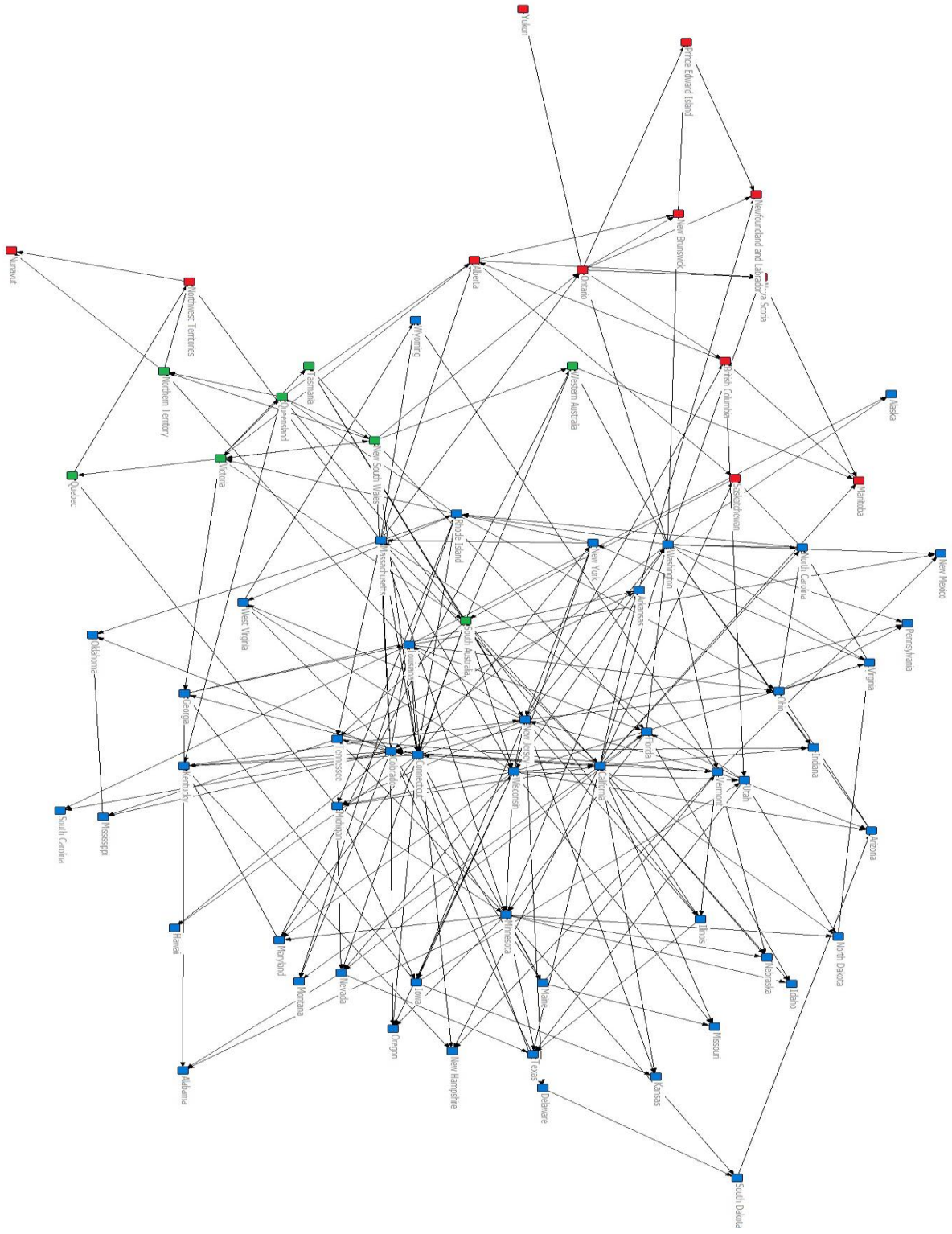
Creating an ERGM simulation requires four steps. The first step is to theorize which characteristics describe the observed network. The next step is to run the model and check the Goodness of Fit statistics, which indicate how well the observed network falls within the confidence intervals of the simulated networks on several baseline diagnostics. The next step is to adjust the network characteristics included in the model until the observed network falls within the confidence intervals of the simulated networks as well as possible. If the model can be fit, the summary shows which factors are significant via coefficients for each parameter that express how much the conditional log odds of a tie being formed are changed by a one unit change in that parameter.

Results

The graph of the network in Figure 1 (shown below) supports Hypothesis 1 in that it presents evidence of cross-national policy diffusion between a wide variety of states. Of the 231 ties in this network, forty of them are between states in different countries, a cross-national edge proportion of seventeen percent. A quarter of the cross-national ties are from other countries going into the United States. This implies that there is a meaningful population of potential edges leading from foreign states to the United States, even though the U.S. states are policy leaders in many areas. If policy adoptions in each country occurred at random or only between states in the same country and without influence from abroad, the network would show three isolated networks for the Australian, Canadian, and U.S. states and provinces.

Instead, the graph shows that states and provinces from all three countries are entwined with each other. This suggests that some policy adoption sequences are nonrandom and that some relationships may be particularly noteworthy. For example, the locations of the Australian states permeate furthest into the center of the network. They start with the Northern Territory on the periphery and lead all the way in to South Australia, which is quite central to the network and which ties to six foreign states. Canadian provinces, though not integrated as thoroughly as Australian states, are still tied to many foreign states. In total, approximately half of all Australian and Canadian state edges are with states in other countries.

Figure 1: 55-Policy Network (All States and Provinces)



Although it is possible that these characteristics of the network could be generated due to the policies or jurisdictions selected, this does not seem likely. It would be difficult for any one unusual policy or policy category to overwhelm the effect of the multiple other policies and policy categories included. As referenced in discussion of possible biases that the dataset may contain, Desmarais et al. 2015 found that patterns of diffusion were not sensitive to the policies chosen for inclusion. The in-country linkages within the network look like what would be predicted in the policy diffusion literature, with wealthy and innovative states known to be policy drivers (such as Massachusetts, California, New South Wales, South Australia, and Ontario) closer to the center and more interconnected with states or provinces from that country. Testing a subset of 35 policies drawn at random yielded comparable network structure, characteristics, and ERGM results. These points suggest that the results are not likely being driven by any specific policy or subset of policies. The network thus displays preliminary evidence for the hypothesis that systematic cross-national policy diffusion occurs between states in different countries.

Examining the density (proportion of ties out of total possible ties) alleviates concern that NetInf will not have enough data to compute a network. The dataset has a density of 4.8%, which implies that only about 5% of the maximum number of policy adoptions would be needed for NetInf to work properly. That translates to about 1,000 policy adoptions. Since there are 2,344 policy adoptions in the dataset, NetInf has sufficient data to return a network.

Reciprocity is low: only four edges display it. This indicates that actors do not frequently learn from those who have reached out to them, but rather that some states consistently lead, and others learn from those leaders. Patterns of states learning from each other in a reciprocal fashion are still possible but are not repeated often enough to support the prediction that it is a primary learning mechanism. This conclusion from observing the data is sufficient evidence to reject

Hypothesis 4 (the interdependence hypothesis of reciprocity) since including a term for reciprocity in an ERGM simulation would not likely produce a model that exhibits so little of it.

Table 2 reveals patterns of cross-national leaders and followers among the three countries. The first column, Number of Edges, indicates the number of connections in the network that emanate from states and provinces in one country to states or provinces in either of the other two countries. For example, twenty-eight connections emanate outward from Australian states in the network.

Table 2: Tie Statistics

	Number of Edges	**Percent of total edges (231 edges)**	**Percent of cross-national edges (40 edges)**	**Percent of country dataset (28 edges)**
AUS to Aus	12	12/231 = 5.2%	NA	12/28 = 43%
AUS to Can	6	6/231 = 2.6%	6/40 = 15%	6/28 = 21%
AUS to USA	10	10/231 = 4.3$	10/40 = 25%	10/28 = 36%
AUS TOTAL	28	28/231 = 12.1%	16/40 = 40%	100%
	Number of edges	**Percent of total edges (231 edges)**	**Percent of cross-national edges (40 edges)**	**Percent of country dataset (20 edges)**
CAN to Can	16	16/231 = 7.4%	NA	16/20 = 80%
CAN to Aus	3	3/231 = 1.3%	3/40 = 7.5%	3/20 = 15%
CAN to USA	1	1/231 = 0.4%	1/40 = 2.5%	1/20 = 5%
CAN TOTAL	20	20/231 = 9.0%	4/40 = 10%	100%
	Number of edges	**Percent of total edges (231 edges)**	**Percent of cross-national edges (40 edges)**	**Percent of country dataset (183 edges)**
USA to USA	163	163/231 = 70.1%	NA	163/183 = 89%
USA to Aus	8	8/231 = 3.5%	8/40 = 20%	8/183 = 4.4%
USA to Can	12	12/231 = 5.2%	12/40 = 30%	12/183 = 6.6%
USA TOTAL	183	183/231 = 79.2%	20/40 = 50%	100%
Grand Total	231	99.9%	100%	NA

Twelve of them are same-country connections from one Australian state to another (for example, Queensland to Victoria), ten of them project out from Australian states to U.S. states (representing instances where a U.S. state may be observing an Australian state), and six of them lead from Australian states to Canadian provinces. All together, Australian states project twenty-eight outbound ties, twelve of which are between themselves and sixteen of which are with states and provinces in other countries. Looking further down the column shows that Australian states are also the recipients of ties from three Canadian provinces and eight U.S. states, for a total of thirty-nine ties in the network.

The following column (Percent of Total Edges) indicates that twelve percent of outbound linkages emanate from Australian states, nine percent from Canadian provinces, and seventy-nine percent from U.S. states. As mentioned above, it is possible that the fact that no legislation regarding topics relevant only in parliamentary governments is included in the dataset may be artificially deflating the number of outbound ties from Australian states and Canadian provinces. However, dividing these totals by the number of states or provinces in each country reveals that Australian states actually have slightly more ties per state (four) than either U.S. states (3.66 per state) or Canadian provinces (1.5 ties per province). These totals suggest that Australian states and U.S. states are comparable in terms of average outbound ties, i.e., the number of circumstances where a state may be observed by other states in the policy formation process.

Looking at the third column (Percent of Cross-National Edges) indicates that forty percent of the cross-national ties in the network emanate from Australian states, ten percent from Canadian provinces, and fifty percent from U.S. states. It also indicates that Australian states and U.S. states are each recipients of about 27.5% of cross-national ties, while the Canadian provinces are recipients of about forty-five percent of ties. By this indication, Australian states

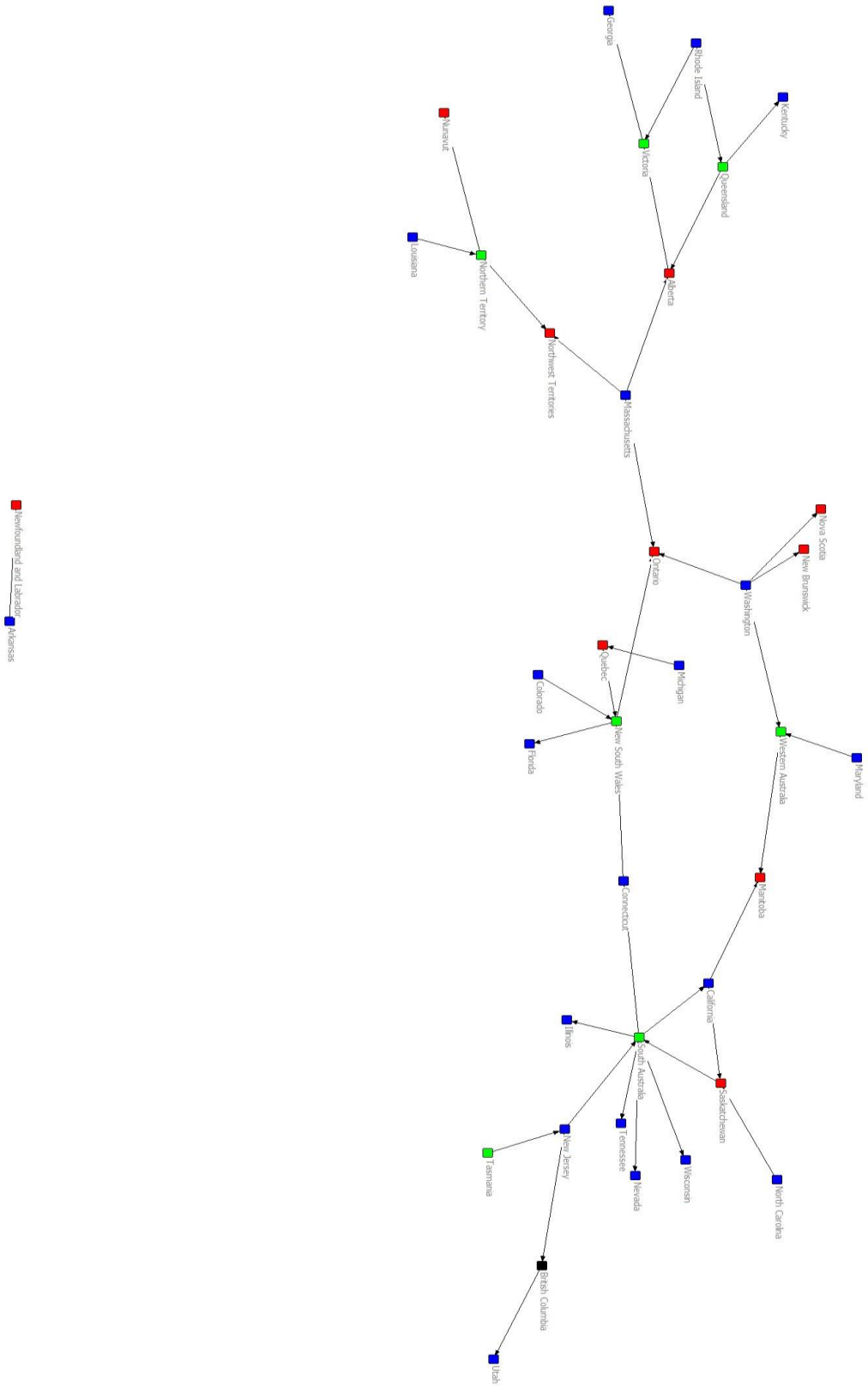
and U.S. states tend to be observed frequently and may sometimes look abroad as well. On the other hand, Canadian provinces do not seem to be studied very often but seem to observe what is happening abroad more often. This provides empirical support for the finding in Rabe 1999 that Canadian provincial bureaucracy stifles policy entrepreneurialism.

It is interesting that three of the four Canadian-province-led ties lead to states in Australia, not states in the United States. In fact, the only Canadian-to-U.S. tie was British Columbia to Utah. This implies that U.S. state lawmakers do not look as often to Canadian provinces as they do to other sources, perhaps because the Canadian constitution limits what provinces can legislate on to far fewer policy topics than for which the U.S. state governments are authorized to legislate.[34] The final column suggests that the U.S. states and Canadian provinces are similar in that the majority of their outbound ties are to same-country states and provinces. However, only forty-three percent of Australian states' outbound ties are to states in the same country. Overall, these findings suggest that U.S. states are both frequently observed and also look abroad on a regular but limited basis, that Canadian provinces look abroad more often but are little studied by others, and that Australian states both look abroad rather frequently and also may be observed more often than the Canadian provinces.

The dataset has thirty-eight states that have a cross-national edge. Figure 2 extracts these connections out of the overall network to make them more visible without the same-country ties that make examination more difficult. The network illustrates policy diffusion patterns radiating outward from a few wealthier, more innovative central actors like California and New South Wales, to several provinces and states like the Northwest Territories and Kentucky that have smaller governments and tend to be less wealthy. Essentially, a few leaders form a core inner

[34] For example, Canadian states do not legislate on criminal code issues, but this represents a significant volume of legislation for Australian and U.S. states.

Figure 2: 55-Policy Dataset (Cross National Ties Only)



network and are surrounded by smaller states who seem to be looking to policy leaders for solutions. The central ring of leaders connected to each other provides support for the finding in Shipan and Volden 2014 that policymakers in larger states are better equipped to learn from other states. However, the linkages of smaller states also offer support for Hypothesis 2: that actors in small states likely observe larger states for policy ideas. Policymakers in smaller states may indeed be able to identify foreign leaders in a particular policy area and benchmark the foreign policy against that of local leaders and use it in addition to that of advice from local leaders. One example of this is Nevada, a state with a citizen legislature that meets biannually and with a GDP that places it 32nd out of 50 U.S. states[35] choosing to partner with Queensland to improve in policy areas such as water management, mining and extraction, and best practices for dry climates. (Trade and Investment Queensland) Globalization and the reduced costs of internet research and remote communication have likely played a significant role in this.

As in the all-state dataset, this graph displays very low reciprocity. This suggests that policy leaders focus on producing their own work, and a positive externality from this is that they give actors in smaller states models that are more innovative or comprehensive than what they might produce on their own. Lawmakers in smaller states that might not have the resources to research and develop their own policy therefore have an incentive to study what both local and foreign leaders are doing. Actors in large states also appear to observe other large states, but not in a manner indicating great reciprocity due to the lack of two-way relationships (denoted by linkages with arrowheads on both ends). This indicates that policymakers study each other for different policies over time as the need arises, but that legislators reaching out for advice on one topic do not increase the likelihood that legislators in the observed state will reach out to the

[35] 2019 current dollars. Bureau of Economic Analysis

borrowing state in the future to ask questions on a different subject. One possible explanation for this is that it is much harder to build reciprocity between foreign counterparts in legislatures, which are composed of many actors, than it is for reciprocity to form in executive branch relationships between just two actors and which can be sustained for many years, such as the rapports established between several U.S. state governors and Canadian province premiers. (Rutan 1981, Boyd 2017)

One way to probe this explanation in more depth would be to test whether reciprocity is greater in networks of policy diffusion between executive branches of states in different countries, as premiers and governors are often in office for much longer than legislators and this may foster the development of reciprocal connections. Rutan 1981 notes that collaboration between the state of Washington and the province of British Columbia tends to wax and wane with the strength of the relationship between the state's governor and the province's premier. Comparing levels of reciprocity in networks of cross-national legislature policy adoptions to cross-national executive branch policy adoptions would shed more light on this assessment.

I next run ERGM models to test Hypothesis 3, that actors with more ties (representing more diffusion connections) are more likely to incur ties than actors who do not have ties. Following the steps outlined at the end of the Methods section, the model includes variables accounting for *Sharing a Border*, being in the *Same Country*, the number of incoming ties (called *In-Degree*), *Out-Degree* (the number of outgoing ties, i.e., instances in which a state is potentially a model under observation by another state), and *Edgewise Shared Partners* (a measure of transitivity, i.e., the extent to which state A, after forming a tie with state B, is likely to form ties with all of the states that state B has ties with). The last three variables are geometrically weighted to make sure that outliers do not skew results.

I expect *Sharing a Border* and being in the *Same Country* to both be positive, as they relate to geography, which is still an important facilitator of policy diffusion. However, I also expect the network interdependency variables to be significant to represent how actors influence other actors, and that this in turn affects who is likely to practice cross-national policy diffusion. I predict that the coefficient on geometrically weighted *In-Degree* will be positive, to represent that the likelihood of adding an additional diffusion tie increases based on the number of diffusion ties a state already possesses. I add *Out-Degree* (the number of outgoing ties) and geometrically weighted *Edgewise Shared Partners* (the number of mutual connections that exist for any two actors sharing a tie) to improve model accuracy, but do not generate specific hypotheses for them. I run simulations for both the all-edge dataset and the cross-national-only dataset.

Reviewing the Goodness of Fit statistics before examining the model results reveals that the statistics are satisfactory, with the line representing both observed networks falling within the confidence intervals for the simulated networks. This means that the variables theorized to be important in forming these networks are indeed likely to be present. The charts of the Goodness of Fit statistics for both models are included in Appendix I.

Inspecting the results of the ERGMs in Table 3 yields support for theories of actor interdependence. Geometrically Weighted *In-Degree* is highly significant in the 55-policy dataset, thus providing support for Hypothesis 3. The positive sign on the coefficient indicates that the probability of garnering an additional inbound tie increases with the number of incoming ties already possessed by a state.

Table 3: Exponential Random Graph Modeling (ERGM) Results

	Model 1 55 Policies	Standard Error	Model 2 Cross-National Only	Standard Error
Incoming Ties	14.589***	(3.440)	1.771	(1.126)
Outgoing Ties	−3.157***	(0.242)	−1.299**	(0.660)
Edgewise Partners	0.351*	(0.200)		
Edges	−2.614***	(0.380)	−4.024***	(0.953)
Borders	−0.590*	(0.350)	−0.090	(0.610)
Country	0.051	(0.092)		
Decay (Edgewise Partners)	−0.577	(0.890)		
AIC	1614.480		381.175	
BIC	1659.858		402.585	

Note: *p<0.1; **p<0.05; ***p<0.01

In terms of policy diffusion, this implies that each diffusion connection possessed by a state increases the likelihood of it forming an additional connection.[36] The inbound nature of the ties is important because it represents the active side of policy diffusion where lawmakers in a state going study the policy of another state, thereby creating an "inbound" connection from a foreign state back to the home state. Lawmakers in the home state must actively search for, and bring in policy, whereas actors in the state they adopt from can be completely passive in (or even unaware of) the transaction of being observed and studied. This may explain why Geometrically Weighted *Out-Degree* is significant but negative for both models. In policy terms, this suggests that, while state policymakers actively raise their *In-Degree* "score" by seeking more examples from abroad, it is rarer for these actors to actively promote their policies to be emulated by other legislatures.[37] It also indicates that state legislatures that borrow policy do not necessarily share

[36] See Appendix IV for additional discussion and interpretation of the concept of In Degree.
[37] Isolated instances exist of states working to export their policies, such as Quebec promoting its inclusion in French language books in American universities and Germany and German states working to spread their renewable energy policy (Chapelle 2014, and Steinbacher 2018). However, exporting policies is still not common between sub-national governments like states and provinces.

their findings with other states, as doing so would presumably increase the number of emulators and outbound ties. Learning about the best practices of states in other countries may still be a rather solitary process. Even if policymakers in one state wanted to share their success with looking abroad, the lack of forums that share cross-national information compared to the number of comparable sources for sharing domestic-only best practices suggests that any information publicized about such successes would be scattered and decentralized.

The positive term on *Edgewise Shared Partners* in the 55-policy dataset means that a state is more likely to form a tie with another state, the more ties that it has in common with other states. This is an alternate measurement for clustering or transitivity, and the fact that it is significant provides support for the assertion that there is more transitivity than can just be explained by the exogenous attributes of sharing a border and being in the same country. It does not have a large effect, perhaps because the overall measure of transitivity for these two networks was lower than the levels of transitivity often associated with social networks. It drops out all together in the model of only cross-national ties.

The exogenous attribute variables provide additional insight into cross-national diffusion. *Edges* is an intercept term that represents the density of the network and indicates that the conditional log odds of any tie existing in the network is -2.614 for the 55-policy dataset. It means that the probability of a tie between any two actors is quite low, given the proportion of actual ties that exist (fewer than 5%) out of the large number of potential ties is also quite low. In the 55-policy model, the country of each state in a potential dyad was not significant, but whether they share a border is significant. This fits the expectation that geography explains some of the variation in observed policy diffusion. The negative sign represents the characteristic that the majority of edges are between states that do not share a border – thirty out of 231 edges are

between contiguous states, or approximately 13%. This is comparable to the original finding in Desmarais et al. 2015, who found that between 10-20% of the ties in their networks were between states that shared a border. Therefore, although sharing a border is a significant factor, this finding supports the conclusion that state policymakers are clearly looking beyond local borders in their policy adoption patterns.

The model built exclusively of cross-national ties enables a test of the hypotheses for which there is no risk that connections between states in the same country are driving the results. Same-country ties account for eighty-three percent of the connections in the full network. Although the network of cross-national-only ties is very small and therefore loses precision, it provides a useful robustness check to ascertain whether the findings in Model 1 can be generalized to cross-national policy diffusion. For the model built exclusively of cross-national ties, *Country* and variables relating to *Edgewise Shared Partners* were dropped because they no longer aid model convergence. The findings for *Out-Degree* and *Edges* hold, but the coefficient for *Borders* is no longer significant. This is not surprising given that the dataset is composed expressly of cross-national ties. *In-Degree* is no longer quite statistically significant but is still positive. Forty cross-national ties probably do not give enough opportunity for *In-Degree* patterns to present, but a larger dataset would likely reveal a similar *In-Degree* pattern among purely cross-national ties as among the complete dataset.

Conclusion

This chapter investigates the reasons that prompt state policymakers to look at policy examples in foreign state legislatures and theorizes about the patterns by which such diffusion is likely to occur. Approximately seventeen percent of ties formed in the policy adoption networks in this study were between states in different countries. This supports Hypothesis 1: that cross-

national diffusion occurs between states and provinces of many types. About half of those ties went from the U.S. states to abroad, and about a quarter came from abroad to the U.S. states, with the final quarter flowing between Australia and Canada. Instead of the networks of the three countries' diffusion patterns being entirely isolated, they were interwoven in a way that suggests that policymakers from states in all three countries learn from each other. Although the algorithm cannot prove that ties between states represent instances of diffusion where legislators were specifically contacting legislators in other countries to learn from them, the ties produced represent policy adoption patterns between states that persist over time, and which would be unusual if there were absolutely no observation at all between states.

Studying the network composed solely of cross-national ties reveals support for Hypothesis 2, that small states are likely to form attachments to large states that are policy drivers. The network displayed a pattern of leading policy generators forming a core, and policy observers creating a periphery. Testing the full network and the cross-national-only networks for actor interdependence generate results that provide preliminary support Hypothesis 3: having more inbound policy ties increases the likelihood of securing future inbound ties, i.e., adoptions of policies of states in other jurisdictions. Lastly, no support was found for Hypothesis 4, that states form reciprocal ties on a regular basis. This indicates that perhaps state lawmakers seek outside influence on a regular basis but are not inclined to specifically observe policies from a foreign state whose policymakers have reached out to, or learned from, them in the past.

This chapter finds patterns indicative of cross-national diffusion at a 95% confidence level, and that further examination of cross-national sub-federal policy diffusion is warranted to better understand the mechanisms associated with increased or decreased likelihood of its occurrence. This study and further studies using these methods would contribute to the network

analysis and policy diffusion literatures because cross-national sub-national learning is one of the least-studied circumstances where diffusion occurs, and better understanding of the characteristics of interdependency that promote cross-national diffusion may improve scholarly understanding of how lawmakers decide which peers to study when formulating policy. This chapter makes a first attempt at answering this question and provides evidence that, although globalization itself might not cause cross-national policy diffusion, the two likely coincide strongly. The cost of learning from others who are far away has dropped, both because information is more available and because it is easier to communicate electronically and in person. Access to the internet, cloud computing, metadata analytics,[38] and advanced communication platforms have all enabled legislators to efficiently learn about which policies around the world are successful.

Though raising many additional questions, the results begin to suggest how policies might be borrowed across international borders. Wealthier, more innovative leader states from all three countries tend to be at the center of the network, which suggests that the cross-national network of policy diffusion follows a similar pattern of looking to leaders for policy ideas that was tested on only U.S. states in Boehmke et al. 2017. Leader states may drive the majority of generalized policy diffusion that covers a wide range of topics germane to all sub-national jurisdictions, such as emergency response legislation, education reform, senior citizen care, etc.

At the same time, connections between leader and non-leader are evident, as well as connections between multiple smaller states that presumably arise on policy topics of interest specifically to the states and provinces with those connections. For example, linkages in the

[38] For example, the 2013 Enterprise Information Management System instituted in the state of Michigan required all agencies to share their data to "enhance services to residents and agencies…[in order] to improve statewide outcomes overall." (PEW 2018) Streamlining data in this way can accelerate the sharing of best practices across departments and, ultimately, across jurisdictions.

network between Louisiana, the Northern Territory, and the Northwest Territories may represent familiarity that has arisen over time due to the oil and extraction industries that form a significant part of the economy in each of these states and provinces. Sister State Agreements provide another example of an institution that might facilitate this type of same-profile cross-national diffusion, as states often partner with states that they are similar to in some aspect.[39] Taken together, the prevalence of the more innovative leader states at the center of a network of both large and small states, as well as smaller offshoots of the network that show some connections between smaller states suggest that cross-national diffusion may be driven in part by wealthier states with more cross-national connections, and also in part by states of all sizes seeking out states in other countries who share a similar economic or geographic profile and who may therefore be a useful contact for a specific policy area. Future studies can work to investigate further the conditions under which one or both of these drivers may influence policy diffusion outcomes.

This chapter conducts one of the first studies of the network interdependencies of state-level governance. This is valuable because diffusion is an example of actor interdependence where the decisions of one actor are influenced by another, and this seems to characterize policymaking in many situations. For example, an article from Governing Magazine noted that

> *"For the most part, states are pretty strategic about where they seek trade deals and where they send their governors… They keep digging in places where they've made connections in the past. If a state has already landed a major*

[39] In addition to the example of Nevada and Queensland mentioned earlier, other examples including Alabama (27th out of 50 in terms of U.S. state GDP in 2017) partnering with Brandenburg, Germany (11th out of 16 in terms of German *Land* GRP), (German Federal Statistical Office) and Vermont partnering with the prefecture of Tottori, Japan, which is described as "a fairly rural, mountainous coastal district…with roughly the same population as Vermont." (WPTZ Burlington)

company from South Korea, for instance, it makes sense to go after more Korean companies. There can be network effects, with other suppliers or other companies from the same sector deciding to tag along. Once a company is established and enjoys success in a state, it might vouch for that state back home… Building up existing networks makes more sense for economic development directors than trying to tap into whatever country or region seems hot at a given moment [even though]…That's not to say that state officials don't look for new opportunities." (Greenblatt 2018)

This excerpt indicates that states from an interdependent network when pursuing trade deals, and such behavior likely extends to other areas of policymaking as well. Network analysis is specifically designed to test for the presence of interdependencies such as these among states or state legislatures. It therefore offers a promising opportunity to learn more about the behaviors and interdependencies of state legislators between themselves and with respect to other governments both at home and abroad. Further research could also investigate the specific effects of globalization on cross-national policy diffusion, including the change in diffusion patterns over time and the effect of technology and professional organizations on diffusion rates. Lastly, these findings indicate previously unconsidered resourcefulness of state legislators in crafting policy. In the service of their constituents, legislators are, perhaps, even more creative, and diligent, at discovering solutions than previously understood. This suggests that a prudent direction for Chapter III is to begin an investigation into some of the institutional features in state-level governments that promote or hinder the efforts of legislators to learn about policy options in states and provinces abroad.

CHAPTER III
Term Limits, Legislative Institutions, and Cross-National Policy Diffusion

Abstract

Term-limited state legislators are incentivized to pass legislation that will make them competitive for careers after they leave the legislature. (Lewis 2012) However, term-limited legislators are also at greater risk than their non-term-limited counterparts of proposing legislation that will not pass due to either a) duplicating other proposals or b) being poorly written. (Kousser 2005) I theorize that this motivates term-limited legislators to look abroad for policies because policies from states in other countries have a higher chance of being novel (decreasing the risk of proposal failure from duplication), and provide a model for legislators who are inexperienced at drafting legislation to imitate. I hypothesize that the likelihood of passing legislation that originates in states in foreign countries increases when term limits are in place. I use generalized linear mixed models to test this on a dataset of twenty policies that originate in U.S. states, Canadian provinces, and Australian states. The results indicate that term limits are not a strong driver of cross-national policy adoption but that the proportion of foreign states that have already adopted the policy is positively associated with adoption in both term-limited and non-term-limited states.

International Sub-federal Policy Diffusion

The legislatures of the fifty states of the United States are avid producers, innovators, and borrowers of policy, and there is substantial research into how policy spreads between them. Yet the U.S. states also have a long history of adopting policies that originated beyond U.S. borders. For example, U.S. states adopted several policies in the 19th and early 20th centuries that originated in either Canadian provinces or Australian states, each of which continues to affect societal outcomes today, such as the Australian ballot system, workers compensation, and the merit system of appointment. It would be difficult to imagine a modern democratic system today that lacks these innovations.

The phenomenon of U.S. states adopting policies from states in other countries continues into the current era. During the twentieth century, the first state lotteries appeared in Australian states several decades before appearing in American states. (Australian Gambling Report) Australian state parliaments also led the way at the state level in the 1970s with mandatory seatbelt laws. (Conybeare 1980) This policy spread to Canadian provinces and European countries before becoming widespread in the United States. Alberta was the first province or state in Australia, Canada, or the United States to deregulate their electricity market, and was soon followed by several U.S. states. ("Energy Deregulation in Alberta") These examples indicate that policy proliferation at the sub-national level occurs internationally and may even occur by both learning and emulation rather than mere simultaneous yet independent adoption.[40]

[40] For instance, a potential example of emulation is that most of the laws requiring mandatory bicycle helmets for minors were passed in the United States within three years of each other and within five years of the first states in Australia to adopt the policy, suggesting that some states may have adopted based on an ideological stance or a desire to emulate other states rather than based a substantial amount of published research on the primary effects of the law (whether or not helmets reduced injuries and fatalities), as well as its secondary effects (whether it also reduced the number of children who rode bicycles at all).

What internal factors make a state in the United States more likely to adopt policy from a state in a different country? In this chapter I theorize that term limits are an institutional feature of some U.S. states that encourage legislators to adopt foreign policies through reducing legislator experience and increasing motivation to pass unique policies that are pre-formatted and which have the best chance of being noteworthy to the public. Relying on policy ideas from states and provinces in other countries should eventually result in increased volumes of policies adopted from foreign jurisdictions as inexperienced legislators gain seniority when term limits force more senior policymakers to leave. Using a generalized linear mixed model that includes both state and policy random effects, I explore facets of this theory by testing how policy origin source and proportion of foreign adopters are associated with the likelihood of passing a policy that originated in a foreign country. The results provide only partial support for the theory that term-limited state legislatures pass foreign-origin policy more than their non-term-limited counterparts and also suggest that both term-limited and non-term-limited legislatures have a higher likelihood of adopting a policy of foreign origin as the proportion of foreign states that have adopted the policy increases. These findings suggest that effect of term limits may differ in the same-country and cross-national diffusion processes and provide guidance in helping to refine the list of plausible mechanisms for cross-national policy diffusion at the state level.

The structure of the chapter is as follows. In Section Two I explore the causal mechanism theorized to drive legislators in term-limited states to investigate and propose legislation based on policies that originate in foreign countries. I then theorize how increased incentives for observing policy from states in foreign countries at the legislator level might aggregate up to changes in legislative outcomes at the state level. In Sections Three and Four I lay out the data and the model. Section Five presents the results of several generalized linear mixed models that

test the hypotheses and examine predicted probabilities. In Section Six I conclude with policy implications and suggestions for further research.

The Effect of Term Limits on Legislator Incentives and Cross-National Sub-National Policy Diffusion

Between 1990 to 1996, twenty-one states voted by referendum to enact limits on the length of terms that state legislators could serve. Fifteen states still have term limits as of 2019, with most of the limits going into effect between 1996 and 2002. (NCSL) Not all term limits are equally severe. Representatives in Michigan undergo a lifetime ban on service after six years in the House and eight years in the Senate. But legislators in Louisiana may return to either the house or legislature as often as desired so long as they observe a two-year break between campaigns. Six states have lifetime bans like Michigan, and nine states have consecutive bans like Louisiana. Appendix V presents a map of states that have enacted lifetime and consecutive bans, as well as states that have repealed term limits. (PEW 2016)

Studies show that term limits change the incentives of legislators who operate under their purview. Fenno 1973 observes that legislators are generally driven by three priorities: to keep office, to gain power within the legislature, and to affect policy. Term limits shift the operating procedures of the legislature and alter the incentive for legislators to pursue these priorities. First, term limits reduce or eliminate the possibility of keeping a legislative seat for more than a few terms. This reduces the incentive to devote resources to re-election activities and increases incentive to devote resources to activities that will ensure the legislator can get a good job after being required to leave office. (Swift and VanderMolen 2016, (201)) Scholars point to the ability to pass legislation as one of the clearest ways that legislators claim successes that may help them land a good job after exiting the legislature. (Kousser 2005, Miller et al. 2018) Thus, term limits

affect legislator behavior by increasing the incentive to pass legislation they can point to in subsequent career searches.

Term limits also increase legislator incentive to gain power within the legislature for two reasons. The first is that term limits make it easier for incoming members to gain power because they increase the chance for any single legislator to gain power because leaders are required to leave office after a relatively short amount of time instead of becoming entrenched at the top.[41] Mandated turnover provides opportunities for junior legislators to gain power quickly and pass more legislation, which will be helpful in subsequent career searches. The second way that they increase incentive to gain power within the legislature is that a legislator's ability to pass legislation improves if he or she has a more powerful position in the legislature which, as mentioned in the previous paragraph, assists with subsequent career searches. Kousser 2005 (147) finds that leaders in the majority party passed two more bills per session on average than they did before term limits, but the success rates of junior members in the minority party decreased by 1.6 bills per session.

Term limits therefore primarily mediate the incentives of legislators by increasing the benefits of passing legislation and gaining power within the legislature. However, while term limits increase these incentives, they simultaneously reduce the capacity of legislators to accomplish these objectives. Kousser 2005 finds that the volume of bills proposed has increased in term-limited legislatures, but the proportion of bills passed annually has not changed. He notes that veteran staffers theorize that this dynamic arises due to inexperienced legislators proposing

[41] Indeed, Kousser 2005 (33) explains that removing entrenched leaders was the primary impetus that galvanized the term limits movement, noting that California Assembly Speaker Wille Brown "provided much of the political ammunition behind the push for term limits in 1990. Brown had led the lower house for a decade by that time and had grown so powerful that he once referred to himself as the 'Ayatollah of the Assemblies.' Yet Brown's strong-arm tactics, his links to rich interest groups, and the growing atmosphere of partisanship in his assembly made the house vulnerable to a reform initiative. 'The real progeny,' Republican political consultant Tony Quinn said of Brown's reign, 'was term limits.'"

the same policies as other members of their cohort. This leads to many more duplicate bills dying before reaching a vote. Sarbaugh-Thompson et al. 2006 supports this conclusion with a finding that term limits foster conditions that increase the risk of duplication because term-limited legislators come to rely on narrower, more partisan networks once entering the legislature. This reduces legislator knowledge of activities outside of their network and puts them at risk of proposing legislation that is already being prepared by fellow legislators in different circles. Another possible explanation is that the constant influx of new and inexperienced legislators means that many of the bills proposed are badly written and are eliminated during the legislative process due to poor craftsmanship.

I theorize that term-limited legislators look abroad for policy ideas to overcome the two obstacles they face to passing more legislation and gaining power within the legislature. The shift induced by term limits toward gaining power and passing laws incentivizes legislators to look abroad for policy ideas more often than they would otherwise for three reasons. The first reason is that looking abroad for policy ideas decreases the risk of proposal failure through duplication by providing a source of novel and unique policy ideas. Legislation from states and provinces in other countries may reflect different norms, traditions, and problem-solving approaches to policy topics of interest. A legislator may have a better chance of standing out and getting legislation passed if he or she proposes a policy that may be common elsewhere but which is novel in the United States and not likely to be at risk of duplication. Even if every term-limited legislator looks abroad there will be plenty of sources of policy inspiration and therefore risk of duplication is still much lower than previously.

Getting legislation passed in turn gives the legislation sponsor a better chance of garnering recognition in the legislature, which may lead to a better position within the legislature

and an improved opportunity of securing a desired career after leaving legislative office. Strategic legislators may be aware of the unique challenges they face from term limits for their chances of passing legislation and may actively seek ways to alleviate this disadvantage. Looking abroad for novel policy ideas is one such way to do this. By looking for policy ideas in places where few others look, a legislator can reduce the likelihood that someone else will propose the same piece of legislation. Although some policies of foreign origin may only be relevant to their jurisdiction, states and provinces in other countries have a history of passing legislation that is both applicable in U.S. states and which may also be considered novel and innovative. A foreign jurisdiction may therefore provide a useful cache of policy ideas from which to draw on.

The second way that looking abroad for policy may increase a legislator's chance of success is that policies of foreign origin provide a source of pre-formatted legislation that saves inexperienced legislators from crafting completely new policy. Lewis 2012 notes that legislators under term limits are less experienced with legislative procedures. While foreign-origin legislation will need some adjustment to be applicable and consistent with the laws of the legislator's state, it also has the advantage of already being crafted such that all of the core ideas important to the success of the policy are theoretically in place. An inexperienced legislator may find this preferable to drafting a completely new legislation or looking to a neighboring state.

To summarize, term limits shift motivations for state legislators to focus more heavily on finding a good career after they are termed out of office, which in turn increases their incentive to pass policy and gain power in the legislature. These shifting incentives caused by the imposition of term limits are likely to alter behavior of the comparatively less experienced legislators in term-limited states to search for novel and pre-formatted legislation with a higher

chance of passage in order to gain power in the legislature and garner legislative victories that can be used in subsequent career searches. Lastly, term-limited legislators are more policy-driven than non-term-limited legislators. (Sarbaugh-Thompson et al. 2006) Herrick and Thomas 2006 find that "term-limited legislators were less likely than their counterparts to run for office for personal goals and more likely to be motivated by issues." Taken together, these shifting incentives generate the following hypothesis:

Hypothesis 1: The likelihood of adopting a policy that originated in a foreign state or province increases in states with term limits.

The ways in which term limits are theorized to alter legislator incentives to borrow foreign legislation also have important ramifications for legislator incentives to not just borrow but learn from states passing policies in foreign countries. On the one hand, an increased motivation to affect policy should increase the incentive to learn about how well or poorly that policy is doing in states that have already passed it, i.e., foreign states. Yet the drive to quickly find and pass unique legislation decreases incentive to wait and learn from it. Term-limited legislators are more rewarded for quickly passing legislation than for waiting to learn from other states where the policy has passed, as waiting to learn more would likely reduce the amount of legislation they are able to pass in their career. (Miller et al. 2018) This motivation serves to decrease incentive to learn about these policies as they are being passed in other jurisdictions in favor of simply locating a policy and taking it home as quickly as possible.

The change in legislator incentives to seek out and propose foreign legislation after term limits are enacted provides the basis for an additional hypothesis about how term limits are associated with opportunities to learn about policy. Term-limited legislator incentives to find

unique policy and pass it as quickly as possible decrease the incentive to wait long amounts of time to learn about policy success. When aggregated up to the state level, this should result in term-limited state legislatures passing policies from foreign jurisdictions when fewer foreign jurisdictions have passed it, compared to non-term-limited states. This idea is captured in Hypothesis 2:

Hypothesis 2: Term-limited legislatures should pass policies of foreign origin sooner than non-term-limited legislatures, leading to an inverse relationship between term limits and the proportion of foreign states that have adopted the policy of foreign origin.

This does not mean that term limits should increase the overall volume of legislation; Kousser 2005 notes that term limits are not associated with a change in the volume of legislation passed. However, the mediating effect of term limits on legislator behavior should increase the passage rate of bills inspired by foreign states. The relative inexperience that legislators who examine foreign-origin policy when crafting bills means that the proportion of foreign-inspired legislation probably will not increase immediately. Over time however, legislators relying on foreign-origin policies may find them more novel and durable to scrutiny, and therefore less likely to be culled due to duplication or poor craftsmanship. Legislators should come to rely on foreign-origin policies more often as a source of inspiration as they find success with foreign-origin policies and gain seniority in the legislature. This would result in both a higher proportion, and higher absolute volume of passed legislation coming from states in foreign countries.

To summarize, term limits decrease legislator efforts to keep office beyond the legislated limit, increase their motivation to gain power within the legislature, and are associated with changing the composition of legislatures to include a higher proportion of legislators who are

more policy-driven than their predecessors. The shifting priorities of legislators resulting from term limits increase motivation, particularly among junior members and members in the minority party, to look for policy from states in other countries in order to find pre-written legislation that is less likely to be duplicative than widely circulated domestic policy ideas. This increases a legislator's chance of having their bill passed, which bolsters their opportunity to gain power within the legislature and pursue a successful career after being termed out. These changed incentives should translate into a higher likelihood of passing policies of foreign origin when term limits are in place and a higher likelihood of passing policies of foreign origin when comparatively fewer foreign states and provinces have passed the policy.

Data

To test Hypothesis 1, I use a binomial indicator of whether a policy was *Adopted* in any year from 1979 to 2015 as the dependent variable. The data is comprised of ten policies originating in the United States, and ten policies originating in a state or province in either Australia or Canada. The years for each policy in the dataset begin at the first year the policy was adopted in a state or province. For each policy in each state, the range of years ends when the state chooses to adopt the policy. There are a total of 16,441 observations. Appendix VI provides brief descriptions of the policies, which were found in the Boehmke and Skinner 2012 dataset, and descriptive statistics are available in Appendix VII.

The foreign-origin policies are policies where evidence suggests that the policy originated outside of the United States. These policies were not selected at random but rather extracted from the dataset of 188 policies used in Boehmke and Skinner 2012 which, although theorized by those authors to be a dataset that is broadly representative of state-level policy areas, may not be fully representative of all policies that originated in foreign states or provinces

and which were subsequently adopted by U.S. states. Specifically, they may only be the policies that are comparatively more widespread and therefore noticeable enough to be easily collected by researchers scouring U.S. state-level policy databases. There may be additional policies that originated in foreign jurisdictions but which were not widely adopted. An analysis based on policies that lawmakers proliferated the furthest may therefore underrepresent the true extent of cross-national policy diffusion and limit the extent to which inference can be made about the effect of term limits.

