

UNIVERSITY OF CALIFORNIA,  
IRVINE

The Evolution of Marijuana Politics in the United States

DISSERTATION

submitted in partial satisfaction of the requirements  
for the degree of

DOCTOR OF PHILOSOPHY

in Sociology

by

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## **DEDICATION**

To my communities...

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# **ABSTRACT OF THE DISSERTATION**

The Evolution of Marijuana Politics in the United States

By

Burrel James Vann Jr

Doctor of Philosophy in Sociology

University of California, Irvine, 2019

Edwin Amenta, Chair

This dissertation investigates the causes of support for marijuana legalization across the United States. Across three empirical studies, I argue that increased support for and passage of legalization resulted from 1) increased attention to marijuana, and shifting frames associated with marijuana combined with 2) structural and political conditions that allowed for the resonance of claims about the benefits of marijuana legalization. The first study explores the dramatic shift in coverage of marijuana from 1990 to 2016. I show that media coverage of marijuana shifted from dominant negative narratives of criminality and delinquency to more neutral coverage, focusing on revenue creation and linking marijuana to political behavior. The second study links discursive data to political institutional context, policy feedback, and structural data to show that the shift towards positive discourse about marijuana, and aspects of the political institutional environments, were significantly associated with a quicker pace of legalization across the United States. In the final study, an analysis of marijuana legalization ballot initiatives, I find that counties with high levels of parental segregation have higher levels of support for legalization. This dissertation reveals a less understood mechanism of the policymaking process: when political advocates are lacking, the strategic use of media can transform meanings associated with contentious issues and garner public support.

# Chapter 1

## Introduction

The sex fiend is a progressive criminal. He often begins with annoyances. He progresses to the sending of obscene letters, or exhibitionism. One finds him “annoying” children, or following women. For all these things, he often is merely fined, or given “orders to leave town,” or punished by a short jail sentences – none of which deters him in the slightest degree from other and more serious offenses. And every sex criminal is a potential murderer.

It should be determined, for instance, to what extent the recently widespread use of marijuana, or American hashish, has been responsible for the sex crime.

Thus, a tremendous force may now be exerted toward the eradication of a drug which violently affects sex impulses.<sup>1</sup>

The above quote, appearing in the *Los Angeles Times* in the fall of 1937, marked the beginning of the political fight, led by Harry J. Anslinger, to eradicate marijuana from America. Journalistic accounts like these, and the subsequent slew of restrictions on drugs, resulted in marijuana being conflated with fear, and ultimately prohibited in the United States through the Marihuana Tax Act of 1937. Terms like criminal, immoral, and deviant were often used, and it was assumed that marijuana was a danger to society. While early discussions of marijuana were usually negative, it took over half a century for the tone of coverage to shift towards attacking these perceptions:

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<sup>1</sup>Hoover, J Edgar. September 26, 1937. “WAR ON THE SEX CRIMINAL!” *Los Angeles Times*.

In 1998, President Bill Clinton signed a provision that made people temporarily or permanently ineligible for federal financial aid depending on how many times they had been arrested and convicted of a drug offense... the effect was real and devastating: the people most in need of financial aid were also being the most targeted for marijuana arrests and were therefore the most at risk of being frozen out of higher education.

Why would Democrats support a program that has such a deleterious effect on their most loyal constituencies? The fact that they are ruining the lives of hundreds of thousands of black and Hispanic men... barely seems to register.

This is outrageous and immoral and the Democrat's complicity is unconscionable...

No one knows all the repercussions of legalizing marijuana, but it is clear that criminalizing it has made it a life-ruining racial weapon. When will politicians have the courage to stand up, acknowledge this fact and stop allowing young minority men to be collateral damage?<sup>2</sup>

By the end of the twentieth century, newspapers began to change their tune. Editorials encouraging the passage of marijuana legalization were more frequent. Coverage began to be associated with medicine, social justice, and civil rights. Although marijuana remained illegal at the federal level, there was an uptick in state level activity to change marijuana laws statewide – and the use of the ballot initiative proved relevant for enacting medicalization and legalization. Most noticeably, medical marijuana initiatives took off in the 1990s and 2000s and were successful in California's 1996 Proposition 215.

At the same time, there were changes in public opinion on marijuana – by 2013, American public support for marijuana surpassed 50 percent (Gallup, 2013). This presents my puzzle: What accounts for the change in marijuana policies in the United States since 1990?

Understanding marijuana policy change is important for substantive discussions about progressive policy change and the set of cases to which it belongs. Marijuana legalization bears some similarity to contentious and morality-related policies such as abortion rights, anti-prohibition, and lotteries (Gusfield, 1963; Andrews and Seguin, 2015; Pierce and Miller, 1999; Berry and Berry, 1990). Marijuana legalization is similar to anti-prohibition and lotteries in that their perceived negative consequences and costs will only be incurred by those who make use of the policy (Mikesell and Zorn, 1986; Berry and Berry, 1990). Marijuana

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<sup>2</sup>Blow, Charles M. October 23, 2010. "Smoke and Horrors" *New York Times*.

legalization differs, however, from anti-prohibition given alcohol's longstanding social and economic impact on American society (Andrews and Seguin, 2015). Marijuana legalization also bears similarity to taxation policy (Amenta and Halfmann, 2000) in its generation of economic benefits. Finally, marijuana legalization has followed the reverse trend of tobacco policy. Tobacco use is tied to social and economic fabric of the United States. Yet, in recent years, has experienced some retrenchment – due to increasingly negative connotations and beliefs attached to smoking. Marijuana, on the other hand, has become increasingly associated with medicinal and economic benefits.

Legalization as progressive policy presents an intriguing case not wholly identical to others, yet one that can inform our understanding of the factors that contribute to progressive policy change. Moreover, given the recency of legalization, studying this policy can provide insight into the process of early adoption of policy in the long history of policy change.

This project aims to fill some of these gaps by explaining how and why changes in the cultural, political, and structural landscape have contributed to changes marijuana policy in since 1990.

## 1.1 Explanations for Policy Change

What are possible explanations for changes in marijuana policy? I explore five perspectives to explain the legalization of marijuana. These five perspectives guide my analysis throughout this dissertation. In the conclusion, I evaluate how well each perspective helped in explaining my puzzle.

### **1.1.1 Political Institutional Contexts**

One possible explanation for the shifts in marijuana policy is related to political institutional contexts. Certain contexts provide more opportunities for policy change than others. Political context theories often focus on the role of elite allies in government that may contribute to the overall success of a policy change (Amenta et al., 1994; Amenta, 2006). Research in political sociology and political science has focused on the role of left- or reform-oriented parties in the passage or adoption of progressive policies (Amenta and Elliott, 2019; Amenta et al., 2005; Korpi, 1983). Moreover, whether or not elite allies hold majorities in government is important for the likelihood for policy change(Ansolabehere and Snyder Jr, 2006; Winters, 1976; Abramowitz, 1983; Campagna and Grofman, 1990). And because political officials as allies want to make good on their promises, they will often support or sponsor policies that accord with the interests of their constituents (Page and Shapiro, 1983; Mayhew, 1974; Downs, 1957; Stimson et al., 1995).

Voting results are also an important part of the political institutional environment. Support for specific parties signal to both constituents and political officials that certain types of policy change are possible or not (Amenta and Elliott, 2019). These characteristics pique the interests of politicians and constituents to support specific policy changes (Berry and Berry, 1990; Boushey, 2016).

Public opinion is also an important part of the political institutional environment (Burstein, 1998, 2003). Similarly, public opinion serves as a signal about what sorts of policies are possible. Therefore, public opinion reveals the saliency of political issues for constituents as well as political officials (Pacheco, 2012; Nicholson-Crotty, 2009).

### **1.1.2 Policy Feedback**

An alternative explanation related to the political context involves the legacy of policy reforms or policy feedback around an issue. Drawing on ideas of increasing returns (Pierson, 1996, 2000), policy reforms will have both immediate, as well as long lasting benefits for future policy change (Amenta et al., 2012). Policies often lead to institutionalized benefits to a specific group of people. These benefits can provide a boost in the efficacy of future advocacy on the part of beneficiaries (Amenta and Caren, 2004).

### **1.1.3 Cultural Context/Discourse**

Mass media are central for making sense of relevant events (Gamson and Modigliani, 1989). According to Ferree et al. (2002) are a master forum within which actors compete for coverage of their issues (Amenta et al., 2012), which serves to identify and redefine, which can shape public perceptions of issues. Importantly, news organizations operate by a set of “news values” procedures that helps to identify what *counts* as news (Amenta et al., 2012; Galtung and Ruge, 1965), which not only affects the selection of topics to be covered (Galtung and Ruge, 1965) but also the ways in which these topics are covered.

The news values process necessarily selects on official or institutional news coverage (Schudson, 2002; Gitlin, 1980; Gans, 1979) that tends to center on institutional political action and actors, because they are seen as newsworthy (Amenta et al., 2012). Relatedly, the economics of news media puts various pressures on the news to run stories that are not too gruesome, not too critical, and not too controversial.

These and similar pressures lead to stories that do not venture too far from mainstream ideas and beliefs, so media coverage of an issue is likely to be close to public opinion about that issue (Gamson and Modigliani, 1989). News can also influence public opinion. For

example, (Gamson and Modigliani, 1989) find that the appearance of new frames around nuclear energy in news coverage influenced public discussion of the nuclear energy issues, which ultimately shapes public opinion about the issue.

Yet, organizations and other actors in the environment also have the ability to shape these frames. Recent research on the cultural consequences of social movements (Earl, 2004) finds that organizations can impact public conversation about issues (Bail et al., 2017) and initiate discursive change by offering their own diagnoses of and solutions to problems (Bail, 2012; Snow et al., 2007; Benford and Snow, 2000). By injecting new frames into the broader discursive environment, organizations can shape the evolution of discourse. Although frames that ‘fit’ the broader discursive environment (McCammon et al., 2007) or those that articulate widespread beliefs usually win out (McCammon et al., 2001; Snow et al., 2007; Gamson and Modigliani, 1989), alternative or fringe frames have the ability to alter discourse on a topic (Bail, 2012).

These studies suggest, then, that news media is not likely to (but can) feature media frames that are from the fringe of public discourse, but the media frames they do feature have an impact on public opinion or support for an issue.

#### **1.1.4 Advocacy Organizations**

Perhaps marijuana advocacy organizations influenced marijuana policy change by way of being covered about the marijuana issue. Scholarly attention has traditionally focused on how the news media covers advocacy organizations (Amenta et al., 2009; Andrews and Caren, 2010). Understanding this process is an important first step, as gaining coverage may be necessary to influence the public discussion of an issue. Coverage gives organizations an opportunity to inject new framing packages into the media arena, potentially changing the conversation around an issue (Gamson and Modigliani, 1989). Although research on social

movements typically focuses on the impact of protest on coverage (Earl et al., 2004; Oliver and Myers, 1999), marijuana advocacy organizations rarely engaged in the type of protest necessary to gain coverage. Coverage of organizations may provide better opportunities for influence the discussion of an issue.

### 1.1.5 Structural Contexts

Perceptions of and support for political issues results from the contexts within which people are embedded (Blau, 1977a,b; McVeigh and Diaz, 2009). Importantly, the distribution of people and their interests across space can shape aggregate support for progressive policy change. McVeigh et al. (2014), for example, find that the distribution of the highly educated had implications for support for conservative mobilization. Structural contexts consists of the presence or absence of certain attributes (Blau, 1977a,b; Blau and Duncan, 1967), as well as their spatial spread across a local environment. The impact of social structure on policy change can also involve the presence or absence of advocacy organizations (Vann Jr, 2018; Soule and Olzak, 2004), aspects of the lived environment (Olzak and Soule, 2009) as well as levels of segregation within local contexts (Andrews and Seguin, 2015; Olzak et al., 1994).

While any one of the previous perspectives may provide a better explanation for the changes in the passage of marijuana legalization than other perspectives, they do no operate in a vacuum. Each of the processes described by the perspectives are likely to influence and be influenced by the processes of other perspectives. For example, amenable political contexts may lead to additional coverage of marijuana, but the nature of this coverage is likely to be influenced by policy reform mechanisms. My analyses take into account these processes.

## 1.2 Data

To explain my puzzle, I collected a variety of data. Importantly, my dependent variables include data on marijuana initiative voting and on newspaper coverage of marijuana from 1990 to 2016. The battle for marijuana legalization only recently shifted to state governments. Therefore, I rely on voting data from ballot initiatives<sup>3</sup> and newspaper articles about marijuana. From 1990 to 2016, states with the provision of the ballot initiative became sites of policy change on the marijuana issue. Thus, I use data from citizen/voter initiatives as measures of support for legalization. These data come from the Secretary of State websites for each state.

## 1.3 Summary of Dissertation

The rest of the dissertation is laid out in the following way. In chapter 2, I explore the amount and type of coverage newspapers gave to marijuana, from 1990 to 2016. I do so by considering the various frames associated with marijuana. Specifically, I separate the analysis into coverage of marijuana alone and coverage that also included marijuana advocacy organizations. I find that during the early years, marijuana coverage was mostly negative, and centered on a variety of frames. In later years, coverage became less negative (more neutral and positive) and frames shifted towards discussions of politics and revenue creation associated with marijuana legalization. This suggests that when controversial political issues enter public discourse by being put on the political agenda, a number of frames will be juxtaposed with one another and compete for dominance. But, given the controversial nature of these issues, as coverage of these issues matures, to maintain coverage, they must be linked to or framed as non-controversial, “traditionalist,” or quotidian (Snow et al., 1998) behavior.

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<sup>3</sup>rather than state legislative hearing date because these hearings were few and far between

Next, in chapter 3 I analyze the rate of adoption of legalization. I use event history analysis to investigate what explains the rate of adoption of legalization across the American states, from 1990 to 2016. I find that positive coverage on marijuana increases the rate of passage, particularly in states with the ballot initiative. I also find that Democratic support and political competition increase the rate of legalization. Moreover, prior histories with marijuana in a state, by way of medicalization, increases the rate at which states adopt legalization over time.

Chapter 4 takes a structural approach to understanding legalization. Using ordinary least squares analysis of county-level support for legalization initiatives between 2000 and 2016, I examine how local level factors that contribute to increased voter support for policy change. I find that parental segregation and (the absence of) inequality ultimately create contexts within which marijuana legalization is viewed as non-threatening to the community.

Finally, Chapter 5 concludes the project, summarizing how each perspective contributed to my explanation of the outcomes investigated in chapters 2–4. I argue that discourse about marijuana became less negative as a result of framing shifts. This shift in framing ultimately helped to speed up the process of legalization across the U.S. Yet, at the local level, segregation and inequality play a role in aggregate support for legalization. I discuss limitations of this project, as well as directions for future study.

# Chapter 2

## The Discursive Shift on Marijuana Legalization

### 2.1 Introduction

Examination of frames, narratives, and discourse has been central to sociological understanding of cultural and political change (Ghaziani and Baldassarri 2011; Vasi et al. 2015; Bail 2012; McCammon et al. 2007). I contribute to this line of inquiry by investigating whether and how framing about marijuana changed over time. Coverage of marijuana presents an ideal case with which to examine discursive shifts, given that the ways in which marijuana was covered has moved away from negative discussions that centered on crime and danger (Newhart and Dolphin 2019; Bonnie and Whitebread II 1970; Rosenthal and Kubby 1996), towards positive and neutral discussions regarding the benefits of marijuana and marijuana legalization (Mosher and Akins 2019). To what extent has there been a general shift away from negative coverage of marijuana? And to what extent have new frames come to dominate the discussion of marijuana?

With recent advances in the field of computational social science, it has become easier than ever to gather, code, and analyze large corpuses of text for the purpose of tracking discursive trends (Bateman et al. 2019; Bail 2012; Vasi et al. 2015). As such, I rely on webscraping techniques to gather newspaper articles about marijuana over time, breaking these articles as either covering marijuana with or without coverage of a marijuana advocacy organization. I, next, rely on automated text analysis to code the valence of each news article. Finally, using a combination of inductive and deductive approaches, I create a list of eight possible frames (and keywords associated with these frames) that may have appeared in marijuana coverage. I use automated coding to categorize each article has having the presence or absence of each frame.

In this article, I shed light on the ways in which frames about marijuana changed in the United States between 1990 (when marijuana initiatives began to take off) and 2016. I demonstrate various characteristics about marijuana coverage and discourse over time. First, I show that, after 1996, when marijuana medicalization was on the ballot in California, coverage of marijuana increased dramatically. Secondly, I show that coverage of marijuana became decreasingly negative and increasingly neutral over time. Thirdly, I show that frames centering on revenue creation and politics came to dominate the discussion of marijuana, followed by framings related to rights and patients.

## 2.2 Marijuana Discourse Across Time

According to historians studying marijuana, initial depictions of marijuana were positive, centering on the medicinal and material benefits of cannabis (Bonnie and Whitebread II 1970; Rosenthal and Kubby 1996). While there was relatively little coverage of marijuana during this time (Bonnie and Whitebread II 1970; Mosher and Akins 2019), what little coverage did exist was positive. However, during the 1930s, the valence of this coverage

shifted as a result of political and bureaucratic changes.

In 1930, President Herbert Hoover established the Federal Bureau of Narcotics (FBN) and appointed Harry J. Anslinger as commissioner. According to scholars, Anslinger was in charge of repurposing prohibition funds, and, in noticing that Americans were enjoying Mexican and Native-American cannabis, Anslinger chose to direct his Bureau's resources toward cannabis (Newhart and Dolphin 2019). In fact, Anslinger used media to paint cannabis in a negative light as a way to ramp up public opposition to the substance. Anslinger used stories and advertisements in newspapers (including William Randolph Hearst's newspapers) to portray cannabis as dangerous to women, children, and society (Mosher and Akins 2019). Hearst, for his part, stood to lose economically if American cannabis use expanded – he invested in wood pulp, which he used for his papers, and the expansion of hemp (which could also be used for cheaper newspaper manufacturing) put him in danger of losing his fortune. Through a campaign of “yellow” journalism, which enabled Anslinger to rebrand the drug with the more Native-sounding name marihuana (or marijuana) instead of cannabis, Anslinger and Hearst were able to associate the drug with a source or group of people responsible for the drug problem: immigrants, Mexicans, and indigenous “others.” Through newspapers, Anslinger and Hearst were able to “sell” marijuana as dangerous – relying on a fear narrative that argued that only through cannabis prohibition could America’s children, women, and society be protected (Mosher and Akins 2019; Newhart and Dolphin 2019; Rosenthal and Kubby 1996).

Within a few years, these narratives took hold. In fact, over this time, marijuana became increasingly associated with criminality – and in particular, minority criminality. During this time, marijuana was thought to be used mainly by minorities (freed Black slaves and Mexican immigrants) and had psychological properties that made them more prone to violence (Caulkins et al. 2012; Slaughter 1987). These dominant narratives came to be used in arguments to Congress in favor of a full ban on marijuana – resulting in the creation of the

Marihuana Tax Act of 1937 (Newhart and Dolphin 2019).

Between the 1930s and 1960s, the Act faced tough criticism in state and federal courts, as the judicial system worked to clarify the parameters of the law as well as what could and could not be enforced (Bonnie and Whitebread II 1970; Mosher and Akins 2019). Around this time, advocacy organizations emerged to fight for access to marijuana (Newhart and Dolphin 2019). In 1970, the first marijuana movement organization, the National Organization for the Reform of Marijuana Laws, was created to fight against marijuana prohibition and to move public opinion on marijuana so as to enable full legalization of marijuana for all people. It wasn't until the mid-1990s and early 2000s (during NORML's fight for medicinal marijuana use on the California ballot) that other organizations such as the Marijuana Policy Project (1995), Students for Sensible Drug Policy (1998), and the Drug Policy Alliance (2000) joined the fight – each with a specific purpose for legalization. For example, MPP would work on marijuana policy specifically while DPA would focus on both marijuana and similar narcotic policies, and SSDP would work to change the minds of youth, particularly on college campuses.

According to prior research, marijuana discourse shifted in the 1960s. During this time, coverage of marijuana centered on the freedom to use the drug, but also included negative coverage about users – framing users as addicts, hippies, and burnouts (Mosher and Akins 2019). Given that many scholars have given attention to coverage of marijuana during this period, and that of coverage during the beginning of President Nixon's "War on Drugs," (Bonnie and Whitebread II 1970; Mosher and Akins 2019; Alexander 2010; Caulkins et al. 2012), I focus on coverage that took place immediately following this time, when change via statewide initiatives became a plausible alternative for policy change.

In the mid-1990s, private individuals began to fight against marijuana prohibition in the United States by sponsoring marijuana medicalization initiatives in states with direct democratic processes. During this same time, newspapers 1) give increasing attention to mar-

ijuana, and 2) link discussions of marijuana with additional topics. Some scholars have indicated that during this time, narratives about marijuana began to become more positive, as coverage tended to focus on the political aspects of initiatives or voters, the benefits to patients, and the rights of cannabis users (Newhart and Dolphin 2019; Mosher and Akins 2019; Bonnie and Whitebread II 1970). Over time, the trajectory of marijuana legalization is such that states (under federal prohibition of marijuana, and those with the initiative/referendum process) would first propose medical legislation, followed by recreational legalization legislation. During this time, marijuana coverage began to link with larger “American” values of liberties and freedom, in addition to shifting to the benefits of legalization for revenue, creating resources for rehabilitation, decreasing crime, and altering policing practices – especially in communities of color (Mosher and Akins 2019; Newhart and Dolphin 2019).

Given this shift, I expect to find a shift in narratives about marijuana over time, coupled with a shift in the valence of attention to marijuana over time. Before turning to my data and methods, I outline some of the current thinking on the ways in which discourse changes.

## 2.3 Discursive Change Processes

The study of discourse has been central to work in the sociology of culture (DiMaggio 1997; Swidler 1986; Lamont 1992). In recent years, the study of discourse has also come to the forefront of work in political sociology, with increased focus on the influence of advocacy organizations on public discourse (Bail 2012; Earl 2004; McCammon et al. 2007; Ghaziani and Baldassarri 2011; Vasi et al. 2015; Gamson and Modigliani 1989; Andrews and Caren 2010). Importantly, organizations must first be covered by news media, which provides the opportunity to gain “standing” or serve as legitimate representatives for their issues and have their preferred messages conveyed (Amenta et al. 2012; Ferree et al. 2002; Elliott et al. 2016). Drawing on previous work on framing (Goffman 1974; Benford and Snow

2000), organizations can impact public conversation about issues (Bail et al. 2017) and initiate discursive change by offering their own diagnoses of and solutions to problems (Bail 2012; Snow et al. 2007; Benford and Snow 2000). Frames that ‘fit’ the broader discursive environment (McCammon et al. 2007) or those that articulate widespread beliefs and values usually survive over alternative frames (McCammon et al. 2001; Snow et al. 2007; Gamson and Modigliani 1989), because their frames “are more easily integrated into broader media narratives” on an issue (Bail 2012:858) and appear familiar, realistic, or legitimate.

While organizations can shape the direction of discourse on a topic, the social movements literature sometimes gives less attention to the role of mass media and news organizations in the process of cultural or discursive change. Because, especially for social movements, coverage of issues is critical for affecting discourse, news media are equally important for cultural change. Importantly, mass media are a master forum (Ferree et al. 2002) within which actors compete for coverage of their issues (Amenta et al. 2012). Mass media are central for making sense of relevant events (Gamson and Modigliani 1989), and serve to identify and redefine, which can shape public perceptions of those issues. Yet, media organizations themselves operate by a set of procedures, known as news values (Galtung and Ruge 1965), that can also have effects on discourse.