Another dimension on which the selection of cases may be biased is the overall conservativeness or liberalness of policies from states in foreign jurisdictions. This may affect which U.S. states are likely to adopt these policies in addition to whether term limits are in place. Although data measuring the relative liberalness or conservativeness of state-level policies across international boundaries is scant, it may be the case that U.S. states are more predisposed to learn about the policy developments in foreign counterparts that share their ideology. As discussed in Chapter I, there are some examples of fairly liberal U.S. states electing into self-governing state-level climate change agreements with other fairly liberal states.[42] This would harm the ability to draw inferences from the analysis by creating the possibility that a policy's political position drives whether a state will adopt it. It would thus be concerning if the policies of foreign origin in this dataset were written around topics with an extremely liberal or

[42] For example, states like California, Connecticut, and Maine are drawn into closer contact with left-leaning sub-national jurisdictions in other countries through agreements such as the Declaration of the Federated States and Regional Governments on Climate Change, as mentioned in Chapter I. The first six states to pledge to uphold the Paris Climate Agreement standards were California, Connecticut, Minnesota, New York, Oregon, and Vermont, putting them in closer contact with more liberal states and countries abroad that are similarly committed to the Agreement. (Ecosystem Marketplace) Lastly, the majority of the ten states that currently participate in the Regional Greenhous Gas Initiative (RGGI) (Connecticut, Delaware, Maine, Maryland, Massachusetts, New Hampshire, New Jersey, New York, Rhode Island, and Vermont) vote predominantly for Democratic presidential candidates. Participating in or being an observer to RGGI likely fosters more communication with Canadian provinces Quebec, New Brunswick, and Ontario, which are Observers to the initiative.

conservative slant, such as stringent emissions targets or permissive resource extraction rights. However, none of the policies in the dataset are explicitly liberal or conservative in nature, and Chapter I also listed many examples of cross-national policy adoption that were nonpartisan. Therefore, although it will be important to assess the extent to which a state's liberalness or conservativeness is associated with its likelihood of adopting a policy and control for policy random effects, it is expected that the political nature of policies of foreign origin will not compromise the analysis.

The ten policies that originated in the United States were randomly drawn from a list of twenty-five policies listed in the Boehmke and Skinner 2012 dataset which proliferated in years for which covariate data was available. Like the foreign-origin policies, these data may also be biased from the perspective that the policies compiled by Boehmke and Skinner are not representative in some way.[43] One possibility is that the proportion of foreign adoptions of the U.S.-origin policies is higher in the subset than in the twenty-five possible policies in the Boehmke and Skinner 2012 dataset.[44] This means that the policies selected may overemphasize the number of foreign states to adopt policies by about one state on average, or three states at the median. However, it is also possible that these policies underrepresent the spread because policy adoption dates could not always be located. For example, evidence suggests that zero tolerance alcohol legislation exists in Manitoba, Nova Scotia, and New Brunswick, but because an official date could not be found, these observations are not counted in the dataset. (The Globe and Mail) As it is currently not possible to ascertain the direction of bias in foreign adoptions, care must be

[43] For example, political ideology, degree of proliferation, relevancy to foreign states and provinces, ease of finding them during research, etc.

[44] The average number of foreign states to adopt the ten policies in the dataset was 4.7, and the median was 4 (max 13, min 0). The average number of foreign adoptions of the other 15 policies was 3.67, and the median was 1 (max 20, min 0).

taken when assessing the external validity of the findings in this chapter. However, future studies will benefit from the ever-expanding state-level policy databases in development right now, such as the 700-policy dataset by Boehmke et al. 2018 that comes much closer to rendering a broad and representative sample of state-level legislation in a useable format.

The independent variables are *Term Limits*, whether the policy is of *Foreign Origin*, the *Proportion of Foreign Adopters*, and the interactions of these variables. Data on *Term Limits* comes from the website of the National Conference of State Legislatures and measures when term limits first take effect. Sarbaugh-Thompson's continuous variable for *Term Limits* is included as a robustness check, with higher values indicating higher proportions of turnover. Following Kousser's expectations that term limits do not affect overall volume of bill passage, the *Term Limits* variable is not expected to be significant by itself. However, when interacted with *Foreign*, the coefficient is expected to be positive to increase the chances of policy adoption.

Proportion of Foreign States Adopting is the proportion of all Canadian provinces and Australian states that have adopted a policy in a given year. Following the expectation outlined in Hypothesis 2, the interaction of *Term Limits* and *Proportion of Foreign Adopters* is expected to be negative. For non-term-limited states, the expectation is that this should be positive for policies of *Foreign Origin*, when studying policy outcomes in states in other countries is the best way to learn the effects of a policy. I do not expect it to be significant for policies of domestic origin, where *Neighbors Adopting the Policy* is more important.[45]

Variables that might affect the outcome variable include *Legislative Professionalism*, proportion of *Neighboring States Adopting*, *Citizen Ideology*, and *State Ideology*. Squire's

[45] It is worth noting that four term-limited states share a water or land border with Canada, a fact that may make legislators in those states more motivated to observe legislation in Canadian states and provinces.

measure of *Legislative Professionalism* is a proportion that ranges from 0 to 1 for each legislature in each year measuring to what extent a state legislature matches the professionalism of the U.S. federal Congress. (Squire 2007, Squire 2017, Mooney 1994) The expectation for *Legislative Professionalism* is that it will not be significant in the full dataset of policies, because I expect that all states will legislate in all policy areas regardless of professionalism level, and that *Legislative Professionalism* should not therefore be statistically associated with likelihood of passing a policy. *Neighboring States Adopting* is the proportion of states bordering the state under observation which have already adopted the policy for the year in question. It is expected that likelihood of adoption will be positively correlated with this variable, as geographic proximity is important in policy diffusion. (Nicholson-Crotty and Carley 2016) *Citizen Ideology* and *State Ideology* are originally measured on a scale of zero to one hundred, with zero being the most conservative and one hundred being the most liberal. (Berry et al. 1998) To make these numbers computationally tractable they are centered and scaled into standard deviations around zero.

As discussed above it is important to control for these variables as a state's ideology can affect the likelihood of its legislators passing policies that are particularly conservative or liberal. (Grossback and Peterson 2004) However, since the liberal and conservative degree of the policies in this dataset is not quantified, there is no ex ante expectation as to the direction of the variables of *Citizen Ideology* and *State Ideology*. Covariate data extends back to 1960 but less than five percent of the policy adoptions in the dataset occurred during these years. This lack of variation impedes the model's explanatory power and these years were thus dropped. A year covariate is added to account for the effect of time.

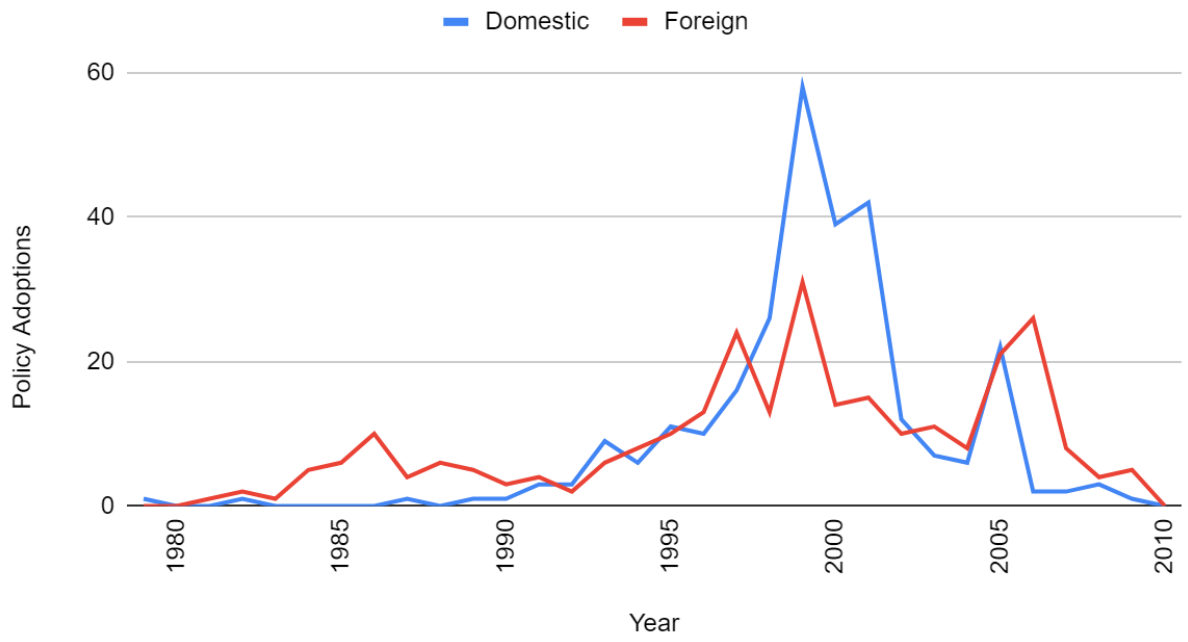
Model Specifications

I use a generalized linear mixed model fit by maximum likelihood (Laplace Approximation) to fit pooled event history models that include *State* and *Policy* as random effects to account for the possibility that the likelihood of any policy being adopted varies by both state and policy. Allowing state and policy to vary as random effects is especially important to account for factors affecting the likelihood that a policy originating in states in foreign countries will be adopted by U.S. states. For example, state laws about graduated drivers licensing arrived in the United States fairly quickly after foreign adoption, perhaps due to policy-level effects such as widespread availability of data on the efficacy of this type of policy. On the other hand, primary seatbelt laws did not enter the United States until fourteen years after they were implemented in Australia, potentially due to the stringent anti-helmet and individual rights lobbies that, driven by motorcycle culture, were already firmly established in some particular states in the United States like California. (Jones and Bayer 2007) Many other state-level effects might affect the likelihood of adoption, such as the degree to which executive agencies or nonprofits handle a policy area and act as a substitute for policy from the legislative branch. Incorporating state and policy as random effects therefore allows the model to account for multiple such unseen factors that may affect the likelihood of a specific policy being passed in the United States.

Figure 3 shows the number of adoptions made by U.S. states of the domestic-origin and foreign-origin policies in the dataset. There are 559 out of 1000 possible adoptions. The number of adoptions of policies that originated in a foreign jurisdiction is almost identical to the number of adoptions of policies of domestic origin (276 and 283 out of a possible 500, respectively). The domestic policy adoption dates center around 1999 and have four local maximums at 1986, 1997, 1999, and 2006. The increased volume of policy adoptions in the 1990s may reflect a change in

legislature activity or protocol around this time (one possibility points to the rise of internet use and e-governance generating a spike in activity) but is likely also due in part to the Boehmke and Skinner 2012 dataset having more policies from the 1990s and 2000s than other eras, leading to an increased number of adoptions in that time period. The left skewed distribution of adoption dates therefore demonstrates the importance of controlling for time in the dataset. In particular, time splines are very helpful to account for the nonlinear effect of time on policy adoptions. (Buckley and Westerland 2004) Several time spline models are used for testing and return uniform results across models.

Figure 3: Policy Adoptions by Year (1979 - 2010)



Apart from the surge of domestic policy adoptions between 1998-2002, the distribution of adoptions of domestic-origin and foreign-origin policies align very closely. A Kolmogorov-Smirnov test confirms that the distributions are similar, with a p-value of 0.046. The surge of adoptions may be caused specifically by the fact that almost all adoptions of individual

development account laws and almost half of all adoptions of laws mandating insurance coverage for clinical trials occurred in this window, instead of following a more gradual adoption cascade over several years. The inclusion of policy random effects helps to control for and minimize any impact these policies might have on the overall analysis.

Results

I begin by testing variables on just the domestic-origin policies and just the foreign-origin policies to examine non-interacted variable effects in each policy category. Table 4 shows that *Term Limits* are marginally significant in models using foreign-origin policies, indicating that *Term Limits* may be associated with increased likelihood of adopting policies of foreign origin, which would provide support for Hypothesis 1. The significance of this result is robust to using year fixed effects in Model 2; however, it disappears when using the continuous Sarbaugh-Thompson variable to measure *Term Limits* or when using a time spline with three knots ($p = 0.13$). The result also disappears when using year fixed effects, time splines, or a continuous measurement for *Term Limits* in Model 4. The attenuation of results when robustness checks are included suggests that additional factors play a role in the adoption of policies of foreign origin.

Models 3 and 4 test how the effect of the *Proportion of Foreign Adopters* differs between domestic-origin policies and foreign-origin policies. The coefficient on *Foreign Adopting* in domestic policies (Model 3) is negative and not significant, which would suggest that the proportion of foreign states and provinces that have adopted a policy of domestic origin is not associated with any change in likelihood of a U.S. state adopting the policy. This is understandable from the perspective that, when considering whether to adopt a policy that began in another U.S. state, and U.S. state legislators might prioritize studying outcomes at home and

may not be likely to find many examples of foreign states and provinces that have adopted the policy anyway.

Table 4: Domestic-Only and Foreign-Only Dataset Models

Policy Group:	Model 1 Domestic	Standard Error	Model 2 Foreign	Standard Error	Model 3 Domestic	Standard Error	Model 4 Foreign	Standard Error
Term Limits	0.142	(0.214)	0.415*	(0.215)	0.140	(0.214)	0.383*	(0.217)
Foreign Adopting					−0.134	(0.701)	1.177***	(0.431)
Professionalism	0.375	(0.731)	1.200*	(0.691)	0.375	(0.730)	1.234*	(0.709)
Neighbors Adopting	2.531***	(0.261)	1.800***	(0.233)	2.533***	(0.261)	1.595***	(0.244)
Citizen Ideology	−0.011	(0.107)	0.228**	(0.104)	−0.011	(0.107)	0.250**	(0.106)
State Ideology	−0.060	(0.079)	0.151**	(0.075)	−0.060	(0.078)	0.153**	(0.076)
Year	−0.157***	(0.160)	−0.023***	(0.010)	−0.155***	(0.019)	−0.035***	(0.011)
Constant	2.203***	(0.734)	−3.416***	(0.454)	2.149***	(0.787)	−3.331***	(0.471)
Observations	6784		9693		6748		9693	
AIC	1978.7		2286.6		1980.6		2281.4	
BIC	2040.0		2351.2		2048.8		2353.2	
Variance (State)	0.175		0.190		0.174		0.213	
Std. Dev (State)	0.418		0.436		0.418		0.461	
Variance (Policy)	1.402		0.559		1.375		0.669	
Std. Dev (Policy)	1.184		0.747		1.172		0.818	

Note: *p<0.1; **p<0.05; ***p<0.01
Dependent Variable: State adopted policy or not (1, 0).
Generalized linear mixed model with state and policy random effects.

On the other hand, the coefficient for *Proportion of Foreign States Adopting* is positive and large in magnitude in the foreign-origin policy dataset (Model 4). This is robust to year fixed effects, time splines, and a continuous variable measure of *Term Limits*. The positive coefficient means that U.S. states in the aggregate are increasingly likely to adopt policies of foreign origin as the proportion of foreign states that has adopted them increases. Following the interpretation in Miller et al. 2018, this is a sign that legislators in U.S. states may pay more attention to the policy history in foreign states and provinces when considering whether to adopt a policy that originated abroad, and may also study policy outcomes to determine if the policy's success can be measured. This would be an example of learning in international sub-federal policy diffusion. Breaking the *Foreign Adopting* variable into its Australian and Canadian components indicates that Canadian adoptions of domestic policies are positively associated with adoptions, but there is no statistically significant association with Australian adoptions (see Appendix VIII).

Table 5 combines the datasets of foreign-origin and domestic-origin policies to examine overall trends and uses both the dichotomous and continuous variables for indicating whether *Term Limits* are in place. The interaction of *Term Limits* and a policy being of *Foreign Origin* is statistically significant in Model 1 and robust to using year fixed effects and time splines. However, the significance disappears when using the continuous measure (p = 0.14).

Table 5: Association Between Term Limits and Policy Adoption

Interaction: Term Limits Measure:	Model 1 TL*Foreign Dichotomous	Standard Error	Model 2 TL*Foreign Continuous	Standard Error	Model 3 TL*For. Adopt Dichotomous	Standard Error	Model 4 TL*For. Adopt Continuous	Standard Error
Term Limits	−0.147	(0.198)	−0.140	(0.232)	0.262	(0.202)	0.212	(0.227)
Foreign*Term Limits	0.836***	(0.251)	0.425	(0.288)				
Foreign Adopting*TL					−0.260	(0.535)	−0.787	(0.694)
Foreign Adopting					0.797**	(0.372)	0.812**	(0.359)
Foreign	−0.620	(0.398)	−0.534	(0.394)				
Professionalism	0.591	(0.608)	0.581	(0.617)	0.548	(0.615)	0.540	(0.621)
Neighbors Adopting	2.083***	(0.172)	2.073***	(0.171)	1.954***	(0.175)	1.971***	(0.174)
Citizen Ideology	0.123	(0.083)	0.127	(0.084)	0.131	(0.084)	0.135	(0.083)
State Ideology	0.020	(0.057)	0.010	(0.055)	0.015	(0.056)	0.007	(0.055)
Year	−0.069***	(0.008)	−0.065***	(0.008)	−0.074***	(0.009)	−0.073***	(0.009)
Constant	−1.097**	(0.442)	−1.279***	(0.438)	−1.341***	(0.410)	−1.401***	(0.408)
Observations	16,441		16,441		16,441		16,441	
AIC	4313.3		4323.3		4320.9		4321.2	
BIC	4398.1		4408.0		4405.7		4406.0	
Variance (State)	0.201		0.207		0.208		0.212	
STD.DEV (State)	0.448		0.455		0.456		0.460	
Variance (Policy)	0.738		0.726		0.966		0.961	
STD.DEV (Policy)	0.859		0.852		0.983		0.981	

Note: *p<0.1; **p<0.05; ***p<0.01
Dependent Variable: State adopted policy or not (1, 0).
Generalized linear mixed model with state and policy random effects.

The lack of statistical significance in the continuous variable measure means this provides only mixed support for Hypothesis 1, but all variables are signed as hypothesized and may therefore provide some support for the theory that likelihood of adopting a policy of foreign origin is higher in term-limited states than non-term-limited states. If the coefficients were statistically significant, the log odds of adopting a policy of foreign origin would be 0.620 lower (about 85%) than the log odds of adopting a policy of domestic origin in Model 1.

Although it is possible that the policies selected may be driving the results, this does not seem likely as the number of observations is large (over 16,000) and the number of policies studied (twenty) is high compared to studies that have only examined one policy. (Berry and Berry 1990, Doyle 2006, Mokher and McLendon 2009) Rather, it appears that the operative issue is the measurement of *Term Limits*. The continuous measure provides very valuable insight because it is a much better reflection of the extent to which the mediating effects of term limits affect legislators in their ability to keep office, and the proposed effects of term limits on legislator incentives are critical for the theory of why term-limited legislators would subsequently be motivated to look abroad. For example, in a state like Louisiana where legislators can cycle through houses of the legislature, the motivation to keep office is hardly decreased at all, thus eliminating the primary driver by which term limits are theorized to affect legislator interest in studying policies abroad. On the other hand, in a state with more stringent measures that truly mean the end of a policymaker's legislative career when they are term-limited out, the proposed effect should be very strong. These nuances are lost in a dichotomous measure of *Term Limits*, and thus may lead to spurious conclusions of significance. When using a more accurate measure, *Term Limits* do not appear to impart a very substantial effect on the adoption of policies of *Foreign Origin*.

Turning to Models 3 and 4, the coefficients related to *Proportion of Foreign Adopters* suggest that this variable is an important consideration for all states adopting a foreign-origin policy and is not conditional on whether a state has implemented term limits. The coefficient on *Foreign Adopting * Term Limits* is negative, in line with the prediction for Hypothesis 2 but not statistically significant. On the other hand, the coefficient for *Proportion of Foreign Adopting* by itself is significant for both the dichotomous variable and the continuous variable measure of

Term Limits and is robust to using year fixed effects and time splines. This implies that, all else being equal, the likelihood of adopting any type of policy is positively associated with the proportion of foreign adopters that have adopted the policy, both for states with term limits and for states without *Term Limits*. Examining the association between likelihood of adoption and proportion of Australian and Canadian adoptions (see Appendix VIII) reveals similarly positive and statistically significant coefficients for both Australia and Canada, with the coefficient for Canada being about 2.5 times larger.

Examining the results in Models 3 and 4 by policy origin location makes it possible to ascertain the extent to which the proportion of foreign adopters is associated with increased likelihood of a U.S. state adopting a policy of domestic origin or a policy of foreign origin. The models in Table 6 do this by examining the effect of *Proportion of Foreign Adopters* for domestic policies in states with and without *Term Limits* (Models 1 and 2), as well as for foreign policies in states with and without *Term Limits* (Models 3 and 4).

Table 6: Effect of Foreign Adoptions when Term Limits are in Place (Active Years Only)

Policy Group:	Model 1 No TL Domestic	Error Standard	Model 2 Yes TL Domestic	Error Standard	Model 3 No TL Foreign	Error Standard	Model 4 Yes TL Foreign	Error Standard
Foreign Adopting	−0.369	(0.740)	−2.147	(0.597)	1.026**	(0.480)	2.578**	(1.087)
Professionalism	0.486	(0.904)	0.296	(0.991)	1.522**	(0.748)	1.261	(1.465)
Neighbors Adopting	2.715***	(0.291)	2.359***	(0.597)	1.747***	(0.266)	0.856	(0.669)
Citizen Ideology	−0.067	(0.120)	0.356	(0.378)	0.151	(0.111)	0.887**	(0.410)
State Ideology	−0.047	(0.089)	−0.109	(0.186)	0.193**	(0.083)	−0.084	(0.209)
Year	−0.123***	(0.020)	−0.288***	(0.060)	−0.025**	(0.012)	−0.174	(0.054)
Constant	0.820	(0.799)	8.015***	(2.318)	−3.733***	(0.489)	2.317	(2.229)
Observations	5,652		1,096		8,616		1,077	
(AIC)	1662.1		316.9		1961.3		319.4	
(BIC)	1721.9		361.9		2024.9		364.3	
Variance (State)	0.276		0.000		0.209		0.231	
Std. Dev. (State)	0.525		0.000		0.457		0.481	
Variance (Policy)	1.014		0.982		0.604		1.430	
Std. Dev. (Policy)	1.007		0.991		0.777		1.196	

Note: *p<0.1; **p<0.05; ***p<0.01
Dependent Variable: State adopted policy or not (1, 0).
Generalized linear mixed model with state and policy random effects.

Separating the policies by foreign and domestic origin reveals the reason for the finding in Table 5 that likelihood of adoption increases with *Proportion of Foreign Adopters* for all policies. As in Table 5, Models 1 and 2 indicate that the coefficient for *Proportion of Foreign Adopters* is not significant for states adopting domestic-origin policies, regardless of *Term Limits* status. However, Models 3 and 4 display positive and statistically significant coefficients of great magnitude for *Proportion of Foreign Adopters* when policies are of *Foreign Origin*. This clarifies the finding from the *Proportion of Foreign Adopters* coefficient in Table 5 by indicating that the effect of foreign states and provinces adopting a policy is only associated with increasing the likelihood of a U.S. state adopting the policy when the policy is of *Foreign Origin.*

The coefficients on the *Foreign Adopting* variables in Models 3 and 4 also clarify the null finding on the interaction of *Term Limits* and *Foreign Adopting* in Table 5. Here the coefficients show support for the idea that the *Proportion of Foreign Adopters* of a policy is important both for states with term limits and states without term limits. In contrast to Hypothesis 2, this suggests that observing policy outcomes in foreign states and provinces provides useful information to both term-limited and non-term-limited legislators in U.S. states when considering whether to adopt a policy. The log odds of adopting a policy of *Foreign Origin* when all foreign states have adopted it are about 2.5 times as large in term-limited states as they are in non-term-limited states. The larger coefficient value in Table 6 for term-limited states adopting *Foreign Origin* policies indicates that term-limited states are more likely to adopt foreign policies after more foreign states have adopted than are non-term-limited states are. This could represent more learning from term-limited states, or it may mean that term-limited state legislators are simply not discovering foreign policies or converting them into policy as quickly

as non-term-limited state legislators. The model does not converge with year fixed effects, but the finding is robust to using time splines.

Examining proportion of Australian and Canadian adoptions (listed in Appendix VIII) indicates that proportion of adoptions of states and provinces in both countries is positively associated with adoption by term-limited states (with the effect being larger for the nearby Canadian provinces). Overall, these findings suggest an explanation for the null finding of the interaction of *Proportion of Foreign Adopters* and *Term Limits* in Table 5 and indicate that, in contrast to the prediction in Hypothesis 2, term-limited policymakers do not seem to adopt policies of foreign origin significantly sooner than their non-term-limited counterparts. This suggests that legislators in term-limited states may not be driven to adopt policies of foreign origin noticeably faster, i.e., during times when few other foreign states and provinces have adopted where limited data on success outcomes is available.

Two more coefficients are noteworthy here. The models also show that, while *Legislative Professionalism* is an important factor for non-term-limited U.S. state legislators when evaluating whether to adopt a policy of foreign origin, it is not significant for term-limited states. This means that the likelihoods of highly professional term-limited state legislatures adopting is not distinguishable from the adoption likelihoods of low professionalism state legislatures, suggesting a diminished effect of *Legislative Professionalism* with respect to adopting foreign-origin policies when term limits are in place. Lastly, while the *Proportion of Neighbors Adopting* is positive and significant for states without term limits whose legislatures are considering whether to adopt a policy of *Foreign Origin*, it is not statistically significant for term-limited states. Legislators in states without term limits may continue to rely on the experiences of their neighbors when evaluating whether to adopt a policy of *Foreign Origin*, while policymakers in

states with term limits seem to rely less on the experiences of their neighbors and more on policy outcomes in other foreign states where the policy has been adopted. This supports the findings in Miller et al. 2018 and indicates that the domestic effects of *Term Limits* discovered in that study are in effect here as well, and points to a different policy learning processes for domestic compared to foreign policies. It may be that term-limited legislators are less motivated to study their peers when passing policies of domestic origin but are required to conduct a certain threshold level of research for a policy of foreign origin for which neighbor experiences are not consulted.

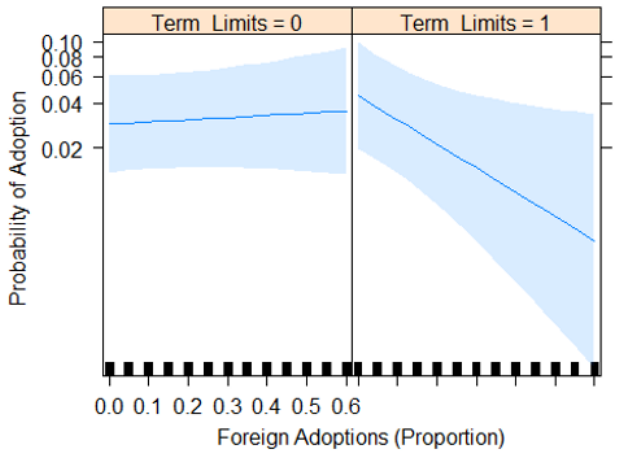
Citizen Ideology, *State Ideology*, and *Year* behave consistently across models. *Citizen Ideology* and *State Ideology* waver between significance and non-significance, and their magnitudes generally present very small changes in the log odds of a policy being adopted. The sole exception is *Citizen Ideology* in Model 4 in Table 6, where a one-standard-deviation change in *Citizen Ideology* to being more liberal (i.e., a very large change) is associated with a 147% increase in the odds of adopting a policy. The coefficient for *Year* is significant and negative across all models save Model 4 in Table 6, indicating that the log odds of adopting a policy generally decrease as time progresses. The effect never represents more than a 33% decrease in the likelihood of adopting a policy, and in seven out of twelve models represents less than a 10% change in odds.

Predicted Probabilities

Figure 4 and Figure 5 visualize how the likelihood of adopting a policy changes for states where *Term Limits* are in place as the proportion of foreign jurisdictions that have adopted the policy increases. This contributes to an understanding of the extent to which term-limited states are more or less likely to adopt before non-term-limited states, thus indicating whether term-

limited legislators may be engaging in more aggressive cross-national research. Figure 4 shows the predicted probabilities of adopting a policy for term-limited and non-term-limited states as the proportion of foreign adopters increases from zero to one for domestic-origin policies in the dataset (i.e., policies that were developed in the United States).

Figure 4: Predicted Probabilities for Probability of Adoption when Term Limits are in Place (Domestic-Origin Policies Only)



The figure demonstrates that, for policies of U.S. origin, states without *Term Limits* are slightly more likely to adopt a policy as the *Proportion of Foreign Adopters* increases. This suggests that states without term limits adopt policies that are developed in the United States somewhat later, perhaps because they are waiting to observe success outcomes. The very slight slope indicates that, while positive, the *Proportion of Foreign Adopters* is not a strong predictor of the *Probability of Adoption*. This seems understandable, as the influence of foreign adopters should be smaller in the contemplation of adopting policies of domestic origin.

On the other hand, the right side of the graph indicates that for non-term-limited states, the probability of adopting a policy of domestic origin decreases as the proportion of foreign jurisdictions adopting the policy increases. If statistically significant, this finding would align

with that of Miller et al. 2018, that term-limited states adopt policies significantly sooner than their non-term-limited counterparts. The strong negative slope indicates that by the time a policy of domestic origin proliferates to states and provinces in other countries, the likelihood of an additional term-limited state adopting would be very low.

In contrast, Figure 5 shows the predicted probability of adoption for term-limited and non-term-limited states for policies of *Foreign Origin*. Although not statistically significant, the clear trend is the same for both states with *Term Limits* and states without *Term Limits*: the likelihood of adopting a policy of *Foreign Origin* increases with the *Proportion of Foreign Adopters*. It may the case that the number of foreign states that have adopted is important when few U.S. states have adopted the policy, and less important when several of a state's neighbors have adopted the policy. Substantively, this suggests that term limits do not consistently drive term-limited states to adopt policies of foreign origin before states where term limits are not in place, which reduces support for the theory that term-limited legislators are driving research of policies that originate abroad.

Figure 5: Predicted Probabilities for Probability of Adoption when Term Limits are in Place (Foreign-Origin Policies Only)

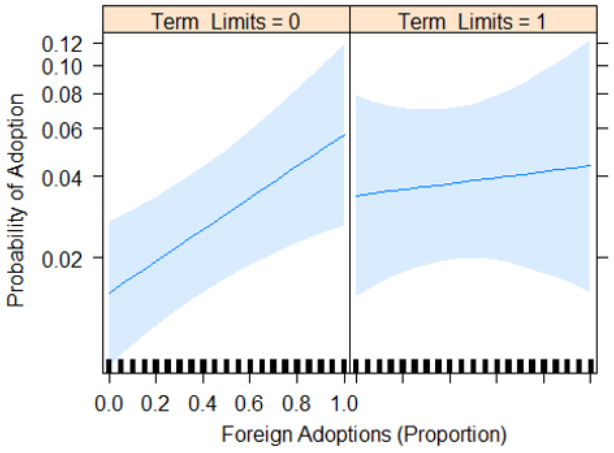
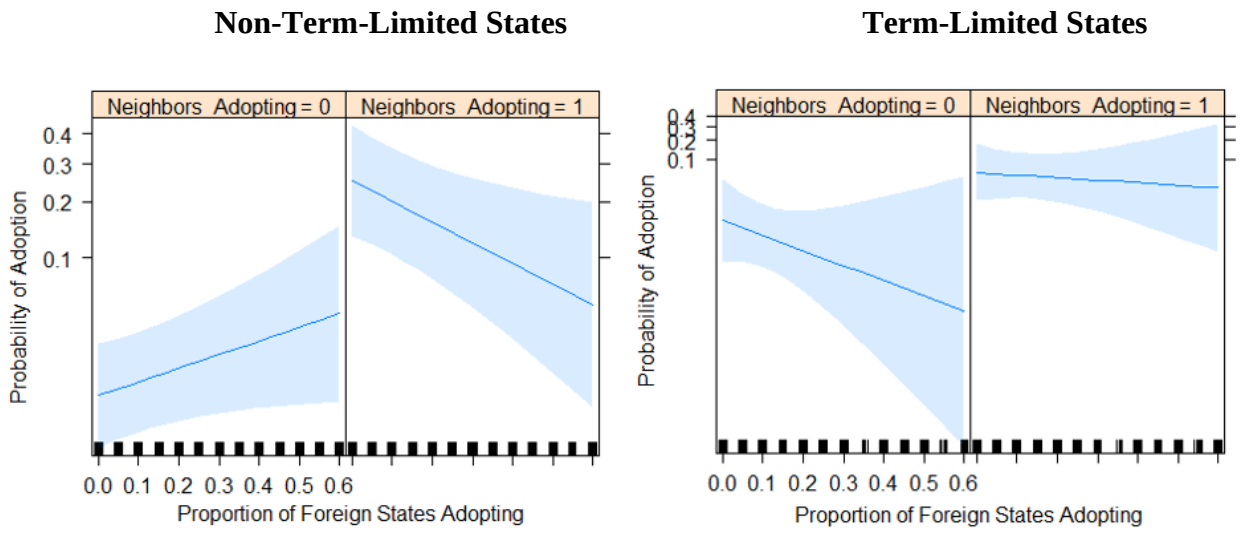


Figure 6 displays how the likelihood of adopting a policy of domestic origin changes for term-limited and non-term-limited states as either the *Proportion of Neighboring States* or the *Proportion of Foreign States* adopts the policy. Both the proportion of *Neighboring States Adopting* and the proportion of *Foreign States Adopting* can suggest information about the importance of other states' policy success outcomes to a state considering whether to adopt a policy.

Figure 6: Predicted Probabilities for Proportion of Neighbors Adopting (Domestic Policies)



Hypothesis 2 predicts that the information provided by foreign state adoptions should be less important for term-limited states where legislators are looking to borrow innovative policy ideas without waiting to examine success outcomes. The following graphs provide insight into the relative importance that term-limited and non-term-limited U.S. state legislators might place on the value of information about policy success outcomes provided by foreign adopters when no neighboring states have adopted compared to when all neighboring states have adopted.

The figure on the left indicates that, when no neighbors have adopted a policy of domestic origin in a non-term-limited state, the state's likelihood of adoption in increases with

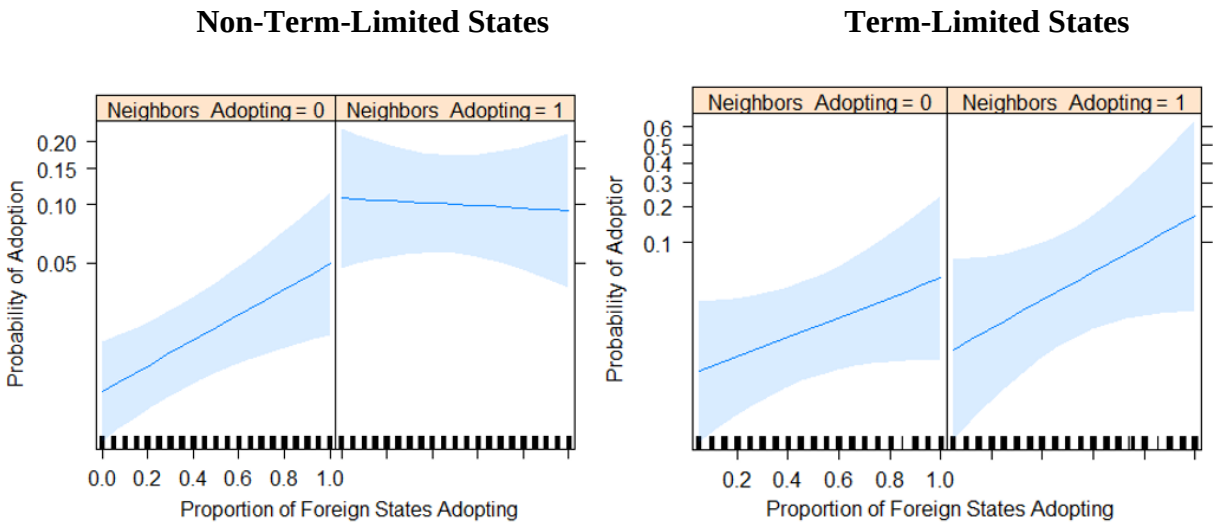
the *Proportion of Foreign States* that have adopted the policy. This indicates that to some extent states may be able to use success outcomes in states in foreign countries for gauging when a policy of domestic origin will be suitable for home use and there are no neighbors to study. The effect becomes strongly negative when all neighbors have adopted, indicating a high likelihood that the non-term-limited state will already have adopted the policy for each marginal adopting foreign state, which in turn indicates much less likelihood that the non-term-limited state is studying and observing the policy outcomes in the foreign states that have adopted the policy.

In contrast, the predicted probabilities of adoption of domestic policies for term-limited states (the right-hand figure) are negatively associated with the *Proportion of Foreign Adopters* regardless of the number of neighbors that have adopted. The direction of this relationship is in line with the finding in Miller et al. 2018 that term-limited states are likely to adopt policies of U.S. origin before many of their neighbors. This suggests therefore that the policy adoptions in foreign jurisdictions would not factor heavily into likelihood of adoption.

Figure 7 shows how the proportion of *Neighboring States Adopting* a policy of *Foreign Origin* mediates the effect of *Proportion of Foreign Adopters* for term-limited and non-term-limited states. For non-term-limited states, the effect is strongly positive when no neighbors have adopted, and the negative slope after all neighbors have adopted is much shallower than for the set of domestic policies. This indicates that the likelihood that a non-term-limited state will have already passed the policy with each marginal foreign adopter is much smaller than the comparable likelihood for a policy of domestic origin. This, in turn indicates that non-term-limited states may be studying the policy outcomes in foreign states more carefully when the policy originated in a foreign jurisdiction.

On the other hand, the predicted probabilities of adoption for term-limited states, although not significant, are positively associated with the *Proportion of Foreign Adopters* regardless of how many of a state's neighbors have adopted the policy. This supports Miller et al's 2018 finding that term-limited states do not appear to be observing their neighbors, but provides evidence against Hypothesis 2, that term-limited states are predicted to adopt policies of foreign origin faster than non-term-limited states (i.e., when a lower proportion of foreign states and provinces has adopted).

Figure 7: Predicted Probabilities for Proportion of Neighbors Adopting (Foreign Policies)



Overall, these results point to a scenario where both term-limited and non-term-limited states observe and potentially learn from their foreign counterparts when considering whether to adopt a policy of *Foreign Origin*. Having *Term Limits* in place is not statistically significantly associated with adopting policies of *Foreign Origin* sooner than states where *Term Limits* are not in place. However term-limited state adoption patterns suggest the possibility that, similar to their counterparts in non-term-limited states, term-limited legislators may value learning about policy outcomes in the foreign context when determining whether to adopt them at home.

Conclusion

This chapter explores how the state-level institution of term limits is associated with a state legislature's proclivity to adopt policies of foreign origin. U.S. states are leaders in policy invention, and yet it is evident that some policies originate in other parts of the world and are subsequently borrowed by U.S. states. The theory of this chapter is that implementing term limits leads to a higher likelihood of adoption of state-level policy from other countries because term limits motivate legislators to pass more bills while hindering their ability to craft quality legislation. These dual effects prompt legislators to seek ready-made policies abroad that are unique and easily marketable, and which therefore have a higher likelihood of passage due to decreased chance of duplication and decreased chance of poor craftsmanship since the policy is already a law elsewhere that can be imitated. These factors in turn decrease legislator incentive to take the time to learn from the outcomes of foreign-origin policies in foreign jurisdictions, because legislators are more rewarded for passing policy than waiting for signs of a policy's success before borrowing it.

A generalized linear model fit by maximum likelihood tests the hypotheses that *Term Limits* are associated with an increased likelihood of adopting policies generated in states in other countries, and that the likelihood of adoption is negatively associated with *Proportion of Foreign Adopters* when *Term Limits* are in place. The analysis finds marginal support for the theory that *Term Limits* are associated with an increase in the adoption of foreign policies. Using the dichotomous measure of *Term Limits* indicates that the likelihood of adopting a policy decreases when the policy is of *Foreign Origin*, and that the likelihood of adopting the policy decreases by about 84% less for term-limited states than for non-term-limited states. This finding disappears when using the continuous measure of *Term Limits* and suggests that institutional factors other than *Term Limits* may drive the discovery and adoption of foreign-origin policies in

U.S. state legislatures. One reason for this may be the policies drawn from the Boehmke and Skinner 2012 dataset for inclusion in the analysis. It is possible that these policies are unique in some way that obscures the effects of *Term Limits* – for example, if term-limited states were for some reason less likely to pass the policies in this dataset than non-term-limited states.

However, two considerations lend support to the model results being valid. The first is that the sample size is fairly large both in terms of observations and also in terms of number of policies studied. There also do not appear to be any meaningful differences in adoption rates for these policies compared to any other policies in the Boehmke and Skinner 2012 dataset, alleviating concerns that the policies used for this analysis may differ in a way that affects results. The second consideration is that the results largely confirm the findings of Miller et al. 2018 with respect to the behavior of term-limited states when adopting policies of domestic origin. Results in this paper (particularly from Table 6) support the finding from Miller et al. 2018 that term-limited states adopt policies before neighboring states and are therefore both less able and less likely to study policy success outcomes in other states before writing their own legislation. It therefore appears that the institution of term limits may play a role in how state legislators determine the amount of research to conduct when borrowing a policy from another state in the same country, but that additional considerations may be important when determining whether to borrow a policy from abroad.

The analysis of foreign adopters found that the association between the *Proportion of Foreign Adopters* and likelihood of *Policy Adoption* is positive and significant for policies of *Foreign Origin* for both term-limited and non-term-limited states. This finding is in contrast to the hypothesized relationship between *Proportion of Foreign Adopters* and likelihood of foreign-origin policy adoption for term-limited states, which was that term-limited state legislatures are

more likely to adopt policies of *Foreign Origin* before many foreign states have adopted them. This hypothesis was generated from the theory that term-limited legislators are more interested in passing novel legislation than studying policy outcomes in many states to find out what policy instruments work best. However, it seems that other dynamics are at play in the process of cross-national policy transfer.

One possible alternative explanation is that legislators in term-limited legislatures need to study the study policy outcomes of policies worth borrowing that come from other countries and pursue legislation that is based on learning from those examples. Another possibility is that term-limited legislators do not study outcomes at all but rather discover the policies later, after a higher proportion of foreign states have adopted. If either of these alternative explanations is correct, it suggests that term limits are not the mechanism of interest driving cross-national policy diffusion at the state level. Further investigation could work to ascertain whether the later adoptions of term-limited legislators demonstrate evidence of learning, or merely that they are just slower to find and adopt policies. Jansa et al. 2019 found that term limits were not a significant predictor of copying legislative text, but that legislative professionalism is significantly associated with less text copying between state laws in a domestic context. It would be insightful to examine this and other institutional factors which cut across term-limited and non-term-limited states that might better explain cross-national policy adoption patterns.

A final productive avenue of study prompted by the results of this chapter would be to examine the policy research process at the level of the individual legislator to better understand exactly what motivations propel legislators to conduct foreign research, and which methods are preferred for such study. Although this analysis does not reveal strong evidence for the motivations of term-limited legislators to seek out policy ideas from states in other countries, it

takes a valuable first step at theorizing about what drives cross-national policy learning at both the institutional and the legislator level. Pinpointing the most relied-upon patterns and methods to engage in global policy diffusion will provide greater insight into the sub-national legislative processes of the 21st century.

CHAPTER IV
Text Analysis of Legislation in Australian States, Canadian Provinces, and U.S. States

Abstract

How do lawmakers change state-level policies they borrow from foreign sources, and how are lawmakers' capacities for cross-national research and policy adaptation affected by the legislative institutions of their state? In this chapter I theorize that policies borrowed across international borders display lower yet still meaningful amounts of similarity compared to policies borrowed from within the same country, and that internal state institutions associated with legislative professionalism increase state capacity for international study but decrease similarity of policy content. Using a dataset of policies adopted in Australian states, Canadian provinces, and U.S. states, I run Heckman selection models to compare *Textual Similarity* of a policy borrower's legislation to the law of the policy originator when borrower and originator are either both from the United States or the originator is not from the United States. I find evidence that text copying does seem to occur between states in different countries, though to a lesser extent than between states in the same country. I also find evidence that *Textual Similarity* is positively associated with *Legislative Professionalism* in a domestic context but that the association between these variables in a foreign context is mixed, suggesting a complex relationship between professionalism and cross-national policy adaptation.

Introduction

In addition to borrowing policies from neighbors and ideological counterparts, state lawmakers also borrow policies from states and provinces in other countries.[46] Pertaining to everything from animal cruelty to zero tolerance alcohol laws, policymakers sometimes borrow policies from vast distances which come to play a significant role in everyday life. Understanding how and why policymakers look abroad is therefore important to a complete understanding of the process of policy diffusion at the state level in the United States and its consequences for many of the laws and policies that shape everyday life in America.

This chapter investigates two specific research questions on this subject. First, how does policy content change when the state borrowing a policy comes from a different country than the state that first passed it? Answering this will illuminate the extent to which legislators consider policies crafted abroad to be immediately adaptable or, on the other hand, the amount of change required to modify a policy for domestic use. Second, how do the borrowing state's legislative institutions affect the similarity of the new content to the foreign legislation? This is important because the extent to which policymakers can capitalize on successful policies of other states speaks to their ability to improve the lives of citizens in their home state, as well as the extent to which foreign policy concepts impact daily life in the United States.

[46] For examples, see Matthews and Kenny 2008 (51), Narassimhan et al. 2018 (984), Rabe 2004 (160), Rabe and Borick 2012 (379), Wagenaar et al. 1988 (51), Gilardi et al. 2014 (8).

The chapter proceeds as follows. I first discuss the challenges posed by cross-national learning that suggest why policy similarity between states in different countries is likely to be lower than that of policies from two states in the same country, even when persuasive arguments exist for why a specific foreign policy example is worth studying or emulating. I theorize that a state legislature's *Legislative Professionalism* shapes the content of cross-nationally diffusing policy by affecting the number of policy clauses introduced from both internal and external sources. I then test hypotheses formulated from this theory on a dataset of four policies that originated in states and provinces in Australia and Canada, and four policies that originated in U.S. states. The dependent variable is *Textual Similarity* of the policy borrower's legislation to the law of the policy originator in either the United States or a state or province in Australia or Canada.

I find that while the texts of U.S. policies borrowed from Australian or Canadian sub-national jurisdictions are still more similar to their domestic counterparts, textual and thematic similarity between states in different countries is also present, suggesting that policymakers find both policy ideas and sometimes even policy language from states in other countries to be suitable for home use. I find mixed results for the effects of *Legislative Professionalism* when a policy comes from a foreign source, which alludes to a puzzle in the literature about whether highly professional states should pass policies of higher or lower similarity to their predecessors and that the answer may depend on several factors. I conclude with a discussion of implications and avenues of research to further investigate both the question of legislative professionalism and other ideas that may illuminate the processes of cross-national policy diffusion.

Drivers of Policy Content in the Foreign Context

Policy transfer between states in foreign countries arises through sponsored trips, networking, professional organizations, and site visits that have come to be known as "policy tourism." (Cook and Ward 2011) However, research during the process of drafting legislation is probably the most consistent method by which lawmakers discover and learn from a policy of foreign origin, as legislators generally conduct intensive research when drafting bills. (Mooney 1991, Bogenschneider et al. 2019) Carley and Nicholson-Crotty 2018 find that legislators are likely to consult a wide variety of sources in this process. When the policy is of foreign origin, it seems likely that policy research will include some measure of policy outcomes in that foreign jurisdiction. For example, when an innovative law is passed, it is likely that the state to first pass that policy will be studied by future borrowers due to such possible reasons as the jurisdiction having garnered recognition for their innovative policy,[47] the greater number of studies available due to the length of time the policy has been active in the state or province that first passes it,[48] and the increased likelihood that that state or province may have developed a comparative expertise in that area due to having worked with the policy the longest.[49] Examples such as the

[47] Examples include knowledge of the first state to legalize same-sex marriage (Massachusetts), recreational marijuana (Colorado), assisted suicide (Vermont), and prostitution (Nevada) is widespread even among the general public, and the laws of those states may have served as models in both the United States and in states and provinces in other countries where the policy was later adopted. Instances where legislators in states and provinces abroad were the first to enact an important policy (for example, Victoria's motorcycle helmet law in 1960, or the eponymous Missouri Plan that was subsequently adopted in Ontario and elsewhere (Volkcansek 2009 (792)), while not as memorable to the public as more contentious issues, may be well known among policy experts even beyond the country in which they originated.

[48] Policymakers pay attention to which policies succeed and which fail when crafting their own bills. (Shipan and Volden 2014, Nicholson-Crotty and Carley 2016) This is particularly true in instances where legislation is adopted in many states before much data is available. For example, two-thirds of the states that passed legislation on mandatory bicycle helmets for minors did so within three years of each other (1992 – 1995) before very much U.S. state data was available on the effectiveness of this legislation. In these circumstances, studies on policy success like *The Introduction of Compulsory Bicycle Helmet Wearing in Victoria*, published in 1992 by Leicester et al. (and presented as a conference report the year previously) was one of the only studies on the efficacy of the law by the time many of the U.S. state laws were passed.

[49] For example, California is widely recognized as a renewable energy pioneer and has developed the infrastructure to send delegations to provide foreign sub-national consultations (for example, to British Columbia in 2006) and create emissions trading systems technological agreements with Chinese provinces (Boyd 2017 (553); Narassimhan

widely copied Quebec Plan to reintroduce liquor into U.S. states (Dupré, R. 2008), Victoria's primary seatbelt law (Grey 1985), and others demonstrate that policy leaders in foreign locales are studied very closely when legislators in the home state or province are inclined to do so.

However, when a state looking to borrow a policy is in a different country than the state where the policy originated, the shared policy content between originators and borrowers is expected to decrease, even if there are many compelling reasons to study policy outcomes abroad. Two forces drive this. The first is the need to comply with different federal regulations. For example, Canadian federal environmental legislation is generally less comprehensive than U.S. federal environmental legislation. (Nemetz 1986 (607), Cattanach and O'Connor 1992 (466)) Policy text that U.S. state lawmakers borrow from Canadian provinces in environmental matters must likely be modified to comply with stricter federal regulations in the United States.

An example of this is hazardous waste legislation: stronger federal regulations exist in the United States in this area than in Canada, especially the Resource Conservation and Recovery Act, which "provides uniform national standards and permit guidelines for hazardous waste management." (Rabe 1991 (186), Brun 2019) Yet Canadian provinces Alberta and Manitoba developed hazardous waste siting policies that have been studied and emulated to some extent by states in the United States. (Rabe 1991 (189), Rabe et al. 1994 (16)) Any U.S. state legislatures borrowing some portion of legislation from a Canadian province in this area would most likely need to alter it to comply with more stringent U.S. federal statutes in a way that they would not have needed to consider if they had chosen to emulate a U.S. state's policy instead. Second, language norms in each country should affect the specific words used in policy text. Policymakers from states in two different countries may use different spelling (if using British or

et al. (2018 (984)). Policy originators who achieve specialization in the areas in which their legislatures pioneered innovations may be sought out for advice even after many other state legislatures have also adopted the policy.

Canadian versus American English, or standard French versus Québécois) and disparate phrases are used to describe the same concept.[50] Therefore, although the incentive to study the policies of the foreign states and provinces that are early adopters transcends national boundaries, federal compliance and differing linguistic norms suggest a clear effect on policy similarity:

Hypothesis 1: The text of a policy borrowed from a state in a different country should display lower policy similarity to the original text than a policy borrowed from a state in the borrowing state's home country.

The institutional context in which legislators research and draft legislation is also likely to influence how policy ideas from abroad are synthesized into final bills. Even when the policy is foreign, all legislators should have sufficient access to legislative text through the internet (or through the legislative research agency, the library, and professional organizations in the era before internet) to conduct at least basic research on a policy topic of interest. However, highly professional legislatures are known for conducting more thorough research during bill formation (Mooney 1993 (192), Kousser 2005) and have the capacity to study far more examples than are observed by legislators in less professional states.

This dichotomy between more and less professional states occurs for several reasons. For one, less professional legislatures have fewer of the resources that enable them to conduct more thorough study. They tend to have lower staff levels and shorter session lengths that shift legislator priorities to legislation that is most urgently needed for the state to continue to function, such as appropriations bills. For another, it is also possible that legislators in less

[50] For example, it is common to use the phrase "novice driver" in Canada where "student driver" is more common in the United States. Rabe 1991 (204) also points out that "individual provinces and states tend to define hazardous, as opposed to solid or radioactive wastes, in somewhat differing ways."

professional states find lower levels of research sufficient more often than their counterparts in more professional legislatures because less professional states generally produce legislation that is less technically complex. (Ka and Teske 2002)

This increased capacity for and tendency toward additional research in more professional legislatures should result in legislation that is less like any of the original pieces of legislation that were studied, compared to legislation that is produced in a less professional legislature. Legislators in more professional states have more resources with which to study the policy originator than do their peers in less professional states. However, legislators in more professional states are also likely to have achieved similar levels of understanding and proficiency in far more policy examples due to their contacts, research resources at their disposal, and the time and staff levels that assist in the process of learning. The tendency to produce larger, more complex, and more innovative legislation should drive lawmakers in more professional states to utilize the larger array of research tools at their disposal to research *more* policies and research *each* policy in greater depth. Consulting many more examples suggests that the final legislation will borrow from many sources and be less similar to any one of them:

Hypothesis 2: Higher levels of professionalism are associated with lower levels of policy similarity to the policy of the state in which the policy originated.

When lawmakers are writing their state's version of a policy that originated in a different country, the effect of these dynamics should be amplified. While most policymakers likely discover a policy's origins in the course of basic research, more professional states develop greater access to foreign sources that will enable them to investigate policies of foreign origin far more comprehensively than policymakers in less professional states. Specifically, more

professional states have larger research bureaus, larger professional networks which may include foreign contacts, and more committees that provide legislators with increased time to research (Mooney 1993), including committees on foreign affairs.[51] More professional states are more likely to study best practices (Shipan and Volden 2014), and a policy of foreign origin may have proliferated through several other foreign states before coming to the home country, which provides more examples to learn from.

A hypothetical example illustrates this creation process. Suppose policymakers in the state of Indiana, which has a part-time citizen legislature, and the state of Illinois, which has a full-time legislature with well-staffed research agencies, are contemplating passing a policy that originated in South Australia. Policymakers might approach the task with a broad background investigation of the legislation with the goal of quickly finding reports on the success of the policy that will guide them in what will work best in their own states. This process is likely to include a discovery and review of the South Australia legislation for policymakers in both Indiana and Illinois, because, as the first policy passed, its background and evolution have likely been publicized more than many subsequent adopters, and also has more years of testable outcomes that can be analyzed. A policy research process like this would match the findings in Mooney 1991 (450—451), who found that 24.2% of the written information studied by satisficing legislators in the process of bill formation was from outsider sources, and that "in writing bills, then, legislators should need and have the time to use the complex and difficult information from outsider sources."

[51] Committees that focus on foreign affairs are more common in professional states. Five of the twelve states that have a committee or subcommittee dedicated to international commerce or affairs (California, Illinois, Massachusetts, New York, and Wisconsin) are quite professional. Three of the seven less professional states with such committees (Arizona, Texas, and Hawaii) are either border states or heavily dependent on international partnerships. These committees likely facilitate the discovery of foreign best practices into the U.S. states.

At this point the policy research process likely differs for the two states contemplating this policy adoption. Legislators in Indiana working on a part-time schedule with limited staff have little incentive to conduct further research after finding a suitable working model. Their policy is likely to be based on a smaller number of sources found in a shorter period of research, including perhaps one or two seminal policies encountered as part of introductory research, and perhaps also a neighbor and an ideological counterpart or role model.

On the other hand, legislators in Illinois have many more resources at their disposal and are likely to investigate far more examples in order to develop a more complex policy and verify that their intended policy model will be appropriate for use in Illinois. In addition to the same-country sources of influence commonly identified in the policy diffusion literature, this likely includes more examples from abroad of subsequent adopters after the policy originator, in order to better understand the evolution of the policy and discover more policy instrument variations to get ideas about concepts that worked well and can be incorporated. This level of additional research requires more of the resources that are more often available in more professional states, including things like more staff and larger research agencies, more developed international committees and offices that might have contacts for reaching out and asking questions, and more session time to conduct research.

Finally, lawmakers in more professional states tend to incorporate more policy innovations into finished legislation when adapting legislation from others. (Kousser 2005, Tolbert et al. 2008, Jansa et al. 2019) The task of modifying the policy to be optimal for domestic contexts, in part due to the obstacles arising purely from the policy being foreign, is likely to inspire more innovation in those states whose legislators have the wherewithal to do so and whose policies are generally more complex. Taken together, the motivation to innovate and

the wider research capacities that provide greater international access suggest that professional states will examine an even greater number of examples and produce a policy that is even less similar to any one of them when a policy is of foreign origin:

Hypothesis 3: The inverse relationship between legislative professionalism and policy similarity is amplified in the when the policy originates in a state in a different country.

To summarize, several grounds exist for which state policymakers might borrow language from policies of states in other countries. Even when a policy originates in a foreign state or province, examining that policy in its foreign context can be beneficial, suggesting that there should be some similarity in policy content even in policies from states and provinces in different countries. However, external and internal factors affect the similarity of policies that are spread across international borders. Externally, I expect that standardizing policies to align with federal regulations and the commonly accepted legal writing of the borrowing country will decrease similarity. Internally, I theorize that more professional states exhibit less policy similarity due to collecting and integrating more examples of best practices from a larger number of sources (as well as adding their own innovations), and that this effect is amplified in the foreign context.

Data

The data for this study consist of 5,700 state-year-policy observations for U.S. states between 1979 - 2014, including 294 observations for a year in which a policy was adopted.[52] The observations are for eight policies drawn largely from the Boehmke and Skinner 2012 dataset:

[52] As the number of years in which a policy was adopted also determines the number of observations for which a textual similarity score would be available, it is important to collect enough policies to yield approximately 300 observations in order to conduct statistical analysis. Eight policies were sufficient for this task.

four that originated in foreign states or provinces in Australia or Canada and four policies that originated in U.S. states.[53] A background on each policy is available in Appendix IX. The policies were drawn randomly from the available policies that were suitable based on being passed in years covariate data was available. The same caveats mentioned in Chapters II and III apply given that the policies are drawn from a dataset of policies which is in turn a subset of all legislative policy topics that lawmakers contemplate collectively. Boehmke and Skinner note no reason to suspect the policies in their 2012 study are unrepresentative of the universe of policies, but policy sample size is low in this study and the policies that originate in Australian states and Canadian provinces may be nonrandom in some way. For example, if Canadian and Australian political ideologies are generally to the left of the United States, then lawmakers in left-leaning U.S. states may be more likely to pass those policies, and the policy adoption behavior (and therefore content similarity patterns) of more conservative states will be systematically underrepresented.

To control for this, policy indicator variables are included and help account for inherent differences between these policies not captured by other factors (mandatory bicycle helmets and anti-bullying are the omitted foreign and domestic categories). Despite the small sample size, the policies included display significant variety along many dimensions that are important for analysis. Adoption dates vary over a range of thirty years, decreasing the risk that results are based on an attribute of a specific time period. The policies cover a variety of subjects and range in word length from 34 words to 79,812 words. This allows for wide variation in policy complexity. They range from fewer than half of all states adopting (twenty-one states adopting for both mandatory bicycle helmets for minors and school of choice laws) to all or virtually all

[53] Anti-bullying legislation was added at random from the NCSL website to provide an additional domestic policy for which legislation is available in Australia and Canada.

states adopting (graduated drivers licensing laws and anti-bullying legislation), which provides variation in the number of pieces of example legislation available. Taken together, the policies display wide variety along several important dimensions and should thus be suitable for a preliminary investigation.

The dependent variable is a measurement of policy diffusion operationalized as *Textual Similarity* between the law of the first state to pass a policy, and the law of the state where it is later adopted. Out of the 5,700 state-year observations, 294 of the observations are years in which a state adopted a policy and therefore have a *Textual Similarity* score. The scores take values between 0 and 1 for each dyad, where high values indicate greater similarity between two documents. The observations are calculated in Quanteda (Benoit et al. 2018) using the cosine method, which is the "bag of words" approach that has been used in plagiarism detection. (Jiffriya et al. 2014, Saptono et al. 2018) Although not without problems[54] this method is widely used to trace similarities in policy and has generally been considered suitably accurate.[55] Several studies have shown that *Textual Similarity* scores point to text reuse when documents are more similar than is likely by chance, and that text reuse that is more significant than what chance alone would predict provides evidence of policy diffusion. (Smith et al. 2014 (183), Burgess et al. 2016 (57), Linder et al. 2018 (16), Gilardi and Wüest 2020 (4)) Thus, the dependent variable is structured to provide a measure of policy diffusion between each adopting state with the policy originator.

[54] For example, Li and Han 2013 note that in spite of the "proven effectiveness" of cosine similarity that renders it "good enough for most text mining applications," they point out that it does not always account for how the distance between similar words in two texts under comparison may affect meaning. Grimmer and Stewart 2003 (272) suggest that the reason that cosine similarity performs well despite a lack of emphasis on word order is because "while it is easy to construct sample sentences where word order fundamentally changes the nature of the sentence, empirically these sentences are rare...In practice, for common tasks like measuring sentiment, topic modeling, or search, n-grams do little to enhance performance."

[55] See Garret and Jansa 2015, Wilkerson and Casas 2017, Jansa et al. 2010, Gilardi et al. 2020.

Table 7: Policies in the Dataset

Policies of Foreign Origin Subsequently Adopted by U.S. States				
Policy	State or Province of Origin	Year of Origin	First U.S. Adopter	Year of First U.S. Adoption
Graduated Drivers Licensing	Ontario	1993	Kentucky	1996
Mandatory Bicycle Helmets for Minors	Victoria	1990	New Jersey	1992
No Seatbelt is Primary (Ticketable) Offense	Victoria	1970	New York	1984
Right to Breastfeed in Public	Yukon	1987	Florida	1993
Policies of U.S. Origin Subsequently Adopted by States and Provinces in Other Countries				
Policy	State of Origin	Year of Origin	First Foreign Adopter	Year of First Foreign Adoption
Anti-Bullying Legislation	Georgia	1999	Manitoba	2004
Medical Marijuana	California	1996	Victoria*	2016
Electronic Prescription Drug Monitoring	Michigan	1988	British Columbia	1993
School of Choice Legislation	Arkansas	1987	Alberta	1988

*Note: Medical Marijuana legalized federally in Canada in 2001

Following precedent in Jansa et al. 2019, higher levels of *Textual Similarity* between policies of an earlier adopter and a later adopter are interpreted as instances where the later adopter made fewer changes to the policy, and lower levels of similarity suggest instances where more changes, i.e., more innovations, were made to the policy. The policy diffusion literature conceptualizes innovation in terms of new policy provisions that are added by subsequent adopters to the original policy to result in a more complex piece of legislation (for a seminal example see Glick and Hays 1991).[56] Adding more policy clauses that cover new and innovative topics bring new vocabulary into the text that decrease similarity scores. On the other hand, a state that does not add any new clauses and therefore largely emulates a previous policy is likely to produce a law that will be more similar to the previous document to which it is compared.

[56] Glick and Hays 1991 (837, 841), provided a comprehensive study on the connection between similarity of policy and innovation by measuring instances of innovation, which they describe as "the reinvention of policy during the diffusion process" in living will policies. They noted that this process occurs "by liberalizing existing provisions or by adding totally new provisions" and show that lawmakers created policies that become more and more different (i.e., less similar) based on the number of new and innovative policy ideas added to policies adopted by each subsequent state.

For all but the first few adopters there are of course many other policy examples to study in addition to just the policy originator, and a state legislator contemplating a policy will most likely examine several of them. This is a concern if the *Textual Similarity* score indicates that a state legislator studied the originator when in fact they borrowed from a local role model who first looked to the originator. An example would be if the policies of Iowa and South Australia are similar but Iowan legislators did not look to South Australia at all but rather looked only to Illinois, whose legislators did in fact adopt the policy based on the South Australian legislation.

This is indeed a risk, but the previous section lays out several reasons for why policymakers in all adopting states have both the means and motivation to consistently observe policy originators in the process of research.[57] This means that the risk of instances where similarity score is high but the borrower has never *seen* the legislation of the policy originator is hopefully quite low. Even if legislators rely primarily on the legislation of a domestic counterpart that references the text of the originator, at least they have seen the similar content in both original and modified source and can be aware of the provenance of the policy idea.[58] Future studies could contribute greatly by advancing methods to identify the true source from which a state's legislators borrow a policy concept when lawmakers have already spread the concept to more than one policy text.

Another factor to consider is the extent to which legislators consider borrowing policy text from foreign sources to be riskier than borrowing text and ideas from domestic sources. An

[57] Lawmakers are likely to study the policy originator during their research no matter how many states have adopted in the intervening time period when an originator has achieved widespread recognition, conducted and published leading studies about success outcomes, become a center of expertise on the policy topic, or some combination of these phenomena.

[58] One additional factor that helps to make this variable yield a conservative estimate of general "level of foreign observation" is the fact that similarity scores should underestimate the extent of foreign influence because they ignore all of the non-systematic instances where a borrowing state observes additional foreign states besides just the policy originator, such as other states where widely publicized studies were issued or the text of a more professional state (like Ontario or New South Wales) that did not happen to adopt first.

argument can be made for either position. On the one hand, legislators may view policies from foreign jurisdictions as unusable because the policy outcomes in a foreign state or province relay very little information about what will happen at home due to differences that arise from being in different countries. If this is true, then policies borrowed from foreign locales increase political risk because legislators cannot predict how successful the policy will be in their own jurisdiction.

On the other hand, the Canadian provinces and Australian states score highly on several measures that would make them credible examples that U.S. state legislators might point to as justification for how a policy from one of these states or provinces might improve quality of life at home. For example, six of the thirteen Canadian provinces (Alberta, British Columbia, Ontario, Northwest Territories, Saskatchewan, and Yukon) had median family incomes that placed them within the top 20 U.S. states in 2017, and the province with the lowest median family income (Nunavut, at $55,009) was higher than eighteen U.S. states.[59]

Similarly, Australian and Canadian cities regularly dominate The Economist Intelligence Unit's annual Global Liveability [*sic*] Ranking, with Vancouver taking the number one spot for seven years in a row between 2004 to 2010, before ceding first place to Melbourne from 2011 to 2017.[60] State legislators working on policies to improve quality of life in the big cities of their state would have an extremely credible reason to point to legislation in the foreign states and provinces that contain these cities to justify a proposed action. Therefore, although legislators may associate borrowing a policy of foreign origin with some risk due to being in a different country, there are many reasons to suggest that policies from foreign jurisdictions may also be

[59] Statista and World Bank. 2017 current USD.

[60] At least two Canadian cities and three Australian cities have made it into the top ten for every year since at least 2015 by earning scores for "over 30 qualitative and quantitative factors across five broad categories of Stability, Healthcare, Culture and Environment, Education and Infrastructure." (The Economist Intelligence Unit). No U.S. city made the top ten for any of the five years where information was available.

used as a source of third-party credibility worth emulating in order to achieve the desirable outcomes that characterize the foreign state or province.

Text was cleaned by removing stopwords and stemming, although numbers were kept for policies where age may be important, such as bicycle helmet laws for minors and graduated drivers licensing requirements. British spelling in the foreign policy originators was changed to American English to be comparable to the spellings used in the U.S. state policies (see Table 22 in Appendix X for a list of changes). *Text Similarity* generally either slightly increases or slightly decreases over time, and *Textual Similarity* is lower when policymakers borrow from a foreign policy originator than when they borrow from a domestic one (see Figure 15 and Figure 16 in Appendix X). The average *Text Similarity* scores for states adopting foreign policies ranges by policy between 0.19 to 0.47, and the average score for adopting domestic policies ranges from 0.44 to 0.58. The value of *Text Similarity* ranges from 0.02 to 0.80 in the complete dataset, with a mean of 0.43 and a standard deviation of 0.17.

Examining legislation samples confirms that the cosine method's lower *Text Similarity* scores between foreign states and higher similarity scores between domestic states is faithful to the text. For example, policy text from Victoria and New Jersey on mandatory bicycle helmets shows lawmakers wrote similar concepts and some similar words, but rarely in the same order and with some synonymic substitutes. One such instance is where Victoria's text mandates that helmets be "approved by" the Roads Corporation, whereas New Jersey's text requires helmets to "meet the standards of" the American National Standards Institute:

Victoria: "*A **person** must not drive a **bicycle** on a highway **unless** he or she is **wearing** a securely **fitted bicycle helmet** of a type approved by the Roads Corporation.*"	New Jersey (Similarity Score = 0.43): "A ***person** under 14 years of age shall not operate, or ride upon a **bicycle** as a passenger, **unless** that **person** is **wearing** a properly **fitted** and fastened **bicycle helmet** which meets the standards of the American National Standards Institute.*"

In contrast, *Text Similarity* between originator and borrower states in the same country is generally higher in terms of words and sentence structure, as in this anti-bullying paragraph:

Georgia: "***Each*** *local* ***board of education shall adopt policies****, applicable to students in grades six through 12, that* ***prohibit bullying*** *of a* ***student*** *by another* ***student****...Each local* ***board of education*** *shall ensure that* ***students*** *and* ***parents*** *are* ***notified*** *of the* ***prohibition*** *against* ***bullying***"	Oklahoma (Similarity Score = 0.68): "***Each*** *district* ***board of education shall adopt*** *a* ***policy*** *for the control and discipline of all children...The* ***policy*** *shall specifically* ***prohibit*** *harassment, intimidation, and* ***bullying by students****….The* ***students****, teachers, and* ***parents*** *or guardian of every child residing within a* ***school*** *district shall be* ***notified*** *by the district* ***board of education*** *about its* ***adoption*** *of the* ***policy****.*"

The *Textual Similarity* scores clearly reflect relative differences in textual similarity between cross-country originator-borrower pairs and same-country originator-borrower pairs. The scores attributed to the one- and two-word phrase matches in the cross-country pairs like originator Victoria and borrower New Jersey in the mandatory helmets example are noticeably lower than the scores attributed to the multi-word phrases and closer sentence structure of the same-country pairs like originator Georgia and borrower Oklahoma in the anti-bullying example. At the same time, the scores identify meaningful similarity in cross-country pairs that is evident when reading for thematic content. A final example of this is how Ontario's graduated drivers licensing legislation authorizes authorities to make rules "respecting practical and written driving examinations and mental and physical, including ophthalmic and auditory, examinations for applicants for drivers licenses for novice drivers of any class or level," and Tennessee's legislation, which, while written very differently, states essentially the same concept, that "any person who is fifteen years of age or older, who has successfully passed the standard written test and visual examination…may be issued a learner permit by the Department of Safety." Despite different phrases used for visual testing, written testing, and student driver, these concepts are quite similar to each other. Therefore, the lower but meaningful similarity scores between cross-

country originators and borrowers seem suitably calibrated for this analysis. Additional diagnostics for each policy are included in Appendix X.

The independent variables are whether a *Policy is of Foreign Origin*, *Legislative Professionalism,* and an interaction of these two terms. *Legislative Professionalism* is measured in three separate ways: as an index variable, by *Staff Levels*, and by *Session Length*. The index measure of 0 to 1 (higher values indicating higher *Legislative Professionalism*) is generated by Bowen and Greene (2014, 288) and includes observations for more years than the Squire Index but is correlated with the Squire Index at $r = 0.92$ ($p < 0.001$). Data were scaled for computational tractability and missing years were imputed by carrying forward the last observation.[61] Figure 17 in Appendix XI displays how approximately six percent of the observations have high values of *Legislative Professionalism* that make them outliers when calculated using the Tukey 1977 method of 1.5 times the Interquartile Range. The outliers alter the results slightly when excluded, and results using a dataset composed solely of non-outliers are included in Appendix XIII in Table 26.

The Bowen and Greene index is a generalized measure of *Legislative Professionalism* that represents intangible aspects of state legislatures that may contribute to studying a policy originator. This includes policy expertise, committee strength, research budgets, and other factors that would in the aggregate improve a legislature's ability to discover both more examples from which to draw legislative text, as well as to refine and add to it through the

[61] The original scores for *Legislative Professionalism* in the Bowen and Greene index range between 0 to 10, which is a factor of ten greater than the range of the dependent variable (0 to 1) and increased processing time when running calculations for the models used in this paper. Scaling the units decreased computation time without changing the underlying relationship between *Legislative Professionalism* and *Policy Adoption*. No standard practice seems to have emerged as the dominant method for handling missing years but as *Legislative Professionalism* scores do not change very much from session to session this is not anticipated to be a problem. The last observation carried forward method is used because the fairly small year-on-year variation in *Legislative Professionalism* scores suggests that any more complex calculation would produce imputed scores that are quite similar to the values used.

process of policy innovation. Similar to Jansa et al. 2019, two specific aspects of state-level professionalism are hypothesized to have clear effects and are tested separately from the index variable. The first, *Staff Levels*, is expected to directly affect policy similarity because staff members do a great deal of the research and writing that goes into policy formation. (Hammond 1996 (548), Grossback and Peterson 2004 (28)). Therefore, higher *Staff* levels should increase the volume of examples examined to learn about and craft policy, as well as increase innovativeness and drive down *Textual Similarity*. Longer *Session Lengths* should provide more time to conduct research, come up with innovative ideas, and carefully draft and revise policy to make it more innovative.

Each of these three variables of *Legislative Professionalism* (index, *Staff*, and *Session Length*) therefore measures a separate mechanism by which expertise should drive policy change. Each conceptualization of *Legislative Professionalism* is predicted to decrease *Textual Similarity*, and the effect is predicted to be stronger for *Policies of Foreign Origin*. Because *Legislative Professionalism* and *Staff* are highly correlated, they are tested in separate models. However, since *Staff* and *Session Length* are not highly correlated, they are included in the same model. *Staff* levels are measured by the survey data issued by the National Conference of State Legislatures, with missing data imputed by carrying forward the last observation. *Session Length* was calculated from Bowen and Greene 2014. Both variables are scaled.

Descriptive statistics and correlations are presented in Appendix XI in Table 24 and Table 25. The *Legislative Professionalism* variable ranges from 0.012 to 1.0[62] with a mean of 0.198 and a median of 0.167. Table 25 shows that the high correlation of 0.697 for *Legislative Professionalism* and *Staff Levels* supports the decision to test these separately rather than in the

[62] A single observation from California earned this score; every other observation falls below it.

same model. The policy being of *Foreign Origin* and *Textual Similarity* are correlated at -0.616, providing preliminary support for Hypothesis One.

Method

The method of analysis is a two-stage Heckman selection model (Heckman 1976) in which the association between *Textual Similarity* and the independent variables is conditioned on whether state lawmakers opted into passing the legislation, and therefore creating policy that would earn a *Textual Similarity* score. This model is suitable because it is necessary to account for selection bias within the *Textual Similarity* scores since the only observations for which scores are known are instances where a state legislature adopted a policy. Put another way, it is impossible to see what a *Textual Similarity* score would have been for a state in which the policy was never adopted. It is therefore likely that the data exhibit sample selection bias. This situation is common in analyses where the dependent variable is not observable in the entire population of states. Certo et al. 2016 (2,653) write that "in such cases, Heckman models may help to resolve sample selection bias."

The models are structured as a two-stage analysis where the first stage uses a probit to calculate the probabilities that observations select into the condition on which *Textual Similarity* is based, i.e., whether states adopt the policy. The Stage One independent variable and covariates are known as exclusion restrictions and they are: *Neighbors Adopting, Citizen Ideology, State Ideology, Time,* and *Time Squared* (to model the nonlinear effect of time on adoption outcomes). Scholarship has shown repeatedly that a state's likelihood of adopting a policy is associated with whether its neighbors adopt the policy (for a review see Nicholson-Crotty 2016 (80)). Therefore, the predicted association between *Policy Adoption* and *Neighbors Adopting* is positive. Ideology is another factor in whether states will adopt a policy (Grossback and Peterson 2004, Carley and

Miller 2012, Butler et al. 2017), and two measures are therefore included as scaled variables, with higher numbers indicating more liberal positions. (Berry et al. 1998 (334) Without any way to compare ideologies across countries to determine ideological similarity between foreign and domestic dyads I am agnostic about the expected direction of these variables. The effect of *Time* is predicted to be positive, as the chance of adopting a policy increases in years following the original adoption. The coefficient of *Time Squared* is expected to be negative to model how adoptions are most common immediately following first passage and then decrease over time. The results do not change substantively when a variable for *Proportion of Foreign States Adopting* is included, but this variable is dropped due to a high Variance Inflation Factor score with the *Policy is Foreign* indicator that is an independent variable in Stage Two.[63]

As the dataset contains adoption data for multiple policies and multiple states over time, it can be considered a type of pooled dataset that would be suitable for a repeated events duration model. Box-Steffensmeier and Zorn 2001 find that duration models for repeated events perform better when they allow for the risk of failure (in this case, adoption) to vary as time passes when likelihood of an event is contingent on previous events. This is an appropriate paradigm for policy adoptions since there is overwhelming evidence in the policy diffusion literature that the likelihood of a state adopting a policy is influenced to varying degrees by the adoptions that come before it. The current methodology on Heckman Selection Models does not yet account for

[63] When coefficients for *Policy is Foreign, Proportion of Foreign Adopters,* and an interaction of these terms are included in the model, the signs on each coefficient match the empirical findings in Chapter III about the effects of a policy being foreign on its likelihood of adoption. Higher proportions of foreign states and provinces that have adopted the policy are positively associated with a state's likelihood of adopting the policy (though the coefficient of 0.84 likely overreports the extent of the relationship due to the high Variance Inflation Factor caused by including so many measurements of foreign activity in the model). The log odds of adopting a policy of *Foreign Origin* are lower than a policy of domestic origin, and an interacted term of these two variables indicates that the log odds of adopting a policy of *Foreign Origin* increase by 0.551 when the *Proportion of Foreign States Adopting* the policy has gone from 0 to 1. Although the magnitudes of these coefficients are likely overstated due to the variables describing similar aspects of the data, they do inspire confidence for matching the results of the factors affecting the likelihood of states adopting policies of *Foreign Origin*.

dependence between the hazard rates of various observations. This is an oversight that, if corrected, could extend the usefulness of Heckman models for many more applications in political science. However, examining the models that Box-Steffensmeier and Zorn 2001 calculate do not reveal too very drastic of differences between the standard repeated events model and the marginal risk-set model that calculates updated hazard ratios. This suggests that the results in this chapter should be interpreted with caution but that dependence between events is not likely distorting the results to an extent where they are no longer useful indicators of the underlying phenomena. The covariates of *Time* and *Neighbors Adopting* allay this problem as well. A useful extension would be to develop a Heckman selection model that incorporates techniques that can account for variation in the underlying risk sets and compare the results.

The odds ratios calculated in the Stage One probit are factored into Stage Two, which models how change in the dependent variable *Textual Similarity* is associated with changes in the independent variables conditional on whether the policy was adopted. The independent variables here are *Foreign*, *Legislative Professionalism, Staff Levels, Session Length*, and an interaction term between *Foreign* and the *Professionalism* index and *Staff* variables. Following the findings of Kousser 2005, Sarbaugh-Thompson and Lyke 2017, and Miller et al. 2018, I also control for *Term Limits*. This state-level attribute should increase *Text Similarity* by shifting the incentives of legislators towards producing legislation rapidly to be able to point to laws passed as evidence of a successful policymaking past when starting new careers after being term-limited out. Lastly, whether the U.S. leader (i.e., passage by either California or New York) has adopted the policy is also included to control for text reuse that travels through diffusion chains. (Desmarais et al. 2015, Boehmke et al. 2017, Linder et al. 2018) The sign on this is predicted to be negative to

represent the concept that textual similarity to a policy originator will decrease when the example of the first U.S. borrower is also available.

Simulations have shown that Heckman selection models return fairly accurate results even when data are not bivariate normally distributed. (Van der Klaauw and Koning 2003 (40)) However, to err on the side of caution I follow Jansa et al. 2019 (15) and conduct the analysis with a robust Heckman selection model, which relies on semiparametric calculations that allow for the assumption of bivariate normality to be relaxed. This results in expanded standard errors that are more robust to non-normality than in a two-step model. (Zhelonkin et al. 2016, (807)) My results concur with the findings in Van der Klaauw and Koning 2003 in that the coefficients are very similar to models tested with the stricter Two Step model and the Full Information Maximum Likelihood (FIML) model. As the FIML model was tested with robust standard errors clustered by state, this lends credence to the validity of the results.

Results

The results are displayed in Table 8 below. Examining the rho value and Inverse Mills Ratios in the tables suggests that sample selection bias is present and that a Heckman selection model is suitable (see Appendix XII for more discussion). The coefficient on the *Foreign* variable aligns very well with Hypothesis 1. The value of -0.15 indicates that *Textual Similarity* when a policy is of *Foreign Origin* is approximately fifteen percentage points lower than when a policy is of domestic origin but does not drop to zero.

Table 8: Textual Similarity and Legislative Professionalism

	Stage One Dependent Variable: Likelihood of Adoption							
STAGE ONE (Probit)	Model 1	SE	Model 2	SE	Model 3	SE	Model 4	SE
Neighbors Adopting	1.059***	(0.123)	1.059***	(0.123)	1.059***	(0.123)	1.059***	(0.123)
Citizen Ideology (Scaled)	0.039	(0.044)	0.039	(0.044)	0.039	(0.044)	0.039	(0.044)
State Ideology (Scaled)	0.088**	(0.038)	0.088**	(0.038)	0.088**	(0.038)	0.088**	(0.038)
Time (Decades)	0.555***	(0.173)	0.555***	(0.173)	0.555***	(0.173)	0.555***	(0.173)
Time^2	−0.212***	(0.059)	−0.212***	(0.059)	−0.212***	(0.059)	−0.212***	(0.059)
Drivers Licensing	0.580***	(0.125)	0.580***	(0.125)	0.580***	(0.125)	0.580***	(0.125)
No Seatbelt	0.252**	(0.126)	0.252**	(0.126)	0.252**	(0.126)	0.252**	(0.126)
Right to Breastfeed	−0.070	(0.112)	−0.070	(0.112)	−0.070	(0.112)	−0.070	(0.112)
Medical Marijuana	−0.166	(0.133)	−0.166	(0.133)	−0.166	(0.133)	−0.166	(0.133)
Electronic Monitoring	−0.135	(0.113)	−0.135	(0.113)	−0.135	(0.113)	−0.135	(0.113)
School of Choice	−0.764***	(0.161)	−0.764***	(0.161)	−0.764***	(0.161)	−0.764***	(0.161)
Constant	−2.116***	(0.113)	−2.116***	(0.113)	−2.116***	(0.113)	−2.116***	(0.113)
Observations	5,700		5,700		5,700		5,700	
	Stage Two Dependent Variable: Text Similarity (Cosine Method)							
STAGE TWO (OLS)	Professionalism	SE	Professionalism	SE	Staff and Session Length	SE	Staff and Session Length	SE
Policy is Foreign	−0.150***	(0.021)	−0.132***	(0.023)	−0.150***	(0.020)	−0.146***	(0.020)
Professionalism	0.047	(0.032)	0.093*	(0.050)				
Foreign*Professionalism			−0.079	(0.057)				
Staff (Scaled)					0.009*	(0.005)	0.019***	(0.007)
Foreign*Staff							−0.017*	(0.009)
Session Length (Scaled)					−0.001	(0.005)	−0.002	(0.005)
Term Limits	−0.008	(0.014)	−0.009	(0.014)	−0.005	(0.013)	−0.005	(0.014)
U.S. Leader Adopted	−0.005	(0.019)	−0.007	(0.019)	−0.002	(0.020)	−0.008	(0.020)
Drivers Licensing	0.078***	(0.019)	0.076***	(0.019)	0.078***	(0.019)	0.076***	(0.019)
No Seatbelt	0.035**	(0.016)	0.033**	(0.015)	0.037**	(0.016)	0.033**	(0.015)
Right to Breastfeed	−0.212***	(0.016)	−0.214***	(0.016)	−0.212***	(0.017)	−0.216***	(0.016)
Medical Marijuana	−0.001	(0.033)	0.000	(0.033)	0.001	(0.035)	0.004	(0.044)
Electronic Monitoring	0.040*	(0.023)	0.039*	(0.026)	−0.040*	(0.022)	0.040*	(0.022)
School of Choice	−0.093**	(0.039)	−0.096**	(0.038)	−0.090**	(0.038)	−0.094**	(0.043)
Constant	0.505***	(0.048)	0.499***	(0.047)	0.511***	(0.049)	0.517***	(0.047)
Observations	294		294		294		294	
ρ	0.237		0.228		0.239		0.230	
Inverse Mills Ratio	0.020	(0.021)	0.019	(0.020)	0.020	(0.020)	0.019	(0.020)
Note:			*p<0.1; **p<0.05; ***p<0.01					

As median *Textual Similarity* is 0.43, it suggests that similarity falls to 0.28, about a 35% decrease. The coefficient for *Foreign* is similar in Model 2, which shows the effect on *Textual Similarity* of a policy being foreign holding the *Legislative Professionalism* value at zero.[64]

These findings reflect the characteristics in the examples outlined earlier comparing the similarity of text between New Jersey and Victoria when adopting mandatory bicycle helmet legislation. The text was thematically similar, but less linguistically similar than the text of

[64] Note that, as no states ever received a *Legislative Professionalism* score of zero, however, this represents an upper bound of the effect size.

policy borrower Oklahoma's anti-bullying law to that of policy originator Georgia. More examples of this reduction in similarity can be found when comparing the cross-national verbiage in graduated drivers licensing laws to same-country verbiage in school of choice legislation. There is clear thematic overlap in the texts of policy originator Ontario and policy borrower Georgia, but sentence structure similarity is low:

Cross-National Similarity: Ontario and Georgia (Graduated Drivers Licensing)

Ontario:	Georgia (Similarity Score = 0.53):
"*The Lieutenant Governor...may make regulations...requiring novice **drivers** with **drivers licenses** of any **class** or level to be **accompanied**, while **driving**, by an **accompanying driver***"	"*The department shall... issue to the applicant an instruction permit which shall entitle the applicant...to **drive** a **Class** C vehicle...when **accompanied** by a person at least 21 years of age who is **licensed** as a **driver***"

On the other hand, the *Textual Similarity* of California's school of choice legislation compared to policy originator Arkansas is much higher, even though Arkansas is not known for producing legislation that is commonly emulated by other states and California generally creates highly innovative and professional legislation:

Same-Country Similarity: Arkansas and California (School of Choice)

Arkansas:	California (Similarity Score = 0.60):
"*Boards of Directors of local **school districts** are **prohibited** from granting legal **transfers**…(a) where either the **resident** or the receiving **district** is under a **desegregation** related **court order**...and (b) the **transfer** in question would **negatively** affect the **racial balance of that district***"	"*Either the pupil's **school district** of **residence** or the **school district** of choice may **prohibit** the **transfer** of a pupil under this article or limit the number of pupils so **transferred** if the governing board of the **district** determines that the **transfer** would **negatively** impact any of the following: (1) The **court-ordered desegregation** plan of the **district**. (2) The voluntary **desegregation** plan of the **district** that meets the criteria of Section 42249. (3) The **racial** and ethnic **balance of the district**.*"

Nevertheless, some similar policy themes and concepts seem to cross from states in one country to states in another. The negative coefficient and positive rho value indicate that the model likely

overestimates the strength of the relationship, so this estimate can be viewed as an upper bound for the effect associated with a policy being of *Foreign Origin*. (Certo et al. 2015 (2,641).

Looking at the policy fixed effects suggest that *Textual Similarity* may also be associated with policy type, but no clear pattern emerges that would generate a theoretical prediction. Many of the coefficients are statistically significant in comparison to the reference policies (mandatory bicycle helmet laws for foreign-origin policies and anti-bullying legislation for policies of domestic origin). The mix of positive and negative as well as significant and non-significant coefficients is another indication that the policies included in the sample display wide variety and are thus more helpful in drawing inferences than policies that are too similar in some way. It is not immediately clear from the results in Table 8 what types of policy attributes would be likely associated with increased *Textual Similarity* but there are many possibilities. For example, policies of greater complexity may be associated with higher levels of *Textual Similarity* due to a preference by legislators for language that has been vetted on difficult policy topics. On the other hand, policies about contentious morality issues might display lower or even bimodal similarity patterns depending on the distance of citizen or state ideologies between originator and adopter. The topic of how policy types are associated with cross-national diffusion is therefore a promising area for future research.

Hypothesis 2 examines the association between *Textual Similarity* and *Legislative Professionalism.* In contrast to expectation for this hypothesis, Model 1 shows a positive though not significant association between *Legislative Professionalism* and *Textual Similarity* in Stage Two. This means that for the policies sampled, a higher *Legislative Professionalism* rating is associated with an increase in *Textual Similarity* between laws. The finding for *Staff Levels* in Model 3 is statistically significant and implies that higher *Staff Levels* are also associated with

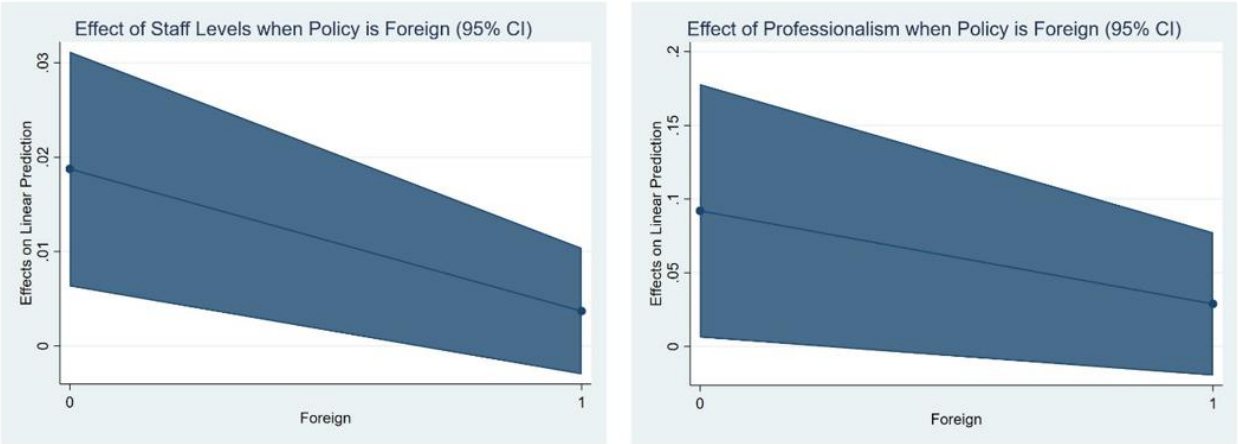
increased *Textual Similarity* in the legislation of the policy originator and the policy borrower. It appears that the activities of staff members deemed so essential by Hammond 1996 and Grossback and Peterson 2004 do indeed play an important role in researching policy history and legislative copy. But the significance of the general *Legislative Professionalism* index supports the theory that other factors within a legislature (such as the number of sponsored trips, committee breadth and depth, research budgets, etc.) are relevant too.