News organizations must make decisions about what counts as “news” (Galtung and Ruge 1965). Often times, what counts is based on timeliness/currency, the impact of the events being covered, and the proximity of those events to potential readers – with local news angles being important (Amenta et al. 2012; Galtung and Ruge 1965). In particular, politics receives the most coverage because political decisions have high impact and include prominent people. In addition, reporters often have increased access to political actors. In sum, much of what counts as news centers on institutional political activity, such as stories about politicians, bills being discussed, or laws being passed (Amenta et al. 2012). Therefore, it is reasonable to assume that, even when discourse on issues changes, the attention to those issues may

include discussions of institutional political actors or action. Yet, this is not to suggest that political actors are driving the discussion, but instead that the larger discursive about an issue becomes increasingly “newsworthy” when included alongside coverage of institutional political action or actors. This may be the case for coverage of marijuana. Yet as discussed in the previous section, for many contentious issues like marijuana, political actors may not want to be the drivers of discursive change. In particular, when dominant discourse on a topic is negative, political actors may be unwilling to discuss the issue in new, positive ways, for fear of reprisals from their constituents in the form of lost votes. Therefore, driving discursive change may provide little political advantage.

Given the tendency of journalists and the norms of news-gathering organizations to seek out official sources (Schudson 2002; Gitlin 1980; Gans 1979), especially during times of high attention to the issue in the news cycle (Baumgartner and Jones 1993) the general lack of discussion by political actors creates opportunities for other actors (including journalists themselves) to, not only, provide alternative narratives on an issue, but shift the character of discourse by linking the issue with new topics or frames.

I argue that, by linking discourse about contested issues to additional, more institutionalized topics or narratives, journalists can facilitate a stark transformation in public understandings on an issue, which can call into question the legitimacy of previously dominant representations of the issue. Initial marijuana discourse centered on criminality and the negative educational, occupational, and mental effects of marijuana use. In recent years, however, this discourse has given way to increasingly positive (or fewer negative) discussions of marijuana’s medical, community, and economic benefits. This coverage has shifted the arenas within which marijuana was discussed by linking marijuana with narrative topics related to medicine, rights, freedom, economics, crime, and policing. Yet it remains unclear whether and how these new narrative topics contributed to the discursive shift away from a dominant negative discourse about marijuana.

## 2.4 Data & Method

Given my interest in *whether* and *how* marijuana discourse shifted over time, I analyze text from print news media across the United States. To do so, I rely on the ProQuest newspaper database. I constrain the analysis to 1990 and on because coverage on marijuana was relatively low prior to 1990, and because this time frame immediately followed Reagan’s intensified “War on Drugs” and “Just Say No” campaign.

To track discursive change, I rely on articles about marijuana in the Proquest database from 1990 to 2016. Because marijuana advocacy organizations may have had an impact on coverage, I separately searched for articles about marijuana in the absence of advocacy organizations, and articles about marijuana that included advocacy organizations. To accomplish this, I wrote a Python script to identify and download all local articles from Proquest that mention “marijuana” between 1990 and 2016.<sup>1</sup> Because national newspapers may be more likely to cover national issues over local issues, I exclude national newspapers, including the *New York Times*, the *Los Angeles Times*, the *Washington Post*, and the *Wall Street Journal*. In addition, I exclude articles that mention at least one of the four main marijuana advocacy organizations. Therefore, I also exclude articles that mention National Organization for the Reform of Marijuana Laws (NORML), Marijuana Policy Project (MPP), Drug Policy Alliance (DPA), and Students for Sensible Drug Policy (SSDP), and their variants. In total, there were 14,163 articles mentioning marijuana. After removing duplicate articles, articles outside of the U.S. or located in the U.S. capitol<sup>2</sup>, short articles (e.g. articles with fewer than 100 words), and articles that are not fully searchable,<sup>3</sup>, I am left with 10,096 locally-based articles, across 185 newspapers, that mention marijuana in some fashion. In addition, I removed articles that come from “alternative” or sensationalized newspapers. To figure out whether or not the newspaper was an “alternative newspaper,” I searched the websites for

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<sup>1</sup>This does not include variants of the word marijuana, or the word cannabis

<sup>2</sup>ProQuest sometimes mistakenly identifies non-U.S. articles when only-U.S. articles are specified.

<sup>3</sup>Articles with fewer than about 900 words.

each newspaper, removing any newspaper that claimed that it was an alternative newspaper. As can be seen in Table 2.1, I am left with 5,893 articles, across 100 newspapers, about marijuana which do not include mention of marijuana advocacy organizations.

Because marijuana advocacy organizations' discussion of marijuana may be important for discursive change on marijuana, I also include coverage of "marijuana" alongside coverage of marijuana advocacy organizations. As such, I wrote a separate Python script to identify and download all articles from Proquest that mention "marijuana" and any one of the four largest marijuana advocacy organizations (and the variants of their names) between 1990 and 2016. Therefore, the script was able to capture all coverage of "marijuana" coupled with coverage of marijuana advocacy organizations, including the National Organization for the Reform of Marijuana Laws (NORML), Marijuana Policy Project (MPP), Drug Policy Alliance (DPA), and Students for Sensible Drug Policy (SSDP).<sup>4</sup> In total, there were 1,616 articles mentioning a marijuana movement organization. After cleaning the data set of articles by removing duplicate articles, I am left with 1,150 articles mentioning marijuana advocacy organizations. In addition, after removing any articles coming from alternative news sources, I am left with 787 marijuana organization-related articles from 62 newspapers (see Table 2.2). For these articles, I include a dummy code to represent that they include mentions of organizations.

As can be seen in Table 2.3, there are a total of 6,680 articles used across these analyses.

Because I am interested in the shift away from negative discourse about marijuana, I categorize each article based on its polarity or valence.<sup>5</sup> I code each article with the assistance of a naïve Bayes classifier in R's **sentiment** package (Jurka 2012). The naïve Bayes algorithm

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<sup>4</sup>Importantly, I separate these sets of coverage for future empirical work on the impact of organizations on the discursive shift.

<sup>5</sup>To prepare all documents for textual analysis, following the procedure used by Bail (2012), I use software in R to transform each article into fully-searchable sets of words, and clean the textual data by eliminating excessive words (e.g. stop-words such as numbers, conjunctions, and determiners), and transforming each word into its stem variant.

Table 2.1: *Local Marijuana News Coverage (N=5,893)*

Newspaper	N	Newspaper	N
Philadelphia Tribune	434	Fort Apache Scout	38
Colorado Springs Independent	408	High Country News	38
New Pittsburgh Courier	230	Precinct Reporter	38
Miami New Times	172	The Charlotte Post	37
The Epoch Times	168	The Culvert Chronicles	36
Los Angeles Sentinel	167	Windy City Times	36
Navajo Times	166	Seminole Tribune	34
New York Beacon	159	Bay State Banner	33
Call & Post	148	The New York Jewish Week	33
Michigan Chronicle	139	Au-Authm Action News	31
The Louisiana Weekly	123	Native American Times	29
Phoenix New Times	116	The Beacon Hill Times	29
Houston Press	115	Jewish Advocate	28
Filipino Reporter	107	Milwaukee Courier	27
Tri-State Defender	106	Jewish Bulletin of Northern California	24
Forward	104	News from Indian Country	24
Afro-American	103	Asian Reporter	21
Indian Country Today	103	Jackson Advocate	21
Recorder	103	Jewish News of Greater Phoenix	20
Current	100	El Chicano Weekly	19
The Skanner	95	Weekly Planet	19
Westside Gazette	91	Jewish Exponent	18
Wind River News	91	The Jewish Press	16
Michigan Citizen	86	Chicago Independent Bulletin	12
The Arab American News	85	Confederated Umatilla Journal	12
South Florida Times	73	Italian Voice	10
Oakland Post	72	The American Israelite	9
Sacramento Observer	71	The Circle: News from an American Indian Perspective	9
The Jewish News Weekly of Northern California	69	The Hunter Envoy	9
India Abroad	67	Asian Pages	8
Sun Reporter	67	ARTVOICE	6
The Tennessee Tribune	65	Cherokee Advocate	5
The Jacksonville Free Press	64	Armenian Reporter	4
Chicago Defender	63	Polish American Journal	4
Irish Voice	62	The Richmond Afro-American and the Richmond Planet	4
The Filipino Express	61	Akwesasne Notes	3
The Gambit	60	Armenian Reporter International	3
India-West	57	Industrial Worker	3
Char-Koosta News	55	North American Post	3
Mississippi Link	55	San Francisco Metro Reporter	3
Sho-Ban News	53	The Athens News	3
Washington Jewish Week	50	The CVN	3
The Boston Banner	47	California Voice	2
Northwest Asian Weekly	45	Cherokee Observer	2
The Ojibwe News	43	MetroWest Jewish News	2
Between the Lines	41	Cherokee Phoenix and Indian Advocate	1
International Examiner	41	Hellenic Times	1
News India-Times	41	New York Amsterdam News	1
Chicago Citizen	40	Oklahoma Indian Times	1
Atlanta Inquirer	39	The Native Nevadan	1

Table 2.2: *Marijuana Advocacy Organization News Coverage (N=787)*

Newspaper	N	Newspaper	N
Los Angeles Times	248	Sacramento Observer	3
Wall Street Journal	95	Sun Reporter	3
New York Times	91	Washington Jewish Week	3
The Christian Science Monitor	77	GlobalPost	2
Colorado Springs Independent	52	High Country News	2
Current	19	Jewish Advocate	2
Philadelphia Tribune	17	Oakland Post	2
Houston Press	16	The Boston Banner	2
New York Beacon	15	The Circle: News from an American Indian Perspective	2
The Athens News	14	The Epoch Times	2
Phoenix New Times	9	The Jacksonville Free Press	2
Afro-American	8	The Tennessee Tribune	2
New Pittsburgh Courier	7	ARTVOICE	1
Forward	6	Atlanta Inquirer	1
Miami New Times	6	Between the Lines	1
New York Amsterdam News	6	Char-Koosta News	1
Precinct Reporter	5	Chicago Independent Bulletin	1
The Skanner	5	El Chicano Weekly	1
Chicago Citizen	4	Filipino Reporter	1
The Gambit	4	Italian Voice	1
The Louisiana Weekly	4	Michigan Chronicle	1
Tri-State Defender	4	Milwaukee Courier	1
Westside Gazette	4	Native American Times	1
Windy City Times	4	Navajo Times	1
Call & Post	3	News from Indian Country	1
Chicago Defender	3	News India-Times	1
India Abroad	3	Northwest Asian Weekly	1
Jackson Advocate	3	South Florida Times	1
Los Angeles Sentinel	3	The American Israelite	1
Michigan Citizen	3	The Filipino Express	1
Recorder	3	The Jewish News Weekly of Northern California	1

Table 2.3: *Total Marijuana News Coverage (N=6,680)*

Newspaper	N	Newspaper	N
Philadelphia Tribune	434	Fort Apache Scout	38
Colorado Springs Independent	408	High Country News	38
New Pittsburgh Courier	230	Precinct Reporter	38
Miami New Times	172	The Charlotte Post	37
The Epoch Times	168	The Culvert Chronicles	36
Los Angeles Sentinel	167	Windy City Times	36
Navajo Times	166	Seminole Tribune	34
New York Beacon	159	Bay State Banner	33
Call & Post	148	The New York Jewish Week	33
Michigan Chronicle	139	Au-Authm Action News	31
The Louisiana Weekly	123	Native American Times	29
Phoenix New Times	116	The Beacon Hill Times	29
Houston Press	115	Jewish Advocate	28
Filipino Reporter	107	Milwaukee Courier	27
Tri-State Defender	106	Jewish Bulletin of Northern California	24
Forward	104	News from Indian Country	24
Afro-American	103	Asian Reporter	21
Indian Country Today	103	Jackson Advocate	21
Recorder	103	Jewish News of Greater Phoenix	20
Current	100	El Chicano Weekly	19
The Skanner	95	Weekly Planet	19
Westside Gazette	91	Jewish Exponent	18
Wind River News	91	The Jewish Press	16
Michigan Citizen	86	Chicago Independent Bulletin	12
The Arab American News	85	Confederated Umatilla Journal	12
South Florida Times	73	Italian Voice	10
Oakland Post	72	The American Israelite	9
Sacramento Observer	71	The Circle: News from an American Indian Perspective	9
The Jewish News Weekly of Northern California	69	The Hunter Envoy	9
India Abroad	67	Asian Pages	8
Sun Reporter	67	ARTVOICE	6
The Tennessee Tribune	65	Cherokee Advocate	5
The Jacksonville Free Press	64	Armenian Reporter	4
Chicago Defender	63	Polish American Journal	4
Irish Voice	62	The Richmond Afro-American and the Richmond Planet	4
The Filipino Express	61	Akwesasne Notes	3
The Gambit	60	Armenian Reporter International	3
India-West	57	Industrial Worker	3
Char-Koosta News	55	North American Post	3
Mississippi Link	55	San Francisco Metro Reporter	3
Sho-Bar News	53	The Athens News	3
Washington Jewish Week	50	The CVN	3
The Boston Banner	47	California Voice	2
Northwest Asian Weekly	45	Cherokee Observer	2
The Ojibwe News	43	MetroWest Jewish News	2
Between the Lines	41	Cherokee Phoenix and Indian Advocate	1
International Examiner	41	Hellenic Times	1
News India-Times	41	New York Amsterdam News	1
Chicago Citizen	40	Oklahoma Indian Times	1
Atlanta Inquirer	39	The Native Nevadan	1

uses a stock of trained text that has been associated with three types of polarity (positive, neutral, or negative), and attempts to classify each document as one of the three polarities.<sup>6</sup> In doing so, the algorithm simply compares the word stems in each article to word stems in each of the three dictionaries and classifies each word in the article as negative, neutral, or positive. Next, the algorithm calculates the log likelihood that a given article contains positive or negative sentiment, followed by a fit score, which is a ratio of the log likelihoods between positive and negative sentiment, where a score of ‘1’ indicates neutral polarity in the article, a score below ‘1’ indicates negative polarity, and a score above ‘1’ indicates positive polarity. I simplified version of this process is below. In an article in the *Tennessee Tribune* in 2013, Congressman Steve Cohen (D-TN) praised the Administration’s shift on marijuana:

President Obama’s Administration is making incremental progress to address the basic unfairness of our federal drug policy and law enforcement policy, and I appreciate that it has started to work on these important issues.<sup>7</sup>

In this section of the article, the words “progress,” “important,” and “appreciate” would be categorized as positive, and the word “unfairness” would be categorized as negative, given the linguistic dictionary – a stock of trained keywords signifying negative, neutral, and positive coverage – provided by the `sentiment` package in R (Jurka 2012).<sup>8</sup> In simplified terms, this section of the article would be categorized as positive, given that it would be given more positive codes than negative codes. I therefore use this package (with the algorithm based on the subjectivity lexicon dictionary) to code the valence or polarity of each article, for all 6,680 articles.

Given my interest in the frames included in coverage of marijuana, I give each article a code for the presence or absence of various frames. To select frames, I rely on a process of

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<sup>6</sup>The stock of trained text comes from Janyce Wiebe’s subjectivity lexicon (Wilson et al. 2005), which can be found at: [https://mpqa.cs.pitt.edu/lexicons/subj\\_lexicon/](https://mpqa.cs.pitt.edu/lexicons/subj_lexicon/).

<sup>7</sup>“Cohen Statement on Medicinal Marijuana.” *Tennessee Tribune*. September 5, 2013.

<sup>8</sup>The dictionaries can be viewed through the package information provided by Jurka (2012).

induction – my selection of frames is based on the various frames that have been associated with marijuana over time. In particular, I focus on seven frames about marijuana, based on prior research.

In their work describing reasons why marijuana should be legal, Rosenthal and Kubby (1996)'s arguments center on the rights, as given by the Constitution, as well as Libertarian ideals like individual freedom and personal liberty to use marijuana without fear of retribution or governmental intrusion into private affairs. As such, I include two frames that capture “rights,” and “liberties.” Additionally, in recent years, there has been a shift in public framing of marijuana, alongside the shift toward statewide ballot initiatives as a venue for legalization (Mosher and Akins 2019). These frames have centered on the benefits of legalization for creating streams of revenue through taxation on regulated marijuana sales (Caulkins et al. 2012; Miron 2010). I therefore include a frame related to “revenue creation.” Newhart and Dolphin (2019) have recently demonstrated that part of the broader fight for marijuana legalization necessarily depends on preceding fights for and successful medicalization. As such, discussions of legalization are often intertwined with discussions about the medicinal and public health benefits of marijuana, particularly for patients who might require alternative treatments for their medical issues. As such, I include a frame that centers on “patients.” Scholars have also focused on the restorative justice effects of marijuana legalization. This line of inquiry usually focuses on how legalization could redirect police resources away from hyper-policing in communities of color (Alexander 2010; Davis 2003), toward rehabilitation (Alexander 2010; Mosher and Akins 2019; Davis 2003) and how legalization would restrict the flow of marijuana from underground drug markets, thereby reducing crime (Mosher and Akins 2019; Caulkins et al. 2012). As such, include a frame that encompasses “policing.”<sup>9</sup> Finally, given the nature of coverage of marijuana as a political issue, and given literature that identifies institutional politics as newsworthy (Amenta et al. 2012; Galtung and Ruge

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<sup>9</sup>Upon closer investigation of the data, I noticed that frames of “crime reduction” and “rehabilitation” often covered people arrested, their histories of marijuana use, their placement in rehabilitation facilities, and variable mentions of the term “reduce.” As such, they were removed from the analysis.

1965), I also include a “politics” frame.

To identify the frames, I rely on keywords to select whether frames are absent or present in coverage of marijuana. In the Table below, I outline the search terms used for identifying these frames. In the Table, “+” represents the logical operator “OR” and “\*” represents the logical operator “AND.”

Table 2.4: *Search Terms for Marijuana Narratives*

Narrative	Search Terms (Stems)
Rights	“rights”
Liberties	“libert” + “freedom”
Revenue	“tax” + “revenue” + “dollar” + “money” + “monet”
Patient	“patient” + “medic”
Policing	“policing” + “police” * (“black” + “latin”)
Politics	“vot” + “politic”

In what follows below, I show examples of each frame by using article excerpts. For example, the following excerpt comes from an article in the *Colorado Springs Independent* in 2013 that was coded as containing a “revenue” frame:

New city sales tax revenue from the venue would exceed \$275,000. (By comparison, medical marijuana last year brought in \$1.1 million in sales tax.) The stadium would cost about \$60 million to build.<sup>10</sup>

As seen, although this article covers revenue from a stadium, it also compares that revenue to revenue generated by medical marijuana. In total, there were 2,316 articles that included the “revenue” frame. Next, from an article in *The Louisiana Weekly* in 2013 that was coded as containing a “liberties” frame:

On the eve of a new year, a libertarian strain pulses through America – a get-government-out-of-my-personal-life sensibility that cuts across ideologies and is

<sup>10</sup>Zubeck, Pam. “Talking a Good Game.” *Colorado Springs Independent*. July 3, 2013.

driven by a younger generation's cultural attitudes.

We've seen it in gay-marriage legalization and marijuana decriminalization.<sup>11</sup>

Shown in the above excerpt, the author is drawing connections between the growth of Libertarian ideals in America and arguments in favor of not just marijuana, but also other issues like gay marriage (and beyond this, gun rights). In total, there were only 84 articles that included the "liberties" frame. Next, I include an excerpt from an article in *The Boston Banner* in 2013 that was coded as containing a "rights" frame:

The Barack Obama administration has announced a set of proposals aimed at stemming the growth of the U.S. prison population and racial disparities in the criminal justice system - chief among them, the elimination of mandatory minimum sentencing for low-level drug offenses.

African Americans are nearly four times as likely to be arrested for marijuana possession than whites, despite similar usage rates between the two groups.

Mandatory minimum sentences are not only unfair in stature and consequence, they represent a serious threat to the civil rights gains and progress of the 1960s and '70s.<sup>12</sup>

In the above excerpt, we see how marijuana legalization and the removal of mandatory minimum sentences associated with marijuana infractions as a civil rights issue. In total, there were 1,255 articles that included the "rights" frame. I next give an example of the "patient" frame, from an article in the *Atlanta Inquirer* in 2005:

When the U.S. Supreme Court ruled against medical-marijuana users, many critics of the decision thought the six-justice majority failed to show compassion for severely ill people.

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<sup>11</sup>Sidoti, Liz. "Gun Debate Revives Enduring American Fight." *The Louisiana Weekly*. January 14, 2013.

<sup>12</sup>Kandil, Caitlin Yoshiko. "Obama's Criminal Justice Reform Praised for Historic Proposals." *The Boston Banner*. August 15, 2013.

Under California's Compassionate Use Act, doctors may prescribe marijuana to patients with severe medical problems. Those patients are then permitted to grow marijuana for their own use. The state closely regulates the prescription, cultivation, and use of the product to prevent others from obtaining it. (At least nine other states have similar laws.)

Many well-intentioned people say yes: of course, severely ill people should be able to grow and use marijuana by prescription without fear that federal agents will barge into their homes, destroy their plants, and charge them with unlawful possession.

Sick people need freedom, not permission, however compassionate the motive.<sup>13</sup>

Here, we see that marijuana is being framed in terms of the patients, or groups of people with illnesses that could be treated through marijuana use. In total, there were 806 articles that included the "patient" frame. Next, I show the "policing" frame, which focuses not just on policing, but policing's effects on communities of color. This example comes from an article in the *Sun Reporter* in 2015:

Blacks and Latinos are incarcerated at disproportionately higher rates in part because police target them for minor crimes.

Racial disparities that exist at every step in the criminal justice system, the report noted. That helps explain why Blacks and Latinos account for about 30 percent of the United States population, but 56 percent of the incarcerated population.

These trends are driven by race-neutral laws that still have a significant racial impact, criminal justice professionals influenced by racial bias, an under-funded criminal justice system, and policies that impose strict "collateral consequences" that make it harder for ex-offenders to return home after prison.<sup>14</sup>

Here, the author draws attention to criminal justice practice (specifically policing) in communities of color, particularly regarding marijuana, as a reason for the spike in the prison

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<sup>13</sup>"Muddle At The Supreme Court Over Medical Marijuana." *Atlanta Inquirer*. July 9, 2005.

<sup>14</sup>"Police Killings Underscore Need For Reform." *Sun Reporter*. February 12, 2015.

population. In total, there were 126 articles that included the “policing” frame. Finally, I have an example of the “politics” frame, coming from the *Milwaukee Courier* in 2012:

Election night ushered in some other political surprises as well. Last Tuesday’s election was a watershed moment for the gay marriage movement. Voters in three states voted to legalize it - something no state had done before - and a fourth state voted against a proposed ban.

Tuesday’s progressive electorate also weighed in on the issue of marijuana usage. Colorado and Washington became the first U.S. states to legalize the possession and sale of marijuana for recreational use – in defiance of federal law.<sup>15</sup>

As can be seen, in this article, there is traditional electoral political coverage, of which marijuana is a topic covered. Below, I describe variations in coverage of marijuana in the presence and absence of organizations.

## 2.5 Results

### 2.5.1 Frames in Overall Coverage

As seen in the figures below, there was a substantial change in marijuana coverage over time. In particular, in Figure 2.1, it is important to recognize that there was a consistent increase in overall coverage of marijuana over time. The amount of attention to marijuana reached its peak in 2014, with just over 600 articles. We can see that there are two dramatic peaks in coverage – in 2010 and 2014, respectively. These peaks coincide with ballot initiatives California, Alaska, and Oregon.