The significance of both *Legislative Professionalism* and *Staff Levels* coefficients attenuate in the Non-Outlier dataset (Table 26 in Appendix XIII). This suggests that the propensity to learn from policy originators is stronger among states with more professional legislatures. Neither *Session Length* nor *Term Limits* are statistically significant in any model for either group of observations. Length of time in office (measured in both number of days in session as well as years available to each policymaker to serve) does not therefore appear to be associated with a change in *Textual Similarity* between borrower and originator. The null result for *U.S. Leader has Adopted the Policy* implies that the domestic leader passing a policy is not likely to be studied so exclusively by borrowers as to be associated with a de facto reduction in *Textual Similarity*.

The interacted effects of the *Foreign* and *Legislative Professionalism* variables provide mixed support for Hypothesis 3 when comparing *Textual Similarity* between policies of foreign and domestic origin, as shown in Figure 8 below. The interacted coefficient using the *Legislative Professionalism* variable is negative but not statistically significant in Model 2. On the other hand, the interaction is statistically significant using the *Staff Levels* variable in Model 4, pointing to the idea that the *Textual Similarity* of a borrowing state's legislation to the text of the originating state falls significantly when the policy is of *Foreign Origin* and as the borrowing

state's *Staff Levels* increase. If the theorized relationship between legislative staffers and policy similarity is driving this finding, it means that greater numbers of legislative staff are critical to either creating more innovations to include, collecting more best practices from multiple sources beyond just the policy originator that appear in the final legislation, or both.

Figure 8: Interaction Effects for Professionalism and Staff Levels When Policy Is Foreign



To investigate further, I run Heckman selection models for each policy individually to assess on a case by case basis the direction of the relationship between *Legislative Professionalism* and *Textual Similarity*. The models do not have large enough sample sizes to trust the tests of statistical significance, but they provide clues about which policies drive the interaction results.[65] The models for domestic policies show a uniformly positive association between *Legislative Professionalism* and *Textual Similarity* and are listed in Table 27 of Appendix XIII. Although in contravention to Hypothesis 2, this is compelling evidence that more professional legislatures do in fact take note of the policy originator in the domestic context,

[65] As a robustness check, I additionally estimate OLS regressions. They reveal coefficients signed identically, and four out of eight cases showed the same coefficient magnitude (in the other cases, regressions often showed inflated magnitudes and significance). The individual policy models therefore likely provide a meaningful look into how the variables may be interacting in each policy. The variable *US Leader has Adopted* was dropped to avoid quasi-separation (as was *Term Limits* for primary seatbelt laws).

either because states with professional legislatures are early adopters and there are few cases available, or because the principles listed in the theory make a first adopter worthy of study by states whose legislators have the capability to do so regardless of how many additional states have passed the policy in the meantime (as suggested in Miller et al. 2018 that higher professionalism may be associated with later adoptions). The positive association also may mean that innovative content theorized to decrease *Textual Similarity* between policy originator and more professional borrower does not represent so large a portion of the content as to overwhelm the general similarity. Rather, the policies may be more similar than different even with innovation factored in, as might be the case in California's school of choice legislation, which has a similarity score of 0.60 with policy originator Arkansas.

On the other hand, two of the policies of *Foreign Origin* (graduated drivers licensing and mandatory bicycle helmets) have negative coefficients for *Legislative Professionalism*, while the other two policies of *Foreign Origin* show a positive association between these two variables (see Table 9 on the following page). The models therefore suggest only mixed support for Hypothesis 3 and prompt several important questions, namely, why would *Legislative Professionalism* sometimes be associated with more *Textual Similarity* and sometimes with less for policies of *Foreign Origin*, and what are the conditions under which one relationship or the other is expected?

Keeping in mind that these results are based on only four policies and that a broader survey of policies will clarify additional nuance, this finding hints that there are likely many phenomena at play in cross-national policy learning that exert conflicting effects on policy similarity.

Table 9: Individual Selection Models (Policies of Foreign Origin)

	Stage One Dependent Variable: Likelihood of Adoption					
STAGE ONE (Probit)	Graduated Licensing	Bicycle Helmets (Two Step)	Bicycle Helmets (Robust)	Primary Seatbelt	Right toBreastfeed (Two STep)	Right to Breastfeed (Robust)
Neighbors Adopting	−0.051	1.435***	2.445***	−0.133	−0.089	0.050
	(0.460)	(0.370)	(0.677)	(0.448)	(0.363)	(0.393)
Citizen Ideology (Scaled)	0.091	0.064	0.226	−0.200	−0.040	−0.027
	(0.137)	(0.143)	(0.258)	(0.124)	(0.094)	(0.102)
State Ideology (Scaled)	0.148	0.381**	−0.110	0.139	0.170**	0.161*
	(0.109)	(0.150)	(0.219)	(0.120)	(0.086)	(0.094)
Time (Decades)	7.171***	1.116	5.701	11.124***	2.350***	1.912**
	(2.001)	(0.818)	(4.891)	(3.037)	(0.664)	(0.746)
$Time^2$	−4.211***	−0.888*	−8.033	−2.883***	−0.535**	−0.418*
	(1.319)	(0.446)	(5.579)	(0.846)	(0.218)	(0.241)
Constant	−3.078***	−2.411***	−2.982***	−11.276***	−3.421***	−3.124***
	(0.548)	(0.305)	(0.952)	(2.650)	(0.453)	(0.504)
Observations	355	878	878	568	870	870
	Stage Two Dependent Variable: Textual Similarity					
STAGE TWO (OLS)	Graduated Licensing	Bicycle Helmets (Two Step)	Bicycle Helmets (Robust)	Primary Seatbelt	Right to Breastfeed (Two STep)	Right to Breastfeed (Robust)
Professionalism	−0.047	−0.022	−0.051*	0.058	0.126*	0.084
	(0.026)	(0.057)	(0.028)	(0.055)	(0.068)	(0.059)
Term Limits	0.001	0.030	0.017		−0.044*	−0.040
	(0.022)	(0.054)	(0.011)		(0.026)	(0.029)
Constant	0.469***	0.396***	0.420***	0.365***	0.273***	0.224***
	(0.026)	(0.046)	(0.018)	(0.051)	(0.062)	(0.061)
Observations	50	21	21	46	46	46
ρ	0.081	−0.014	−0.042	0.057	−0.685	−0.394
Inverse Mills Ratio	0.005	−0.001	−0.002	0.037	−0.059*	−0.029
	(0.019)	(0.023)	(0.003)	(0.038)	(0.033)	(0.035)

Note: *p<0.1; **p<0.05; ***p<0.01

For example, as outlined in the theory section of this chapter, lawmakers in more professional state legislatures may find policies from multiple sources abroad but create very different policies from the original even while having more access to it, while lawmakers in less professional states with fewer resources at their disposal will likely still encounter the text of the policy originator during research but will study fewer additional examples and innovate less. But there are also several compelling reasons for a positive association between *Legislative Professionalism* and *Textual Similarity*. For example, perhaps some committees and networks in professional states are so developed that they can alert legislators to desirable new policies from foreign states before actors in a less professional state would be likely to research those subjects on the internet. In such cases adoption would likely reveal higher *Textual Similarity* scores due to

the very few previous adopters to study. Higher *Textual Similarity* would be especially plausible if the first state to adopt the policy in a foreign country was also considered quite professional and its legislators produced a policy on par with the standards of legislation in the professional home state.

Table 10 helps to clarify some of the conditions under which high or low *Textual Similarity* would be expected. This paper theorizes and tests for evidence of circumstances where higher *Legislative Professionalism* would be associated with lower policy similarity. But reasons for which a legislature in a professional state might adopt a policy that is more like the policy originator even after many other states have passed a policy are also evident. This suggests that the association between *Legislative Professionalism* and policy similarity is more complex and that a more nuanced theory will not only clarify the conditions under which higher and lower similarity is expected in terms of borrowing from foreign sources and adding innovation, but it will also enable a better understanding of how the cross-national policy research and formation process differs from the same-country policy diffusion process, as well as whether the same legislative institutions are used for both or if different institutions are relied on more heavily for each type of diffusion.

Table 10: Potential Relationships between Professionalism, Adoption Timing, and Similarity for Subsequent Research

HIGH PROFESSIONALISM	**High Similarity**	**Low Similarity**
Early Adopter	- Strong research capacity leads to early detection when few other examples exist - It is a good policy with little innovation needed (potentially due to being written by a foreign state that is also highly professional)	- Good idea but text must be reworked to fit standards of professional borrowers - Research skills lead to finding many examples all synthesized into final text
Later Adopter	- More widely publicized success or failure outcomes to study - Foreign state has developed policy expertise to offer advice	- Standard reasons for policy evolution over time (many additional examples, etc.)

LOW PROFESSIONALISM	**High Similarity**	**Low Similarity**
Early Adopter	- Early discovery (perhaps due to acute policy problem, term limits, or internet research) with minimal capacity for or interest in innovation	- Legislation simplified for home use (especially if adopting from a more professional foreign originator) - Fundamentally different objective (i.e., Florida with Right to Breastfeed)
Later Adopter	- Notoriety serves to bypass need to research many other jurisdictions - More widely publicized success outcomes to study - Foreign state has developed policy expertise to offer advice	- Choosing to borrow from a neighbor or from lobbyist or model legislation

With thousands of policies passed, and tens of thousands more policies drafted every year, these different mechanisms could very easily all be happening at once. A follow up investigation could clarify further the conditions under which a highly professional legislature can be expected to be produce policy that is very similar or very different to the original policy from abroad by testing how patterns of policy passage and similarity correspond to the possibilities outlined here. Table 10 provides a starting point for further theoretical development of some of the drivers that may be associated with similarity of policy content between cross-nationally diffusing policies.

Conclusion

This chapter investigates how policy origin source and state-level institutions are associated with sub-federal policy diffusion across international borders. It finds evidence that legislators do borrow policy text across international boundaries to some extent, and also that the relationship between *Legislative Professionalism* of the policy borrower and the policy's *Textual*

Similarity to that of the policy originator may be sensitive to whether the policy is from a domestic or foreign source. Although many examples exist of state lawmakers studying legislation from foreign sources, particularly when the policy is innovative, the cross-national diffusion of policy content should be lower than same-country diffusion due to differing federal compliance requirements and linguistic norms. I theorize that the policies of more professional states demonstrate lower levels of shared policy content due to the resources available to lawmakers in professional states to gather greater numbers of best practices and add innovations to each policy. I tested hypotheses about policy *Origin Source* and *Legislative Professionalism* on a database of 294 policy adoptions across eight policies that originated in Australia, Canada, and the United States, measuring *Textual Similarity* via the cosine similarity method and using Heckman selection models to test the association between *Textual Similarity*, policy *Origin Source*, and institutions of state-level *Legislative Professionalism*.

In line with Hypothesis 1, testing showed a consistent and negative association between *Textual Similarity* of policy originator and policy borrower when the policy was of *Foreign Origin* by about fifteen percentage points, or approximately thirty-three percent. These findings hold in both the full dataset and the sample of non-outliers, indicating that verbiage changes due to the policy being of *Foreign Origin* are consistent across levels of *Legislative Professionalism* and may therefore be more structural in nature rather than related to specific policy content. Although it is not necessarily surprising that policies decrease in *Textual Similarity* when crossing foreign borders, this is a valuable contribution because it is one of the first attempts to quantify the cost of cross-national sub-federal policy transfer. It also reveals a potentially more interesting fact, which is that the transfer of policy, though reduced, seems to be very real despite the potential obstacles to crossing international borders. For example, verbal

similarity to the policy originator in primary seatbelt legislation manifests in the text of states like Kansas, which passed its law sixteen years after Victoria did:

Victoria:	Kansas:
"*A **person** shall not be **seated** in a motor **car**, that is **in motion** in a **seat** for which a **safety belt** is provided unless he is wearing the **safety belt** and it is **properly** adjusted and securely **fastened**.*"	"*Each front **seat** occupant of a passenger **car** manufactured with **safety belts**...shall have a **safety belt** properly **fastened** about such person's body at all times when the vehicle is **in motion**.*"

The findings of this study mirror this example of Victoria and Kansas by finding that, while specific language differs more when crossing international boundaries, policy themes seem quite observable and transmittable from states in one country to states in another. Future studies could investigate this fascinating example of what Boyd 2017 (554) describes as policy inspiration by focusing both on the specific text of the policies to discern what is systematically ignored in that estimated 16% decrease, and additionally on identifying the specific themes contained in each policy and how they eventually spread.

In contrast to the expectation for Hypothesis 2, the coefficient on *Legislative Professionalism* is positive and significant for models that use the full dataset, and positive but not significant for the dataset that only includes non-outliers on *Legislative Professionalism*. This indicates that *Legislative Professionalism* is positively associated with *Textual Similarity* and that the most professional states may drive the results. The analysis finds mixed support for Hypothesis 3 in that the interaction of *Foreign* and *Legislative Professionalism* is negative but not significant, and examining the association between *Textual Similarity* and *Legislative Professionalism* in each individual policy of *Foreign Origin* revealed a negative association for two policies and a positive association for two others. The finding suggests that there are additional mechanisms affecting the association between *Text Similarity* and policy *Origin Source* beyond simply a state's level of *Legislative Professionalism*. As discussed in the Results

section, these can include such factors as policy specific considerations, the effects of timing and other examples available, and the extent to which a policy originator is known for its policy and its expertise. The fact that motivations exist for more or less policy similarity for states of both high and low *Legislative Professionalism* offers an intriguing possibility to craft a theory that can better define the conditions under which high and low similarity to the text of a foreign originator's policy are expected.

This would be of particular interest for more professional states, as there are contrasting theories about whether lawmakers in professional states borrow more or less policy content when adapting policies from other sources. One hallmark of professionalism is incorporating best practices from other states' policies, as established by Shipan and Volden 2014 and Nicholson-Crotty and Carley 2016. From this perspective it may theoretically be possible to see higher similarity between a professional state's policy and the policy of a state whose practices have been deemed successful. On the other hand, professional states tend to modify previous policies through the inclusion of newly innovated clauses as theorized by Kousser 2005 and tested in Jansa et al. 2019, leading to the conclusion that policies from more innovative and professional states should have lower *Textual Similarity* to previous adopters.

These two theories present contrasting predictions about levels of text similarity, but future studies could demonstrate how these two forces may work simultaneously in more professional state legislation by examining not only the word-by-word *Textual Similarity* scores to understand which aspects of the policy are clearly borrowed copy-and-paste legislation, but also identifying aspects within the documents that are a) textually distinct yet thematically similar, and b) passages which are wholly new and therefore likely due to the increased innovative powers ascribed to professionalism. This will provide insight into why states with

higher professionalism are said to emulate both more and less and bridge a small gap in the literature, while paving the way to test the theoretical implications about the conditions under which policymakers in highly professional states are expected to borrow more or less from policy originators in foreign jurisdictions.

Overall, this chapter contributes to the study of policy diffusion by developing a theory for how shared policy content is affected when sub-national lawmakers engage in cross-national policy diffusion by borrowing policy ideas from states in other countries, and also by developing and testing a theory about how state-level legislative institutions affect the proclivity for cross-national sub-federal policy diffusion as measured by *Textual Similarity*. These steps are important in the process of better understanding the global nature of state-level policy learning. Findings suggest both that more than a few ideas are indeed compelling enough for state policymakers to look abroad to find answers, and also provide preliminary insight into how policies of foreign origin are adapted for use at home.

There are many additional questions worthy of investigation in this area. A study that continues an even deeper examination of which skills or attributes of professional state legislatures promote the study of policies in other countries would be informative since these characteristics provide access to vast sources of novel policy ideas unavailable to legislatures without these attributes. It would also be useful to see whether the advent of the internet has improved the ability of lawmakers in less professional states to research more thoroughly with fewer of the resources thought to assist lawmakers in professional states. Finally, future research that can account for diffusion influences of more states in different countries may reveal significantly greater indications of cross-national sub-federal policy diffusion than are evident in this study.

Ultimately, as the costs of international communication and collaboration continue to decline in the era of globalization, the feasibility of cross-national policy diffusion has great potential for growth. Legislators can improve the quality of life of their constituents through expanding the number of states and provinces they study in the global network of democracies from which policies are borrowed, thus accelerating the discovery and maturation of solutions to pressing policy issues. As legislators search for answers to new issues whose best practices are not yet known but which are shared by states and provinces around the world, the improved ability to observe and learn from counterparts in other countries who have made progress to viable solutions is an advantage that policymakers can use to move their home states forward and improve the lives of their citizens.

CHAPTER V
Conclusion

Cross-national policy diffusion between states and provinces remains an understudied phenomenon. Borrowing policy from states in different countries requires more effort than borrowing from local sources. It demands a research investment, a conviction that the policy will be relevant despite differing circumstances between home and abroad, and a commitment to modify the policy to suit local and federal requirements. With these three impediments to transfer between states in different countries, it seems that states would always lean towards easier and more local alternatives.

Most of what is known about state governments, and especially state legislatures, suggests that state policymakers primarily gather inspiration from examples in their own country, particularly from lawmakers in neighboring states, model legislation, states that share comparable ideology, and states from the home country that are considered worthy of emulation for many other reasons. (Nicholson-Crotty and Carly 2016, Garrett and Jansa 2015, Grossback and Peterson 2004, Boehmke 2017) All of these domestic sources of inspiration pose lower research and policy drafting costs than studying states in foreign countries. Additionally, the amount of research that most policymakers in state governments can conduct is reduced for highly politicized issues. (Mooney 1991) The literature summary in Bogenschneider et al. 2013 (264) indicates that policymakers feel that "political considerations, established patterns of information gathering, and increased partisanship of legislatures" sometimes prevent them from studying more professional research.

Despite these obstacles, evidence of sub-national learning and collaboration continues to accumulate. A classic example of state governments learning from a foreign national government is the concept of the enterprise zone, which originated in the United Kingdom under the Thatcher government and which "stirred interest among conservatives in the United States….Following its transatlantic crossing, the idea commenced a long odyssey across the American states." (Mossberger 2000 (54)) Dolowitz and Medearis 2009 (694) write that New York policymakers studied German states for suggestions on "the revision and approval of risk-based standards of contaminated lands," and that "a one-week tour to Germany's Ruhr Valley actually resulted in practitioners coming back and pushing through changes to regional planning approaches in the New Jersey State Plan." Massachusetts consulted research from Denmark about the feasibility of offshore wind stations (Motta 2015), and North Dakotan policymakers have studied Norway not only to develop their severance tax and revenue allocation system, but also to modify the state's prison reform system. (Rabe 2018 (228), Janzer 2019) At the state-to-state level, U.S. governors have signed hundreds of Sister State Agreements and Memoranda of Understanding of varying levels of commitment to learn from other states and collaborate on policy initiatives.[66]

It may be argued that cross-national learning should be more common in state-level executive branches with governors who travel between countries and act in many ways as heads of state. (McMillan 2017) In contrast, legislators generally face time constraints and reduced international contact. These factors, in addition to the previously mentioned sources of domestic inspiration, would seem to decrease legislator capacity to specialize in any one area and develop contacts that might lead them abroad in the same way as do executive branch policymakers.

[66] Ralston 2013 details the substantive progress on environmental policy that developed from meaningful partnerships between five pairs of U.S. states and German Länder between 1995 and 2004 alone.

And yet, evidence of cross-national learning appears regularly at the legislative level. Evidence abounds of states and provinces in Australia, Canada, China, and Germany passing legislation that originated in a U.S. state legislature. For example, legislation establishing guidelines for when and how to report child abuse originated in U.S. legislatures in the 1960s and spread to Canadian provinces and Australian states within five years. (Matthews and Kenny 2008) A personal interview with a delegate from the *Landtag* of the German state of North Rhine-Westphalia (2017) indicated that the representatives of that legislative body had specifically studied legislation in several U.S. states regarding online universities in the process of developing their own legislation on the topic. Stalking and cyberstalking legislation spread within just two years to Canadian provinces and three years to Australian states after several stalking murders in the United States in the early 1990s achieved global media attention and brought similar crimes into the spotlight in other countries. (Watson 2005)

U.S. states seem likely serve as role models for states in other countries around the world since the top ten wealthiest U.S. states all have GDPs that place them within the top forty wealthiest *countries* in the world.[67] California's GDP places it in the top ten of the world's largest economies, and states in China, France, Germany, Japan, the United Kingdom, and the U.S. all had GDPs in the top 20 largest national economies in 2017.[68] But evidence suggests that U.S. states, despite often being economically larger entities than most of their sub-national peers around the world, have policymakers who still observe and learn from states in other countries. Examples of this date back to at least the 1850s, with the Australian ballot example mentioned in

[67] 2019 current dollars, International Monetary Fund and United States Bureau of Economic Analysis
[68] Fifteen states, provinces, or administrative divisions had larger GDPs than that of Switzerland, the 20th largest country (at $679 billion), including: Bavaria, California, City of London, Florida, Guangdong, Ile-de-France (Parisian region), Illinois, Jiangsu, New York, North-Rhine Westphalia, Pennsylvania, Shandong, Texas, Tokyo, and Zhejiang. Source: IMF World Economic Outlook. Accessed 4 September 2018.

Chapter I. Dolowitz and Medearis (2009, 694) suggest that learning from European models was a popular strategy before World War Two. They observe:

> *"Between the 1980s and 1930s the US and Europe shared such an epistemic community - especially among environmentalists and planners. American academicians were regularly looking to Europe for urban planning and environmental lessons. 'Grand tours' to European capitals were organized to study park designs, transportation planning, and taxation policies."*

The authors conclude by noting that "the U.S. university system, the introduction of kindergartens, and modern American forestry and natural resources management practices were imported from Germany under similar conditions." Dolowitz and Medearis argue that the post-war hegemony of the United States reduced the perceived importance of studying examples in many (now war-torn) foreign countries after World War Two. But later examples of policy germinating in state legislatures in foreign countries and subsequently being adopted in U.S. legislatures still arise. Twentieth-century examples include adopting policies on mandatory motorcycle helmets that originated in Victoria, Australia, and graduated drivers licensing systems first passed in the province of Ontario. Moving into the 21st century, the National Conference of State Legislatures published a years-long study spearheaded by Maryland but conducted jointly by several U.S. states to study the best practices of K-12 education in states around the world and implement best practices at home (as alluded to in earlier chapters). The commission analyzed top-performing school systems in foreign cities, provinces, and countries (including Finland, Ontario, Shanghai, Singapore, Alberta, and other regions) to develop a final recommendation based on four principles around which to target improvement. To date the study has guided legislation in at least five U.S. states. (Exstrom 2019) States have clearly been

learning from their foreign counterparts for many decades and continue to see the benefits moving forward.

Research Question and Summary of Findings

The potential benefits from observing policy innovations in states in other countries are clear, but so too are the challenges. What, therefore, explains the conditions under which state policymakers look abroad versus looking at home for policy inspiration? What factors make this practice more or less likely? In what ways is the foreign context similar to or different from same-country state-level policy diffusion? And, if state legislatures in other countries produce legislation that is worthy of emulation and which could be of value to U.S. states, why does cross-national sub-federal policy diffusion not happen more frequently? What are the most important constraints that affect the ability for policymakers to borrow useful policies across international borders?

Neither the current literature on policy transfer nor the literature on policy diffusion make much reference to cross-national learning at the state or provincial level. Boyd 2017 (549) develops a framework that points to technical learning, the desire to conform to external norms and values, and political benchmarking and bandwagoning as the key drivers of cross-national collaboration on climate change policies between U.S. states and Canadian provinces. Ralston 2013 claims that the theories of multilevel governance (see Hooghe and Marks 1996 and 2001) and policy entrepreneurialism (see, for example, Mintrom 1997) are influential in helping policymakers discover that their peers in states in other countries are working on similar topics and may have useful information. Steinbacher 2018 follows Ralston 2013 and Boyd 2017 in suggesting that the theory of policy transfer as conceptualized in Dolowitz and Marsh 1996 and Dolowitz and Marsh 2000 is applicable at the sub-national level, in that learning from states in

other countries generally arises by singular actors looking for best practices to improve a policy that is not working well, or looking to implement a program for which no policy is yet in place. (Rose 1991, Newmark 2002 (154))

However, while the previously mentioned studies on policy transfer (especially Ralston 2013 and Steinbacher 2018) rely on these theories to explain specific case studies, these theories do not attempt to explain what internal factors characteristic of sub-national units drive cross-national diffusion systematically. The policy diffusion literature identifies several institutional features likely to affect policy diffusion (for example, committee strength, lobbying strength, professional networks, and term limits),[69] as well as types of peer states (such as neighbors, economic competitors, ideological counterparts, states identified by their citizens as similar, etc.)[70] who might serve as domestic sources of policy learning. However, these theories are not extended to the case of actors transferring policies between states in different countries.

I theorize, and this project has shown, that cross-national sub-national policy diffusion, while certainly bolstered by individual actors as advocated in policy transfer theory, manifests on a global scale consistently enough to suggest the presence of structures promoting cross-national diffusion that are more institutionalized than the actor-oriented policy transfer literature contends. I draw from the policy diffusion literature to develop an explanation for cross-national sub-federal policy diffusion that takes steps to identify 1) why legislators borrow cross-nationally, 2) who they borrow from, and 3) the processes by which they borrow.

To do this I first theorize that instances of cross-national policy diffusion aggregate into networks whose connections represent likely pathways for policy diffusion between states in different countries. Modeling policy borrowing in this fashion tests whether evidence favors the

[69] Mooney 1993, Shipan and Volden 2006, Balla 2001, Miller et al. 2018, and Kousser 2005
[70] Mallinson 2019, Berry and Baybeck 2005, Grossback and Peterson 2004, and Bricker and LaCombe 2020

single actor or policy entrepreneur model of policy adaptation, or alternatively the structural framework of policy diffusion that would justify subsequent testing into the institutional features associated with increased proclivity toward this type of policy learning and borrowing. I then study which state government institutions may be associated with cross-national diffusion. I theorize that *Term Limits* are associated with increased likelihood of looking abroad rather than looking at home in order to find novel and pre-formatted policy ideas that will stand a higher chance of passing through the legislature. This variable has been shown to be an important predictor of intra-American borrowing (Miller et al. 2018) and provides a starting point for discerning the conditions under which policymakers might look abroad versus looking to a neighbor or some other role model.

I continue by expanding my theory about institutional features associated with cross-national diffusion of policy content. I theorize that legislators must modify policies borrowed from abroad more than policies borrowed from same-country examples in order to make them compliant with federal regulations and different state legal norms. I also theorize that a state's *Legislative Professionalism* affects both the policy research process and the policy formulation process when legislators are practicing cross-national policy transfer. More professional states have more capacity and incentive to research more polices during the policy learning stage, and to add more innovations during the policy formation stage, thus resulting in a policy that looks less similar to any of the examples than a policy formed in a less professional state. I theorize that this should be amplified in the foreign context due to the increased number of examples to study and the fact that more professional states have far greater capacity for more in-depth foreign research due to increased research staffs and budgets and potentially more access to

foreign contacts through professional organizations, personal contacts, and government committees focused on international policy.

The first chapter finds evidence that lawmakers do transfer policies between countries in a pattern that is different than what would be expected by chance. It therefore supports the hypothesis that cross-national diffusion happens more methodically than what would be expected if driven purely by isolated actors independently creating similar policies. It also finds that states are connected in a network where more professional states are at the center and smaller states are linked to them in a pattern suggesting that both large and economically powerful states, as well as smaller and less professional states learn directly from large states. In this way, cross-national policy diffusion patterns are similar to the networks solely consisting of U.S. states found in Desmarais et al. 2015 and Boehmke et al. 2017 where many states of all sizes and capacities observe a smaller group of leader states.

The policies that proliferate through the U.S. state legislatures indicate a tendency toward learning and emulation as opposed to competition or coercion. This provides insight into when a foreign originator may be valued over a neighbor, an ideological counterpart, or model legislation from the United States. The examples of graduated drivers licensing, mandatory bicycle helmets for minors, and primary seatbelt legislation indicate that lawmakers may be more likely to adopt policies of foreign origin when benefits are clearly measurable, when many studies exist, and, most likely, for simpler concepts that can integrate well and in situations where no clear best practice is established in the United States, even among a state's role models. These findings corroborate the factors that best foster policy transfer described by Rose 1993 (132), which are policies with single goals that address simpler problems, and which have direct relationships between problem and solution. Rose also supposes that actors are more likely to

engage in cross-national policy transfer when there are few perceived side effects, copious information on implementation, and good ability to predict success outcomes.

The second chapter supports the findings in Miller et al. 2018 with respect to the institution of *Term Limits* and same-country diffusion processes, but reveals no strong findings of a significant association between *Term Limits* and a *Likelihood of Adopting* a policy from a state in a foreign country. In contrast to the findings that states with term limits are associated with borrowing policies that originated in the United States sooner than non-term-limited states, the study found that the likelihood of adopting a policy of *Foreign Origin* is positively associated with the *Proportion of Foreign States* that have adopted the policy for both term-limited and non-term-limited states, suggesting that states with term limits adopt these policies no sooner than states without term limits. Thus, legislators in term-limited states do not appear to be less interested than the legislators in non-term-limited states in learning from the experiences that foreign states and provinces have had with the implementation of the policy. This suggests that processes for researching and borrowing policies of foreign origin differ from those for policies of domestic origin. The process of borrowing policies of *Foreign Origin* appears to be less influenced by *Term Limits* and allows more opportunity for studying success outcomes in foreign states and provinces before deciding to adopt.

The third chapter finds that a state's level of *Legislative Professionalism* is positively associated with *Textual Similarity* of the state's policy to that of the policy originator when the policy is of domestic origin, but finds either no relationship or a negative association when the policy is of *Foreign Origin*. It also finds a negative interaction between *Staff Levels* and similarity to policies of *Foreign Origin*. This suggests that, despite more professional states' greatly increased capacities for finding policies of foreign origin, that they either do not study

them whatsoever (which seems unlikely), or that they do find and study them but add innovative ideas and combine best practices from other sources to create products that are less like the policy originator than other states who do not innovate as much. This gives rise to several intriguing research questions to better understand the relationships between professionalism, innovation, and capacity for cross-national policy learning that should be explored more thoroughly.

Lastly, the study also finds lower levels of *Textual Similarity* between borrowed policies when a policy is developed abroad compared to when it originates in the same country as the state who borrows it. This preliminary effort to quantify the extent to which borrowing policy from abroad results in changes to policy content suggests that cross-national borrowing represents a higher opportunity cost to legislators in terms of more investment being needed into modifying a policy for home use. However, the results also indicate that themes from the earliest policies abroad are often maintained in policies that are passed by much later adopters in the United States. Policymakers therefore appear to deem concepts pioneered abroad as useful and applicable to their home jurisdiction on a regular basis.

External Validity

It is important to note how the states and provinces selected for this study may influence the findings. The most important factors that could affect external validity from this perspective are the degree to which sharing a common language and which sharing a common law system and British colonial heritage predisposes these jurisdictions to study each other instead of other sources. For example, studying the patterns between the states and provinces in Australia, Canada, and the United States reveals that proximity is not necessary for cross-national diffusion, as many of the examples of policies originating abroad and subsequently being

adopted by states in a different country were between Australian originators and U.S. borrowers. However, it will be necessary to examine cross-national patterns of diffusion between U.S. states and states in non-English-speaking and non-commonwealth countries to ascertain if these findings are externally valid. Examples such as the U.S. states studying German *Länder* for energy policy and the fervent study that scholars and U.S. states alike have undertaken of the economic policies of the country and city-states nicknamed the Asian tigers[71] suggest that policy learning is not limited to English-speaking jurisdictions. However, examples of U.S. states learning from states in non-OECD countries are currently scarce in the literature. The study undertaken here will provide a good baseline from which to assess the volume of cross-national learning between states in non-commonwealth countries, states in non-western countries, and states in non-OECD countries.

These findings should also be viewed considering the additional national and sub-national factors that may influence policy diffusion between states in general and between Australian, Canadian, and U.S. jurisdictions in particular. One factor that was not investigated here was the degree to which cross-national diffusion between Canadian provinces and U.S. states may be increased due to sharing of borders. It seems likely that this increases diffusion between these governments. The degree of autonomy that states have from their federal government is also a factor that should be investigated to determine how cross-national sub-national diffusion depends on the extent to which a state or province is authorized to legislate on a policy topic.

[71] This nickname refers to South Korea, Taiwan, Hong Kong, and Singapore, which together represent four jurisdictions widely praised for their rapid economic growth at the end of the 20th century. A search of the University of Michigan library database for the exact phrase "Asian Tigers" (excluding all hits for the Asian tiger mosquito) yields 41 journal articles between 1975 and 1990, 2,845 articles between 1990 and 2005, and 4,658 articles written between 2005 and 2020. This indicates a steady fascination with the economic lessons that can be drawn from these non-western governments.

Another consideration is the degree to which a state or province's federal government or state-level executive branch has already legislated on the issue and whether or how that affects subsequent state-level legislation. For example, Australia was the only country in the three countries studied here which made it a right to breastfeed in public before any of its states did, yet all seven Australian states and territories subsequently passed their own laws on this topic. The empirical tests in Chapter III and Chapter IV work to control for the latent influences of gubernatorial or bureaucratic policies that may have already been in place in some states by including state and policy random effects in Chapter III and policy fixed effects in Chapter IV. However, as Shipan and Volden discuss in their 2006 paper on vertical diffusion between local and state governments, more investigation into when policies passed at a different level of government—whether from above or below—result in the actor or actors under observation (in this case, state legislators) deciding that no policy adoption is necessary would be a welcome contribution to the literature.

Finally, interest groups and other non-governmental organizations (NGOs) likely also play a role in both promoting and hindering diffusion of policies from abroad. Professional groups such as the Insurance Institute of Highway Safety (IIHS) and the International Association of Engineers develop expertise in how the policies of interest to them are carried out around the world, and as a result may both advocate for policies they support and against policies they oppose.[72] Organizations dedicated to governance such as the Commonwealth Parliamentary Organization, the National Conference of State Legislatures, and the International Association of

[72] See section on graduated drivers licensing in Appendix IX; the International Institute of Highway Safety was a strong proponent of passing substantive graduated licensing systems and worked to make sure that new state laws did not simply pass symbolic legislation. It therefore seems likely that the IIHS would have relied on claims supported by evidence of best and worst practices from the graduated drivers licensing programs implemented in jurisdictions in other countries.

Court Administration simultaneously promote best practices like the aforementioned professional groups, while also going one step further to regularly put legislators, executive officials, and bureaucrats in contact to exchange policy ideas. Lastly, coalitions of sub-national governments such as the C40 Climate Leadership Group, the United Cities and Local Governments, and City Alliance (Swiney 2020) also likely foster diffusion, whether between state-level governments or from city governments up to state governments (as evidence from Shipan and Volden 2006 also suggests is common).

It seems likely therefore that non-government organizations play a role in shaping the dataset of this study in terms of both the policies that were passed in some states, as well as in terms of policies that were not passed in others Though the expected effect of professional organizations, non-profits, and other non-governmental organizations is to generally increase cross-national policy diffusion rather than decrease it due to the known ability for NGOs to develop specialist knowledge in an area that makes them more likely to be familiar with successful policies in other jurisdictions, it must be noted that this study is not able to distinguish the cross-national policy diffusion attributable to legislator research or personal contacts from the diffusion attributable to NGO actors who advocated for a policy they discovered from a different country.

Nonetheless, the studies here have several features that suggest the results are externally valid and applicable to other groups of states. First, the hallmarks of legislator interdependence likely to increase studying of states in other countries seem to exist in sub-national states all over the world. A review of the international roster for the annual Legislative Summit of the National Conference of State Legislatures indicates that the number of attending delegates from states in other countries more than doubled between 1998 and 2017. This suggests that legislators from

sub-national jurisdictions around the world find increased benefit from cross-national connections over time as more and more opportunities for collaboration arise. This example demonstrates both a rationale and a conduit for cross-national learning to occur between states in far more countries than just the three in this study.

Second, many other states around the world have the capacity and professionalism that seem to increase the benefits of cross-national learning, meaning they are likely to participate as well. States, provinces, and prefectures like North Rhine-Westphalia and Bavaria, Zhejiang, Rio de Janeiro and São Paulo,[73] Tokyo,[74] Lagos (Nigeria), Gyeonggi (South Korea), and Maharashtra (India) are economic drivers of their countries and in many cases display high levels of professionalism that would enable them to study examples in other parts of the world and adapt them for use at home. Developing a measurement of professionalism that could standardize across states in different countries would greatly assist in measuring its effect on international policy learning, but there is no doubt that states around the world possess many of the capacities of legislatures in Australia, Canada, and the United States that are theorized to be important. Therefore, the results in these studies should be useful in furthering scholarly understanding of cross-national diffusion between other states and should guide the generation of theories and hypotheses about cross-national diffusion between larger and more diverse groups of sub-national units.

Lastly, these findings should be externally valid because it is expected that more policy ideas flow outward from U.S. states to other jurisdictions abroad than flow inward to U.S. states, which was the primary focus of this study. The United States has almost four times as many

[73] The states of Rio de Janeiro and São Paulo (both of which contain cities by the same name) are, in addition to Minas Geris and Espírito Santo, considered two of the states most responsible for driving the Brazilian economy.
[74] Tokyo is another example of a jurisdiction where a city and a prefecture share the same name.

jurisdictions as Canada and more than seven times as many jurisdictions as Australia. By sheer numbers alone it is almost inevitable that the U.S. states are producing more policy ideas in the aggregate than arise from other systems with far fewer jurisdictions. When coupled with the high levels of state autonomy and authority that the U.S. states have inherited from a system that heavily prioritizes states' rights compared to other federal systems, it seems likely that a more thorough examination of policy borrowing in Canada or Australia or sub-national jurisdictions in many other countries would reveal as many or more examples of policies borrowed from the U.S. states as this project was able to find of U.S. states borrowing from abroad.

Overall, therefore, the finding that cross-national diffusion occurs systematically seems applicable to a broader range of states and provinces than just those in Australia, Canada, and the United States. The findings suggest that state-level institutions and attributes are associated with propensity for international learning in ways that invite additional investigation. The historical evidence mentioned in Chapter I and empirical evidence from three different quantitative studies relying on vastly different methodologies in Chapters II through IV all point to cross-national diffusion occurring between U.S. states and states and provinces in different countries.

Opportunities for Future Research

These findings present several fruitful possibilities for future research. The first would be to investigate further the research practices that promote or discourage cross-national policy learning. A finding that cross-national learning is very labor intensive and depends on having large research staffs and the capacity for international site visits would indicate a very different reason for the volume of cross-national learning currently underway than if cross-national research can be satisfactorily completed over the internet and via teleconferencing. A second avenue of exploration would be to better understand how policies change when legislators

transfer them from a foreign context to a domestic context. A study examining whether the 30% reduction in similarity between the policy originator and the policy borrower in Chapter IV is due more to adding additional clauses to comply with federal legislation but in all other ways is quite similar, or, rather, is due to significant changes in the policy itself, would shed light on the degree to which policymakers truly transfer policies between countries and therefore the extent to which cross-national learning (or emulation) may be occurring.

Another factor that should be investigated is the extent to which policy characteristics affect adoption outcomes. It would be very useful to investigate whether same-country and cross-national policy diffusion vary based on policy characteristics such as complexity, ideological leaning or moral stance, provision of public or private goods, and many other dimensions. Developing a system to categorize policies by complexity, number of studies conducted, publicity of results, etc. would enable a more accurate investigation by integrating a more nuanced acknowledgement of policy variety into the models than the fixed and random effects presented in Chapters III and IV.

Testing the external validity of these findings by increasing the number of states in different countries studied, as well as the number of policies included, will provide better data from which to make improved conclusions. As discussed in the previous section, one promising first foray along these lines would be to conduct the same study on policies that lawmakers adapted from U.S. states to Canadian and Australian provinces and states. This would be useful because it is theorized that these states and provinces borrow at least as many ideas from U.S. states as U.S. state legislators have borrowed from them. Data limitations on the legislative professionalism of these jurisdictions prevented their being included in this study. However, this information could be readily assembled using the same sorts of data used for the Squire Index

and the Bowen and Greene index in terms of legislator salaries, session length, and staff volumes. Studying outbound cross-national policy learning from the United States would provide great benefit in terms of enhancing our understanding of cross-national sub-national diffusion. A study incorporating Australian and Canadian states and provinces would also provide useful variation for testing a more nuanced theory of the association between *Legislative Professionalism* and cross-national policy borrowing, as described in Chapter IV.

Developing a cross-national index of *Citizen Ideology* and *State Ideology* would permit for examination of whether a state's political leanings are associated with any effect on who a state's policymakers study abroad. This is an attribute that has been found to be influential in determining who states look to for examples within their own country. (Grossback and Peterson 2004) It was not found to be a driving factor in Chapter III, potentially because the policies included were not dramatically liberal or conservative and therefore may have been more likely to be adopted by states of any ideology. However, a promising avenue of research is to more thoroughly investigate if this is also an important predictor of cross-national diffusion. Systematizing a measure of ideology for states and provinces in other countries would permit for an investigation of how the ideology of both borrowing and lending states are associated with cross-national policy adoption, both in terms of which policies are taken across international borders and where they come from, as well as which states are most likely to adopt them.

A promising and related avenue of future research would be to investigate the conditions under which borrowing policy (measured in either broad policy concepts, specific legislative text, or both) from states in other countries instead of states in the same country is associated with more political risk to legislators considering the policy transfer. Legislators are known to be risk averse and scholars such as Rose 1991, Dolowitz and Marsh 2000, and Parinandi 2020

suggest that policy borrowing may be one way to justify actions and decrease risk by demonstrating how a policy has worked well in a third-party example. Thus, it would be useful to examine the extent to which third-party states in different countries are seen as more or less credible and how this affects cross-national sub-national diffusion. As stated in Chapter IV, an argument can be made supporting either position. The suggestion in the preceding paragraph to measure the political ideologies of states in different countries would greatly facilitate this research, as policymakers' perceptions of which states are credible are likely tied to the extent to which the ideology of the policymakers in both states is similar. Examining how risky borrowing policies from states in foreign countries is perceived to be, especially when the ideological similarity of state-and-province pairs is accounted for, will provide great insight into the extent that policymakers view policies from foreign states as transferable to home states, and therefore their usefulness.

Categorizing policies by the extent to which success outcomes can be measured would be also be helpful for this. Such a measurement is a concept that Shipan and Volden 2008 frame as both important and difficult. Creating a dataset that standardizes success measures across many policy categories instead of just anti-smoking legislation (Shipan and Volden 2008) or renewable portfolio standards (Nicholson-Crotty and Carley 2016) would be an even greater challenge. Nonetheless, studies could investigate the extent to which cross-national policy diffusion is associated with either concrete success outcomes (in proactive policies with a stated objective) or perceived success outcomes (such as through average sentiment scores in studies and news media published about the policy). Studying how these outcomes in foreign states and provinces, as well as potentially from same-country states who adopt later, are associated with changes in policy adoption behavior would greatly improve scholarly understanding of the extent to which

policy outcomes in foreign and domestic jurisdictions are valued by legislators crafting policy. This in turn will provide great insight into the perceived risks of borrowing policies of foreign origin.

Contributions

This project thus advances the policy diffusion literature in terms of developing a theory of systemic cross-national sub-national policy diffusion that theorizes about the conditions under which state policymakers will look abroad rather than looking to domestic role models, as well as the processes by which they undertake this course of study. The findings add perspective to current theories and understanding of policy diffusion by showing that cross-national diffusion should be considered when discussing policy origins, both for an accurate understanding of policy evolution and also in order to attribute the proper characteristics to borrowing legislatures. For example, if New York is credited with creating ten policies that it in fact researched and imported from abroad, scholars may overestimate the ability of the New York legislature to formulate very innovative policies, while at the same time underestimating its capability to discover successful policies abroad and adapt them for use at home. These are two separate legislative processes that should not be blurred together.

It is therefore important to incorporate the search for foreign examples into scholarly understanding of legislator policy research behavior because this reveals another facet of legislator creativity and drive to construct useful policy while operating under pressing political and time constraints. With studies such as that of Carley and Nicholson-Crotty published as recently as 2018 that point to extreme variation in the number and type of sources consulted, this is an area of policy diffusion research with active theoretical questions about how multiple sources of inspiration are synthesized into a single policy. These theories can generate both

quantitatively testable hypotheses and call for very comprehensive qualitative case studies that can provide insight into legislator and staff strategies for policy research.