Coding the valence/polarity for each articles, reveals an interesting pattern: there was both a substantial decrease in negative attention to marijuana and an increase in neutral coverage

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<sup>15</sup>“Capitol Report - The Dawning of Liberal America?” *Milwaukee Courier*. November 17, 2012.

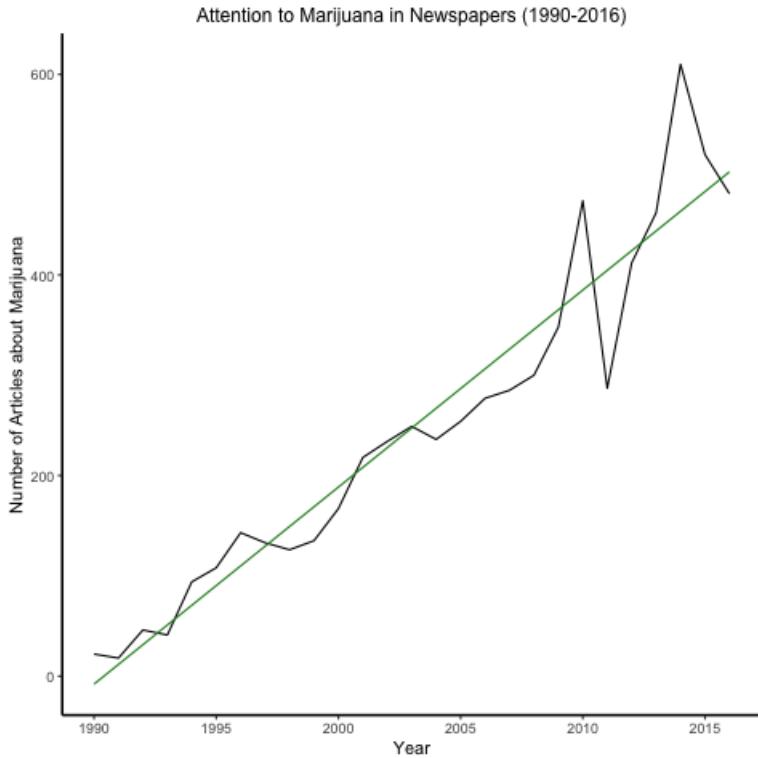


Figure 2.1: Coverage of Marijuana

of marijuana. As seen in the Figure 2.2 below, the percent of negative coverage about marijuana only stayed consistently below fifty percent only after 2010. During this same time, we see that coverage of marijuana became increasingly neutral over time. In fact, a majority of attention to marijuana was neutral in later years, between 2013 and 2016. Given these data, there is a sense that marijuana discourse changed over time, becoming less negative – a shift away from the dominant negative discourse on marijuana identified in prior research (Mosher and Akins 2019; Bonnie and Whitebread II 1970).

I now turn to the frames presented in articles about marijuana. To be sure, all frames exhibit some degree of variation over time. As shown in the figures below, I have broken the frames into high, moderate, and low frequency frames for ease of interpretation. As seen in Figure 2.3, there is a general increase in frames about politics and revenue creation. Importantly, throughout nearly the entire period under investigation, discussions that linked marijuana

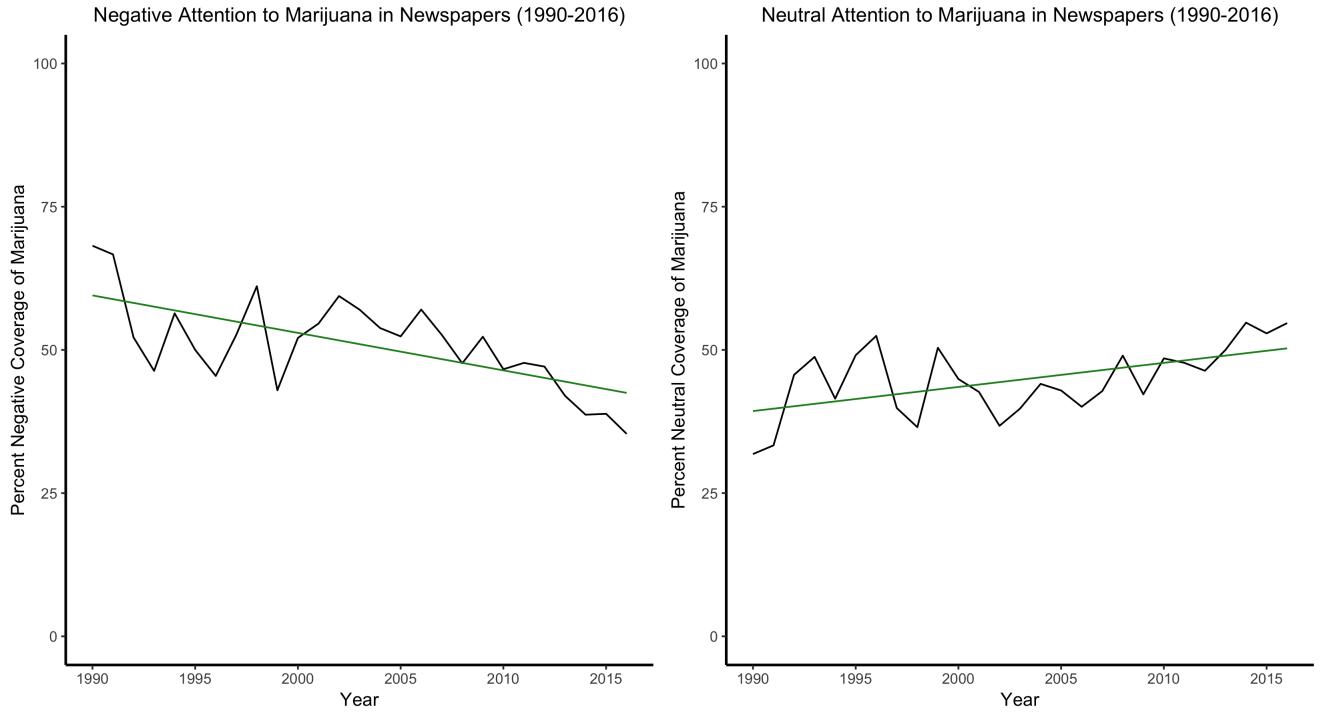


Figure 2.2: Change in Valence of Marijuana Coverage

to revenue, taxes, or many were the most prevalent. While the dominance of this frame is clear, narratives linking marijuana to politics came second, and oftentimes showed a similar, albeit lower, trend. In addition to the general growth in these two frames over time, there was also a large drop for both in 2012. Part of this drop may be due to higher levels of election coverage in 2012 that did not include mentions of marijuana.

I next turn to moderately covered frames in overall coverage in Figure 2.4. These include coverage of patients and rights. These two trends are relatively similar across time. We see brief spikes in coverage of marijuana associated with patients (e.g. medicinal uses) and rights in 2010 and 2014. These two spikes may be related to the added coverage of marijuana at when marijuana-related initiatives were put on the statewide ballots in California (2010), Alaska (2014), and Oregon (2014), which provided increased opportunities for marijuana to be linked with additional frames.

Finally, Figure 2.5 depicts low-frequency frames in news coverage of marijuana. From this

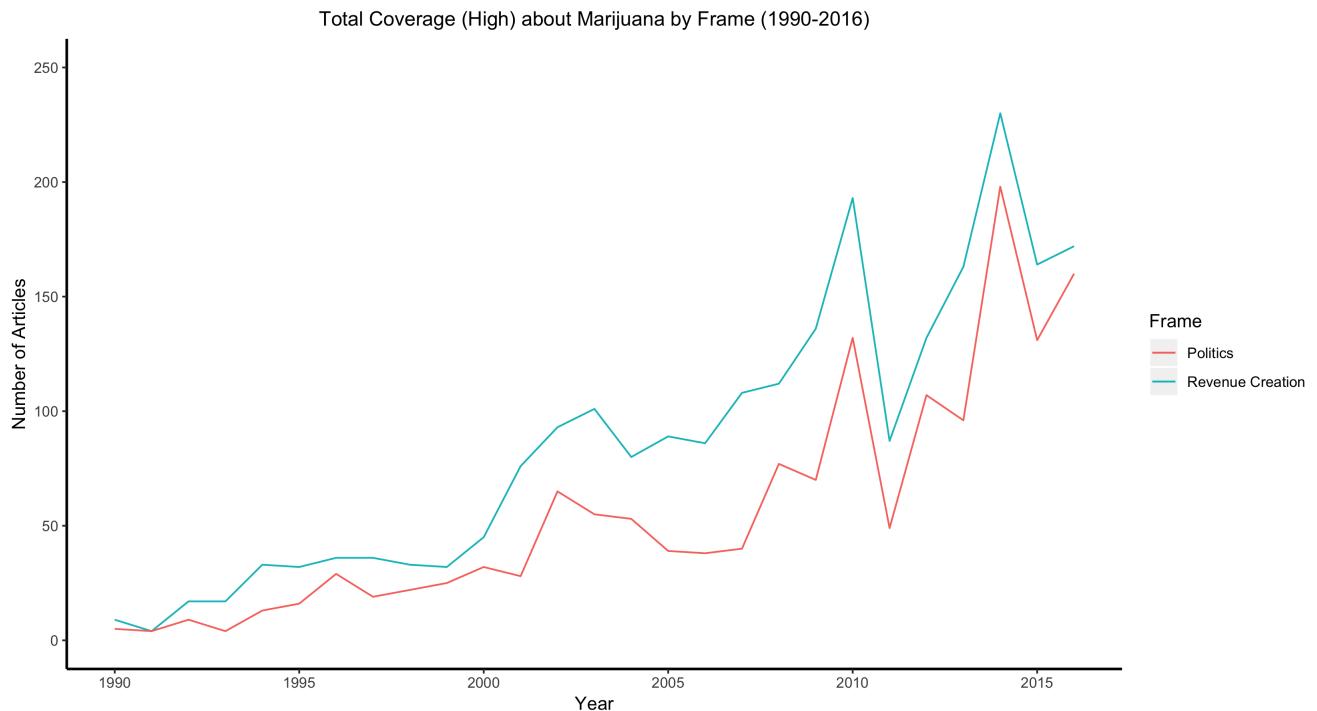


Figure 2.3: Amount of Total Coverage for High Frequency Narratives

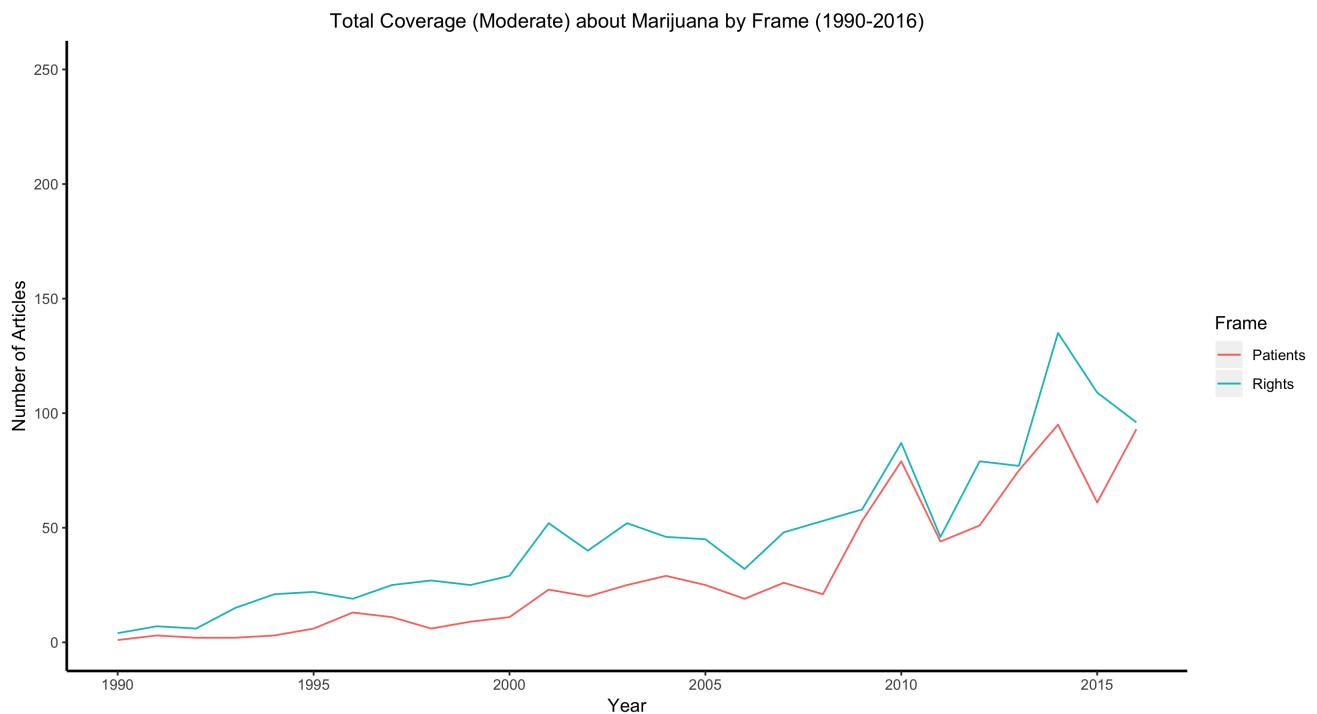


Figure 2.4: Amount of Total Coverage for Moderate Frequency Narratives

figure, we can see that frames centering on liberties and policing remained relatively low (near zero) during the period of investigation. Only in later years, around 2013, did we see a slight increase in the policing frame, which may be related to increased coverage of police shootings of unarmed Black people and coverage of the Black Lives Matter organization.

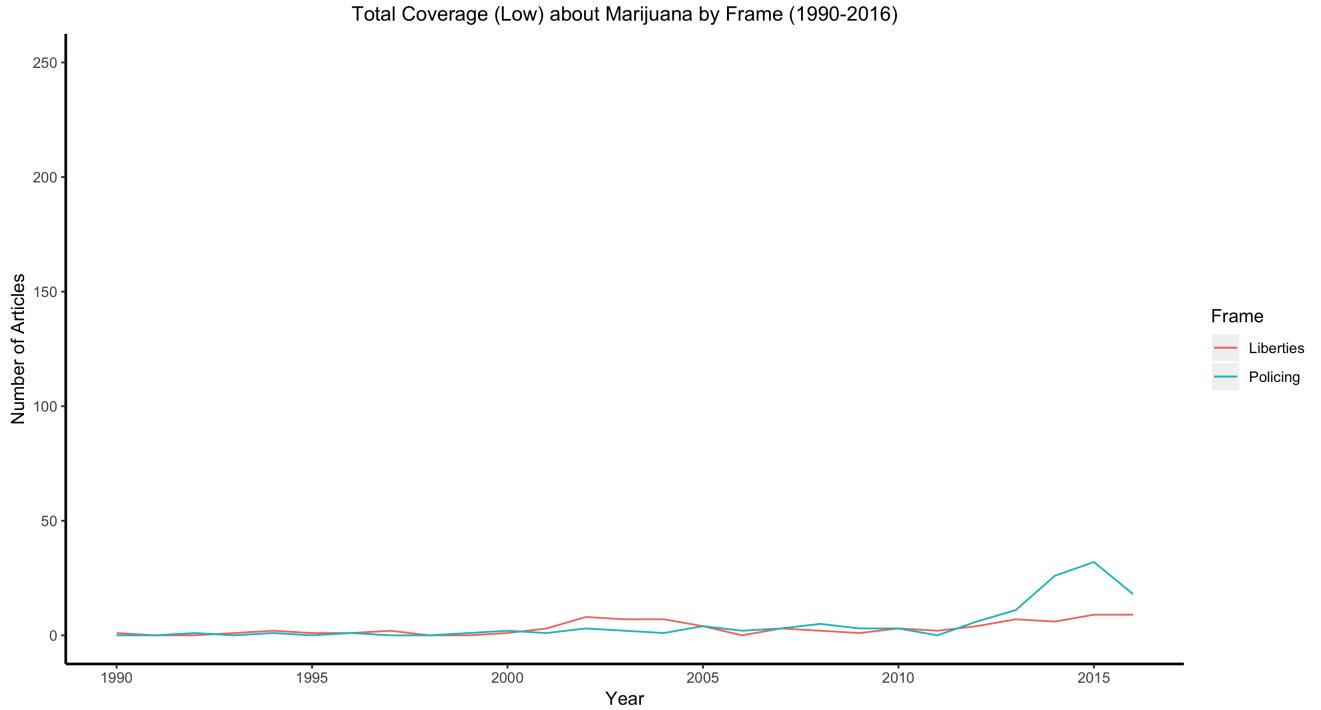


Figure 2.5: Amount of Total Coverage for Low Frequency Narratives

### 2.5.2 Frames by Local versus Organization-Related Coverage

I next separate the above frames to compare differences in frames used between local coverage about marijuana only, and coverage about marijuana alongside mentions of marijuana advocacy organizations. Again, I present three figures that align with the high-, moderate-, and low-frequency frames presented above. These figures show the percentage of coverage in a given year that includes the various frames, broken out by whether or not the coverage also mentioned at least one of the four marijuana advocacy organizations.

Figure 2.6 depicts the percentage of all coverage in that year that includes politics or revenue creation frames. As we can see, general marijuana coverage tends to center on revenue as the topic of conversation, even if only around 30 percent of the time. In general (local) coverage of marijuana, politics was mentioned in connection with marijuana even less, often between 15 and 20 percent of the time. Turning to organizational coverage, we see that coverage of politics and revenue creation frames show considerable variability, with frames of revenue creation sometimes dominating coverage and frames of politics sometime dominating.

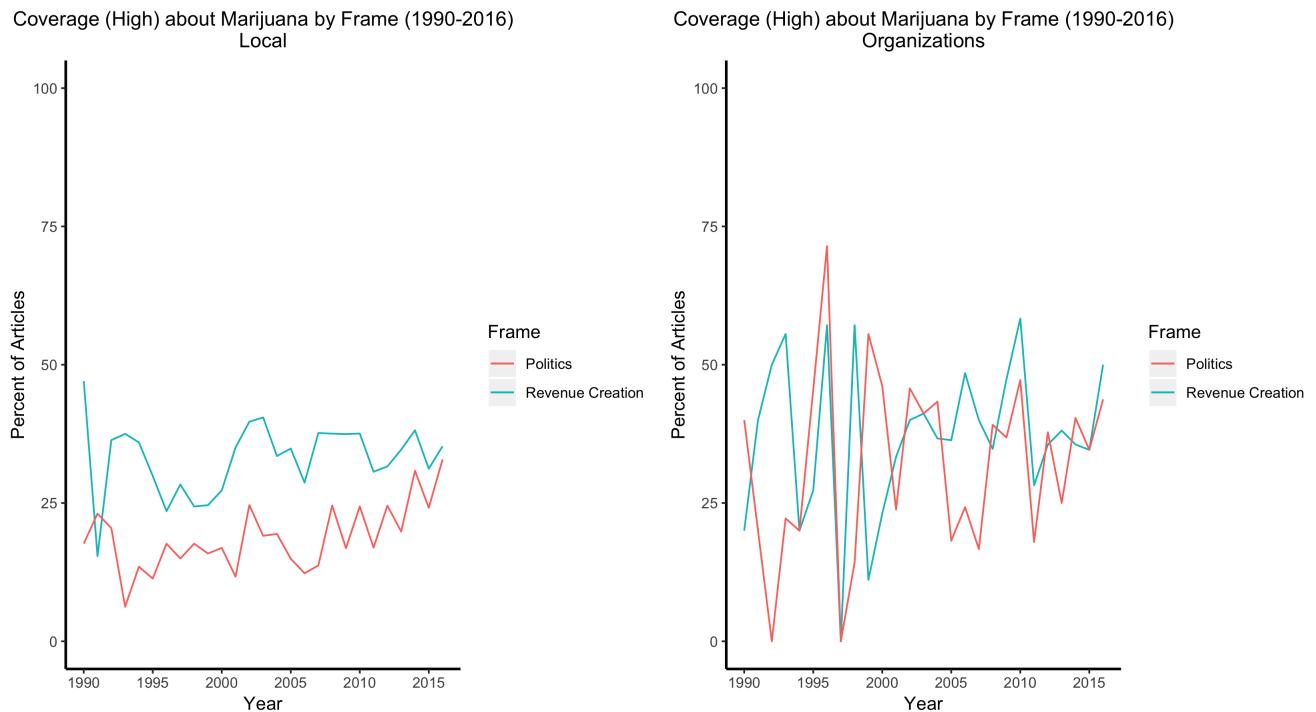


Figure 2.6: Amount of Coverage for High Frequency Narratives (by Source)

Next, 2.7 shows that coverage of organizations was more likely than general marijuana coverage to include frames that centered on patients and those that centered on rights. In addition, when compared to Figure 2.6 above, and Figure 2.8 below, we see that organizational coverage was most likely to include frames that focused on rights. When compared to all coverage, we can see that organizational coverage may be driving the amount of articles that include rights frames.

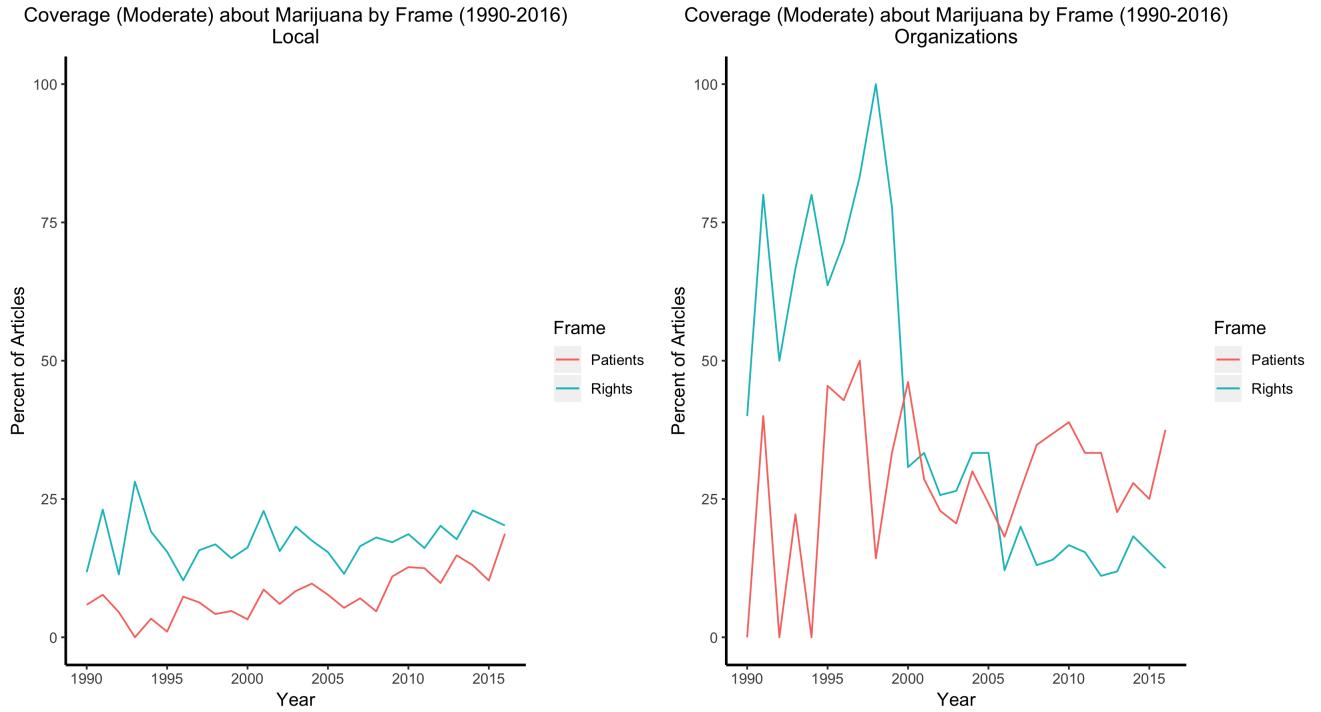


Figure 2.7: Amount of Coverage for Moderate Frequency Narratives (by Source)

Finally, Figure 2.8 shows that both general marijuana coverage as well as organization-related coverage were least likely to include frames about policing or liberties. Here we see that for both, there was near-zero percent of coverage that included these frames. There were brief spikes in liberties frames in organization-related coverage over time. In addition, both coverage sets show a minor spike in policing frames later in time.