The research presented here also contributes by highlighting the importance of legislative professionalism in the cross-national context in addition to the same-country context in which it is often considered. It suggests that many factors drive policy similarity between states in different countries, and that these factors may also be affected by the professionalism of at least the borrowing state and possibly also the originating state. More work will be able to properly isolate and identify how legislative professionalism and its contributing elements promote access to foreign policy concepts, as well as how professionalism leads to changes that ultimately render the policy less similar to the policy originator.

From a methodological perspective, this project integrates several methods and applies them to new contexts. I use network analysis to create a network that incorporates states from three countries instead of just one country, thereby opening the possibility to uncover new relationships between states outside national boundaries. I also use generalized linear mixed models that incorporate time splines to model states and policies as random effects whose slopes can vary. This provides valuable insight into the unpredictable influence of individual states and policies on adoption outcomes. In Chapter IV, I apply text analysis to the comparison of policy verbiage in states in different countries, and explore the delineation needed between theories of policy innovation and copy-and-paste policymaking to better identify if professional states innovate more or emulate more. I also contribute more evidence to the suitability of Heckman selection models for use in policy diffusion studies based on their ability to counter the selection bias problem that is endemic to policy diffusion studies where many states' policy similarities cannot be known due to those states never adopting the policy. Lastly, this project also

contributes methodologically by demonstrating the need for a Heckman selection model that can account for repeated events and varying hazard rates in the first stage of the model due to the changing likelihoods of policy adoption based on the number of other states that have adopted.

Implications

The evidence of cross-national diffusion documented in this project has very positive implications for the state-level policymaking process and its impact on human life worldwide. It means that successful policy ideas are almost certainly created and discovered faster than they would have been if diffusion were not occurring. Associate Justice of the Supreme Court Louis Brandeis was the first to describe the U.S. states as laboratories of democracy in 1932 and did so in an explanation of how vital it was that the Supreme Court carefully consider the "serious consequences" of denying a state the right to experiment "in things social and economic." (New State Ice Co. v. Liebmann) State-level experimentation enables many different policy ideas to be tried and good ones to be discovered faster. Naturally, increasing the number of experimenting actors allows lawmakers to try more policies in shorter succession and thus for the best ideas to be discovered more rapidly and diffuse more rapidly among all states who can benefit from them. Just as fifty U.S. states are better able to test multiple concepts and arrive at successful practices faster than the thirteen original colonies would be able to do, so too are seventy states and provinces from Australia, Canada, and the United States better able to test more ideas and arrive at policy solutions faster than just fifty American ones. When it comes to policy innovation, a larger network is almost certain to be more helpful than a smaller network, provided that policymakers can study and learn from their foreign counterparts.

A question that has been raised from time to time is whether state legislators can become unduly influenced by foreign ideas in the study of policy from foreign states and provinces,

especially by private interests. Although this does not seem likely to be a problem when legislators borrow an innovative policy that is soon to become commonplace (such as bike sharing or graduated drivers licensing), it may be more of a concern when legislators actually travel to foreign locales, especially if their trips are purchased by special interest groups. Some constituents fear these trips might make them spend excessive amounts of taxpayer dollars, become beholden to organizations that sponsor the trips, or develop a new policy perspective that unfairly prioritizes a foreign influence. For example, in December 2019 a group of Minnesotan state legislators traveled to Israel and became the subject of an editorial published in the *Minnesota Star Tribune* that noted:

> *"House Speaker Melissa Hortman is a prominent legislator on the tour. In a statement, she said she wants to learn about 'the complex political and security issues facing Israel and the region.' Such language is often code for justifying Israel's brutal occupation of Palestinian territory, including the arrest and imprisonment without trial of Palestinians – even children. It is also used to justify controversial laws aggressively promoted by Israel's lobbyists. Such laws aim to discourage American citizens from participating in the international BDS (boycott, divest, sanction) movement to protest Israel's treatment of Palestinians. Sadly, Minnesota is one of 27 states that have passed such laws."*

Ultimately, the possibilities alluded to in this editorial for foreign interest groups to sway policy are a separate issue from the potential benefit from studying and observing cross-national policy. The ability of foreign interest groups and lobbies to sway legislation is a serious threat that should not be underestimated. However, evidence suggests that this problem threatens many,

if not most policy areas today, not just topics that are overtly related to foreign policy.[75] Policymakers and constituents alike should therefore consider it a crucial duty to scrutinize *all* policy areas for evidence of either domestic or foreign corruption, and should not discount the benefits to be gained from cross-national learning out of a concern that cross-national policy is the primary bastion of negative foreign interference. In the case of the Minnesota state legislators traveling to Israel, the legislators themselves responded a week later with an editorial in the *Tribune* entitled "Yes, we state legislators belong in the Mideast. Here's why we're there," in which the seven co-authoring legislators addressed the issue of trip funding and noted that

> *"To be clear, all of us are participating in this bipartisan trip using our own personal funds. Since the next legislative session is not set to begin until February, none of us are taking time away from our responsibilities at the State Capitol to be here….On Monday we received briefings from the talented professionals of companies with a significant Minnesota presence about the remarkable breakthroughs driven by their Israeli researchers. Similarly, we met with experts in cybersecurity and data privacy whose work is critical for our state's economy. It was fascinating to learn more about the Israeli health care system…We look forward to returning home with insights and understanding we could not have gained without coming here." (Kiel et al. 2019)*

Another normative concern that may be expressed in the United States about policies that come from other countries is that perhaps the policies are in some way contrary to an "American" way of life. American policymakers have occasionally been either critiqued or

[75] Several (though likely not all) of the conduits for foreign interest groups to donate to candidates and causes through dark-money political groups, ballot measure support, and super PACs are well documented (Sozan 2019).

praised (depending on the source) for engaging in *American exceptionalism*, described in Keleman 2014 as "the notion that the United States is unique among all other nations, and that because of its distinctive history, culture, and values the normal rules and historical forces that apply in other countries do not apply in America…and that policies, institutions, and values found in Europe [and presumably the rest of the world] cannot or should not take root in the United States." This dissertation shows that, not only have many European ideas and policies benefitted U.S. citizens (such as Dutch bike sharing programs, German sanitization systems, and Norwegian energy resource policies), but also that many policies and ideas from other cities, states, and countries around the world have been of great benefit to the United States as well. Examples include such policies as bottle deposit laws from British Columbia,[76] Cape Town sealing from South Africa's Cape Province,[77] and, in a timely example, even public use and promotion of face masks during health crises, which was pioneered in China to stop the spread of airborne sickness during the Manchurian plague outbreak of 1910.[78]

All of these policies of foreign origin have been embraced in the United States in levels that range from pockets of stout support in the limited areas where the policy is relevant and

[76] The Container Recycling Institute notes that "British Columbia's beverage container recovery system, enacted in 1970, is the oldest legislated deposit-return system in North America."

[77] Cape Town sealing, also known as Cape sealing, is the process of paving over roads with Cape seal (a mix of tar and gravel) to extend the service life of the road. Consisting of "a chip seal covered by a slurry seal or a microsurface," the process was developed in Cape Province in South Africa in 1950 and spread around the world due to its ability to provide "a smooth, dense surface, one having good skid resistance and a relatively long service life." (Solaimanian and Kennedy 1998)

[78] The use of the modern medical face mask to fight plague was pioneered by Liande Wu, an ethnically Chinese and Cambridge-educated doctor from Malaysia appointed by the Chinese imperial court to oversee efforts to fight the Manchurian plague epidemic of 1910, which had a 100% mortality rate among those infected. (Lynteris 2018). Wu theorized that the virus was airborne instead of being carried by rats and fleas, and that masks used in surgery to prevent doctors from infecting patients could also be used to prevent disease particles from spreading among plague victims. His innovation gained international traction when a French colleague who was also the head of the Beiyang Medical College refused to wear a mask and died within two days of being exposed to the plague. (Lei 2014, Jenne 2018) Wu further assisted the international spread of the innovation by presenting a summary of his findings three months later at the International Plague Conference in modern-day Shenyang. (Jenne 2018) Writing for the New York Times, Lynteris 2020 notes that "when the Spanish influenza struck in 1918, face masks were readily adopted" around the world.

therefore in use (the aforementioned Norwegian energy resource policies in North Dakota), to acceptance that is widespread and commonplace (primary seatbelt laws and graduated drivers licensing systems). To borrow the phrasing used in Keleman 2014, these innovations and many others like them are evidence that "policies, institutions, and values" from both Europe and the rest of the world are quite capable of taking root in the United States. So many concepts and policies of foreign origin have become ingrained in U.S. culture that the argument that ideas from foreign states and countries are not valuable to, or are even contrary to American way of life seems to be predicated on a lack of understanding of how many commonly accepted ideas stem from states and countries abroad. It would be difficult to find an American citizen who would argue that either kindergarten or the Australian secret ballot system, for example, should *not* have been instituted in the United States. Instead, this project shows that policymakers in states and provinces around the world legislate on similar issues and develop policy innovations which are of widespread benefit to humans in jurisdictions far beyond where the ideas originated, including such jurisdictions as the U.S. states.

Policy Recommendations

These findings support the conclusion that cross-national policy proliferation has great potential to improve quality of life, but also requires more effort for legislators to study and borrow. Therefore, several policy steps can be taken to maximize the sharing of best practices between cross-national jurisdictions. These can be summarized into four specific policy recommendations. The first is that sub-national government policymakers should integrate at least a small amount of news about policy developments in other parts of the world into their standard process of learning about current events in order to reap the benefits of policy innovation abroad for use at home. The impressive volume of innovative sub-national policies

that originate outside of the United States demonstrates that very successful ideas regularly begin in other parts of the world and that legislators who discover these policies first stand to gain the most legislative credit for their transfer to the home state.

Second, legislators and lobbyists alike should incorporate at least a cursory look at a policy's global history into their research process for any specific bill if they are not doing so already (as theorized in Chapter IV). While it is true that legislators are pressed for time and cannot investigate any one policy topic as thoroughly as a bureaucrat might be able to, it is also the case that legislators conduct more research when drafting legislation than during any other activity and use more outside sources (as opposed to contacts in the legislature) for bill formation than for any other activity. (Mooney 1991) Furthermore, many legislators display genuine desire to craft the best policy possible that will do the most good and which is as airtight as possible against lawsuits. (Bogenschneider et al. 2019) Researching policies from abroad can accomplish this by approaching old policy problems from new perspectives and guaranteeing that the legislator's proposed policy direction has the chance to be *globally* cutting edge, not just at the fore of domestic solutions to the topic. Nonprofits and other policy specialist organizations could make it vastly more efficient for legislators to access this research during the policymaking process. Many such organizations do this already and presumably this results in policies that lawmakers have vetted more thoroughly and whose outcomes in various settings can be more clearly predicted. This decreases the personal risk faced by legislators of proposing a policy whose outcome is uncertain, so any steps taken to facilitate this will be beneficial for both legislators and policy activists.

Third, as suggested in the preceding two paragraphs, organizations that act as general information clearinghouses for state legislatures and executive branches on a wide array of

policy topics should formalize their efforts to collect and distribute information about beneficial policy developments abroad. The additional time and resources involved in collecting cross-national information on policies that solve important problems facing constituents range from trivial (for a cursory google search) to exorbitant (for an out-of-country site visit). However, collecting information about a policy does not have to be such a barrier. Organizations like the National Conference of State Legislatures, the Uniform Law Commission, and state legislative research agencies could begin to more systematically include policy explanations for states in other countries on their websites in order to give legislators all the information that could benefit them in one convenient location. If the "laboratories of democracy" paradigm is accurate, providing more complete information about the known outcomes of policy experiments will enable legislators to create subsequent policies that they base on more accurate premises, thus increasing likelihood of successful outcomes.

The value of compiling the results of worldwide policy experiments was highlighted in the coronavirus pandemic. Countries, states, and provinces met the challenge with wildly different policies and therefore provided critical opportunities for policymakers to study what might work in the face of grave danger to their communities. The severity of the problem was such that policymakers were forced to make life or death decisions with perilously incomplete information, suggesting that every additional example of how Policies A and B worked in Contexts C and D was likely important and useful to at least one other jurisdiction studying the problem. To improve lawmakers' policy responses, the National Conference of State Legislatures announced that

> *"Since the global outbreak of COVID-19, NCSL has been tracking more than 1,200 bills introduced in 42 state legislatures and the District*

of Columbia related to coronavirus. Our new State Action on Coronavirus database helps lawmakers and others keep up to date with real time information about bills related to and responding to COVID-19."[79]

However, despite acknowledging the virus' global reach in the message, NCSL limited their database to U.S. state responses. By tracking only U.S. state legislation, this database risks overlooking best practices like those in the state of Kerala, India. The state's low-tech yet effective response has been praised by *The New York Times Interpreter*, *The Diplomat*, *The MIT Technology Review*, and *The Economist* as one of the most successful state government responses so far, which suggests that elements of Kerala's preparation and response may offer useful lessons that can be implemented elsewhere.[80] Shipan and Volden 2020 point out how important it is for state legislators hoping to benefit from successful ideas elsewhere to not merely to emulate but to study which practices can best be transferred to the home context. Having the information about global responses available in a central location will make it easier for state legislators to do this, both for fighting COVID-19 and improving policy sharing more broadly. These agencies could also be extremely useful by developing indexed and searchable profiles of states in other countries that show the physical, economic, demographic, and industrial characteristics by which states in different countries might be similar to each other and might therefore stand to benefit from cross-national learning. Making it easier for states to learn about each other in this way would do much to facilitate cross-national partnerships.

[79] NCSL Distance Learning Report. Email received 22 May 2020 from marketing@ncsl.org.
[80] See Fisher and Taub 2020, Nowrojee 2020, Faleiro 2020, "Bargain Abatement."

Fourth, states and state legislators themselves could help future generations of policymakers by documenting their policymaking process whenever possible. Studying what lawmakers have done outside a legislator's home jurisdiction is a widespread practice. Policymakers can therefore help each other by fostering a culture of documenting their policymaking process for subsequent legislators to study and build on, in the same way that academic scholars strive for transparency so that subsequent researchers can use what was learned before and push the discipline further.

This is a process that can be established over time and which could also come to be considered an aspect of legislative professionalism. For example, committee chairs could insist that bill sponsors add a summary of the research process to the committee website. Additionally, legislative research agencies helping a querying legislator could include reports of what previous legislators have read and who they have consulted with the help of the research agency when creating previous legislation on the same topic. Steps like these save legislators' time by giving them clear and efficient access to a source that Mooney 1991 claims they value highly: previous legislators who have been in a similar situation and faced similar constraints. Incentives for any one legislator to benefit from other legislators' documentation efforts but skip the cost of documenting his or her own process can be minimized by leadership establishing documentation of process as a norm in the legislature and as the mark of a respected legislator. Negative incentives to free ride could also be minimized by entrusting as much of the work of documentation as possible to third parties such as permanent staff and research agencies. By amassing several examples of inspiration in cross-national policy transfer, this study helps take a first step in this direction of improved documentation.

Concluding Remarks

This study investigated the extent to which cross-national policy diffusion occurs systematically at the state level, as well as the institutional features of state-level government associated with this type of policy transfer. State-to-state cross-national diffusion seems to be the least studied level of cross-national diffusion between similar governing bodies[81] yet continues to occur on a regular basis. Looking at diffusion through legislatures rather than executive branches also provided an opportunity to study diffusion among policymakers whose tenures are characterized by tension between the need for thorough research and pressing time constraints and a more politicized environment than bureaucratic agencies and executive branch leaders face. (Bogenschneider et al. 2013) The fact that a robust amount of international learning takes place even in U.S. state legislatures is a testament to the assertion that policy developments around the world can be useful far beyond the jurisdiction where they were created.

Additionally, this project took an ambitious methodological approach to understanding the phenomenon of cross-national sub-national diffusion: the interdependent nature of policy diffusion via social network analysis, the unpredictable nature of states and policies via generalized linear mixed models, and the content of policy similarity with text analysis. The result is a broad examination that delivers a thorough introduction to the realm of cross-national state-level policy diffusion. Overall, these methods proved very well suited to revealing unique and important aspects of cross-national policy diffusion that provided insight on its structure and proliferation.

The potential benefits of cross-national policy diffusion are clear in the urgent policy responses being considered by states to combat COVID-19. Dolowitz and Marsh 2000 (17) note

[81] Compared to city-city cross-national diffusion and country-country cross-national diffusion

that "if there is some form of 'global' crisis, such as the economic downturn during the mid-1980s, actors are more likely to feel some pressure to engage in transfer." The emergency lockdown actions taken by governors represent only a first wave of policy diffusion on this topic. Every branch of state-level government will be grappling for years to come with issues that have no known answers as they deliberate on how to handle financial fallout from the current pandemic, preparedness for future pandemics, the correct balance of emergency powers that should be delegated to executive branches, appropriate safeguards for personal privacy in the face of urgent public need, and more. With citizens around the globe deeply affected by the pandemic, there is much potential for carefully researched and well-formulated cross-national sub-federal collaboration to accelerate the diffusion of helpful policies that can bring relief faster to people all over the world.

But the importance of cross-national sub-national collaboration stands on its own in normal times as well. Implementing primary seatbelt legislation in terms of lives and dollars saved is one of the most tangible examples of normative benefits provided by cross-national learning. Estimates in Grey 1985 indicate that the state of Virginia would lose at least 66 – 261 lives annually and pay $1.2 to $3 million dollars[82] in expenses related expressly to traffic fatalities caused by not wearing a seatbelt for every year that a primary seatbelt law was not implemented. When aggregated over time and across jurisdictions globally, and adjusted to account for productivity saved by avoiding death and injury, primary seatbelt legislation has helped save tens of thousands of lives and likely avoided what would now be trillions of dollars in medical costs. Examples like this reveal in bold strokes the kinds of benefits available to

[82] $2.96 to $7.4 million in 2020 dollars

legislators who can successfully discover policies from states in other countries and adapt them for home use.

Plato observed that citizens of a "well-ordered city" could "amend what is deficient" and "establish more firmly institutions…which are good already" by studying foreign examples to be found "over sea and over land." Almost two thousand four hundred years later, modern cities and states continue to heed this advice. In the modern era, state congresses, legislatures, assemblies, *Landtäge,* prefectures, parliaments, provincial committees, and regional councils worldwide face a plethora of similar problems at the same time and in rapid-fire sequence. This is abundantly clear even in the non-COVID-related policies legislators are tackling this year, such as the legality of microchipping employees, whether nut milks and plant-based proteins can be labeled as milk or meat, taxing music and video streaming services, drones, artificial intelligence, transgender athletes, electronically linking suicide hotlines, block chain and cryptocurrencies, scooter regulations, "fair work" scheduling, Next Generation 911 services, and much more. Clear answers for most of these topics are not readily apparent, and states around the world are taking innovative stances that will be of value to states in other countries. Though he could not have envisioned the topics on which policymakers would conduct "examination and inquiry," Plato would no doubt be gratified to see the extent to which policymakers in sub-national states and provinces around the world study and borrow each others' best practices to the benefit of constituents at home. Indeed, as cross-national networks strengthen with continued improvement in communications, the opportunity for policymakers to find beneficial policies for their communities from counterparts in other countries will only continue to grow.

APPENDICES

APPENDIX I
Goodness of Fit Statistics

Figure 9: Goodness of Fit Statistics for Model 2 (55 Policies)

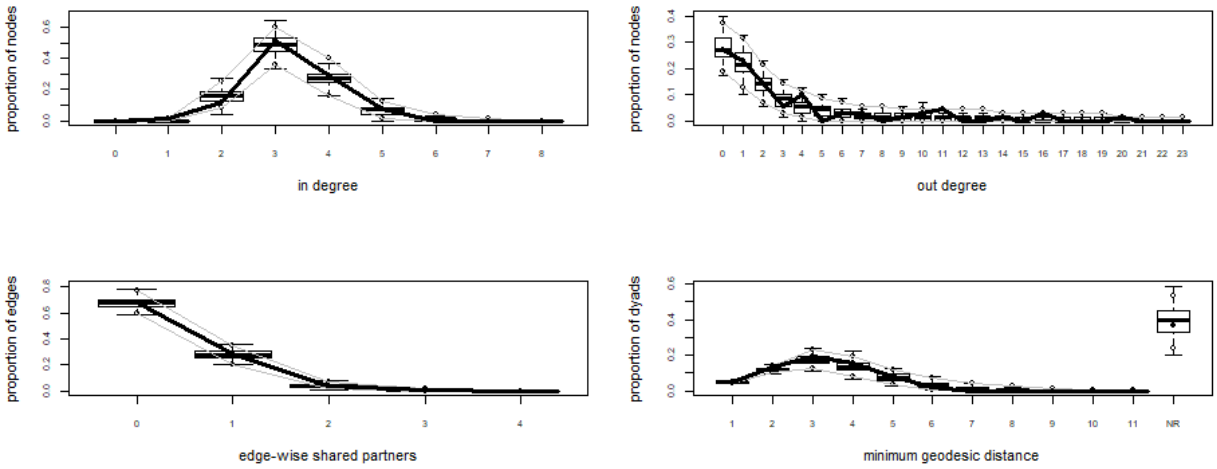
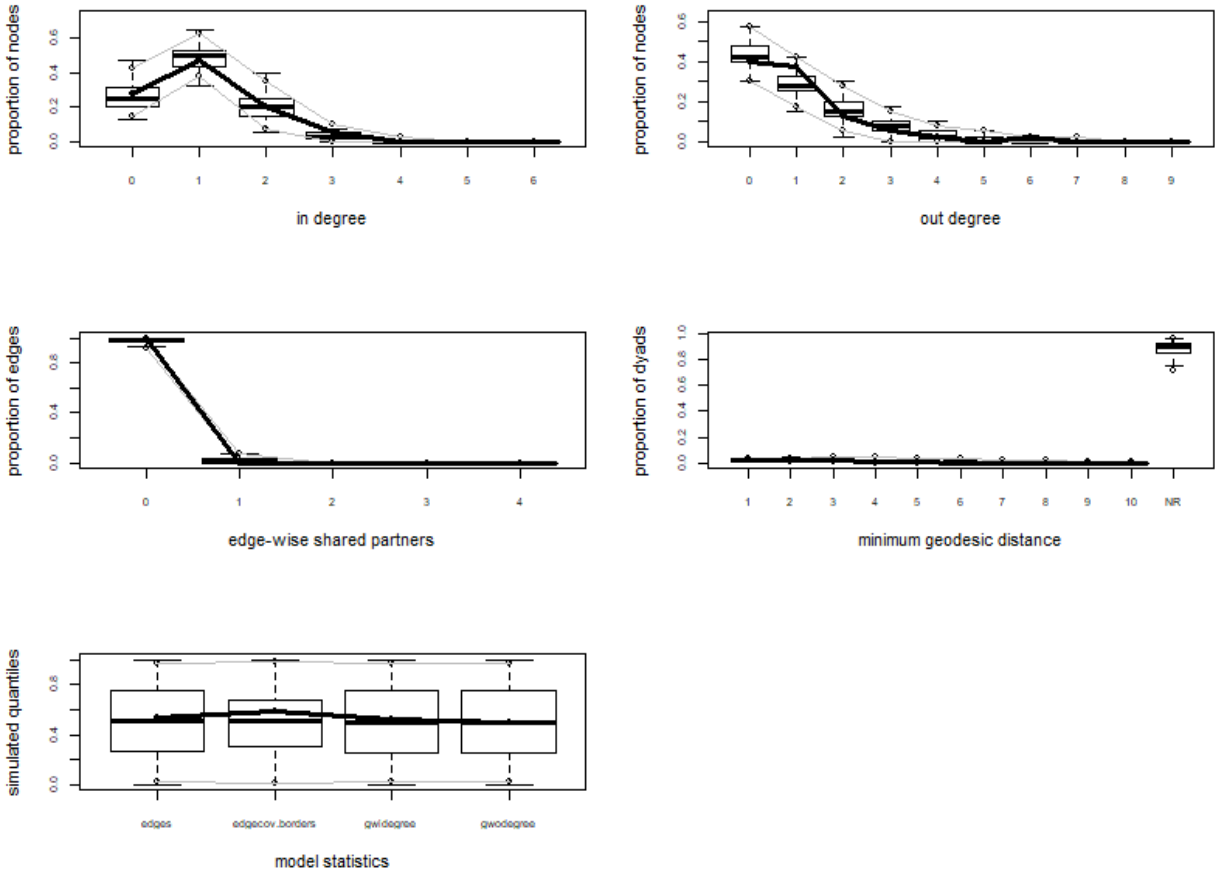


Figure 10: Goodness of Fit Statistics (Cross-National Ties Only)



APPENDIX II
Edge Lists (55-Policy Networks Only)

Edges Emanating from Australia, Ranked by Improvement to Model Fit

	Origin Node	Destination Node	Improvement	P-Value
1	New South Wales	Northern Territory	367.15407	7.327770e-10
2	South Australia	Western Australia	364.32137	6.370388e-09
3	South Australia	Queensland	358.48867	2.776626e-08
4	South Australia	Tasmania	319.48867	9.093300e-08
5	New South Wales	Victoria	293.32326	6.485614e-07
6	Queensland	New South Wales	250.82515	2.269186e-05
7	Victoria	South Australia	173.66163	9.755369e-04
8	New South Wales	Western Australia	141.16352	1.640445e-03
9	Victoria	New South Wales	128.66352	3.900147e-03
10	New South Wales	South Australia	104.66352	1.003456e-02
11	Victoria	Queensland	99.33081	1.089706e-02
12	Queensland	Victoria	97.33081	3.198933e-03
13	New South Wales	Tasmania	96.49811	7.209707e-03
14	South Australia	New South Wales	76.49811	2.263828e-02
15	Queensland	Northern Territory	74.16541	7.609077e-03
16	Queensland	South Australia	71.49811	3.053450e-02
17	Victoria	Tasmania	70.66541	1.919605e-02
18	Western Australia	South Australia	44.16541	8.064690e-02

Edges Emanating from Canada, Ranked by Improvement to Model Fit

	Origin Node	Destination Node	Improvement	P-Value
1	British Columbia	Alberta	317.32326	1.765523e-07
2	Ontario	Manitoba	300.15596	2.307497e-08
3	Ontario	British Columbia	298.15596	1.516366e-07
4	Ontario	Nova Scotia	268.82326	1.195113e-06
5	Ontario	Quebec	248.32515	7.898022e-06
6	British Columbia	Newfoundland and Labrador	243.82326	1.054343e-06
7	Ontario	Prince Edward Island	237.15785	3.122700e-06
8	Ontario	New Brunswick	235.32515	1.533864e-05
9	British Columbia	Saskatchewan	226.49244	1.937065e-05
10	Quebec	Northwest Territories	192.32515	2.438440e-05
11	Ontario	Yukon	182.32704	1.436072e-04
12	Alberta	Nunavut	170.16163	8.193017e-04
13	Nova Scotia	Ontario	155.49433	5.842723e-04
14	Manitoba	British Columbia	153.99622	6.436814e-04
15	New Brunswick	Newfoundland and Labrador	121.66352	2.024093e-03
16	Nova Scotia	Manitoba	108.83081	2.604575e-03

17	Nova Scotia	New Brunswick	103.33081	6.473639e-03
18	Alberta	Nova Scotia	95.33081	1.944656e-03
19	Northwest Territories	Nunavut	92.83081	1.513259e-02
20	New Brunswick	Prince Edward Island	90.49811	7.233794e-03
21	Quebec	Saskatchewan	90.33081	8.902337e-03
22	Quebec	Alberta	90.33081	1.278497e-02
23	Quebec	Ontario	88.33081	9.887393e-03
24	Alberta	Manitoba	80.99811	1.638150e-02
25	Manitoba	Quebec	77.33081	1.718741e-02
26	Manitoba	Northwest Territories	76.49811	5.437986e-03
27	Prince Edward Island	Newfoundland and Labrador	72.33270	7.729352e-03
28	Alberta	Saskatchewan	68.99811	1.747237e-02
29	Ontario	Saskatchewan	58.99811	3.903754e-02
30	New Brunswick	British Columbia	54.66541	2.733932e-02
31	British Columbia	Ontario	54.16541	4.479977e-02
32	Prince Edward Island	Quebec	53.66541	4.574003e-02
33	Nova Scotia	Quebec	48.16541	6.486388e-02

Edges Emanating from the United States, Ranked by Improvement to Model Fit

	Origin Node	Destination Node	Improvement	P-Value
1	California	Montana	480.81759	5.976131e-11
2	Washington	Indiana	471.48489	3.671490e-10
3	Wisconsin	Maryland	459.81759	2.327493e-10
4	Wisconsin	Oregon	457.31759	5.260135e-10
5	Washington	Vermont	456.81948	1.751708e-07
6	Wisconsin	West Virginia	456.48489	2.993066e-08
7	California	Nebraska	449.98489	5.496756e-10
8	California	Texas	448.81759	2.649505e-10
9	West Virginia	Wyoming	443.65219	1.125406e-08
10	Wisconsin	Washington	442.48489	1.180176e-08
11	Washington	Colorado	439.81948	6.812641e-09
12	Connecticut	Pennsylvania	439.48678	3.969691e-09
13	Washington	Rhode Island	431.98678	4.828078e-09
14	California	Missouri	426.81948	4.163215e-09
15	Louisiana	South Carolina	424.81948	2.822195e-09
16	California	New Hampshire	420.31948	2.687517e-09
17	Wisconsin	New Jersey	416.81948	2.278720e-08
18	Colorado	Louisiana	407.65407	2.061448e-08
19	New Jersey	Ohio	407.48678	1.342690e-08
20	California	North Carolina	405.81948	2.418879e-09
21	Minnesota	Tennessee	402.65407	2.080217e-08
22	Wisconsin	Michigan	398.31948	4.307463e-08
23	Connecticut	Maine	393.98678	1.379766e-08
24	Wisconsin	Virginia	390.98678	1.507696e-07
25	Colorado	Kentucky	389.32137	5.722310e-08
26	Louisiana	New Mexico	387.15407	3.610142e-08
27	California	Illinois	387.15407	5.599843e-08
28	Wisconsin	Minnesota	384.81948	7.736294e-08
29	California	Florida	382.98678	3.511529e-08
30	New Jersey	Delaware	379.65407	3.102322e-08
31	Washington	Oklahoma	372.48867	1.589581e-07
32	New Jersey	California	371.82137	6.044822e-08
33	Wisconsin	Kansas	369.98678	1.316149e-07

34	Wisconsin	Iowa	361.15407	8.101847e-07
35	California	Idaho	358.82137	2.114499e-07
36	Massachusetts	Connecticut	358.32137	1.221403e-07
37	Wisconsin	Nevada	352.15407	1.236694e-07
38	Wisconsin	Arizona	350.65407	2.041840e-07
39	Colorado	Utah	347.15596	6.001745e-07
40	Wisconsin	Arkansas	344.98678	3.673182e-07
41	Connecticut	Georgia	339.82137	3.274017e-07
42	Minnesota	South Dakota	338.15596	6.629789e-07
43	Wisconsin	New York	330.15596	1.893270e-06
44	New York	Massachusetts	326.82326	1.636669e-06
45	Colorado	Mississippi	320.48867	5.590887e-07
46	California	North Dakota	314.48867	1.167172e-06
47	Massachusetts	Wisconsin	300.15785	6.950047e-05
48	Nevada	Alabama	296.49056	4.922448e-06
49	New Jersey	Illinois	227.82704	1.464242e-04
50	Massachusetts	Rhode Island	219.65974	6.642016e-05
51	Colorado	West Virginia	202.66163	2.507432e-04
52	California	Louisiana	191.32704	3.726316e-04
53	Utah	Texas	190.32893	1.057265e-03
54	Colorado	Montana	189.66163	2.238310e-04
55	Louisiana	Connecticut	188.49433	2.311161e-04
56	Colorado	Oregon	185.82893	5.528412e-04
57	Minnesota	Idaho	182.99433	5.781494e-04
58	Connecticut	Massachusetts	182.66163	5.715586e-04
59	Rhode Island	Ohio	180.66163	6.091761e-04
60	Minnesota	Maine	172.66163	7.891977e-04
61	Arizona	Washington	170.82893	8.342725e-04
62	Iowa	Georgia	170.82893	6.928875e-04
63	Mississippi	Oklahoma	170.66163	1.110089e-03
64	Washington	Pennsylvania	170.16163	1.253480e-03
65	New Jersey	Colorado	170.16163	4.505961e-04
66	Vermont	Nebraska	165.49622	5.803570e-04
67	Wisconsin	California	163.82893	1.415097e-03
68	Michigan	Iowa	162.82893	6.226783e-04
69	Connecticut	New York	162.82893	1.309186e-03
70	Maine	Vermont	161.82893	1.432967e-03
71	Michigan	Nevada	159.82893	9.656599e-04
72	Ohio	Virginia	159.82893	9.536021e-04
73	Massachusetts	Minnesota	157.82893	1.041183e-03
74	Maine	Missouri	155.99622	7.747846e-04
75	Massachusetts	Maryland	155.32893	1.258874e-03
76	New Jersey	Michigan	154.49622	1.461582e-03
77	Vermont	New Hampshire	153.49622	9.353383e-04
78	Iowa	Kansas	152.49622	1.618876e-03
79	Oklahoma	Arkansas	151.16352	6.619928e-04
80	Washington	North Carolina	150.49622	1.169480e-03
81	Louisiana	Florida	150.32893	1.485502e-03
82	Colorado	Indiana	148.49622	1.978963e-03
83	Utah	North Dakota	144.49622	1.345651e-03
84	New York	New Jersey	144.49622	2.157164e-03
85	Washington	New Mexico	142.99622	1.882791e-03
86	Washington	Alaska	138.82893	5.663548e-03
87	Connecticut	Delaware	137.99622	1.809343e-03
88	Minnesota	Hawaii	135.16163	2.254901e-03
89	Connecticut	Oregon	129.66352	3.873146e-03
90	Colorado	Tennessee	128.49622	3.700056e-03

91	Vermont	Arizona	127.66352	1.802990e-03
92	California	Washington	123.49622	4.587597e-03
93	Iowa	Wisconsin	121.16352	3.777361e-03
94	Maryland	Kentucky	120.66352	5.375234e-03
95	Vermont	Wyoming	116.66352	4.841840e-03
96	Wisconsin	Missouri	115.66352	9.301866e-03
97	Virginia	New York	114.66352	6.989552e-03
98	Vermont	Illinois	111.83081	5.988618e-03
99	Tennessee	Mississippi	109.83081	5.771833e-03
100	Colorado	California	108.33081	5.353998e-03
101	Iowa	Utah	107.16352	9.449028e-03
102	Colorado	Vermont	104.33081	9.243987e-03
103	Michigan	Minnesota	104.33081	4.799217e-03
104	Utah	Florida	102.99811	8.267657e-03
105	California	Kansas	101.99811	9.122677e-03
106	California	South Dakota	97.16352	1.081592e-02
107	Wisconsin	Colorado	96.33081	7.692008e-03
108	Georgia	Louisiana	95.83081	1.096395e-02
109	California	Michigan	94.33081	1.126601e-02
110	Louisiana	Rhode Island	92.83081	1.155878e-02
111	Ohio	Pennsylvania	92.83081	1.594895e-02
112	Utah	Tennessee	92.33081	2.377031e-02
113	California	Indiana	91.33081	1.193325e-02
114	Montana	Delaware	89.83081	1.621295e-02
115	Michigan	Wisconsin	89.33081	1.429220e-02
116	Massachusetts	Oklahoma	88.83081	1.627369e-02
117	California	Massachusetts	88.33081	1.704934e-02
118	South Carolina	Connecticut	87.49811	1.395140e-02
119	Georgia	Alabama	87.16352	1.223978e-02
120	Arizona	Maryland	86.49811	1.131412e-02
121	Vermont	New Jersey	85.99811	1.226013e-02
122	Rhode Island	West Virginia	85.49811	1.733402e-02
123	New Jersey	Arkansas	83.99811	1.572756e-02
124	New Jersey	Washington	82.66541	1.651641e-02
125	Kentucky	New Hampshire	81.99811	1.451078e-02
126	Louisiana	Ohio	81.99811	1.908667e-02
127	Colorado	South Carolina	80.49811	1.587626e-02
128	New Jersey	Nebraska	80.49811	1.282042e-02
129	Virginia	North Carolina	79.99811	1.709731e-02
130	Colorado	Maine	79.49811	1.860789e-02
131	Louisiana	Montana	78.49811	1.391293e-02
132	New Jersey	Iowa	75.99811	2.218357e-02
133	Vermont	New Mexico	75.49811	1.952745e-02
134	California	Georgia	73.99811	2.592991e-02
135	California	Hawaii	72.49811	2.386042e-02
136	Washington	Virginia	72.16541	1.688160e-02
137	Minnesota	North Dakota	71.16541	2.309996e-02
138	Utah	Kentucky	70.49811	2.436544e-02
139	Florida	Idaho	70.16541	2.162459e-02
140	Florida	Washington	69.99811	2.096608e-02
141	Tennessee	Vermont	69.99811	3.450097e-02
142	Nevada	Texas	68.99811	1.523441e-02
143	South Dakota	Arizona	67.66541	1.457463e-02
144	Louisiana	Alaska	66.99811	4.098122e-02
145	Utah	Arkansas	66.16541	2.771367e-02
146	Utah	Massachusetts	64.49811	3.731939e-02
147	Arizona	Nevada	64.16541	2.693039e-02

148	Massachusetts	Wyoming	63.49811	3.095595e-02
149	Kentucky	New Jersey	62.99811	2.983275e-02
150	Rhode Island	Connecticut	62.66541	2.276456e-02
151	Illinois	Texas	62.16541	3.170236e-02
152	Colorado	Ohio	59.16541	2.680816e-02
153	New York	Rhode Island	58.66541	2.937942e-02
154	Ohio	North Carolina	58.49811	3.856520e-02
155	Minnesota	Alabama	57.16541	3.876711e-02
156	Texas	Colorado	56.16541	3.789411e-02
157	New Jersey	West Virginia	55.66541	3.654223e-02
158	Connecticut	Wisconsin	55.16541	4.399594e-02
159	North Dakota	Virginia	54.16541	3.485813e-02
160	Colorado	Massachusetts	53.99811	4.676874e-02
161	Massachusetts	Tennessee	53.66541	4.055157e-02
162	North Carolina	Rhode Island	53.66541	4.404467e-02
163	Florida	Minnesota	53.66541	4.228728e-02
164	Wisconsin	Illinois	53.66541	4.613678e-02
165	Louisiana	New Hampshire	53.16541	4.623532e-02
166	Rhode Island	Michigan	51.66541	3.793854e-02
167	Minnesota	Oregon	50.66541	5.364149e-02

All Edges, Ranked by Improvement to Model Fit

(Cross-national edges underlined)

	Origin Node	Destination Node	Improvement	P-Value
1	Colorado	Montana	480.48489	1.722803e-10
2	Washington	Indiana	469.48489	4.710846e-10
3	Wisconsin	Maryland	457.31759	3.138463e-10
4	Wisconsin	West Virginia	456.48489	3.470050e-08
5	Wisconsin	Oregon	456.31759	7.235947e-10
6	Washington	Vermont	455.31948	1.958092e-07
7	California	Nebraska	449.98489	6.930698e-10
8	California	Texas	448.81759	3.418139e-10
9	West Virginia	Wyoming	442.65219	1.334501e-08
10	Wisconsin	Washington	442.48489	1.393250e-08
11	Washington	Colorado	439.81948	8.128571e-09
12	Connecticut	Pennsylvania	439.48678	4.792527e-09
13	Washington	Rhode Island	431.98678	5.804776e-09
14	California	Missouri	426.31948	5.082550e-09
15	Louisiana	South Carolina	424.81948	3.433774e-09
16	California	New Hampshire	419.81948	3.292409e-09
17	Minnesota	Tennessee	417.98678	7.989627e-09
18	Wisconsin	New Jersey	416.81948	2.648938e-08
19	Colorado	Louisiana	407.65407	2.402552e-08
20	New Jersey	Ohio	406.98678	1.589187e-08
21	Connecticut	Delaware	399.98678	1.548051e-08
22	Wisconsin	Michigan	396.81948	5.021260e-08
23	California	North Carolina	395.31948	5.964748e-09
24	Connecticut	Maine	392.98678	1.619555e-08
25	Wisconsin	Virginia	390.98678	1.697358e-07
26	Colorado	Kentucky	388.32137	6.707838e-08
27	Louisiana	New Mexico	387.15407	4.166348e-08

28	California	Illinois	387.15407	6.407693e-08
29	Wisconsin	Minnesota	383.81948	8.867168e-08
30	California	Florida	382.48678	4.129959e-08
31	Colorado	Utah	376.98867	2.686184e-07
32	New Jersey	California	371.32137	6.868474e-08
33	Washington	Oklahoma	370.98867	1.793577e-07
34	Wisconsin	Kansas	369.98678	1.477990e-07
35	Washington	Western Australia	368.65219	1.596940e-07
36	Minnesota	Arkansas	362.15407	8.917695e-08
37	Connecticut	Georgia	361.65407	1.287423e-07
38	Wisconsin	Iowa	361.15407	8.858323e-07
39	California	Idaho	358.32137	2.362362e-07
40	Massachusetts	Connecticut	356.82137	1.385876e-07
41	Wisconsin	Nevada	351.65407	1.383158e-07
42	Wisconsin	Arizona	350.15407	2.282920e-07
43	Massachusetts	Ontario	349.15407	1.046830e-07
44	Minnesota	South Dakota	348.48867	2.780859e-07
45	Wisconsin	New York	330.15596	2.054780e-06
46	New York	Massachusetts	326.82326	1.776753e-06
47	South Australia	Queensland	326.48867	4.152821e-07
48	Colorado	Mississippi	319.98867	6.214672e-07
49	California	North Dakota	313.48867	1.289415e-06
50	British Columbia	Alberta	305.32326	3.368738e-06
51	New South Wales	Victoria	298.15596	1.855282e-06
52	Nevada	Alabama	296.49056	5.251441e-06
53	Connecticut	New South Wales	296.32137	8.496625e-07
54	Massachusetts	Wisconsin	290.15785	8.857656e-05
55	South Australia	Tasmania	290.15596	2.989170e-06
56	New South Wales	Northern Territory	288.48867	6.435274e-07
57	Ontario	British Columbia	286.65596	2.757571e-06
58	California	Manitoba	282.82137	3.684748e-07
59	Ontario	Nova Scotia	262.82326	1.179552e-05
60	Michigan	Quebec	258.82326	3.335586e-06
61	New Jersey	Illinois	227.32704	1.503845e-04
62	Ontario	New Brunswick	227.32515	6.311626e-05
63	Massachusetts	Rhode Island	218.65974	6.835290e-05
64	Ontario	Prince Edward Island	217.15785	3.389250e-05
65	Ontario	Newfoundland and Labrador	217.15596	2.980304e-05
66	California	Saskatchewan	215.15785	2.088701e-05
67	New Jersey	South Australia	209.15785	6.135440e-05
68	Colorado	West Virginia	202.66163	2.523180e-04
69	Minnesota	Idaho	199.82704	2.761635e-04
70	Utah	Texas	199.66163	5.148754e-04
71	California	Louisiana	190.82704	3.772711e-04
72	California	Montana	189.49433	3.978286e-04
73	Louisiana	Connecticut	188.49433	2.393945e-04
74	Colorado	Oregon	185.82893	5.623091e-04
75	Quebec	Northwest Territories	183.82515	8.005150e-05
76	Connecticut	Massachusetts	182.66163	5.828972e-04
77	Northern Territory	Nunavut	182.49433	6.524787e-04
78	Minnesota	Nebraska	181.66163	5.307079e-04
79	Rhode Island	Ohio	180.66163	6.309805e-04
80	Ohio	Virginia	179.16163	4.558265e-04
81	New South Wales	Western Australia	175.49622	2.116629e-04
82	Nova Scotia	Manitoba	174.82893	3.873887e-04
83	Minnesota	Maine	172.66163	8.036977e-04
84	Connecticut	Maryland	172.32893	6.257411e-04

85	Rhode Island	Victoria	172.15974	4.358125e-04
86	Arizona	Washington	170.82893	8.414900e-04
87	Iowa	Georgia	170.82893	7.040457e-04
88	Mississippi	Oklahoma	170.66163	1.133287e-03
89	Washington	Pennsylvania	170.16163	1.271771e-03
90	New Jersey	Colorado	169.66163	4.653509e-04
91	Ontario	Yukon	169.32704	3.521548e-04
92	Wisconsin	California	163.82893	1.448189e-03
93	Connecticut	New York	162.82893	1.326998e-03
94	Michigan	Iowa	161.82893	6.335989e-04
95	Maine	Vermont	161.32893	1.447393e-03
96	Michigan	Nevada	159.82893	9.848035e-04
97	Massachusetts	Minnesota	156.82893	1.047661e-03
98	Maine	Missouri	155.99622	7.879312e-04
99	New Jersey	Michigan	154.49622	1.474291e-03
100	California	Arkansas	154.32893	1.702302e-03
101	Vermont	New Hampshire	153.49622	9.466591e-04
102	Iowa	Kansas	152.49622	1.634231e-03
103	Washington	North Carolina	149.99622	1.174204e-03
104	Colorado	Indiana	148.49622	1.998554e-03
105	Louisiana	Florida	148.32893	1.485059e-03
106	Manitoba	British Columbia	147.99622	1.136168e-03
107	Queensland	New South Wales	147.32893	1.871384e-03
108	Utah	North Dakota	143.99622	1.362025e-03
109	Minnesota	Delaware	143.16352	1.313829e-03
110	Washington	New Mexico	142.99622	1.897443e-03
111	Victoria	South Australia	142.49622	2.859606e-03
112	New York	New Jersey	142.49622	2.151568e-03
113	Washington	Alaska	138.82893	5.700372e-03
114	Connecticut	Hawaii	133.32893	3.133410e-03
115	Connecticut	Oregon	129.66352	3.893472e-03
116	Colorado	Tennessee	128.49622	3.678021e-03
117	Vermont	Arizona	127.16352	1.795458e-03
118	Alberta	Saskatchewan	126.49622	1.834815e-03
119	Rhode Island	Queensland	125.99622	3.509103e-03
120	California	Washington	122.16352	5.142153e-03
121	Iowa	Wisconsin	121.16352	3.792943e-03
122	Maryland	Kentucky	120.66352	5.483035e-03
123	Arkansas	Newfoundland and Labrador	117.16352	2.273371e-03
124	Vermont	Wyoming	116.66352	4.852558e-03
125	Wisconsin	Missouri	115.66352	9.338722e-03
126	Vermont	Illinois	111.33081	6.043222e-03
127	Washington	Nova Scotia	111.32893	6.199821e-03
128	Tennessee	Mississippi	109.83081	5.865472e-03
129	Massachusetts	Alberta	109.82893	3.923275e-03
130	Virginia	New York	109.16352	7.290277e-03
131	Colorado	California	108.33081	5.400149e-03
132	Iowa	Utah	107.16352	9.472137e-03
133	Victoria	Tasmania	105.99811	5.947307e-03
134	Washington	New Brunswick	104.99622	6.156755e-03
135	Colorado	Vermont	104.33081	9.162149e-03
136	Michigan	Minnesota	104.33081	4.770039e-03
137	California	Kansas	101.99811	9.203718e-03
138	Delaware	South Dakota	101.33081	6.884022e-03
139	New South Wales	Ontario	98.33081	5.312928e-03
140	Utah	Florida	97.49811	8.060401e-03
141	Tennessee	Arkansas	95.83081	1.001967e-02

142	Georgia	Louisiana	95.83081	1.107066e-02
143	Quebec	New South Wales	95.16541	4.991697e-03
144	California	Michigan	94.33081	1.138040e-02
145	Wisconsin	Colorado	94.33081	8.085292e-03
146	South Australia	Tennessee	94.16352	2.502583e-02
147	Colorado	Hawaii	93.33081	1.406992e-02
148	Louisiana	Rhode Island	92.83081	1.158503e-02
149	Ohio	Pennsylvania	92.83081	1.603075e-02
150	California	Indiana	90.83081	1.185887e-02
151	Massachusetts	Oklahoma	88.83081	1.630005e-02
152	Alberta	Victoria	88.66541	3.525166e-03
153	California	Massachusetts	88.33081	1.725488e-02
154	South Australia	Connecticut	87.83081	1.995673e-02
155	Georgia	Alabama	87.16352	1.237773e-02
156	Tasmania	New Jersey	86.83081	2.107616e-02
157	Rhode Island	Connecticut	85.49811	9.440920e-03
158	New Brunswick	Prince Edward Island	85.49811	7.938380e-03
159	Rhode Island	West Virginia	85.49811	1.764549e-02
160	New Jersey	British Columbia	84.33081	2.106640e-02
161	New Jersey	Washington	82.66541	1.653559e-02
162	South Australia	Wisconsin	82.33081	2.158843e-02
163	Kentucky	New Hampshire	81.99811	1.453383e-02
164	Louisiana	Ohio	81.99811	1.900537e-02
165	Massachusetts	Northwest Territories	81.33081	1.242000e-02
166	Victoria	Georgia	80.99811	2.031497e-02
167	New South Wales	Quebec	80.83081	8.519360e-03
168	Colorado	South Carolina	80.49811	1.584230e-02
169	Virginia	North Carolina	79.99811	1.763032e-02
170	Colorado	Maine	79.49811	1.868811e-02
171	Louisiana	Montana	78.49811	1.379896e-02
172	Kentucky	New Jersey	77.99811	1.817975e-02
173	Louisiana	Northern Territory	76.49811	1.217247e-02
174	Minnesota	Maryland	75.49811	2.256180e-02
175	New Jersey	Iowa	75.49811	2.273648e-02
176	New South Wales	Tasmania	74.49811	1.959399e-02
177	Washington	Wisconsin	73.99811	2.869739e-02
178	Vermont	New Mexico	73.99811	1.848806e-02
179	Vermont	Nebraska	73.66541	9.571726e-03
180	Washington	Ontario	72.66541	1.804874e-02
181	Washington	Virginia	72.16541	1.685804e-02
182	Minnesota	North Dakota	71.16541	2.275790e-02
183	Saskatchewan	South Australia	70.66541	1.518850e-02
184	Florida	Idaho	70.16541	2.176340e-02
185	Florida	Washington	69.99811	2.088160e-02
186	Connecticut	Kentucky	69.99811	2.580292e-02
187	Colorado	New South Wales	69.16541	2.343433e-02
188	Nevada	Texas	68.99811	1.540723e-02
189	Northwest Territories	Nunavut	68.99811	2.514411e-02
190	Tennessee	Vermont	68.99811	3.451989e-02
191	South Australia	Nevada	68.49811	2.501624e-02
192	South Dakota	Arizona	67.66541	1.412110e-02
193	Western Australia	Manitoba	67.33270	2.951589e-03
194	Louisiana	Alaska	66.99811	4.103454e-02
195	Alberta	Nova Scotia	66.16541	8.690112e-03
196	California	Connecticut	65.99811	2.691129e-02
197	New Jersey	Delaware	65.49811	3.622137e-02
198	South Australia	Western Australia	64.83270	2.513247e-02

199	Alberta	New Brunswick	64.16541	2.369818e-02
200	Massachusetts	Tennessee	63.66541	2.898174e-02
201	Massachusetts	Wyoming	62.99811	3.088283e-02
202	South Australia	Illinois	62.99811	3.720137e-02
203	Illinois	Texas	62.16541	3.105517e-02
204	Arizona	Ohio	60.99811	3.689958e-02
205	Utah	Massachusetts	59.99811	3.684095e-02
206	Georgia	Arkansas	59.83270	1.939535e-02
207	Ohio	North Carolina	58.49811	3.821987e-02
208	New York	Rhode Island	58.16541	2.862233e-02
209	British Columbia	Utah	57.99811	3.465807e-02
210	Victoria	Queensland	57.66541	3.632101e-02
211	Minnesota	Alabama	57.16541	3.926647e-02
212	Queensland	Alberta	56.83270	2.352981e-02
213	Prince Edward Island	Newfoundland and Labrador	56.50000	2.582631e-03
214	Texas	Colorado	56.16541	3.724554e-02
215	New Jersey	West Virginia	55.66541	3.682037e-02
216	South Australia	California	55.49811	4.284470e-02
217	Queensland	Northern Territory	55.33270	1.703369e-02
218	North Dakota	Virginia	54.16541	3.537839e-02
219	Colorado	Massachusetts	53.99811	4.685619e-02
220	Florida	Nevada	53.66541	4.222002e-02
221	North Carolina	Rhode Island	53.66541	4.530466e-02
222	Florida	Minnesota	53.66541	4.357849e-02
223	Louisiana	New Hampshire	53.16541	4.631072e-02
224	Northern Territory	Northwest Territories	53.00000	1.121472e-02
225	North Carolina	Saskatchewan	52.83270	1.943927e-02
225	New South Wales	Florida	52.66541	4.483327e-02
227	Vermont	New Jersey	51.16541	3.568857e-02
228	Rhode Island	Michigan	51.16541	3.897615e-02
229	Maryland	Western Australia	51.16541	4.132578e-02
230	Queensland	Kentucky	50.99811	4.284274e-02
231	Minnesota	Oregon	50.66541	5.362942e-02

APPENDIX III
List of Policies Collected for Chapter II

Table 11: Policies Used in Network Analysis (Boehmke and Skinner 2012)

Abortion - One Parent Notify	Council on the Arts
Abolish Death Penalty	Cyberstalking
Adveritising Commissions	Debt Limitation
Agricultural Experiment Stations	Educational Television
Air Pollution Control	Fair Employment Laws
Animal Cruelty Laws	Fish Agency
Anti-Injunction Laws	Grandparent Visitation Rights
Ban Prescrip. Incentives	HMO Model Act (First)
Beautician Licensing	HMO MOdel Act (Second)
Bicycle Helmets for Minors	Human Rights Commission
Board of Health	ID Theft Protection
Cigarette Tax	Juvenile Court System
Tax Expenditure Limitataions	Term Limits
Voter Registration w/ License	Workers Compensation
Labor Agency	Prescription Monitoring
Legislative Research Agency	Protecting Journalist Sources
Lemon Laws	Right to Breastfeed in Public
Lotteries	School of Choice
Medical Savings Accounts	Segregated Education
Merit System	Soil Conservation Districts
Missouri Plan	Stalking Definition
Newborn Hearing Screening	State Hate Crime Laws
Normal Schools	Strategic Education Planning
Pharmacist Licensing	Strategic Revenue Planning
Planning/Development Ag.	Strategic Transport Planning
Post Conviction DNA Tests	Symbolic Medical Marijuana
Three Strikes Law	Tribal Gaming

APPENDIX IV
Discussion of *In-Degree*

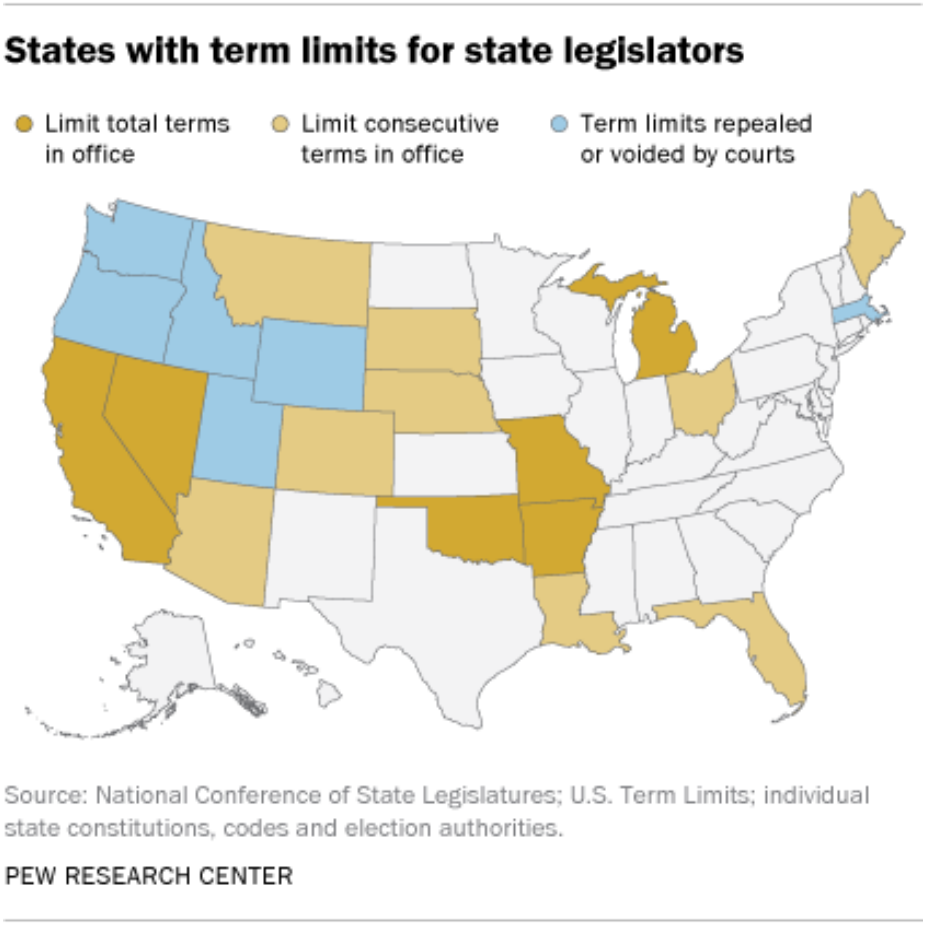
Does the method used to test network interdependence pre-determine the outcome? Consider the statistically significant finding of positive *In-Degree*, indicating that the more inbound ties a state has attached to it, the more likely it is to garner an additional inbound tie. It is unlikely that the ERGM simulations would find this statistically significant if it does not accurately reflect the relationships between actors in the network. If actors in the network behaved in a way that discourages *In-Degree*, this variable would demonstrate indications of irrelevance for producing simulations that approximate the observed network. For example, if adopting policies from states in foreign countries had a reputation for delivering policies poorly suited to the home state, the sign on *In-Degree* would probably be negative to connote that the more inbound ties an actor has, the less likely it is to gain an additional inbound tie. However, no such stigma seems to exist. Evidence from Sugiyama 2011 and Parinandi 2020 shows that there are circumstances under which adopting policies from external sources can in fact be seen as superior due to authority attached to their neutral third-party status. Thus, the positive coefficient on *In-Degree* aligns with theoretical expectations for actors in a transnational policy diffusion network.

This chapter also demonstrates how ERGMs will return results counter to expectations if the network structure does not support the hypothesis. *Reciprocity* is a very common attribute of social networks, ostensibly because reciprocal behavior is a critical survival tool among social beings. (Cialdini 1987) But contrary to expectation, the data generated using the NetInf algorithm showed that this network does not exhibit meaningful *Reciprocity*. Subsequent

attempts to include a variable for *Reciprocity* in the ERGM simulations worsened model fit instead of improving it. The fact that the ERGMs successfully rejected a hypothesis about a variable that seemed likely to matter is a good sign that it is correctly assessing which factors accurately describe the network, and not simply returning coefficients that characterize all networks. Therefore, it would not likely include *In-Degree* if the network did not exhibit this property.

APPENDIX V
States with Term Limits

Figure 11: States with Term Limits (Lifetime Ban, Consecutive Ban, and Repealed)



Using a Continuous Measure of *Term Limits*

Sarbaugh-Thompson 2010 created a continuous measure of *Term Limits* that measures the increase in proportion of turnover in a legislature compared to its turnover in the decade

before limits were placed, adjusted for potential to cycle between legislatures. For example, term limits increase turnover by 27% in the Arizona legislature. Sarbaugh-Thompson 2010 (201) theorizes that the negative values for Louisiana and Nevada may indicate that the generous term limits of these states may inspire legislators to serve the full term instead of serving for fewer years as they did when there were no term limits.

Table 12: Years of Impact and Severity of Term Limits by State

State	Year of Impact	Year Enacted	Severity
California	1996	1990	1.37
Maine	1996	1993	0.21
Arkansas	1998	1992	1.99
Colorado	1998	1990	0.33
Michigan	1998	1992	1.55
Oregon	1998 - 2002	1992	N/A
Arizona	2000	1992	0.27
Florida	2000	1992	0.15
Montana	2000	1992	0.47
Ohio	2000	1992	0.52
South Dakota	2000	1992	0.09
Missouri	2002	1992	0.75
Oklahoma	2004	1990	0.00
Nebraska	2000	2006	0.35
Louisiana	2007	1995	-0.18
Nevada	2010	1996	-0.02

APPENDIX VI
Description of Policies in Dataset for Generalized Linear Mixed Models

Table 13: Policies and First Adopters in Foreign Locations

Policy	State or Province of Origin	Year	First Foreign Adopter	Year
Charter Schools	Minnesota	1991	Alberta	1993
Individual Development Accounts	Iowa, Kansas	1993	NA	
Identity Theft Laws	Arizona	1996	South Australia	2003
Infant Hearing Screening	Utah, Virginia	1998	Ontario	2001
Mandated Coverage of Clinical Trials	Arizona	1994	NA	
Restrictions on Methamphetamine Precursors in over the counter drugs	Oklahoma	1996	NA	
Office of Women's Health	Ohio	1993	British Columbia	1994
Prescription Drug Monitoring	California	1940	Queensland	1983
Post-DNA Conviction	Illinois	1997	NSW	2001
Stalking Definition	California	1990	Queensland	1993
Credit Report Authorization	Queensland	1971	California	2001
Electricity Deregulation	Alberta	1995	California	1996
Graduated Drivers Licenses	Ontario,	1993	Connecticut	1996
Bicycle Helmets for Minors	Victoria	1990	New Jersey	1992
Kinship Care Laws	Ontario	1984	California	1998
State Lotteries	Queensland	1916	New Hampshire	1964
Primary Seatbelt Laws	Victoria	1970	New York	1984
Public Breastfeeding Laws	Queensland	1991	Florida	1993

Smoking Banned in Work Area	Ontario	1994	California	1995
Strategic Transportation Authority	Western Aus.	1966	Florida	1974

APPENDIX VII
Descriptive Statistics for Chapter III (Term Limits and Cross-National Diffusion)

Table 14: Descriptive Statistics (All Policies)

All Observations					
	Min	Mean	Median	Max	St. Dev.
Term Limits	0	NA	0	1	NA
Term Limits Continuous Measure	-0.18	0.05	0	1.99	0.31
Foreign	0	NA	0	1	NA
Proportion of Foreign Adoptions	0	0.16	0.05	1	0.24
Neighbors Adopting	0	0.14	0	1	0.29
Legislative Professionalism	0.03	0.20	0.17	0.66	0.12
Citizen Ideology	-2.28	0.08	0.02	2.97	0.92
State Ideology	-2.76	-0.13	-0.09	1.82	1.11

Table 15: Descriptive Statistics (Domestic and Foreign-Origin Policies)

Domestic-Origin Policies Only					
	Min	Mean	Median	Max	St. Dev.
Term Limits	0	NA	0	1	NA
Term Limits Continuous Measure	-0.18	0.04	0.00	1.99	0.32
Foreign	0	NA	0	0	NA
Proportion of Foreign Adoptions	0	0.07	0	0.65	0.17
Neighbors Adopting	0	0.13	0	1	0.29
Legislative Professionalism	0.03	0.20	0.17	0.66	0.12
Citizen Ideology	-2.28	0.12	0.06	2.97	0.93
State Ideology	-2.76	-0.10	-0.06	1.82	1.13
Foreign-Origin Policies Only					
	Min	Mean	Median	Max	St. Dev.
Term Limits	0	NA	0	1	NA
Term Limits Continuous Measure	-0.18	0.05	0	1.99	0.30
Foreign	1	NA	1	1	NA
Proportion of Foreign Adoptions	0	0.24	0.20	1	0.25
Neighbors Adopting	0	0.15	0	1	0.28
Legislative Professionalism	0.03	0.19	0.16	0.66	0.12
Citizen Ideology	-2.28	0.05	-0.01	2.97	0.90
State Ideology	-2.76	-0.16	-0.12	1.82	1.10

Table 16: Correlations

	Term Limits	Citizen Ideology	State Ideology	Legislative Professlsm.	Neighbors Adopting	Foreign Adopters	Policy is Foreign	Year
Term Limits	1							
Citizen Ideology	0.01	1						
State Ideology	-0.17	0.45	1					
Professionalism	-0.01	0.32	0.20	1				
Neighbors Adopt	0.23	0.03	-0.17	-0.11	1			
Foreign Adopters	0.21	0.03	0.01	-0.13	0.33	1		
Policy is Foreign	0.00	-0.02	-0.01	-0.02	-0.01	0.35	1	
Year	0.37	0.07	-0.30	-0.13	0.55	0.51	-0.00	1

APPENDIX VIII
Tables for Proportions of Foreign Adoptions by Country

Table 17: Domestic Policies Only and Foreign Policies Only (Australian and Canadian Adopters)

Policy Group:	Model 1 Domestic (Australian Adopters)	Model 2 Domestic (Canadian Adopters)	Model 3 Foreign (Australian Adopters)	Model 4 Foreign (Canadian Adopters)
Term Limits	0.144	0.159	0.368.	0.391.
	(0.215)	(0.215)	(0.219)	(0.216)
Foreign Adopting	0.629	2.312.	1.264**	1.141*
	(0.387)	(1.223)	(0.400)	(0.496)
Professionalism	0.382	0.396	1.265.	1.234.
	(0.739)	(0.736)	(0.720)	(0.701)
Neighbors Adopting	2.533***	2.588***	1.534***	1.623***
	(0.262)	(0.263)	(0.249)	(0.245)
Citizen Ideology	-0.007	-0.011	0.253*	0.237*
	(0.108)	(0.108)	(0.107)	(0.105)
State Ideology	-0.066	-0.060	0.149*	0.157*
	(0.079)	(0.079)	(0.076)	(0.075)
Year	-0.170***	-0.173***	-0.033**	-0.034**
	(0.019)	(0.019)	(0.011)	(0.011)
Constant	2.645**	2.708**	-3.579***	-3.392***
	(0.811)	(0.823)	(0.495)	(0.481)
Observations	6748	6748	9693	9693
AIC	1978.1	1977.4	2278.5	2283.1
BIC	2046.3	2045.5	2350.3	2354.9
Variance (State)	0.185	0.180	0.227	0.202
SD (State)	0.430	0.424	0.476	0.450
Variance (Policy)	1.601	1.812	0.847	0.768
SD (Policy)	1.265	1.346	0.920	0.877

Dependent variable: State adopted policy or not (1, 0). Generalized linear mixed model with varying intercepts for state and policy. *p < .05. **p < .01. ***p < .001

Table 18: Association Between Term Limits and Policy Adoption

	Model 1 Dichotomous (Australian Adopters)	Model 2 Dichotomous (Canadian Adopters)	Model 3 Continuous (Australian Adopters)	Model 4 Continuous (Canadian Adopters
Term Limits	0.378.	0.173	0.352	0.107
	(0.193)	(0.186)	(0.215)	(0.209)
Foreign Adopting	0.666*	1.555***	0.641*	1.633***
	(0.277)	(0.457)	(0.268)	(0.449)
Foreign Adopting*TL	-0.587	0.188	-1.108*	-0.347
	(0.365)	(0.471)	(0.491)	(0.596)
Professionalism	0.555	0.608	0.556	0.596
	(0.619)	(0.613)	(0.625)	(0.620)
Neighbors Adopting	1.946***	1.929***	1.978***	1.945***
	(0.176)	(0.174)	(0.175)	(0.173)
Citizen Ideology	0.128	0.128	0.132	0.131
	(0.084)	(0.186)	(0.084)	(0.083)
State Ideology	0.013	0.021	0.004	0.013
	(0.056)	(0.084)	(0.055)	(0.056)
Year	-0.027***	-0.082***	-0.070***	-0.079***
	(0.009)	(0.010)	(0.009)	(0.010)
Constant	-1.453***	-1.217**	-1.506***	-1.292**
	(0.403)	(0.435)	(0.401)	(0.435)
Observations	16441	16441	16441	16441
AIC	4318.7	4311.8	4316.7	4313.2
BIC	4403.4	4396.6	4401.5	4398.0
Variance (State)	0.213	0.205	0.218	0.210
SD (State)	0.461	0.453	0.466	0.459
Variance (Policy)	0.967	1.387	0.953	1.399
SD (Policy)	0.984	1.178	0.976	1.183

Dependent variable: State adopted policy or not (1, 0). Generalized linear mixed model with varying intercepts for state and policy. *p < .05. **p < .01. ***p < .001

Table 19: Effect of Foreign Adopting when Term Limits are in Place (Domestic)

Policy Group:	Model 1 Domestic No Limits (Australian Adopters)	Model 2 Domestic No Limits (Canadian Adopters)	Model 3 Domestic Term Limits (Australian Adopters)	Model 4 Domestic Term Limits (Canadian Adopters
Foreign Adopting	0.748*	1.602	-0.645	-4.669
	(0.417)	(1.276)	(1.113)	(2.861)
Professionalism	0.522	0.510	0.227	0.247
	(0.914)	(0.908)	(0.990)	(0.989)
Neighbors Adopting	2.718***	2.763***	2.382***	2.332***
	(0.293)	(0.294)	(0.594)	(0.581)
Citizen Ideology	-0.064	-0.065	0.384	0.344
	(0.121)	(0.121)	(0.377)	(0.376)
State Ideology	-0.051	-0.048	-0.107	-0.128
	(0.090)	(0.090)	(0.186)	(0.189)
Year	-0.143***	2.763***	-0.305***	-0.301***
	(0.020)	(0.294)	(0.056)	(0.053)
Constant	1.454.	1.357	8.570***	8.718***
	(0.834)	(0.849)	(2.228)	(2.173)
Observations	5652	5652	1096	1096
AIC	1659.2	1660.9	317.3	315.1
BIC	1719.0	1720.6	362.3	360.1
Variance (State)	0.294	0.284	0.000	0.000
SD (State)	0.542	0.5239	0.000	0.000
Variance (Policy)	1.263	1.331	1.3e100	0.793
SD (Policy)	1.124	1.153	1.2e100	0.890

Dependent variable: State adopted policy or not (1, 0). Generalized linear mixed model with varying intercepts for state and policy. *p < .1. **p < .05. ***p < .001

Table 20: Effect Foreign Adopting when Term Limits are in Place (Foreign)

Policy Group:	Model 1 Foreign No Limits (Australian Adopters)	Model 2 Foreign No Limits (Canadian Adopters)	Model 3 Foreign Term Limits (Australian Adopters)	Model 4 Foreign Term Limits (Canadian Adopters
Foreign Adopting	1.068*	0.834	1.782	3.023*
	(0.442)	(0.519)	(1.102)	(1.458)
Professionalism	1.516*	1.529*	1.415	1.357
	(0.758)	(0.739)	(1.479)	(1.481)
Neighbors Adopting	1.710***	1.791***	0.904	0.780
	(0.269)	(0.266)	(0.682)	(0.673)
Citizen Ideology	0.155	0.138	0.867*	0.898*
	(0.111)	(0.110)	(0.411)	(0.412)
State Ideology	0.187*	0.197*	-0.075	-0.080
	(0.083)	(0.082)	(0.207)	(0.209)
Year	-0.023*	-0.023.	-0.148**	-0.161**
	(0.011)	(0.012)	(0.053)	(0.534)
Constant	-3.937***	-3.788***	1.266	1.425
	(0.507)	(0.490)	(2.176)	(2.192)
Observations	8616	8616	1077	1077
AIC	1959.8	1963.1	322.4	320.2
BIC	2023.4	2026.6	367.2	365.0
Variance (State)	0.223	0.196	0.229	0.237
SD (State)	0.472	0.443	0.478	0.487
Variance (Policy)	0.736	0.638	1.725	2.633
SD (Policy)	0.858	0.799	1.314	1.623

Dependent variable: State adopted policy or not (1, 0). Generalized linear mixed model with varying intercepts for state and policy. *p < .05. **p < .01. ***p < .001

APPENDIX IX
Policy Details

Graduated Drivers Licensing

Graduated drivers licensing (GDL) is a system that requires new and, especially, young drivers, to pass through several stages of learner's licenses before being issued a full driver's license. The system is an effort to reduce younger driver fatalities. The concept of a graduated licensing system for beginning drivers first arose in the 1970s in the highway traffic and road safety industry. A 1977 paper by the U.S. National Highway Traffic Safety Administration describing the concept is often cited as one of the seminal works on the concept. Though a few state legislatures instituted piecemeal aspects of the program, no U.S. state is considered to have implemented any major elements of the program and no model legislation was produced or circulated. (Mayhew et al. 2005 (3), Holloway 2007 (102))

The first full GDL system was enacted in New Zealand and "much heralded in North America and cited extensively as a legislative initiative to emulate. Of equal importance was the commitment by New Zealand officials to evaluate the program's effectiveness – an outcome anxiously anticipated by observers in North America." (Mayhew et al. 2005 (3)) Ontario passed *The Highway Traffic Amendment Act (Novice Drivers)* on December 14th, 1993, thus launching a cascade of adoptions across North America. Adoptions in the United States began a few years later in 1996, when Kentucky passed the first bill on April 4th and Virginia, Connecticut, Florida, and Michigan followed within the year. This policy was picked up rapidly and thirty-three states

adopted a graduated licensing program for student drivers by 1999. Mayhew et al. 2005 (5) note that the U.S. nonprofit Insurance Institute for Highway Safety compiled research and "actively promoted" the adoption of graduated licensing in the United States in addition to urging that the adoptions were rigorous and not superficial. This organization likely derived many of its researched conclusions from programs such as Ontario's that were already in place, thus providing an example of when interest groups may assist in cross-national policy diffusion.

Mandatory Bicycle Helmets for Minors

This legislation requires minors of varying ages to wear a helmet while operating a bicycle, until only eight years of age in Rhode Island (passed in 1995) until as old as eighteen years of age (California (1993), Alberta (2001), New Mexico (2007), Manitoba (2012)). California and New York both passed laws mandating that passengers under the age of five must be equipped with helmets, but Victoria was the first state in the world to mandate that not just passengers but rather cyclists of all ages, including and especially minors, wear helmets in June of 1990 and taking effect July 1st. (Leicester et al. 1992 (221)) The results were quickly and extensively studied, with at least four studies specifically about the Victorian policy out by 1993 (see footnotes 8-11 in Lane and McDermott 1993 (721)).

New South Wales was immediately behind Victoria, issuing regulations a mere four months afterward declaring on November 16th, 1990, that all bicycle operators, including minors, were to wear a helmet. Like Victoria, New South Wales quickly published and publicized at least three studies on the results of the legislation (see footnote 23 in Lane and McDermott 1993 (164)). The first mandatory bicycle helmet law for minors in the United States was passed a few years later

in New Jersey in 1992, and nineteen of the twenty-one adopting states had done so within ten years. With very few U.S. examples of success outcomes to turn to, it seems probable that the policy originators provided a starting point for drafting policy.

Another reason that it is likely that policymakers in U.S. states were observing international peers is that Australia's aggressive stance on helmets has gained worldwide recognition over the past several decades. The state of Victoria passed the world's first state-level mandatory helmet law for all motorcyclists in 1960 (Curnow 2008 (141, 159), a deeply contested issue in the United States. (Jones and Bayer 2007) While not to be considered direct evidence of policy transmission, one anecdote provides credence for the concept that states whose legislatures are the first to pass a policy can develop a famous or infamous reputation for notable policies passed. An Australian journalist found upon a visit to the Netherlands that "helmets are nonexistent [in Amsterdam], and when people asked me where I was from, they would grimace and mutter: 'Ah, yes, helmet laws.' These had gained international notoriety on a par with our deadly sea animals." (Mayerhofer 2008) This case thus presents a situation where policy leaders gain a reputation as being the first and noteworthy case that is memorable and then subsequently may be studied, if only as a jumping off point.

Primary Seatbelt Legislation

This is legislation that makes it a ticketable offense to drive without wearing a seatbelt. Previously, not wearing a seatbelt was considered a secondary offence and violators could only be ticketed if they were already pulled over for a separate offense. This legislation changed the laws so that drivers could be pulled over expressly for not wearing a seatbelt. The first

mandatory state-level seatbelt law in world was passed in Victoria in 1970 and "spread to a number of European countries, Canadian provinces, and other jurisdictions in the subsequent decade," although Andreassend 1971 (593) claims that the country of Malawi passed a similar law before then to preclude Victoria from earning the distinction of creating the first such law in the world. (Wagenaar et al. 1988 (51)) As with mandatory bicycle helmets, this policy innovation was widely and publicly analyzed, with at least six studies being issued within the first ten years. (Conybeare 1980 (27))

Like graduated drivers licensing, primary seatbelt legislation spread quickly through the United States when it eventually arrived. The first state to adopt it was New York in 1984. Twenty-eight states had passed legislation within two years, and forty-nine out of fifty states had passed enacting legislation within ten years. A report for the Virginia Highway and Transportation Research Council in 1985 wrote that

> *"The purposes of this study were to review mandatory seat belt laws as they have been used around the world, to forecast the impact of such a law in Virginia, and if appropriate, to propose a mandatory seat belt law...The results indicate that a mandatory seat belt law would save hundreds of lives and cause great reductions in injuries from automobile accidents. The relatively low administrative costs associated with this law would be vastly outweighed by savings directly attributable to seatbelt use."* (Grey 1985 (vii))

This suggests an example of legislation where policy originators facilitated policy diffusion with a clear and rigorous testing of results by which borrowers could assess the policy outcomes.

Right to Breastfeed in Public

One policy with a unique pattern is the right to breastfeed in public. Legislation on this topic in the originating province of Yukon and other subsequent adopters in Canada and Australia frames the law in a human rights context, but early U.S. adopters framed it in the context of decriminalizing public nudity. The very low similarity score between Yukon and Florida (the first U.S. state to pass the legislation) reflects this. Policymakers in later states to adopt chose stronger language describing breastfeeding as a human right that more closely matches the original legislative text.

An issue of very public contention, this topic covers legislation declaring that women have the right to breastfeed in any area of public accommodation. The first U.S., Canadian, or Australian sub-national state or province to codify this concept as a human right was Yukon on February 12th, 1987, when legislators amended the *Human Rights Act* to state that "it is discrimination to treat any individual or group unfavorably on any of the following grounds…(f) sex, including pregnancy, and pregnancy related conditions," and states that "No person shall discriminate (a) when offering or providing services, goods, or facilities to the public." This was followed almost immediately by Manitoba, whose legislators amended their *Human Rights Code* on July 17th, 1987, to state that "discrimination means differential treatment of an individual on the basis of…(f) sex, including pregnancy, the possibility of pregnancy, or circumstances related to pregnancy," and forbid discrimination "with respect to any service, accommodation, facility, good, right, license, benefit, program or privilege available or accessible to the public or to a section of the public." Although protected at the federal level in Australia since 1984, similar legislation arose in the Australian states of Queensland in 1991 and the Northern Territory in 1992. Although the Queensland legislation was somewhat ambiguous about the circumstances

under which public breastfeeding was protected, the legislation of both Queensland and the Northern Territory explicitly include the term breastfeeding instead of leaving it to defendants to argue that breastfeeding is a pregnancy-related condition. (Easten 2003 (12)) The legislative text in each of these jurisdictions frames the issue as a matter of human rights and nondiscrimination, as did many of the policies subsequently adopted by Australian jurisdictions on this topic.

The passage of the first U.S. state law on this topic in Florida on March 9th, 1993 revealed that Floridian state legislators were not likely looking at their foreign counterparts when passing the legislation. The text of *An Act Relating to Breastfeeding* clearly shows that the purpose of the legislation was to reconcile the fact that studies reported that breastfeeding is beneficial to human development, but that "the social constraints of modern society militate against the choice of breastfeeding and lead new mothers…to opt for formula feeding for reasons such as embarrassment and the fear of social ostracism or criminal prosecution." This explanation ostensibly refers to Florida's laws regulating public nudity, indecent exposure, and "unnatural and lascivious acts," the threat of which may have been intimidating to breastfeeding mothers. The Florida legislation proceeds to clarify the ways in which breastfeeding does not count as an obscene or sexual act. In contrast to the nondiscriminatory phrasing in the Canadian and Australian legislation, the sentence that declares breastfeeding in public to be a right is heavily oriented toward reframing breastfeeding as a noncriminal act: "A mother may breastfeed her baby in any location, public or private, where the mother is otherwise authorized to be, irrespective of whether the nipple of the mother's breast is uncovered during or incidental to the breastfeeding." As many of the other pieces of legislation passed in the U.S. soon thereafter follow this pattern, it seems unlikely that the first U.S. adopters of right to breastfeed in public legislation were passing this legislation in emulation of their foreign counterparts' aspirational

tone, but rather were promoting breastfeeding as a health issue by amending previous laws to remove the threat of being prosecuted under legislation with potentially alarming phrases like "obscene, sexual, lascivious, deviant, genitals," etc.

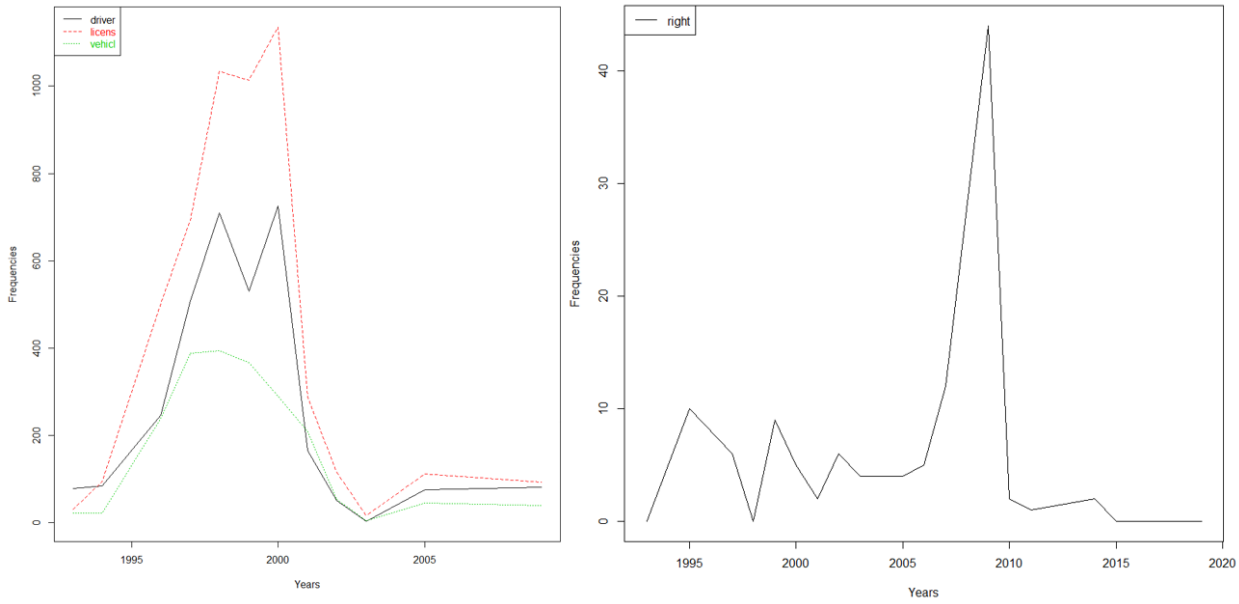
In contrast to the early U.S. adopters, many of the later U.S. adopters follow the style of the Canadian and Australian legislation and indeed go much further to sanctify public breastfeeding as a human right rather than an activity that simply should not be prosecuted. For example, New York, (which may have delayed passing legislation on the right to breastfeed in public because its legislature had earlier passed legislation that, while not guaranteeing it as a right, had decriminalized breastfeeding in public), enacted the *Breastfeeding Mothers' Bill of Rights* on August 11th, 2009. The legislation provides an extensive list of where and how mothers have the right to breastfeed, and mandates that this information be provided to all mothers who deliver at any hospital or health care facility in the state. In contrast to Florida's *An Act Relating to Breastfeeding* but more like the Canadian provinces and Australian states, the title of the legislation for Washington state passed in 2007 begins with *An Act Relating to Protecting a Woman's Right to Breastfeed*. This legislation frames breastfeeding in public and at a mother's place of employment as a civil right:

Yukon: "*On the basis of sex, including pregnancy, and pregnancy related conditions…no* ***person*** *shall discriminate when offering or providing services, goods or facilities to the* ***public.***"

Florida (Similarity Score = 0.02): "*A mother may breastfeed her baby in any location, public or private, where the mother is otherwise authorized to be, irrespective of whether the nipple of the mother's breast is uncovered during or incidental to the breastfeeding.*"	Washington (Similarity Score = 0.41): " *It shall be an unfair practice for any* ***person*** *... to commit an act which directly or indirectly results in... refusing or withholding from any* ***person*** *the admission, patronage, custom, presence, frequenting, dwelling, staying, or lodging in any place of* ***public*** *resort, accommodation, assemblage, or amusement, ... regardless of ..., status as a mother breastfeeding her child*"

The graph of frequency over time of the word "*right,"* in legislation for the right to breastfeed in public affirms this pattern, as displayed in Figure 12. This is the only word that is one of the top ten most frequent words in the Yukon legislation that is also one of the top ten most frequent words in the entire dataset of U.S. state legislation on this topic. A typical pattern for common words in the text of the foreign policy originator that are also common in the text of U.S. state laws is displayed on the left for graduated drivers licensing for the words "vehicle," "driver," and "licens." Words compared like this for most of the policies in this dataset are used frequently in the first few years after the first adoption, as borrowers follow the often-discussed "S Curve" of policy adoptions. Usage then declines.

Figure 12: Top Words in Common Between Foreign Originator and U.S. Borrowers Over Time



In contrast, the annual frequencies for the word "*right*" in right to breastfeed in public legislation are shown on the right. The twenty-eight states that passed legislation on this topic before 2005 collectively included this word an average of ten times per year or less. But the number of times the word is included skyrockets between 2005 and 2010 when sixteen more

states passed legislation. This differs from the typical pattern and indicates that diffusion of both the spirit and specific verbiage of the law occurred later than diffusion of the policy topic. The comprehensive list of rights outlined in the New York legislation suggests extensive research that very well could have led back to the policy originators for examples of best practices in the spirit of which the legislation was intended.

Anti-Bullying Legislation

This is legislation that prohibited bullying in schools and frequently laid out anti-bullying curricula to be taught, as well as sometimes requiring each school district in the state to create an anti-bullying plan. All U.S. states had legislation prohibiting harassment as a violation of human rights, but this legislation is considered to be distinct to previously existing legislation on harassment, as bullying is frequently characterized in the policies as more general behavior than harassment, as the latter must specifically "be motivated by characteristics of the targeted victim….[and] is generally viewed as a subset of more broadly defined bullying behavior. (Greene and Ross 2005)" (Stuart-Cassel et al. 2011 (17)) The first state to pass legislation specifically geared toward anti-bullying policies was Georgia on April 22nd, 1999, coincidentally just two days after the Columbine High School massacre. Seventeen more states had adopted anti-bullying policies within the next five years. Currently all fifty states have anti-bullying measures in place, with Montana being the last state to pass a policy on this topic in 2015. The first Canadian anti-bullying legislation that could be found for this study was passed in 2004 in Manitoba, and the first anti-bullying legislation that could be found for Australia was passed in 2012 in South Australia (although evidence suggests that a policy was in place in New South Wales as early as 2007). (NSW Department of Education)

Medical Marijuana

This legislation permits for marijuana to be consumed palliatively for medical conditions. It was first passed in California in 1996 and has subsequently been adopted in thirty-three states, with several bills stalling out in the 2020 legislative session due to COVID-19. (Zhang 2020) Many of the laws authorizing medical marijuana are based largely on the text of the ballot initiatives by which marijuana was legalized. Later policies were drafted and passed in the legislatures and are sometimes therefore much longer. Several gradations of what constitutes fully legalized medical marijuana exist, with some states prohibiting medical marijuana at large but allowing cannabidiol or allowing medical marijuana usage in all forms but for a restricted set of medical conditions.

The marijuana policy domain is an area in which model legislation is very prominent and likely plays a large role in promoting similar policy themes across states. For example, the Marijuana Policy Project claims credit specifically for helping to formulate medical marijuana legislation and ballot initiatives in Hawaii (2000), Rhode Island (2006), Michigan (2008), Maine (2009), Arizona (2010), Delaware (2011), and Pennsylvania (2016), and claims credit for assisting in legislation drafting for decriminalization initiatives and recreational use initiatives as well. (Marijuana Policy Project) This is another example of a policy topic in which nonprofits probably play a role in driving policy change; an interesting case study for future research would be to investigate the extent to which pro-marijuana factions in states in other countries consult with groups like the Marijuana Policy Project for advice towards legalization in their home state.