### 2.5.3 Frames and Polarity

Do different frames impact the polarity of coverage? To investigate this further, in Figure 2.9 below, we can see how each frame, when used, has become less associated with negative polarity over time. The graphs are broken out by whether or not the frame appeared in general marijuana coverage or organization-related coverage. In addition, I order these graphs in terms of their total frequency over time (with the revenue appearing most frequently, and

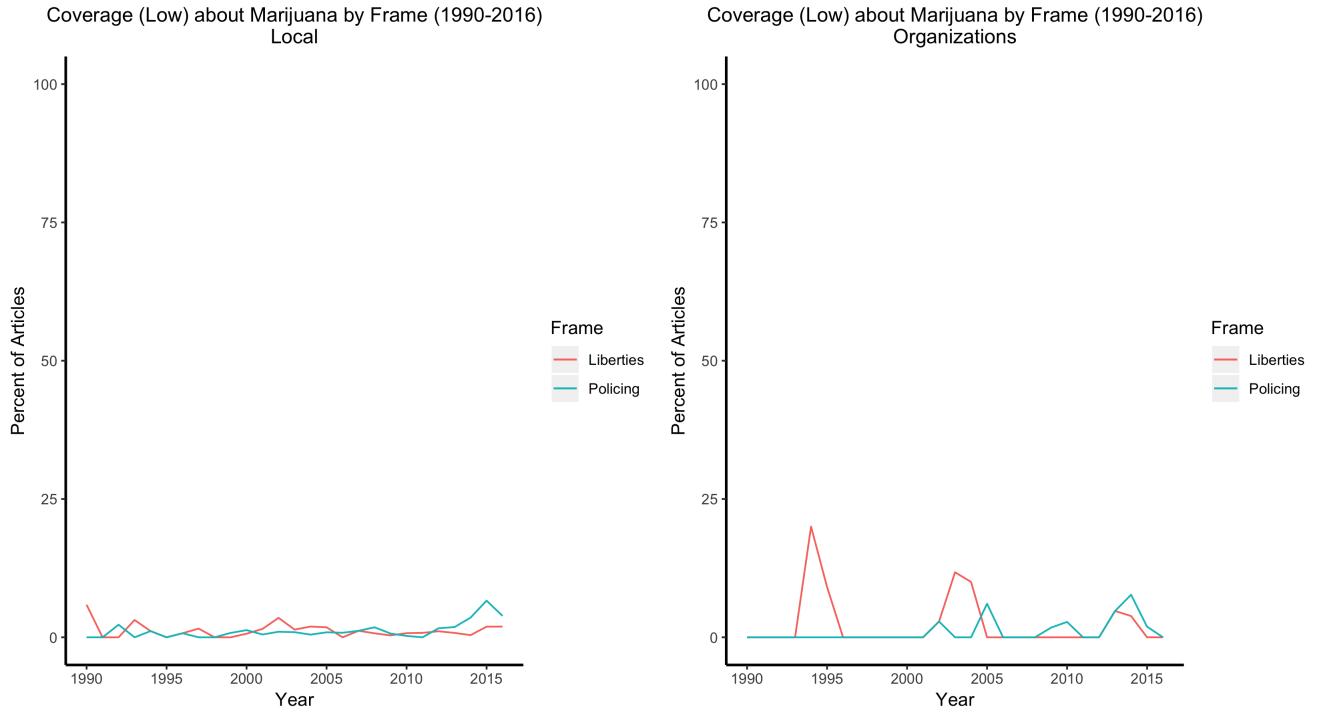


Figure 2.8: Amount of Coverage for Low Frequency Narratives (by Source)

the policing frame appearing least frequently).

Beyond this, in Figure 2.10 below, we can see how each frame became more neutral over time. Again, graphs are broken out by local versus organization-related coverage, and are ordered by their total frequency over time (with the revenue appearing most frequently, and the policing frame appearing least frequently). As we see, for many frames, neutral coverage either hung around 50 percent of each frame's coverage, or increased over time.

To follow this up, I conducted a simple logistic regression of negative coverage on the various frames. In Table 2.5, we see that various frames have distinct impacts on negative polarity of an article. As seen below, more frames have significant impacts on the polarity of coverage in general marijuana coverage than in organization-related coverage. In particular, for general marijuana coverage, frames centering on liberties, patients, and politics significantly decrease the likelihood that an article is classified as negative. For organization-related coverage, however, none of the frames decrease the likelihood that an article is negative. Conversely,

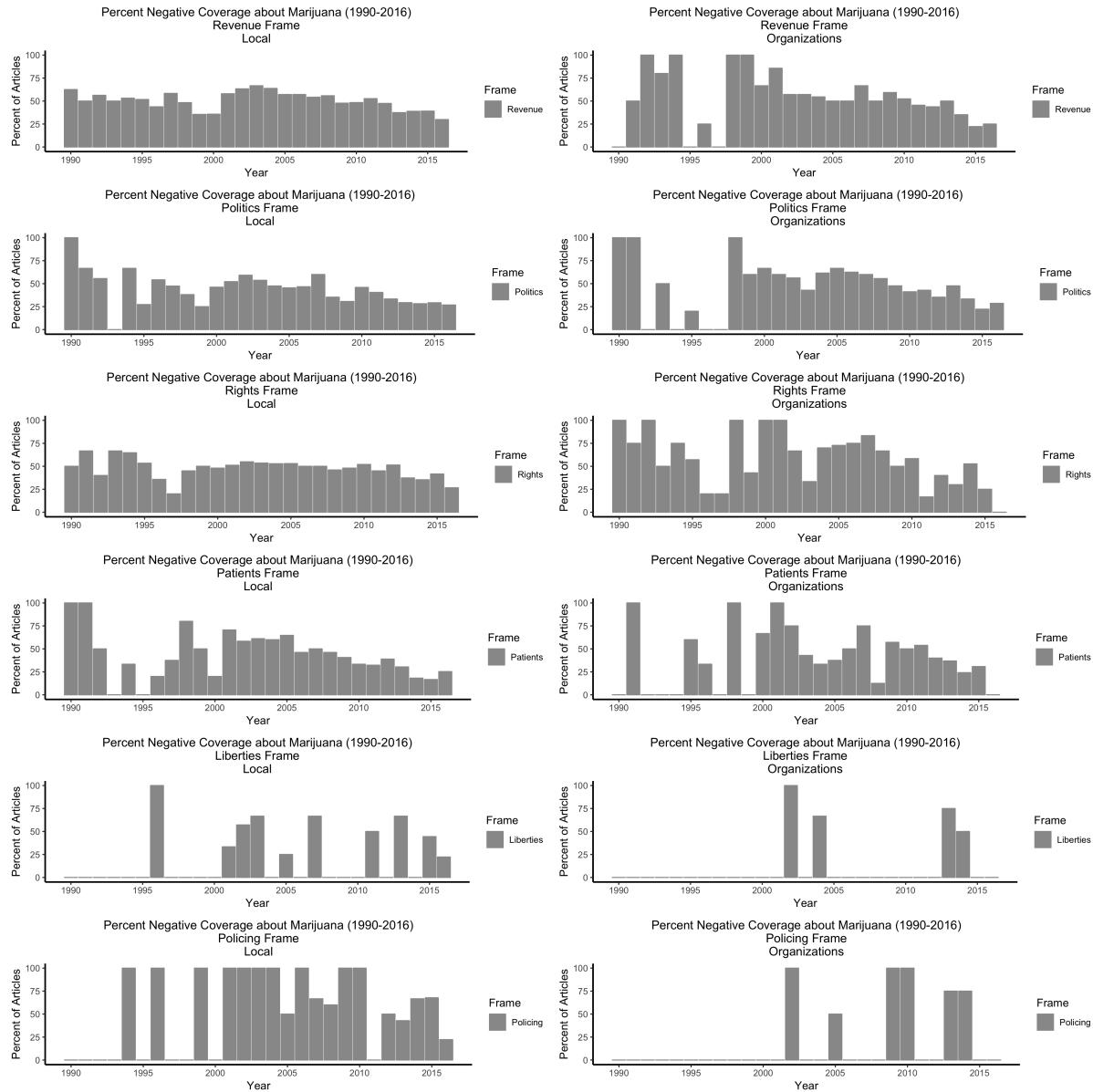


Figure 2.9: Percent of Each Frame's Coverage Classified as Negative (by Source)

frames of revenue creation and policing increase the likelihood an article is classified as negative – only policing frames impact negative polarity for organization-related articles. In sum, we see not only that frames were used variably over time, and that both general and organization-related coverage included these frames variably, but also that some frames (more than others) contributed to decreases in negative coverage over time.

Table 2.5: *Likelihood of Negative Articles about Marijuana: Logistic Regression Estimates with Controls for State-Level Effects*

	General	Organization-Related
	(1)	(2)
Rights	0.022 (0.074)	0.257 (0.191)
Liberties	-0.688* (0.279)	-0.415 (0.504)
Revenue Creation	0.151** (0.058)	0.157 (0.157)
Patients	-0.380*** (0.095)	-0.279 (0.168)
Policing	0.653** (0.207)	1.152* (0.543)
Politics	-0.413*** (0.071)	-0.275 (0.163)
Year	-0.023*** (0.004)	-0.049*** (0.014)
Constant	46.490*** (8.724)	99.206*** (28.465)
Observations	5,893	787
Log Likelihood	-3923.53	-507.65
AIC	7919.07	1077.31
BIC	8159.6	1222.02

Notes: Standard errors are in parentheses.

\* $p < .05$ ; \*\* $p < .01$ ; \*\*\* $p < .001$  (two-tailed test).