Electronic Prescription Drug Monitoring

Electronic prescription drug monitoring programs were created to track drug prescriptions in real time to better detect when patients are systematically abusing prescriptions or when doctors are systematically over-prescribing. The first prescription monitoring programs date back at least as early as 1913 (and probably earlier), when Connecticut mandated that pharmacists must not sell narcotics without a prescription from a licensed physician furnished by the patient, and that they must keep a copy of the prescritpton and regularly make copies available for "the inspection of all prosecuting authorities." This system sought to monitor opiate addicts as the United States was in the midst of a burgeoning opioid crisis due to doctors mistakenly believing heroin could be prescribed to treat morphine addiction. (NarcAnon) Over time states added additional rules about using prescription forms issued by the state government and even writing copies in triplicate. Although Oklahoma is credited with instituting the first up-and-running electronic system for monitoring prescriptions through its Bureau of Narcotics in 1990, (Fishman et al. 2004 (314), legislative authorization for a similar program in Michigan predates this by two years by declaring on March 19th, 1988 that

> *"The Controlled Substances Advisory Commission…shall establish a standardized database format which may be used by dispensing pharmacies to transmit the prescription related information required to the Department of Licensing and Regulation electronically. Within 2 years after establishing electronic or storage media transmission of data required under section 7334, the Controlled Substance Advisory Commission shall evaluate the continued need for triplicate prescription forms and report to the legislature."*

Regardless of whether the Controlled Substances Advisory Commission met its mandate to have a system up and running within one year, this legislation clearly indicates that the intent of the Michigan legislature was to design, institute, and evaluate an electronic prescription monitoring database. The Michigan legislation also contains provisions for what is heralded as innovative about the Oklahoma initiative, that is, enabling pharmacists to send prescription information instantaneously to the state instead of either keeping a copy in case of audit or mailing a physical copy to the state. (PDMP TTAC 2018 (5)) Therefore, while Oklahoma's electronic prescription drug monitoring seems to have been the first fully implemented program (Brushwood 2003 (44)), legislation written with the intent to capitalize on the opportunities of instantaneous electronic transmission originated in the Michigan legislature. Only eleven states adopted electronic prescription drug monitoring in the 1990s, presumably because most states already had what were considered viable paper systems in place. However, twenty-one states legislated electronic prescription monitoring in the 2000s. Currently the state of Missouri is the only state without an electronic prescription drug monitoring program. A bill for an electronic prescription drug monitoring program was proposed in Missouri in 2020 for the seventh year in a row, but failed to pass the senate due to a Republican filibuster over data privacy and civil liberty concerns. (Weber 2020)

School of Choice Legislation

This is legislation that authorizes students to attend school in a school district other than where they live even if there are no extenuating circumstances, such as parents living in two districts or the student being an orphan. Minnesota is sometimes cited as the first state to pass

school of choice legislation (Logan 2018 (9)), but legislation enacting school of choice policies in Arkansas predate those of Minnesota by two months. The legislation in Arkansas declares that

> *"Upon the petition of a student residing in one school district to transfer to another school district, the Board of Directors of the resident district may enter into an agreement with the Board of Directors of the receiving school district transferring the student to the receiving district for the purposes of education."*

This may however be an instance where a state whose policy gains more publicity or notoriety may be more observed, as the Minnesota education system also gained recognition for passing the first charter school law in 1991. ("The Minnesota School Choice Project") A policy that remains contentious, school of choice legislation has been passed in only twenty-one states, with fifteen of those happening within the first ten years.

APPENDIX X
TEXTUAL DIAGNOSTICS BY POLICY

Table 21 presents descriptive statistics for the tokens (post-processed unique words) in each policy grouping. The largest bodies of text are for graduated drivers licensing and medical marijuana legislation at 213,462 and 382,417 words in each corpus, and the smallest sets are in mandatory bicycle helmet and right to breastfeed in public laws (19,074 and 20,112 tokens), closely followed by school of choice (23,849).

Table 21: Token Descriptive Statistics

Foreign-Origin Policies	Total Tokens	Min	Max	Mean	Median	Standard Deviation	Number of Texts
Gradated Drivers Licensing	213,462	657	13,559	4,269	3,074	3,354	50
Mandatory Bicycle Helmets (Minors)	19,074	220	1,648	908	930	401	21
No Seatbelt Primary Offense	48,848	248	2,944	1,062	888	535	46
Right to Breastfeed in Public	20,112	34	1,427	428	356	338	47
Domestic-Origin Policies	**Total Tokens**	**Min**	**Max**	**Mean**	**Median**	**Standard Deviation**	**Number of Texts**
Anti-bullying	65,602	169	3,206	1,339	1,035	978	49
Medical Marijuana	382,417	190	79,812	11,951	5,071	17,489	32
Electronic Prescription Monitoring	137,356	231	8,726	3,052	2,684	1,873	45
School of Choice	23,849	164	2,742	1,136	981	762	21

Table 22: Words Changed to American English

authoris-	enrol	metre	programme
analys-	emphasise	minimise	recgonis-
anaestheti-	favour	neighbourhood	speciality
behaviour	honour	offence	tonne
centre	initialled	organis-	vapour
colour	jeopardise	pretence	vaporising
dependant	labour	pedalling	wilful
defence	licence	practis-	
digitis-	litre		

Keyness plots in Figure 13 and Figure 14 show examples of where policies are quite similar or different when measured by keyness. Keywords are words that occur statistically more often in one document compared to a reference group of other texts, and that therefore suggest which words are, in this case, more unique to a policy originator compared to the proportion of keywords unique to the followers. (Gabrielatos 2018 (225)) For example, the keyness plot for mandatory bicycle helmets shows that the Victorian legislation does not contain many important keywords that are notably different from the text in the policies of the entire subsequent group of U.S. borrowers, with a maximum chi-squared value of about 160 and only a few words ("section," "passeng," "shall") that are statistically unique for the U.S. legislation group. This means that the policies may be more similar as there are fewer words that can distinguish one text from the others.

On the other hand, the much higher high chi-squared values for Ontario's graduated drivers licensing law shows that the use of the word novice, as in "novice driver," is extremely unique. This bears out when reading the actual laws, as all U.S. legislation uses phrases like "student learner" or "student driver." The plot also demonstrates that words surrounding

infractions involving alcohol very much distinguish Ontario's legislation compared to the subsequent graduated drivers licensing laws passed.

However, the much smaller chi-squared values for the words that are distinct to the U.S. legislation when compared to Ontario's policy means that those words are much less unique, i.e., that the U.S. states' unique words are not as unique to them as Ontario's words are to Ontario. Overall, the largest chi-squared values for each of the foreign policies (100, 150, 600, and 4000) displayed similar variation to the largest chi-squared values for each of the domestic policies (60, 150, 200, 4000). This reveals evidence of variation in textual uniqueness that will be helpful for testing.

Figure 13: Keywords for Mandatory Bicycle Helmets for Minors (Victoria)

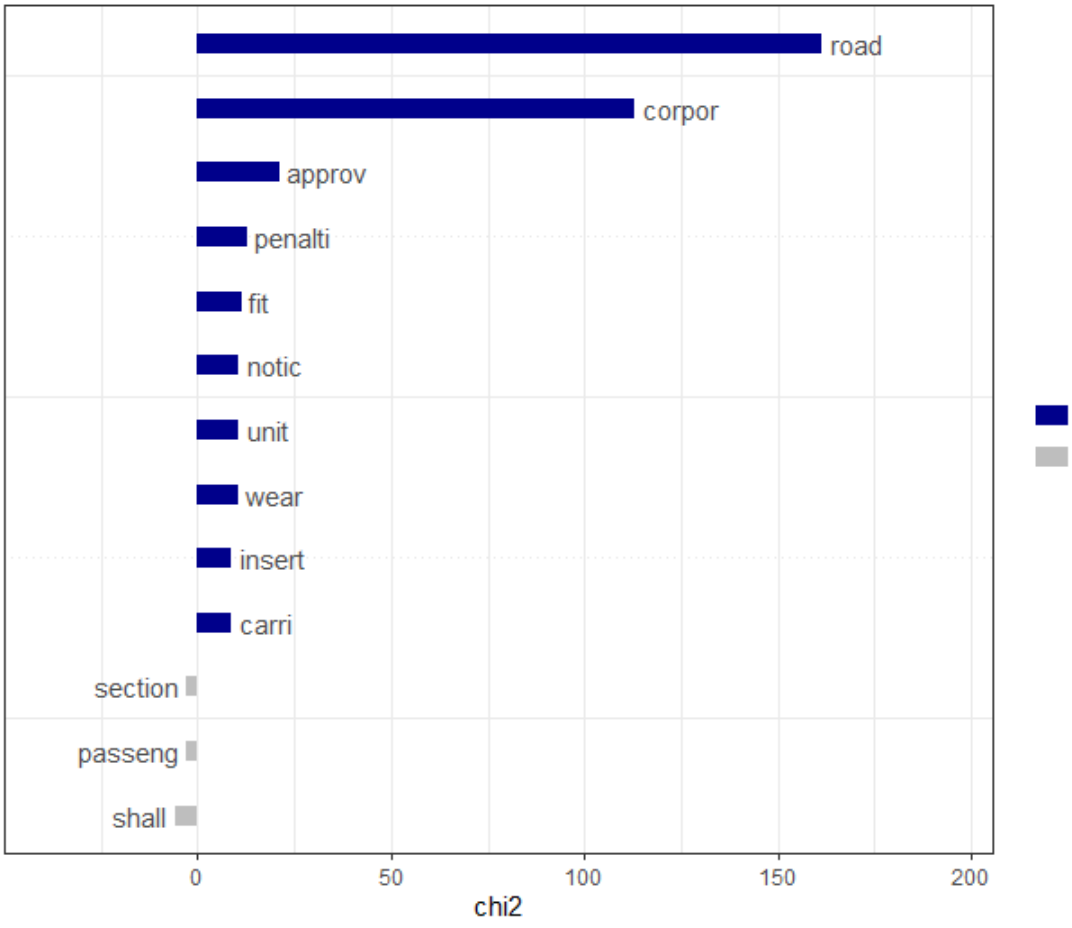


Figure 14: Keywords for Graduated Drivers Licensing (Ontario)

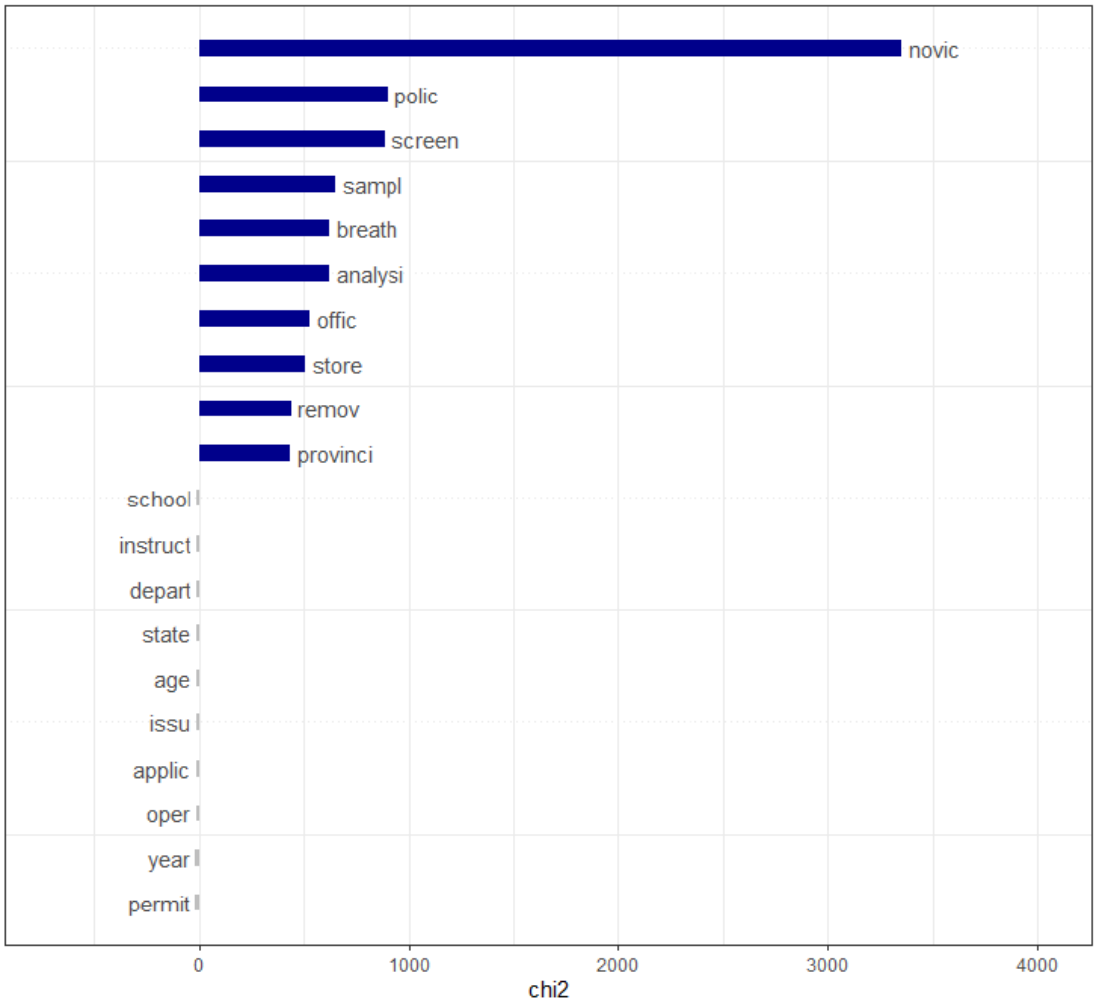


Table 23 on the next page shows the most common words found in the original policy, and the most common words found in the body of U.S. legislation for each policy, ranked by how commonly they appear (numbers, jurisdictions, and legal terms in the top ten were dropped). Words that are underlined appear in the Top Ten in both the original policy and the U.S. borrower texts. Policies with many similar words in the two rows indicate instances where

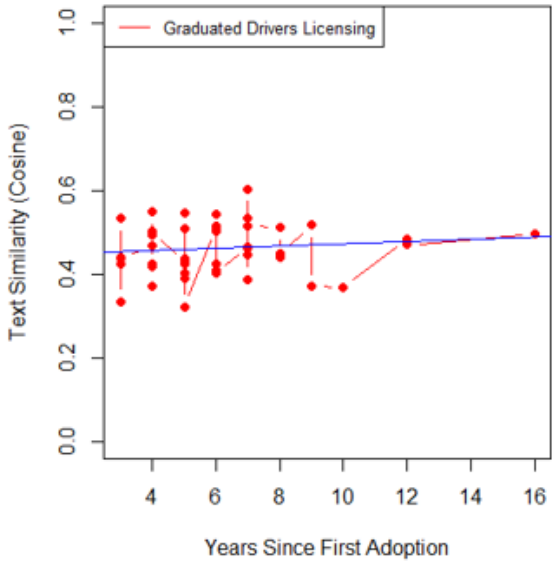
Table 23: Most Frequent Words by Policy, Ranked

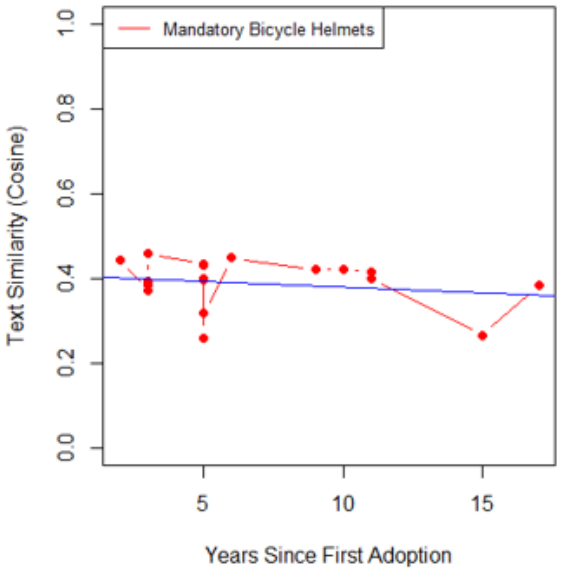
Drivers Licensing								
Foreign Leader	**driver**	novic	**licens**	polic	**vehicl**			
	78	52	31	28	22			
U.S. Adopters (Average)	**licens**	**driver**	person	permit	**vehicl**	applic	oper	year
	68	46	40	29	28	26	24	24
Total Tokens (50 Texts)	3,391	2,322	2,024	1,470	1,420	1,324	1,196	1,193
Bicycle Helmets								
Foreign Leader	**bicycl**	road	**person**	**helmet**	wear	safeti	type	
	13	12	11	9	7	6	6	
U.S. Adopters (Average)	**bicycl**	**helmet**	**person**	passeng	oper	use	seat	
	23	11	11	6	6	6	5	
Total Tokens (21 Texts)	476	222	222	130	117	116	115	
Seatbelts								
Foreign Leader	car	**motor**	**belt**	**safeti**	**person**	respect	seat	
	22	21	10	9	9	6	6	
U.S. Adopters (Average)	vehicl	**safeti**	**belt**	**motor**	violat	**person**	passeng	
	14	12	11	10	7	7	7	
Total Tokens (47 Texts)	665	566	526	461	322	317	314	
Right to Breastfeed								
Foreign Leader	**right**	everi	associ	human	individu	freedom		
	21	9	8	7	7	7		
U.S. Adopters (Average)	mother	public	breast	child	breastfeed	**right**	may	
	4	3	3	3	3	2	2	
Tota Tokens (47 Texts)	184	157	136	133	123	116	111	
Anti-Bullying Legislation								
Domestic Leader	**school**	code (of conduct)	**student**	educ	board	weapon		
	26	19	15	14	10	9		
U.S. Adopters (Average)	**school**	**student**	bulli	polici	district	harass	report	
	33	14	13	10	9	8	7	
Total Tokens (48 Texts)	1,568	686	634	495	420	382	349	
Medical Marijuana								
Domestic Leader	**marijuana**	**medic**	**use**	purpos	**person**	**patient**	physician	
	12	7	7	7	6	6	4	
U.S. Adopters (Average)	**medic**	cannabi	**patient**	depart	**use**	**person**	**marijuana**	
	126	92	76	71	56	53	53	
Total Tokens (31 Texts)	3,197	2,847	2,356	2,200	1,748	1,644	1,642	
Prescription Drug Monitoring								
Domestic Leader	**substanc**	**control**	**prescript**	licens	prescrib	public	administr	
	91	87	81	58	52	43	40	
U.S. Adopters (Average)	**prescript**	inform	**substanc**	**control**	dispens	drug	board	program
	28	26	26	23	22	20	19	15
Total Tokens (44 Texts)	1,249	1,140	1,139	1,030	956	870	820	652
School of Choice								
Domestic Leader	**district**	transfer	**school**	receiv	board	**educ**	**student**	resid
	25	13	8	8	7	7	6	6
U.S. Adopters (Average)	**school**	**district**	pupil	choic	enrol	program	**student**	**educ**
	40	29	12	9	9	8	7	6
Total Tokens (20 Texts)	790	483	240	187	177	155	145	119

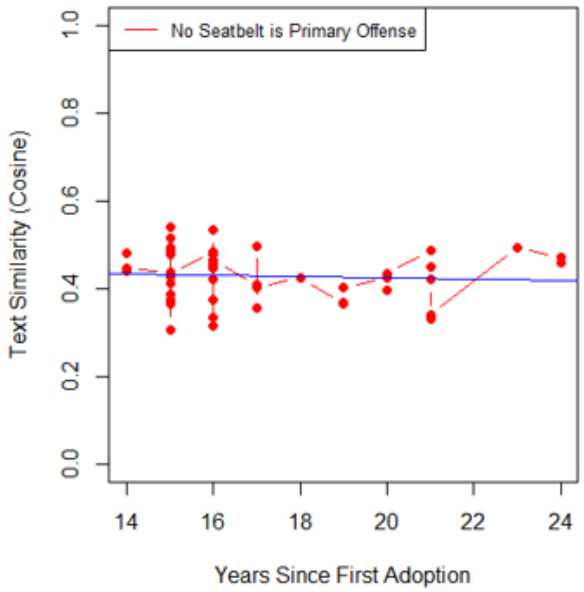
more similarity is likely present as time passes. On the other hand, policies with low similarity between originator and subsequent borrowers (for example, right to breastfeed in public, anti-bullying, and electronic prescription drug monitoring) are evidence of instances where the policy content may have evolved significantly as more borrowers innovated on the original policy topic.

Figure 15 and Figure 16 provide a quick summary of similarity over time as well as the range of similarity scores compared across policies. The similarity scores of U.S. states to policies of foreign origin generally fall in the 0.3 – 0.5 range and average similarity remains mostly constant over time, either increasing or decreasing slightly. An exception is similarity for the legislation on right to breastfeed in public, which is lower (between 0.0 to 0.2) and rises over time. Similarity over time graphs for the domestic-origin policies show higher average similarity scores closer to 0.5 to 0.7, and the decline in similarity over time is somewhat steeper. The exception is the legislation for electronic prescription drug monitoring, the similarity for which increases slightly over time.

Figure 15: Cosine Similarity for All Adopters by Years Since First Adoption (Foreign Policies)







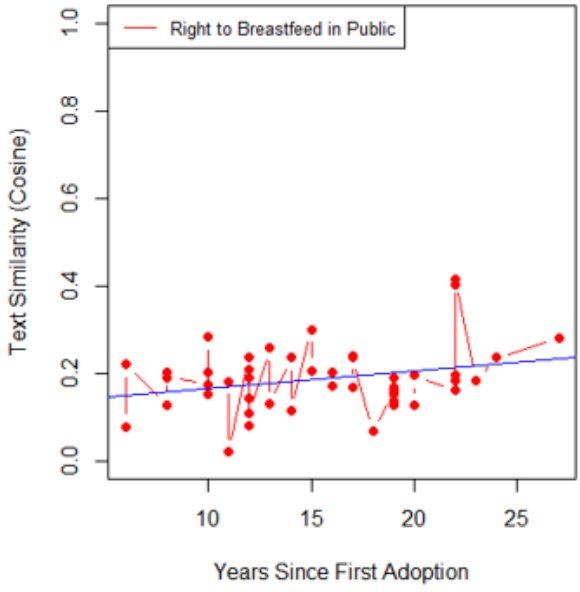
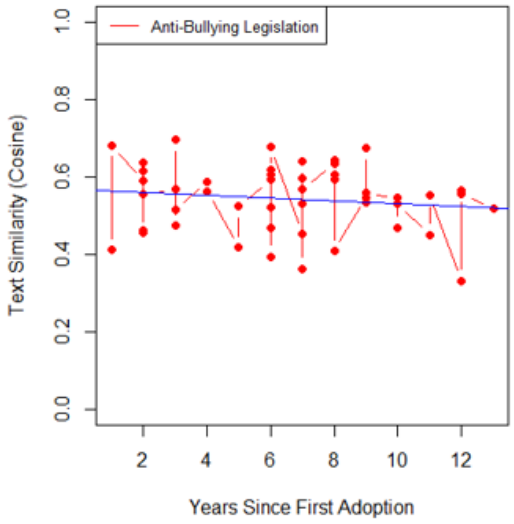
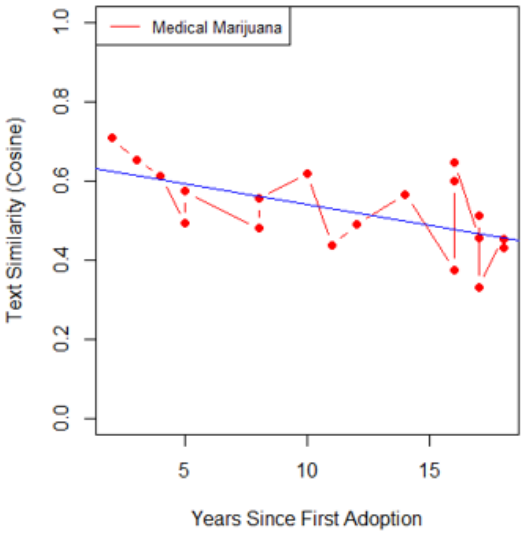
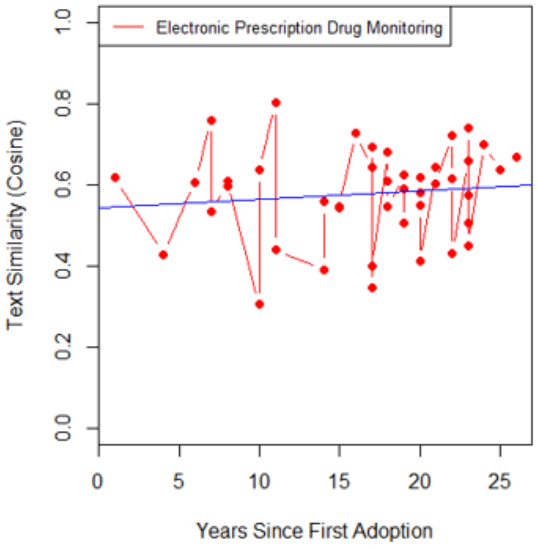
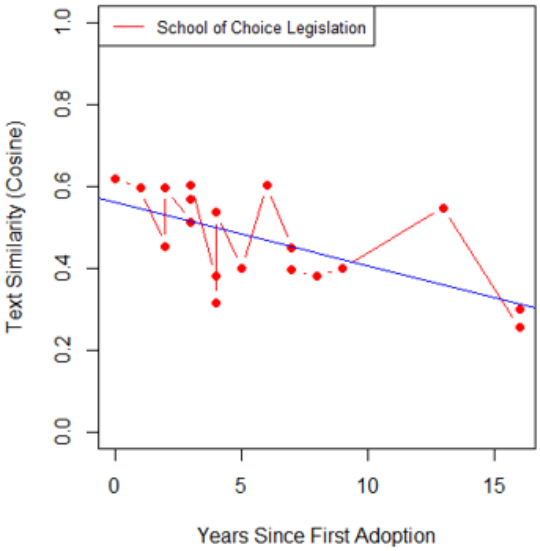


Figure 16: Cosine Similarity for All Adopters by Years Since First Adoption (Domestic Policies)









APPENDIX XI
Descriptive Statistics and Correlations

Figure 17: Outliers for Textual Similarity (Left) and Professionalism (Right)

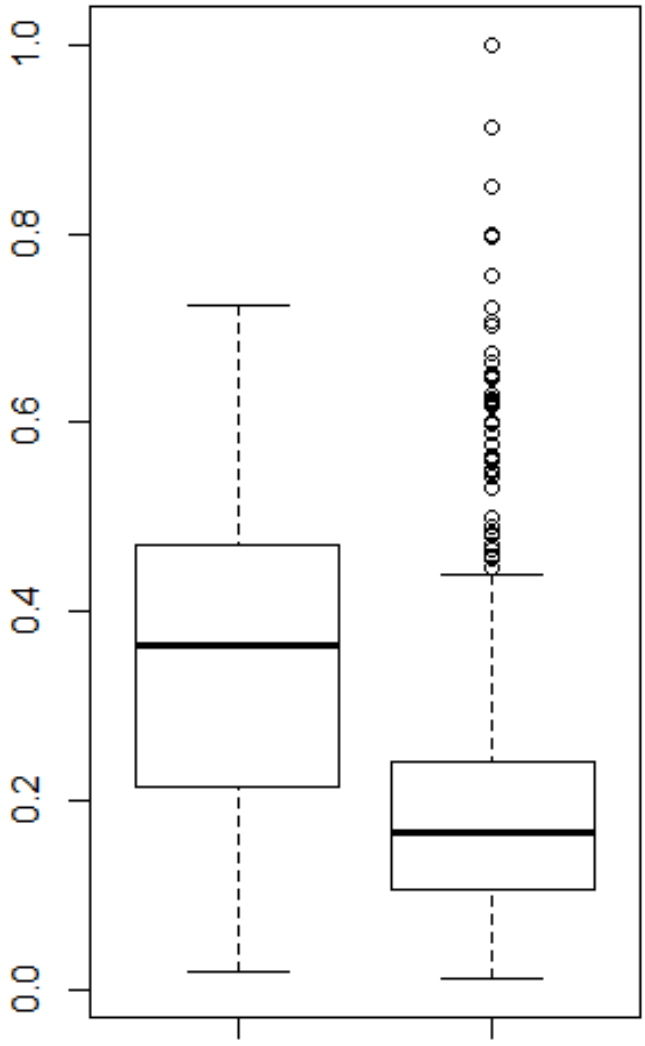


Table 24: Descriptive Statistics for Chapter IV (Text Analysis)

Stage One Variables (Probit)	Mean	St. Dev.	Min	Pctl(25)	Pctl(75)	Max
Policy is Adopted	0.052	0.221	0	0	0	1
Citizen Ideology	48.778	14.877	8.450	38.829	57.972	95.972
Neighbors Adopting	0.213	0.279	0	0.0	0.333	1.0
C.I. Scaled Variable	0.137	0.893	−2.284	−0.461	0.688	2.969
State Ideology	47.935	13.484	17.512	37.978	59.507	73.619
S.I. Scaled Variable	−0.274	1.100	−2.756	−1.087	0.670	1.821
Decades Since First Adoption	1.016	0.752	0	0.4	1.5	4
Stage Two Variables (OLS)	**Mean**	**St. Dev.**	**Min**	**Pctl(25)**	**Pctl(75)**	**Max**
Textual Similarity	0.429	0.165	0.021	0.318	0.548	0.802
Policy is Foreign	0.469	0.499	0	0	1	1
Professionalism	0.198	0.140	0.012	0.108	0.241	1.000
Staff Levels	644.695	708.545	58	238.5	688	4,157
Scaled Staff Variable	0.004	1.005	−0.829	−0.573	0.065	4.987
Session Length (Annual)	68.246	40.118	18	43	80	261
Scaled Length Variable	−0.002	0.998	−1.252	−0.630	0.291	4.795
Term Limits in Place	0.123	0.328	0	0	0	1
US Leader has Adopted	0.677	0.468	0	0	1	1
Policy Instrument Variables	**Mean**	**St. Dev.**	**Min**	**Pctl(25)**	**Pctl(75)**	**Max**
Graduated Drivers Licensing	0.062	0.242	0	0	0	1
Mandatory Bicycle Helmets	0.154	0.361	0	0	0	1
Primary Seatbelt Laws	0.100	0.300	0	0	0	1
Right to Breastfeed in Public	0.153	0.360	0	0	0	1
Anti-Bullying Legislation	0.067	0.251	0	0	0	1
Medical Marijuana	0.134	0.340	0	0	0	1
Electronic Prescription Monitoring	0.161	0.368	0	0	0	1
School of Choice Lesgislation	0.169	0.375	0	0	0	1

Table 25: Correlations for Chapter IV (Calculated using the Spearman Method)

Variables	Adopt	C.I.	S.I.	Neighbors	Decades	Text Simil.	Foreign	Prof.	Staff	Length	Term Limits	U.S. Leader
Policy is Adopted	1	0.037	0.036	0.152	0.051	0.026	0.042	0.034	0.035	0.008	0.024	0.110
Citizen Ideology	0.037	1	0.465	0.047	0.028	0.054	-0.075	0.313	0.256	0.261	0.023	-0.004
State Ideology	0.036	0.465	1	-0.081	-0.110	-0.003	0.025	0.157	0.205	0.127	-0.189	-0.196
Neighbors Adopting	0.152	0.047	-0.081	1	0.449	-0.057	-0.107	-0.050	-0.037	-0.010	0.166	0.443
Decades Since First Adoption	0.051	0.028	-0.110	0.449	1	-0.029	0.033	-0.027	-0.018	-0.024	0.224	0.551
Textual Similarity	0.026	0.054	-0.003	0.057	-0.029	1	-0.616	0.060	0.062	0.027	0.040	0.165
Policy is Foreign	0.042	-0.075	0.025	-0.107	0.033	-0.616	1	-0.024	-0.064	0.019	-0.060	-0.208
Professionalism	0.034	0.313	0.157	-0.050	-0.027	0.060	-0.024	1	0.697	0.738	0.056	-0.022
Staff Levels	0.035	0.256	0.205	-0.037	-0.018	0.062	-0.064	0.697	1	0.277	-0.043	0.005
Session Length	0.008	0.261	0.127	-0.010	-0.024	0.027	0.019	0.738	0.277	1	0.069	-0.048
Term Limits	0.024	0.023	-0.189	0.166	0.224	0.040	-0.060	0.056	-0.043	0.069	1	0.247
U.S. Leader has Adopted	0.110	-0.004	-0.196	0.443	0.551	0.165	-0.208	-0.022	0.005	-0.048	0.247	1
Policy Instruments	Adopt	C.I.	S.I.	Neighbors	Decades	Text Simil.	Foreign	Prof.	Staff	Length	Term Limits	U.S. Leader
Graduated Drivers Licesnsing	0.104	-0.050	-0.009	-0.007	-0.250	0.057	0.274	-0.018	-0.011	-0.002	-0.041	-0.132
Mandatory Bicycle Helmets	-0.053	-0.068	-0.075	-0.089	0.036	-0.103	0.454	-0.010	-0.027	0.004	0.067	0.139
Primary Seatbelt Laws	0.044	-0.020	0.107	-0.036	0.266	-0.049	0.354	-0.036	-0.064	-0.006	-0.098	-0.145
Right to Breastfeed in Public	0.002	0.015	0.027	-0.025	-0.043	-0.695	0.452	0.019	-0.001	0.028	-0.041	-0.219
Anti-Bullying Legislation	0.086	0.015	-0.052	0.104	-0.226	0.239	-0.252	0.006	0.002	-0.019	0.096	0.112
Medical Marijuana	-0.040	-0.026	-0.095	-0.122	-0.081	0.076	-0.368	0.010	0.057	-0.015	0.073	0.271
Electronic Prescription Monitoring	-0.010	0.028	0.025	0.047	0.070	0.497	-0.412	0.017	0.024	0.005	-0.016	-0.087
School of Choice Legislation	-0.065	0.085	0.063	0.137	0.112	0.001	-0.424	0.002	0.008	-0.002	-0.036	0.042

APPENDIX XII
Suitability of the Heckman Selection Model

When Heckman Selection Models are Appropriate

Certo et al. 2016 write that a Heckman Selection model is increasingly suitable when three conditions are present in the data:

1. The exclusion restriction variables of interest are significant, with the strength of the significance directly related to the indication of bias,
2. Correlation between the errors in both models is nonzero, and
3. The Inverse Mills Ratio is significant.

The first two conditions are handily met with this data, with highly significant exclusion restrictions for almost all coefficients and a nonzero correlation of error terms (rho). The Inverse Mills Ratios are not significant, but Certo et al. 2016 (2,655) caution rejecting the hypothesis that sample selection bias is present simply because the Inverse Mills Ratio is not significant, noting that "our simulations indicate that weak exclusion restrictions and/or small samples may result in insignificant lambdas [Inverse Mills Ratios], even when selection bias is present." The exclusion restrictions used in this chapter are strong, but the sample size is small. Certo et al. report that the median sample size in the literature they surveyed was 500. (2016 (2,646)) With second-stage datasets of 291 and 267, this study includes what would likely be categorized as a small sample size. Therefore, two out of three conditions indicate sample selection bias is present, and Heckman selection models can contribute useful information to the analysis.

The smaller values of rho ranging from 0.198 to 0.215 (the variable is on a scale of 0 to 1) report a meaningful but not substantial amount of sample selection bias within the data. This is fortunate, as "the cases where the need to correct for selectivity bias are largest are those with a high correlation between the error terms of the selection and the outcome equation… Unfortunately, though…in exactly those cases Heckman's estimator is particularly inefficient." (Puhani 2000 (65)) The small-to-medium size rho values suggest that the Heckman selection model is desirable to combat nonzero sample selection bias, and not in particularly great danger of inefficient estimation.

Assessing Suitability of Exclusion Restrictions

Earlier generations of scholarship presenting Heckman models tended to include the same independent variables in both stages of the model. However it later studies showed that the quality of the model's predictions for the Stage Two dependent variable (which is generally the variable of interest) improved greatly when the Stage One independent variables are not relevant to or included in predicting the Stage Two outcomes. Certo et al. 2016 (2,644) write that exclusion restrictions are suitable when the independent variables for Stage One are not included in Stage Two also that the error terms of each stage are correlated. As discussed in the previous section, the nonzero rho in the results satisfies the second condition. In addition, the low correlation between proportion of *Neighbors Adopting* and *Textual Similarity* (at -0.057) suggest that the number of neighbors who have adopted is of little consequence in explaining the *Textual Similarity*. In contrast, the correlation between *Neighbors Adopting* and whether a state adopts a policy is approximately three times greater at 0.152. In summary, the exclusion restrictions for this model are theoretically motivated and demonstrate satisfactory properties.

APPENDIX XIII
Robustness Checks

Table 26: Results of Chapter IV Analysis with Non-Outliers

	Stage One Dependent Variable: Likelihood of Adoption							
STAGE ONE (Probit)	Model 1	SE	Model 2	SE	Model 3	SE	Model 4	SE
Neighbors Adopting	1.033***	(0.127)	1.033***	(0.127)	1.033***	(0.127)	1.033***	(0.127)
Citizen Ideology (Scaled)	0.041	(0.046)	0.041	(0.046)	0.041	(0.046)	0.041	(0.046)
State Ideology (Scaled)	0.085**	(0.039)	0.085**	(0.039)	0.085**	(0.039)	0.085**	(0.039)
Time (Decades)	0.626***	(0.189)	0.626***	(0.189)	0.626***	(0.189)	0.626***	(0.189)
Time^2	−0.234***	(0.066)	−0.234***	(0.066)	−0.234***	(0.066)	−0.234***	(0.066)
Drivers Licensing	0.617***	(0.130)	0.617***	(0.130)	0.617***	(0.130)	0.617***	(0.130)
No Seatbelt	0.240*	(0.129)	0.240*	(0.129)	0.240*	(0.129)	0.240*	(0.129)
Right to Breastfeed	−0.046	(0.116)	−0.046	(0.116)	−0.046	(0.116)	−0.046	(0.116)
Medical Marijuana	−0.161	(0.138)	−0.161	(0.138)	−0.161	(0.138)	−0.161	(0.138)
Electronic Monitoring	−0.123	(0.117)	−0.123	(0.117)	−0.123	(0.117)	−0.123	(0.117)
School of Choice	−0.831***	(0.176)	−0.831***	(0.176)	−0.831***	(0.176)	−0.831***	(0.176)
Constant	−2.163***	(0.121)	−2.163***	(0.121)	−2.163***	(0.121)	−2.163***	(0.121)
Observations	5,356		5,356		5,356		5,356	
	Stage Two Dependent Variable: Text Similarity (Cosine Method)							
STAGE TWO (OLS)	Professionalism	SE	Professionalism	SE	Staff and Session Length	SE	Staff and Session Length	SE
Policy is Foreign	−0.138***	(0.021)	−0.148***	(0.033)	−0.138***	(0.020)	−0.137***	(0.020)
Professionalism	0.063	(0.062)	0.031	(0.136)				
Foreign*Professionalism			0.050	(0.150)				
Staff (Scaled)					0.005	(0.006)	0.001	(0.014)
Foreign*Staff							0.007	(0.016)
Session Length (Scaled)					0.001	(0.009)	0.001	(0.009)
Term Limits	−0.002	(0.014)	−0.002	(0.014)	−0.001	(0.014)	−0.000	(0.014)
U.S. Leader Adopted	−0.009	(0.019)	−0.008	(0.020)	−0.008	(0.020)	−0.006	(0.021)
Drivers Licensing	0.080***	(0.020)	0.080***	(0.019)	0.080***	(0.020)	0.079***	(0.020)
No Seatbelt	0.031*	(0.016)	0.031*	(0.016)	0.031*	(0.017)	0.031*	(0.017)
Right to Breastfeed	−0.219***	(0.016)	−0.219***	(0.016)	−0.220***	(0.017)	−0.219***	(0.017)
Medical Marijuana	0.019	(0.035)	0.019	(0.034)	0.019	(0.034)	0.019	(0.035)
Electronic Monitoring	0.040*	(0.024)	0.040*	(0.024)	−0.040*	(0.024)	0.040*	(0.024)
School of Choice	−0.095**	(0.044)	−0.096**	(0.043)	−0.098**	(0.044)	−0.096**	(0.043)
Constant	0.497***	(0.049)	0.502***	(0.049)	0.506***	(0.049)	0.504***	(0.049)
Observations	271		271		271		271	
ρ	0.242		0.243		0.254		0.253	
Inverse Mills Ratio	0.020	(0.020)	0.020	(0.019)	0.021	(0.020)	0.021	(0.020)
Note:			*p<0.1; **p<0.05; ***p<0.01					

Table 27: Individual Policy Models (Domestic Origin)

	Stage One Dependent Variable: Likelihood of Adoption				
STAGE ONE (Probit)	Anti-Bullying (Two Step)	Anti-Bullying (Robust)	Medical Marijuana	Prescription Drug Monitoring	School of Choice
Neighbors Adopting	0.362	0.555	1.037	−0.928*	0.390
	(0.338)	(0.353)	(0.663)	(0.476)	(0.640)
Citizen Ideology (Scaled)	0.132	0.169	0.208	0.058	0.042
	(0.118)	(0.132)	(0.204)	(0.122)	(0.214)
State Ideology (Scaled)	−0.021	−0.089	0.339**	0.088	0.390**
	(0.100)	(0.111)	(0.154)	(0.099)	(0.176)
Time (Decades)	2.200**	2.375**	−1.921*	0.375	2.937
	(0.894)	(1.014)	(0.998)	(0.629)	(1.891)
Time^2	−1.029	−1.222*	1.290**	−0.244	−3.284*
	(0.655)	(0.723)	(0.552)	(0.229)	(1.804)
Constant	−2.074***	−2.233***	−1.989***	−2.528***	−2.374***
	(0.252)	(0.316)	(0.342)	(0.420)	(0.422)
Observations	384	384	761	920	964
	Stage Two Dependent Variable: Textual Similarity				
STAGE ONE (Probit)	Anti-Bullying (Two Step)	Anti-Bullying (Robust)	Medical Marijuana	Prescription Drug Monitoring	School of Choice
Professionalism	0.108	0.119*	0.095	0.074	0.095
	(0.077)	(0.067)	(0.171)	(0.076)	0.101
Term Limits	−0.024	−0.026	−0.036	−0.004	
	(0.029)	(0.031)	(0.058)	(0.035)	
Constant	0.497***	0.526***	0.430***	0.613***	0.534***
	(0.059)	(0.059)	(0.092)	(0.082)	(0.065)
Observations	47	47	22	43	19
ρ	0.221	0.005	0.454	−0.208	−0.329
Inverse Mills Ratio	0.019	−0.000	0.048	0.023	−0.035
	(0.039)	(0.042)	(0.032)	(0.047)	(0.024)
Note:					*p<0.1; **p<0.05; ***p<0.01

Table 28: Individual Policy Models (Foreign Origin)

	Stage One Dependent Variable: Likelihood of Adoption					
STAGE ONE (Probit)	Graduated Licensing	Bicycle Helmets (Two Step)	Bicycle Helmets (Robust)	Primary Seatbelt	Right toBreastfeed (Two STep)	Right to Breastfeed (Robust)
Neighbors Adopting	−0.051	1.435***	2.445***	−0.133	−0.089	0.050
	(0.460)	(0.370)	(0.677)	(0.448)	(0.363)	(0.393)
Citizen Ideology (Scaled)	0.091	0.064	0.226	−0.200	−0.040	−0.027
	(0.137)	(0.143)	(0.258)	(0.124)	(0.094)	(0.102)
State Ideology (Scaled)	0.148	0.381**	−0.110	0.139	0.170**	0.161*
	(0.109)	(0.150)	(0.219)	(0.120)	(0.086)	(0.094)
Time (Decades)	7.171***	1.116	5.701	11.124***	2.350***	1.912**
	(2.001)	(0.818)	(4.891)	(3.037)	(0.664)	(0.746)
$Time^2$	−4.211***	−0.888*	−8.033	−2.883***	−0.535**	−0.418*
	(1.319)	(0.446)	(5.579)	(0.846)	(0.218)	(0.241)
Constant	−3.078***	−2.411***	−2.982***	−11.276***	−3.421***	−3.124***
	(0.548)	(0.305)	(0.952)	(2.650)	(0.453)	(0.504)
Observations	355	878	878	568	870	870
	Stage Two Dependent Variable: Textual Similarity					
STAGE TWO (OLS)	Graduated Licensing	Bicycle Helmets (Two Step)	Bicycle Helmets (Robust)	Primary Seatbelt	Right to Breastfeed (Two STep)	Right to Breastfeed (Robust)
Professionalism	−0.047	−0.022	−0.051*	0.058	0.126*	0.084
	(0.026)	(0.057)	(0.028)	(0.055)	(0.068)	(0.059)
Term Limits	0.001	0.030	0.017		−0.044*	−0.040
	(0.022)	(0.054)	(0.011)		(0.026)	(0.029)
Constant	0.469***	0.396***	0.420***	0.365***	0.273***	0.224***
	(0.026)	(0.046)	(0.018)	(0.051)	(0.062)	(0.061)
Observations	50	21	21	46	46	46
ρ	0.081	−0.014	−0.042	0.057	−0.685	−0.394
Inverse Mills Ratio	0.005	−0.001	−0.002	0.037	−0.059*	−0.029
	(0.019)	(0.023)	(0.003)	(0.038)	(0.033)	(0.035)

Note: *p<0.1; **p<0.05; ***p<0.01

BIBLIOGRAPHY

Andreassend, D. C. (1976). Victoria and the seat belt law, 1971 on. *Human Factors, 18*(6), 593-600.

Akers, M. (2020). RTC Bike Share Usage Nearly Doubles in April Amid Shutdown. Las Vegas Review-Journal. 4 May 2020. Accessed 27 June 2020. https://www.reviewjournal.com/business/rtc-bike-share-usage-nearly-doubles-in-april-amid-shutdown-2021138/

Australian Bureau of Statistics. (2017). Australian National Accounts: State Accounts, 2016 - 2017. Accessed 5 September 2018. http://www.abs.gov.au/AUSSTATS/abs@.nsf/Lookup/5220.0Main Features12016-17?OpenDocument

Australian Institute for Gambling Research University of Western Sydney Macarthur. (1999). Australian Gambling Comparative History and Analysis. Accessed 26 June 2020. https://www.greo.ca/Modules/EvidenceCentre/files/AIGR(1999)Australian_gambling_comparative_history_and_analysis.pdf

Bader, M.C. (2019, December 6). Do Minnesota state politicians really belong in the Mideast? *StarTribune.* Accessed 27 June 2020. https://www.startribune.com/do-minnesota-state-politicians-really-belong-in-the-mideast/565906512/

Balla, S. J. (2001). Interstate professional associations and the diffusion of policy innovations. *American Politics Research*, *29*(3), 221-245.

Bargain abatement; Developing countries and covid-19. (2020, May 9). *The Economist*, *435*(9193), 25(US). Retrieved from https://link-gale-com.proxy.lib.umich.edu/apps/doc/A622936508/ITBC?u=umuser&sid=ITBC&xid=0d6fad34

Baybeck, B., Berry, W. D., & Siegel, D. A. (2011). A strategic theory of policy diffusion via intergovernmental competition. *The Journal of Politics*, *73*(1), 232-247.

Begley, S. (2020, March 24). Desperate for Covid-19 answers, U.S. doctors turn to colleagues in China. *STAT.* Accessed 26 June 2020. https://www.statnews.com/2020/03/24/covid-19-answers-doctors-turn-to-china/

Benoit, Kenneth, Kohei Watanabe, Haiyan Wang, Paul Nulty, Adam Obeng, Stefan Müller, and Akitaka Matsuo. (2018) “ he mode: An R package for the quantitative analysis of textual

data ". Journal of Open Source Software . 3(30), 774. https://doi.org/10.21105/joss.00774 .

Berry, F. S., & Berry, W. D. (1990). State lottery adoptions as policy innovations: An event history analysis. *The American Political Science Review*, 395-415.

Berry, F. S., & Berry, W. D. (2018). Innovation and Diffusion Models in Policy Research. In *Theories of the policy process* (pp. 263-308). Routledge.

Berry, W. D., & Baybeck, B. (2005). Using geographic information systems to study interstate competition. *American Political Science Review*, *99*(4), 505-519.

Berry, W. D., Ringquist, E. J., Fording, R. C., and Hanson, R. L. (1998). Measuring Citizen and Government Ideology in the American States, 1960-93. American Journal of Political Science , 42(1), 327-348.

Bliss, L. (2020, April 3). Mapping How Cities Are Reclaiming Street Space. *Bloomberg.* Accessed 26 June 2020. https://www.bloomberg.com/news/articles/2020-04-03/how-coronavirus-is-reshaping-city-streets

Boehmke, F. J., & Skinner, P. (2012). State policy innovativeness revisited. *State Politics & Policy Quarterly*, *12*(3), 303-329.

Boehmke, F. J., & Witmer, R. (2004). Disentangling diffusion: The effects of social learning and economic competition on state policy innovation and expansion. *Political Research Quarterly*, *57*(1), 39-51.

Boehmke, F.J., Brockway, M., Desmarais, B., Harden, J., LaCombe, S., Linder, F., & Wallach, H. (2018). "State Policy Innovation and Diffusion (SPID) Database v.1.0. Harvard Dataverse. https://doi.org/10.7910/DVN/CVYSR7

Boehmke, F. J., Rury, A. M., Desmarais, B. A., & Harden, J. J. (2017). The seeds of policy change: Leveraging diffusion to disseminate policy innovations. *Journal of health politics, policy and law*, *42*(2), 285-307.

Boehmke, F. J. (2009). Policy emulation or policy convergence? Potential ambiguities in the dyadic event history approach to state policy emulation. *The Journal of Politics*, *71*(3), 1125-1140.

Bogenschneider, K., Day, E., & Parrott, E. (2019). Revisiting theory on research use: Turning to policymakers for fresh insights. *American Psychologist*.

Bogenschneider, K., Little, O. M., & Johnson, K. (2013). Policymakers' use of social science research: Looking within and across policy actors. *Journal of Marriage and Family*, *75*(2), 263-275.

Börzel, T. A., & Risse, T. (2012). From Europeanisation to diffusion: introduction. *West European Politics*, *35*(1), 1-19.

BottleBill.org. (2020). Bottle Bill Resource Guide: British Columbia. *BottleBill.org.* Accessed 27 June 2020.

Bowen, D. C., & Greene, Z. (2014). Should we measure professionalism with an index? A note on theory and practice in state legislative professionalism research. *State Politics & Policy Quarterly*, *14*(3), 277-296.

Box-Steffensmeier, J. M., & Zorn, C. J. (2001). Duration models and proportional hazards in political science. *American Journal of Political Science*, 972-988.

Boyd, B. (2017). Working together on climate change: Policy transfer and convergence in four Canadian provinces. *Publius: The Journal of Federalism*, *47*(4), 546-571.

Boyle, A. (2020, June 11). Amid COVID-19 pandemic, experts lay out 10-point plan for a genomic revolution in public health. *GeekWire.* Accessed 26 June 2020. https://www.geekwire.com/2020/amid-covid-19-pandemic-experts-lay-10-point-plan-genomic-revolution-public-health/

Bricker, C., & LaCombe, S. (2020). The Ties that Bind Us: The Influence of Perceived State Similarity on Policy Diffusion. *Political Research Quarterly*, 1065912920906611.

Brun, J. (2019). Overview and comparison of environmental laws in the US and Canada. Accessed 22 March 2020. https://nimonik.com/2019/10/overview-and-comparison-of-environmental-laws-in-the-us-and-canada/

Brushwood, D. B. (2003). Maximizing the value of electronic prescription monitoring programs. *The Journal of Law, Medicine & Ethics*, *31*(1), 41-54.

Buckley, J., & Westerland, C. (2004). Duration dependence, functional form, and corrected standard errors: Improving EHA models of state policy diffusion. *State Politics & Policy Quarterly*, *4*(1), 94-113.

Buckley, J. (2019, September 4). World's most livable city for 2019, according to the Economist Intelligence Unit. *CNN.* Accessed 26 June 2020. https://edition.cnn.com/travel/article/worlds-most-livable-cities-2019-trnd/index.html

Buehler, R., & Hamre, A. (2014). *Economic benefits of capital bikeshare: A focus on users and businesses* (No. VT-2013-06). Mid-Atlantic Universities Transportation Center.

Bullock, C., Brereton, F., & Bailey, S. (2017). The economic contribution of public bike-share to the sustainability and efficient functioning of cities. *Sustainable cities and society*, *28*, 76-87.

Bureau of Economic Analysis. (2018). Gross Domestic Product (GDP) by County and Metropolitan Area. Accessed 5 September 2018. https://apps.bea.gov/itable/iTable.cfm?ReqID=70&step=1

Bureau of Economic Analysis. (2018). Quarterly Gross Domestic Product (GDP) by State. Accessed 5 September 2018. https://apps.bea.gov/itable/iTable.cfm?ReqID=70&step=1

Bureau of Economic Analysis. (2020). Gross Domestic Product by State, 4th Quarter and Annual 2019. Accessed 26 June 2020. https://www.bea.gov/system/files/2020-04/qgdpstate0420.pdf

Burgess, M., Giraudy, E., Katz-Samuels, J., Walsh, J., Willis, D., Haynes, L., & Ghani, R. (2016, August). The legislative influence detector: Finding text reuse in state legislation. In *Proceedings of the 22nd ACM SIGKDD International Conference on Knowledge Discovery and Data Mining* (pp. 57-66).

Butler, D. M., & Nickerson, D. W. (2011). Can learning constituency opinion affect how legislators vote? Results from a field experiment. *Quarterly Journal of Political Science*, *6*(1), 55-83.

Butler, D. M., Volden, C., Dynes, A. M., & Shor, B. (2017). Ideology, learning, and policy diffusion: Experimental evidence. *American Journal of Political Science*, *61*(1), 37-49.

Carey, M. (2020, April 29). Cities Like New York, Paris, and Berlin Are Adding More Bike Lanes. *Condé Nast Traveler.* Accessed 27 June 2020. https://www.cntraveler.com/story/cities-like-new-york-paris-and-berlin-are-adding-more-bike-lanes

Carley, S., & Miller, C. J. (2012). Regulatory stringency and policy drivers: A reassessment of renewable portfolio standards. *Policy Studies Journal*, *40*(4), 730-756.

Carley, S., & Nicholson-Crotty, S. (2018). Moving beyond theories of neighborly emulation: Energy policy information channels are plentiful among American states. *Energy research & social science*, *46*, 245-251.

Carley, S., Nicholson-Crotty, S., & Fisher, E. J. (2015). Capacity, guidance, and the implementation of the American Recovery and Reinvestment Act. *Public Administration Review*, *75*(1), 113-125.

Cattanach Jr, R. E., & O'Connor, P. V. (1992). Environmental Concerns Raised by the Canada-United States Free Trade Agreement. *Wm. Mitchell L. Rev.*, *18*, 461.

Certo, S. T., Busenbark, J. R., Woo, H. S., & Semadeni, M. (2016). Sample selection bias and Heckman models in strategic management research. *Strategic Management Journal*, *37*(13), 2639-2657.

Chapelle, C. A. (2014). Five decades of Canadian and Québec content in French textbooks in the United States. *American Review of Canadian Studies*, *44*(4), 415-432.

Choudhury, S.R. (2016, August 17). These are the most livable cities in the world. *CNBC*. Accessed 26 June 2020.: https://www.cnbc.com/2016/08/17/melbourne-vienna-vancouver-ranked-top-three-most-livable-cities-by-the-economist-intelligence-unit.html

Cialdini, R. B. (1987). *Influence* (Vol. 3). Port Harcourt: A. Michel.

Conybeare, J. A. (1980). Evaluation of automobile safety regulations: The case of compulsory seat belt legislation in Australia. *Policy Sciences*, *12*(1), 27-39.

Cook, I. R., & Ward, K. (2011). Trans-urban networks of learning, mega events and policy tourism: The case of Manchester's Commonwealth and Olympic Games projects. *Urban Studies*, *48*(12), 2519-2535.

Curnow, W. J. (2008). *BICYCLE HELMETS: Ascientific EVALUATION* (pp. 141-147).

De la Haye, K., Robins, G., Mohr, P., & Wilson, C. (2010). Obesity-related behaviors in

Desjardins, J. (2019). Mapped: The world's oldest democracies. *World Economic Forum*. Accessed 25 June 2020. https://www.weforum.org/agenda/2019/08/countries-are-the-worlds-oldest-democracies

Desmarais, B. A., Harden, J. J., & Boehmke, F. J. (2015). Persistent policy pathways: Inferring diffusion networks in the American states. *American Political Science Review*, *109*(2), 392-406.

Direct Energy. (2020). Energy Deregulation in Alberta. Accessed 27 June 2020. https://www.directenergy.ca/learn/energy-choice/alberta-history-gas-electricity-deregulation

Dolowitz, D., & Marsh, D. (1996). Who learns what from whom: a review of the policy transfer literature. *Political studies*, *44*(2), 343-357.

Dolowitz, D. P., & Marsh, D. (2000). Learning from abroad: The role of policy transfer in contemporary policy-making. *Governance*, *13*(1), 5-23.

Dolowitz, D. P., & Medearis, D. (2009). Considerations of the obstacles and opportunities to formalizing cross-national policy transfer to the United States: a case study of the transfer of urban environmental and planning policies from Germany. *Environment and planning C: government and policy*, *27*(4), 684-697.

Doyle, W. R. (2006). Adoption of merit-based student grant programs: An event history analysis. *Educational evaluation and policy analysis*, *28*(3), 259-285.

Ducharme, L. J., & Abraham, A. J. (2008). State policy influence on the early diffusion of buprenorphine in community treatment programs. *Substance Abuse Treatment, Prevention, and Policy*, *3*(1), 17.

Duffin, E. (2019, July 15). Median annual family income in Canada, by province 2017. Accessed 26 June 2020. https://www.statista.com/statistics/467078/median-annual-family-income-in-canada-by-province/

Duhigg, C. (2020, April 26). Seattle's Leaders Let Scientists Take the Lead. New York's Did Not. *The New Yorker.* Accessed 26 June 2020. https://www.newyorker.com/magazine/2020/05/04/seattles-leaders-let-scientists-take-the-lead-new-yorks-did-not

Dupré, R. (2008). *Why did Canada nationalize liquor sales in the 1920s?: A political economy story* (No. 08-11).

Easten, R (2003). Protecting Breastfeeding Mothers under Queensland Discrimination Law Amendment Act 2002. Research Brief No 2003/15. Queensland Parliamentary Library.

Einstein, K. L., Glick, D. M., & Palmer, M. (2017). *City learning: Evidence of policy information diffusion from a survey of US mayors*. Working Paper.

Engelberg, S., Chen, C., & Rotella, S. (2020, April 18.) Coronavirus Advice From Abroad: 7 Lessons America's Governors Should Not Ignore as They Reopen Their Economies. *ProPublica.* Accessed 26 June 2020. https://www.propublica.org/article/coronavirus-advice-from-abroad-7-lessons-americas-governors-should-not-ignore-as-they-reopen-their-economies

Evans, E. C. (1917). *A History of the Australian Ballot System in the United States...* University of Chicago

Exstrom, M. (2019). Learning From the World's Best Educators. National Conference of State Legislatures. The NCSL Education Program.

Faleiro, S. (2020). What the world can learn from Kerala about how to fight covid-19. *MIT Technology Review*. 13 April 2020. Accessed 26 May 2020. https://www.technologyreview.com/2020/04/13/999313/kerala-fight-covid-19-india-coronavirus/

Faust, K. (2006). Comparing social networks: size, density, and local structure. *Metodoloski zvezki*, *3*(2), 185.

Federal Statistical Office of Germany. Gross Domestic Product by State. Current dollars. www.statistik-bw.de/VGRdL/tbls/tab.jsp

Fenno, R. F. (1973). *Congressmen in committees*. Little, Brown.

Fisher, M. and Taub, A. (2020). A Mind Blowing Conversation About Coronavirus. *The New York Times Interpreter*. 26 May 2000.

Fishman, S. M., Papazian, J. S., Gonzalez, S., Riches, P. S., & Gilson, A. (2004). Regulating opioid prescribing through prescription monitoring programs: balancing drug diversion and treatment of pain. *Pain Medicine*, *5*(3), 309-324.

Fowler, J. H. (2006). Legislative cosponsorship networks in the US House and Senate. *Social Networks*, *28*(4), 454-465.

Gabrielatos, C. (2018). Keyness Analysis: nature, metrics and techniques. In *Corpus Approaches to Discourse* (pp. 225-258). Routledge.

Gallagher, P. (2015). The Whimsical Anarchism of the White Bicycle Revolution. 19 March 2015. https://dangerousminds.net/comments/the_white_bicycle_revolution

Garrett, K. N., & Jansa, J. M. (2015). Interest group influence in policy diffusion networks. *State Politics & Policy Quarterly*, *15*(3), 387-417.

Geldenhuys, D. (1998). The foreign relations of South Africa's provinces.

Gilardi, F., & Füglister, K. (2008). Empirical modeling of policy diffusion in federal states: the dyadic approach. *Swiss Political Science Review*, *14*(3), 413-450.

Gilardi, F., Giovanoli, M., Shipan, C. R., & Wüest, B. (2014). Measuring policy diffusion with automated content analysis.

Gilardi, Fabrizio, Charles R. Shipan and Bruno Wüest (forthcoming), "Policy Diffusion: The Issue-Definition Stage," American Journal of Political Science

Gilardi, Fabrizio and Bruno Wüest (2020). "Text-as-Data Methods for Comparative Policy Analysis." In B. Guy Peters and Guillaume Fontaine (eds), Handbook of Methods for Comparative Policy Analysis. Cheltenham, Edward Elgar Publishing.

Glick, H. R., & Hays, S. P. (1991). Innovation and reinvention in state policymaking: Theory and the evolution of living will laws. *The Journal of Politics*, *53*(3), 835-850.

Global Initiative on Sharing All Influenza Data. www.gisaid.org

Gomez-Rodriguez, M., Leskovec, J., & Krause, A. (2010, July). Inferring networks of diffusion and influence. In *Proceedings of the 16th ACM SIGKDD international conference on Knowledge discovery and data mining* (pp. 1019-1028). ACM.

Goodreau, S. M., Kitts, J. A., & Morris, M. (2009). Birds of a feather, or friend of a friend? Using exponential random graph models to investigate adolescent social networks. *Demography*, *46*(1), 103-125.

Gray, V., & Lowery, D. (2000). Where do policy ideas come from? A study of Minnesota legislators and staffers. *Journal of Public Administration Research and Theory*, *10*(3), 573-598.

Gray, V. (1973). Innovation in the states: A diffusion study. *American political science review*, *67*(4), 1174-1185.

Greenblatt, A. (2018, January 26). Fearing Trump's Trade Policies, U.S. States and Foreign Countries Grow Closer. *Governing.* Accessed 26 June 2020. https://www.governing.com/topics/mgmt/gov-governors-trade-foreign-diplomacy-trump-states.html

Greene, M. B., & Ross, R. (2005). The nature, scope, and utility of formal laws and regulations that prohibit school-based bullying and harassment. *Persistently Safe Schools 2005*.

Grey, J. (1985). *Mandatory seat belt use laws* (No. VHTRC 85-R18). Virginia Transportation Research Council.

Grimmer, J., & Stewart, B. M. (2013). Text as data: The promise and pitfalls of automatic content analysis methods for political texts. *Political analysis*, *21*(3), 267-297.

Grossback, L. J., & Peterson, D. A. (2004). Understanding Institutional Change: Legislative Staff Development and the State Policymaking Environment. *American Politics Research, 32*(1), 26-51.

Grossback, L. J., Nicholson-Crotty, S., & Peterson, D. A. (2004). Ideology and learning in policy diffusion. *American Politics Research, 32*(5), 521-545.

Haider-Markel, D. P. (2001). Policy diffusion as a geographical expansion of the scope of political conflict: Same-sex marriage bans in the 1990s. *State Politics & Policy Quarterly, 1*(1), 5-26.

Hammond, S. W. (1996). Recent Research on Legislative Staffs. *Legislative Studies Quarterly*, 21(4), 543-576.

Heckman, J. J. (1976). The common structure of statistical models of truncation, sample selection and limited dependent variables and a simple estimator for such models. In *Annals of economic and social measurement, volume 5, number 4* (pp. 475-492). NBER.

Herrick, R., & Thomas, S. (2005). Do term limits make a difference? Ambition and motivations among US state legislators. *American Politics Research, 33*(5), 726-747.

Hlavac, Marek (2018). Stargazer: Well-Formatted Regression and Summary Statistics Tables. R package version 5.2.2. https://CRAN.R-project.org/package=stargazer

Hollis, D.B. (2018). The Elusive Foreign Compact. *Missouri Law Review.* 71(4) 1071-1103. https://scholarship.law.missouri.edu/cgi/viewcontent.cgi?article=3797&context=mlr

Holloway, I. (2006). Graduated Driver Licensing in Manitoba: An Analysis of the History and Process of Creating Bill 11. *Manitoba Law Journal*, *3*, 99-99.

Hooghe, L., & Marks, G. (1996). "Europe with the regions": channels of regional representation in the European Union. *Publius: The Journal of Federalism, 26*(1), 73-92.

Hooghe, L., Marks, G., & Marks, G. W. (2001). *Multi-level governance and European integration*. Rowman & Littlefield.

Hyde, S. D. (2011). Catch us if you can: Election monitoring and international norm diffusion. *American Journal of Political Science, 55*(2), 356-369.

Im, J. (2018, August 16). These are the top 10 most liveable cities in the world. *CNBC.* Accessed 26 June 2020. https://www.cnbc.com/2018/08/15/global-liveability-index-2018-most-liveable-cities-in-the-world-.html

International Monetary Fund: World Economic Outlook Database. April 2018. Accessed 4 September 2018. http://www.imf.org/external/ns/cs.aspx?id=28

Jansa, J. M., Hansen, E. R., & Gray, V. H. (2019). Copy and paste lawmaking: legislative professionalism and policy reinvention in the states. *American Politics Research*, *47*(4), 739-767.

Janzer, C. (2019). North Dakota Reforms its Prisons, Norwegian Style. US. News & World Report. Accessed 11 May 2020. https://www.usnews.com/news/best-states/articles/2019-02-22/inspired-by-norways-approach-north-dakota-reforms-its-prisons

Jenne, J. (2018, December 20). The Chinese Doctor Who Beat the Plague. *Los Angeles Review of Books - China Channel.* Accessed 26 June 2020. https://chinachannel.org/2018/12/20/plague/

Jiffriya, M. A. C., Jahan, M. A., & Ragel, R. G. (2014, December). Plagiarism detection on electronic text based assignments using vector space model. In *7th International Conference on Information and Automation for Sustainability* (pp. 1-5). IEEE.

Johns Hopkins University & Medicine. (2020, June 30). Mortality Analyses. *Johns Hopkins University & Medicine.* Accessed 30 June 2020. https://coronavirus.jhu.edu/data/mortality

Jones, M. M., & Bayer, R. (2007). Paternalism & its discontents: motorcycle helmet laws, libertarian values, and public health. *American Journal of Public Health*, *97*(2), 208-217.

Jowett, B. (2008). *The Laws of Plato*. The Project Gutenberg EBook of Laws, by Plato. Last Updated: January 15, 2013.

Ka, S., & Teske, P. (2002). Ideology and professionalism: Electricity regulation and deregulation over time in the American states. *American Politics Research*, *30*(3), 323-343.

Karch, A., Nicholson-Crotty, S. C., Woods, N. D., & Bowman, A. O. M. (2016). Policy diffusion and the pro-innovation bias. *Political Research Quarterly*, *69*(1), 83-95.

Kelemen, R. D. (Ed.). (2014). *Lessons from Europe?: What Americans Can Learn from European Public Policies*. CQ Press.

Kennedy, T.W., & Solaimanian, M. (1998, October). Evaluation of the Cape Seal Process as a Pavement Rehabilitation Alternative. Project Summary Report 1788-S. *Center for Transportation Research - University of Texas at Austin.* https://rosap.ntl.bts.gov/view/dot/14902/dot_14902_DS1.pdf?

Kern, K., Koll, C., & Schophaus, M. (2007). The diffusion of Local Agenda 21 in Germany: Comparing the German federal states. *Environmental Politics*, *16*(4), 604-624.

Kiel, D., Theis, T., Elkins, S., Hortman, M., Kiffmeyer, M., Franzen, M., & Bigham, K. (2019, December 11). Counterpoint: Yes, we state legislators belong in the Mideast. Here's why we're there. *StarTribune.* Accessed 27 June 2020. https://www.startribune.com/counterpoint-yes-we-state-legislators-belong-in-the-mideast-here-s-why-we-re-there/566105471/

Kousser, T. (2005). *Term limits and the dismantling of state legislative professionalism*. Cambridge University Press.

Lane, J., & McDermott, F. (1993). Do helmet wearing laws prevent bicycle injuries?. *The Medical journal of Australia*, *159*(11-12), 719-721.

Lee, C. K., & Strang, D. (2006). The international diffusion of public-sector downsizing: Network emulation and theory-driven learning. *International organization*, *60*(4), 883-909.

Lei, S. H. L. (2014). *Neither donkey nor horse: medicine in the struggle over China's modernity*. University of Chicago Press.

Leicester, P., Nassau, F., & Wise, A. (1991). The introduction of compulsory bicycle helmet wearing in Victoria. In *International Conference on New Ways for Improved Road Safety and Quality of Life, 2nd, 1991, Tel Aviv, Israel*.

Leicester, P., Nassau, F., & Wise, A. (1992). The introduction of compulsory bicycle helmet wearing in Victoria. *International journal of adolescent medicine and health*, *5*(3-4), 221-234.

Leiser, S. (2015). The Diffusion of State Tax Incentives for Business. *Public Finance Review*, 1091142115611741.

Lewis, D. C. (2012). Legislative term limits and fiscal policy performance. *Legislative Studies Quarterly*, *37*(3), 305-328.

Li, B., & Han, L. (2013, October). Distance weighted cosine similarity measure for text classification. In *International Conference on Intelligent Data Engineering and Automated*

Lin, L., & Ping, C.K. (2020, April 22). Singapore Built a Coronavirus App, but It Hasn't Worked So Far. *The Wall Street Journal.* Accessed 26 June 2020. https://www.wsj.com/articles/singapore-built-a-coronavirus-app-but-it-hasnt-worked-so-far-11587547805

Linder, F., Desmarais, B., Burgess, M., & Giraudy, E. (2018). Text as policy: Measuring policy similarity through bill text reuse. *Policy Studies Journal*.

Liu, S. M., & Yuan, Q. (2015). The evolution of information and communication technology in public administration. *Public Administration and Development*, *35*(2), 140-151.

Logan, S. R. (2018). A Historical and Political Look at the Modern School Choice Movement. *International Journal of Educational Reform*, *27*(1), 2-21.

Lynteris, C. (2018). Plague Masks: The Visual Emergence of Anti-Epidemic Personal Protection Equipment. *Medical anthropology*, *37*(6), 442-457.

Lynteris, C. (2020, February 13). Why Do People Really Wear Face Masks During an Epidemic? *The New York Times.* Accessed 26 June 2020. https://www.nytimes.com/2020/02/13/opinion/coronavirus-face-mask-effective.html

Ma, L. (2017). Site visits, policy learning, and the diffusion of policy innovation: Evidence from public bicycle programs in China. *Journal of Chinese Political Science*, *22*(4), 581-599.

Maestas, C. (2003). The incentive to listen: Progressive ambition, resources, and opinion monitoring among state legislators. *The Journal of Politics*, *65*(2), 439-456.

Malang, T., Brandenberger, L., & Leifeld, P. (2017). Networks and social influence in European legislative politics. *British Journal of Political Science*, 1-24.

Mallinson, D. J. (2019). Who Are Your Neighbors? The Role of Ideology and Decline of Geographic Proximity in the Diffusion of Policy Innovations. *Policy Studies Journal*.

Manamela, M. (2012). The Contribution of Study Tours to Oversight in the Limpopo Legislature. Research report submitted in partial fulfillment of the requirements for the degree Masters of Management. University of Witwatersrand.

Marijuana Policy Project. (2020). Our History. Accessed 29 April 2020. https://www.mpp.org/about/history/.

Marsh, D., & Sharman, J. C. (2009). Policy diffusion and policy transfer. *Policy studies*, *30*(3), 269-288.

Maryland International Affairs Office of the Secretary of State. (2020). Bong County & Maryland County, Liberia. Accessed 26 June 2020. https://www.marylandsisterstates.org/about-bong-county-maryland-county-liberia/

Mathews, B., & Kenny, M. C. (2008). Mandatory reporting legislation in the United States, Canada, and Australia: a cross-jurisdictional review of key features, differences, and issues. *Child maltreatment*, *13*(1), 50-63.

Mayhew, D. R., Simpson, H. M., & Singhal, D. (2005). *Best practices for graduated driver licensing in Canada*. Traffic Injury Research Foundation.

Mayrhofer, D. (2008). In the land of the Dutch Black, the cyclist is king of the road. The Age. Accessed 29 April 2020. https://www.theage.com.au/national/in-the-land-of-the-dutch-black-the-cyclist-is-king-of-the-road-20080211-ge6po6.html

McClurg, S. D. (2003). Social networks and political participation: The role of social interaction in explaining political participation. *Political research quarterly*, *56*(4), 449-464.

McDermott, F. T. (1992). Helmet efficacy in the prevention of bicyclist head injuries: Royal Australasian College of Surgeons initiatives in the introduction of compulsory safety helmet wearing in Victoria, Australia. *World journal of surgery*, *16*(3), 379-383.

McMillan, S. (2012). *The involvement of state governments in US foreign relations*. Springer.

Miller, S. M., Nicholson-Crotty, J., & Nicholson-Crotty, S. (2011). Reexamining the institutional effects of term limits in US state legislatures. *Legislative Studies Quarterly*, *36*(1), 71-97.

Miller, S. M., Nicholson-Crotty, J., & Nicholson-Crotty, S. (2018). The Consequences of Legislative Term Limits for Policy Diffusion. *Political Research Quarterly*, *71*(3), 573-585.

Mintrom, M. (1997). Policy entrepreneurs and the diffusion of innovation. *American journal of political science*, 738-770.

Mokher, C. G., & McLendon, M. K. (2009). Uniting secondary and postsecondary education: An event history analysis of state adoption of dual enrollment policies. *American Journal of Education*, *115*(2), 249-277.

Mooney, C. Z. (1991). Information sources in state legislative decision making. *Legislative Studies Quarterly*, 445-455.

Mooney, C. Z. (1993). Strategic information search in state legislative decision making. *Social Science Quarterly*.

Mooney, C. Z. (1994). Measuring US state legislative professionalism: An evaluation of five indices. *State & Local Government Review*, 70-78.

Mooney, C. Z. (2001). Modeling regional effects on state policy diffusion. *Political Research Quarterly*, *54*(1), 103-124.

Morris, D. (2020). After Coronavirus, Bicycles Will Have A New Place In Life. Fortune Magazine. 15 June 2020. Accessed 28 June 2020. https://fortune.com/2020/06/15/bicycles-coronavirus-cities-lime-citi-bike/

Mossberger, K. (2000). *The politics of ideas and the spread of enterprise zones*. Georgetown University Press.

Motta Jr, M. J. (2015). *Powering and puzzling: Offshore wind energy policy innovation, implementation, and learning in Massachusetts*. Northeastern University.

Narassimhan, E., Gallagher, K. S., Koester, S., & Alejo, J. R. (2018). Carbon pricing in practice: A review of existing emissions trading systems. *Climate Policy*, *18*(8), 967-991.

NarcAnon International. Heroin History: 1900s. Accessed 30 April 2020. https://www.narconon.org/drug-information/heroin-history-1900s.html

National Center for Interstate Compacts. The Council of State Governments. www.csg.org/ncic/Default.aspx.

National Conference of State Legislatures.(2020). Size of State Legislative Staff. Accessed 26 March 2020. https://www.ncsl.org/research/about-state-legislatures/staff-change-chart-1979-1988-1996 -2003-2009.aspx

National Conference of State Legislatures. "The Term Limited States." Accessed September 2018. http://www.ncsl.org/research/about-state-legislatures/chart-of-term-limits-states.aspx

Nemetz, P. N. (1986). Federal environmental regulation in Canada. *Natural Resources Journal*, *26*(3), 551-608.

Newmark, A. (2002). An Integrated Approach to Policy Transfer and Diffusion. *Review of Policy Research*, 19(2), 153-181.

New South Wales Department of Education. Bullying of Students – Prevention and Response Policy. Accessed February 2020. https://policies.education.nsw.gov.au/policy-library/policies/bullying-of-students-prevention-and-response-policy?type=history&refid=285776

New State Ice Co. v. Liebmann, 285 U.S. 262 (1932). *Cornell Law School.* Accessed 26 June 2020. https://www.law.cornell.edu/supremecourt/text/285/262

Nicholson-Crotty, S., & Carley, S. (2016). Effectiveness, implementation, and policy diffusion: Or "Can we make that work for us?". *State Politics & Policy Quarterly*, *16*(1), 78-97.

Nikiforuk, A. (2020, June 10). Brazil's Descent into COVID-19 Hell. *The Tyee.* Accessed 26 June 2020. https://thetyee.ca/News/2020/06/10/Brazil-Descent-COVID-Hell/

Nowrojee, B. (2020). How a South Indian State Flattened its Coronavirus Curve. *The Diplomat*. Published 9 May 2020. Accessed 26 May 2020. https://thediplomat.com/2020/05/how-a-south-indian-state-flattened-its-coronavirus-curve/

Parinandi, S. (2020). Policy Inventing and Borrowing among State Legislatures. *American Journal of Political Science.* 10.1111/ajps.12513.

Pew Charitable Trusts. How States Use Data to Inform Decisions. February 2018.

Pew Research Center. (2016). "States with term limits for state legislators." Accessed 14 August 2019. https://www.pewresearch.org/fact-tank/2016/12/01/will-trumps-backing-revive-moribund -term-limits-movement/ft_16-11-30_termlimits_map/

Prescription Drug Monitoring Program Training and Technical Assistance Center (PDMP TTAC). (2018). Technical Assistance Guide. History of Prescription Drug Monitoring Programs. The Heller School for Social Policy and Management. Brandeis University.

Puhani, P. (2000). The Heckman correction for sample selection and its critique. *Journal of economic surveys*, *14*(1), 53-68.

Qiu, L. Y., & He, L. Y. (2018). Bike sharing and the economy, the environment, and health-related externalities. *Sustainability*, *10*(4), 1145.

Rabe, B., Kaliban, C., & Englehart, I. (2020). Taxing Flaring and the Politics of State Methane Release Policy. *Review of Policy Research*, *37*(1), 6-38.

Rabe, B. G., & Borick, C. P. (2012). Carbon taxation and policy labeling: experience from American states and Canadian provinces. *Review of Policy Research*, *29*(3), 358-382.

Rabe, B. G., Gunderson, W., Frazer, H., & Gillroy, J. M. (1994). NIMBY and maybe: Conflict and cooperation in the siting of low-level radioactive waste disposal facilities in the United States and Canada. *Envtl. L.*, *24*, 67.

Rabe, B. G. (1991). Beyond the NIMBY syndrome in hazardous waste facility siting: The Albertan breakthrough and the prospects for cooperation in Canada and the United States. *Governance*, *4*(2), 184-206.

Rabe, B. G. (1999). Federalism and entrepreneurship: explaining American and Canadian innovation in pollution prevention and regulatory integration. *Policy Studies Journal*, *27*(2), 288-306.

Rabe, B. G. (2004). North American federalism and climate change policy: American state and Canadian provincial policy development. *Widener LJ*, *14*, 121.

Rabe, B. G. (2018). *Can We Price Carbon?*. MIT Press.

Ralston, H. A. (2013). *Subnational partnerships for sustainable development: transatlantic cooperation between the United States and Germany*. Edward Elgar Publishing.

Rayasam, R. (2020, April 13). Open and shut. *Politico Nightly.* Accessed 26 June 2020. https://www.politico.com/newsletters/politico-nightly-coronavirus-special-edition/2020/04/13/open-and-shut-488897

Rose, R. (1991). "What is Lesson Drawing?" *Journal of Public Policy*, 11(3), 30.

Rose, R. (1993). Lesson-Drawing in Public Policy: A Guide to Learning Across Time And Space. *New Jersey, Chatham House*.

Rose, R. (2004). *Learning from comparative public policy: A practical guide*. Routledge.

Rutan, G. F. (1981). Legislative Interaction of a Canadian Province and an American State: Thoughts upon Sub-national Cross-Border Relations. *American Review of Canadian Studies, 11*(2), 67-79.

Saptono, R., Prasetyo, H., & Irawan, A. (2018). Combination of Cosine similarity method and conditional probability for plagiarism detection in the thesis documents vector space model. *Journal of Telecommunication, Electronic and Computer Engineering (JTEC), 10*(2-4), 139-143.

Sarbaugh-Thompson, M., & Thompson, T. L. (2017). *Implementing Term Limits: The Case of the Michigan Legislature*. University of Michigan Press.

Sarbaugh-Thompson, M., Thompson, L., Elder, C. D., Comins, M., Elling, R. C., & Strate, J. (2006). Democracy among Strangers: Term Limits' Effects on Relationships between State Legislators in Michigan. *State Politics & Policy Quarterly*, *6*(4), 384-409.

Sarbaugh-Thompson, M. (2010). Measuring "term limitedness" in US multi-state research. *State Politics & Policy Quarterly*, *10*(2), 199-217.

Shaheen, S., Guzman, S., & Zhang, H. (2010, March 1). Bikesharing in Europe, the Americas, and Asia: Past, Present, and Future. *University of California, Davis.* Accessed 26 June 2020. https://escholarship.org/content/qt79v822k5/qt79v822k5.pdf

Shipan, C. R., & Volden, C. (2006). Bottom-up federalism: The diffusion of antismoking policies from US cities to states. *American journal of political science*, *50*(4), 825-843.

Shipan, C. R., & Volden, C. (2008). The mechanisms of policy diffusion. *American journal of political science*, *52*(4), 840-857.

Shipan, C. R., & Volden, C. (2012). Policy diffusion: Seven lessons for scholars and practitioners. *Public Administration Review*, *72*(6), 788-796.

Shipan, C. R., & Volden, C. (2014). When the smoke clears: expertise, learning and policy diffusion. *Journal of Public Policy*, *34*(3), 357-387.

Shipan, C.R., & Volden, C. (2020). Coronavirus policies spread quickly across the U.S. Are cities and states learning – or just copying? *The Washington Post.* 16 April 2020. Accessed 4 May 2020. https://www.washingtonpost.com/politics/2020/04/16/coronavirus-policies-spread-quickly-across-us-are-cities-states-learning-or-just-copying/

Smith, D. A., Cordel, R., Dillon, E. M., Stramp, N., & Wilkerson, J. (2014, September). Detecting and modeling local text reuse. In *IEEE/ACM Joint Conference on Digital Libraries* (pp. 183-192). IEEE.

Smith, O. (2017, August 16). Revealed: The world's best (and worst) cities to live in. *The Telegraph.* Accessed 26 June 2020. https://www.telegraph.co.uk/travel/news/liveable-cities-2017-economist-intelligence/

Snijders, T. A. (2001). The statistical evaluation of social network dynamics. *Sociological methodology*, *31*(1), 361-395.

Sommet, N., & Morselli, D. (2017). Keep calm and learn multilevel logistic modeling: A simplified three-step procedure using Stata, R, Mplus, and SPSS. *International Review of Social Psychology*, *30*(1).

Sozan, M. (2019, December 6). Ending Foreign-Influenced Corporate Spending in U.S. Elections. *Harvard Law School Forum on Corporate Governance.* Accessed 27 June 2020. https://corpgov.law.harvard.edu/2019/12/06/ending-foreign-influenced-corporate-spending-in-u-s-elections/

Squire, P. (2007). Measuring state legislative professionalism: The squire index revisited. *State Politics & Policy Quarterly*, *7*(2), 211-227.

Squire, P. (2017). A Squire index update. *State Politics & Policy Quarterly*, *17*(4), 361-371.

Squire, P. (2017). A Squire Index Update. State Politics & Policy Quarterly, 17(4), 361-371.

Statista. Median Annual Family Income in Canada in 2017, by Province. Canadian dollars.

Statistics Canada. (2018). Gross Domestic Product, expenditure based, provincial and territorial. Accessed 5 September 2018. https://www150.statcan.gc.ca/t1/tbl1/en/tv.action?pid=3610022201

Steinbacher, K. (2018). *Exporting the Energiewende: German renewable energy leadership and policy transfer*. Springer.

Stone, D. (2012). Transfer and translation of policy. *Policy studies*, *33*(6), 483-499.

Stuart-Cassel, V., Bell, A., & Springer, J. F. (2011). Analysis of State Bullying Laws and Policies. *Office of Planning, Evaluation and Policy Development, US Department of Education*.

Sugiyama, N. B. (2011). Bottom-up policy diffusion: National emulation of a conditional cash transfer program in Brazil. *Publius: The Journal of Federalism*, *42*(1), 25-51.

Swift, C. S., & VanderMolen, K. A. (2016). Term Limits and Collaboration Across the Aisle: An Analysis of Bipartisan Cosponsorship in Term Limited and Non-Term Limited State Legislatures. *State Politics & Policy Quarterly*, *16*(2), 198-226.

Swiney, C. (2020). The Urbanization of International Law and International Relations: The Rising Soft Power of Cities in Global Governance. *Michigan Journal of International Law*, 41(2), 227-279.

Texas Secretary of State. (2020). Border Governors Conference. Accessed 27 June 2020. https://www.sos.texas.gov/border/bmaconf.shtml

The Climate Group. (2019). The Real Deal: State & Regional Government Action on Climate Change. Accessed 26 June 2020. https://www.theclimategroup.org/sites/default/files/archive/files/The-Real-Deal--State-and-Regional-Action-on-Climate-Change.pdf

The Climate Group. (2020). Under2 Coalition. Accessed 25 June 2020. https://www.theclimategroup.org/project/under2-coalition

The Council of State Governments. (2019). National Center for Interstate Compacts Database. *The Council of State Governments.* Accessed 27 June 2020. http://apps.csg.org/ncic/Default.aspx

The Economist. (2015, August 15). The world's most "liveable" cities: Ranking the world's best and worst places to live in 2015. *The Economist.* Accessed 26 June 2020. https://www.economist.com/graphic-detail/2015/08/18/the-worlds-most-liveable-cities

The Economist Intelligence Unit. (2020). The Global Liveability Index. Accessed 26 June 2020. http://www.eiu.com/topic/liveability

The Globe and Mail. 3 May 2012. "Zero-tolerance laws gaining ground in Canada; do they work for young drivers?" Stefani Forster. Accessed 31 August 2019. https://www.theglobeandmail.com/news/national/zero-alcohol-laws-gaining-ground-in-canada-do-they-work-for-young-drivers/article4104560/

The Minnesota School Choice Project. (2017). Part I: Segregation and Performance. Institute on Metropolitan Opportunity. University of Minnesota Law School

The Pew Charitable Trusts. (2018). How States Use Data to Inform Decisions. Accessed 27 June 2020. https://www.pewtrusts.org/-/media/assets/2018/02/dasa_how_states_use_data_report_v5.pdf

The World Bank. (2018). Trade as a Percentage of GDP. *World Bank National Accounts Data, and OECD National Accounts Data Files.* Accessed 22 August 2018. https://data.worldbank.org/indicator/NE.TRD.GNFS.ZS

Tolbert, C. J., Mossberger, K., & McNeal, R. (2008). Institutions, policy innovation, and E-Government in the American States. *Public administration review*, *68*(3), 549-563.

Toomet, O., & Henningsen, A. (2008). Sample selection models in R: Package sampleSelection. *Journal of statistical software*, *27*(7), 1-23.

Trade and Investment Queensland. (2018). Queensland and Nevada combine on water solutions. Accessed 27 June 2020. https://www.tiq.qld.gov.au/queensland-and-nevada-combine-on-water-solutions/

Tukey, J. W. (1977). *Exploratory data analysis* (Vol. 2, pp. 131-160).

United States Census Bureau. (2020). S1901: Income In The Past 12 Months (In 2018 Inflation-Adjusted Dollars). Accessed 26 June 2020. https://data.census.gov/cedsci/map

Van der Klaauw, B., & Koning, R. H. (2003). Testing the normality assumption in the sample selection model with an application to travel demand. *Journal of Business & Economic Statistics*, *21*(1), 31-42.

Van Der Zee, R. (2016, April 26). Story of cities #30: how this Amsterdam inventor gave bike-sharing to the world. *The Guardian.* Accessed 26 June 2020. https://www.theguardian.com/cities/2016/apr/26/story-cities-amsterdam-bike-share-scheme

Vogel, G. (2020, May 22). How Sweden wasted a 'rare opportunity' to study coronavirus in schools. *Science Magazine.* Accessed 26 June 2020. https://www.sciencemag.org/news/2020/05/how-sweden-wasted-rare-opportunity-study-coronavirus-schools

Volkcansek, M. L. (2009). Exporting the Missouri Plan: Judicial Appointment Commissions. *Mo. L. Rev.*, *74*, 783.

Wagenaar, A. C., Maybee, R. G., & Sullivan, K. P. (1988). Mandatory seat belt laws in eight states: A time-series evaluation. *Journal of Safety Research*, *19*(2), 51-70.

Walker, J. L. (1969). The diffusion of innovations among the American states. *American political science review*, *63*(3), 880-899.

Watson, K. (2004). "The Criminalization of Stalking in Canada: the Role of the Moral Panic in the Passage of Section 264." Masters Thesis. Department of Law, Carleton University.

Weber, L. (2020). Why Missouri's The Last Holdout On A Statewide Rx Monitoring Program. Kaiser Health News. 20 May 2019. Accessed 2 July 2020. https://khn.org/news/why-missouris-the-last-holdout-on-a-statewide-rx-monitoring-program/

West, J. (2018). *Legislator Use of Communication Technology: The Critical Frequency Theory of Policy System Stability*. Lexington Books.

Wilkerson, J., & Casas, A. (2017). Large-scale computerized text analysis in political science: Opportunities and challenges. *Annual Review of Political Science*, *20*, 529-544.

Wincele, R. (2019, December 12). Cap-and-Trade ambition renewed in 2019 after a decade of decline. Accessed 26 June 2020. https://climate-xchange.org/2019/12/12/cap-and-trade-ambition-renewed-in-2019-after-a-decade-of-decline/

World Bank. National Accounts Data, and OECD National Accounts data files. Per Capita Gross Domestic Product. 2017 dollars. www.data.worldbank.org.

WPTZ Burlington. Vermont joins Tottori, Japan, in sister-state pact. *NBC5.* Accessed 27 June 2020. https://www.mynbc5.com/article/vermont-joins-tottori-japan-in-sister-state-pact/22461319

Yi, H., & Feiock, R. C. (2012). Policy tool interactions and the adoption of state renewable portfolio standards. *Review of Policy Research*, *29*(2), 193-206.

Zhang, M. 2020. Pandemic Upends Pot Legalization. Politico. Accessed 28 April 2020. https://www.politico.com/news/2020/04/08/coronavirus-pandemic-upends-pot-legalization-174073

Zhelonkin, M., Genton, M. G., & Ronchetti, E. (2016). Robust inference in sample selection models. *Journal of the Royal Statistical Society: Series B (Statistical Methodology)*, *78*(4), 805-827.

Zhu, X. (2014). Mandate versus championship: Vertical government intervention and diffusion of innovation in public services in authoritarian China. *Public Management Review*, *16*(1), 117-139.

Zwick, S. (2017, December 4). Which US States Are Already Honoring The Paris Climate Agreement? *Ecosystem Marketplace.* Accessed 26 June 2020. https://www.ecosystemmarketplace.com/articles/two-dozen-us-states-will-honor-paris-climate-agreement-even-feds-dont-heres-six-will-pull-off/