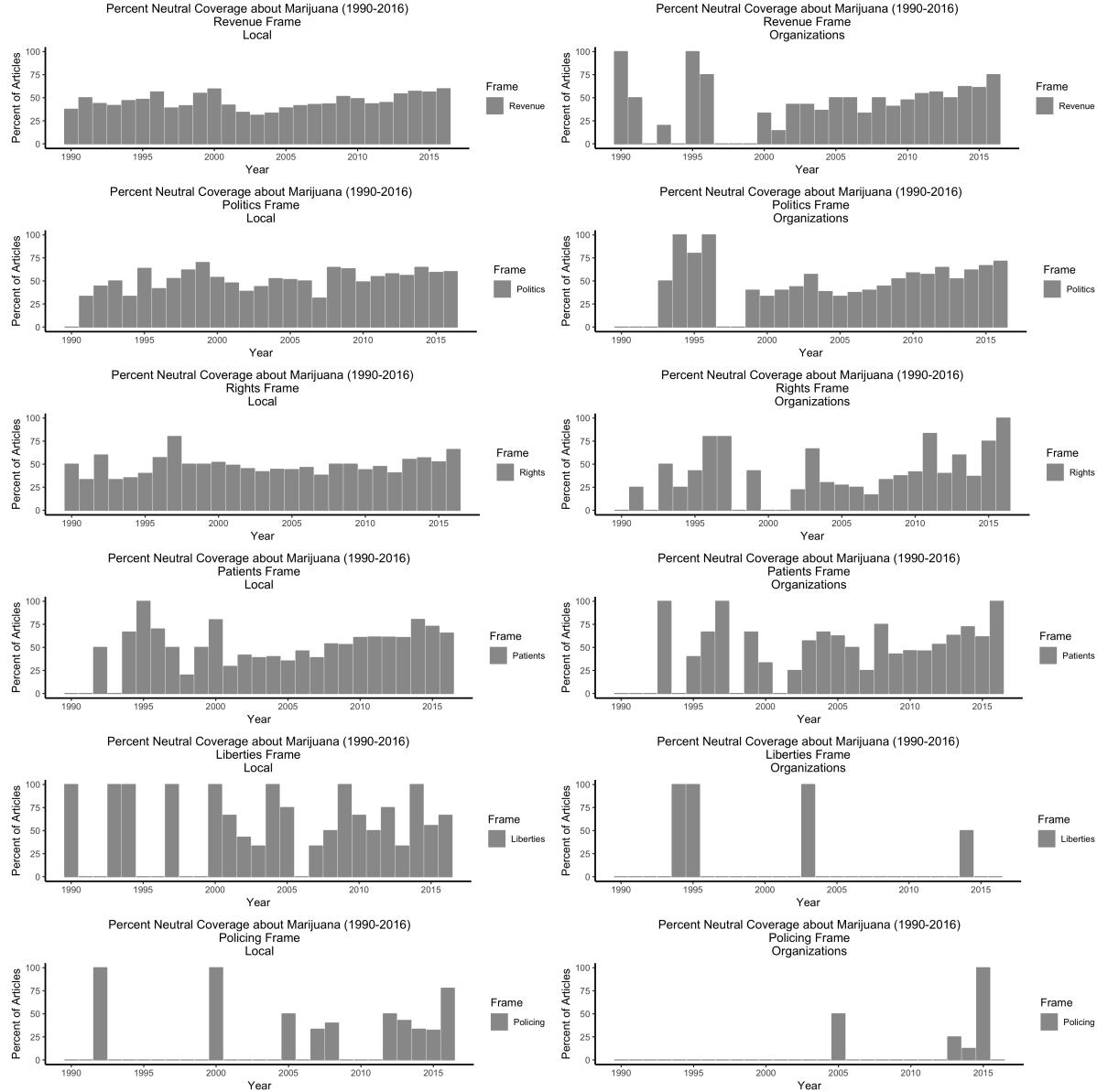


Figure 2.10: Percent of Each Frame's Coverage Classified as Neutral (by Source)

## 2.6 Conclusions

In this article, I account for variation in the discourse about marijuana by considering how narratives have changed over time. As I have demonstrated, marijuana discourse did, in fact, change over time. Firstly, I show that coverage of marijuana has increased during the period of study. We see peaks and valleys in coverage, but also a general upward trend for

attention to marijuana. Yet, not only did coverage discourse about marijuana become less negative, and more neutral, over time, but the ways in which marijuana was discussed also changed over time. There was a general broadening, over time, of the frames used to discuss marijuana. While most coverage of marijuana in 1990 included relatively equal numbers of various frames, frames became more varied over time, with frames about revenue creation coming to dominate a large number of articles. In most years, linking marijuana coverage with frames of revenue creation and politics was most common, whereas frames about liberty, rehabilitation, and policing were least likely.

The current study investigates the characteristics of discursive change on contested issues. I find that, over time, marijuana became linked with frames that centered on traditional citizen behavior (political behavior) and benefits to society (revenue creation). Additionally, this work contributes to a growing chorus of scholarship on discursive change (Bail 2012; Bateman et al. 2019). In particular, this descriptive chapter broadens the scope of scholarly study by investigating the changing character of narratives about contentious political issues. It is my hope that this work will stimulate research on discursive and political factors that influence discursive change.

# Chapter 3

## The Adoption of Recreational Marijuana Legalization in the United States, 1990–2016

### 3.1 Introduction

What accounts for the rate of passage of marijuana legalization in the United States? In the absence of federal legislation, states have become sites for policy change. Yet more than a decade after the Obama Administration released a memorandum signaling a lax stance on state-level marijuana laws (Ogden 2009), most states have not legalized. Those states that have moved on legalization, however, have done so through the statewide ballot initiative.

In this chapter, I seek to understand why some states embrace legalization and others do not. I explore the effects of political institutional contexts, policy feedback, and discourse on the rate of passage of marijuana legalization across the U.S. Literature in political sociology and political science highlight how political contexts and public opinion influence policy change

(Burstein and Linton 2002; Amenta et al. 2001; Amenta and Elliott 2019). Although most studies have emphasized the role of public opinion and aspects of the political environment (Burstein and Linton 2002), it ignores others. For example, the focus on political context centers, almost exclusively, on the makeup of larger legislative bodies (e.g. Congress or State Houses/Assemblies), which overlooks policy change that occurs by alternative means (e.g. public citizen initiative). Because of this, scholars may lack broader understanding of the causal factors associated with policy change and policy diffusion across the United States.

Understanding the rate of adoption of marijuana legalization is important in its own right because the outcome of policy change has impacts on the lives millions of patients and users (Newhart and Dolphin 2019; Miron 2010; Mosher and Akins 2019) as well as those imprisoned for marijuana infractions under the federal system of prohibition (Sered 2019; Gottschalk 2016; Alexander 2010).

Importantly, understanding marijuana policy change is important for substantive discussions about progressive policy change and the set of cases to which it belongs. Marijuana legalization is an interesting case of progressive policy that bears some similarity to contentious and morality-related policies such as abortion liberalization or, to a greater extent, tobacco restrictions, anti-prohibition (Gusfield 1963; Andrews and Seguin 2015) and lotteries (Pierce and Miller 1999; Berry and Berry 1990), which are often opposed for their perceived impacts on youth (Beisel 1997). Marijuana legalization is similar to alcohol prohibition/anti-prohibition and lottery battles in that their perceived negative consequences and costs will only be incurred by those who make use of the policy (Mikesell and Zorn 1986; Berry and Berry 1990). Marijuana legalization differs, however, from anti-prohibition policy change because of alcohol's longstanding social and economic impact on American society (Andrews and Seguin 2015). Only now are we beginning to understand the potential economic benefits that could result from marijuana legalization, and public opinion polls indicate increasing marijuana use over time (Gallup 2013). Marijuana legalization thus bears some similarity to

taxation policy (Amenta and Halfmann 2000) in that there are perceived economic benefits to policy change, yet longstanding opposition from citizens and powerful interests (Amenta and Elliott 2019). Finally, marijuana legalization can also be thought of as similar to, but a reversed trend of, tobacco policy. Tobacco policy, much like alcohol policy has been built into the social and economic fabric of the United States. However, in recent years, there have been increasing attempts to restrict tobacco use through increased taxation, removal from retail locations, and elimination in public use spaces – which may be due to increasingly negative connotations and beliefs attached to smoking. On the contrary, over time, marijuana has become increasingly associated with medicinal uses for patients as well as economic benefits for locales.

In short, given it's unusual history and evolving understandings of marijuana, legalization as progressive policy presents an intriguing case that is not identical to other policies but that can necessarily inform our understanding of the factors that contribution to the various categories of policy change. Moreover, given the recency of legalization, studying this policy can provide insight into the process of early adoption of policy in the long history of policy change.

In this chapter, I ask how aspects of the political contexts, previous policy histories, and discourse on the issue affect the rate of passage of marijuana legislation across the American states, over time. In so doing, I account for the roles of marijuana public opinion, political competition in elections, a state's history with voting on the marijuana issue, the impact of legalization in nearby locales, as well as the effects of positive marijuana discourse on the passage of legalization across the States. I argue that political institutional contexts and discursive contexts matter for increasing the rate at which states legalize. In particular, I argue that competitive elections stimulate interest, which increases representation of interests previously excluded from the political system – increasing legalization's chances of success. Moreover, positive discourse about marijuana creates a context in which voters not only are

more willing to discuss marijuana, but may be more likely to perceive marijuana legalization positively and creates opportunities for legalization.

I use original data to test these hypotheses about policy change. I draw on panel data from states in the U.S. between 1990 and 2016 to investigate the factors that influence the rate of passage of marijuana legalization. By 2016, eight states had legalized marijuana for recreational use.

## 3.2 The History of Marijuana Legalization

At the hands of President Herbert Hoover and under the direction of the commissioner of the Federal Bureau of Narcotics, Harry J. Anslinger, in 1937, the Marihuana Tax Act officially made the possession and sale of marijuana illegal. Marijuana prohibition was strengthened over time, with increased penalties via the Boggs Act (1952) and the Narcotics Control Act (1956), and, through the Controlled Substances Act (1970), which reclassified marijuana as a Schedule I drug – those assumed to have a high potential for abuse or addiction and with no known medicinal purpose – on par with heroin, LSD, and peyote.

During the 1970s, states began to push back on the issue of federal marijuana prohibition. Direct democratic processes such as the ballot initiative were used to reverse marijuana prohibition via medicalization and legalization. Yet as Newhart and Dolphin (2019) argue, marijuana policy change took on a peculiar two stage process – states would first enact laws that enabled access to marijuana for medical purposes, and growing support for and use of medical marijuana would smooth the transition to legalization (Kilmer and Maccoun 2017). In 1972, for example, California became the first state to take up the issue of medicalization. Proposition 19, as it was called, was unsuccessful, however – nearly two-thirds of voters opposed the initiative.

The failure of Proposition proved costly for future marijuana policy change across the states – the marijuana issue was not seriously considered again until the 1990s (two exceptions include a failed legalization initiative in Oregon in 1986 known as Measure 5 and a re-criminalization initiative in Alaska in 1990). In 1996, voters in California again attempted to be early adopters of marijuana policy change by placing another medicalization initiative, Proposition 215, on the ballot. This time, however, a majority of Californians supported medicalization. The success of Proposition 215 set off a wave of statewide ballot initiatives that would have allowed for the medical use of marijuana. In fact, during this time, seven states put medical marijuana on the ballot.

During the 1990s, public opinion on marijuana underwent a positive shift. By the turn of the century, nearly three-quarters of Americans supported marijuana for medical use (McMurray 2003; Gillespie 2001). But this relationship is recursive – growing public opinion may have influenced, and been influenced by, medical marijuana ballot initiatives. As some have argued, this positive shift on both public opinion and the number of medicalization initiatives may have paved the way for future medicalization as well as legalization (Kilmer and Maccoun 2017; Newhart and Dolphin 2019; Bradford and Bradford 2017). In fact, between 2000 and 2016, the number of states attempting to medicalize via the ballot initiative increased to thirteen (up from seven in the 1990s).

This growth, and the success of medical marijuana initiatives made marijuana policy expansion seem possible. As a case in point, between 2000 and 2016, there was also an increase in the number of states voting on initiatives to legalize marijuana for recreational use. Although no states tried to legalize marijuana from 1990 to 1999, as can be seen in Table 3.1, from 2000 to 2016 twelve states had initiatives on the statewide ballot to do so. In addition, this table, sorted by date, displays the various characteristics of each recreational legalization ballot initiative. These characteristics include whether or not the initiative specified an age restriction, a possession limit (for loose cannabis, for concentrates, and plants), as well as

whether or not the initiative also reduced previous penalties attached to marijuana, if the initiative also described or recognized the medical uses of marijuana, if the initiative specified a plan for revenue generation from marijuana (e.g. through taxed sales), whether the initiative would also establish or recognize a separate entity to serve as a regulatory board over marijuana production, distribution, sales, and tax collection in the state, and finally, whether or not the initiative passed.

Table 3.1: *State Ballot Initiatives on Recreational Marijuana Legalization*

State	Year	Initiative	Age Limit	Possession Limit	Adjusts Criminal Penalties <sup>a</sup>	Recognizes Medical Uses	Revenue Generation	Creates Regulatory Entity	Passed
Alaska	2000	Measure 5	18	Unlimited	✓	✓	✓	✓	No
Nevada	2002	Question 9	21	3 oz.		✓	✓	✓	No
South Dakota	2002	Initiative 1	None	Unlimited					No
Alaska	2004	Measure 2	21	Unlimited	✓	✓		✓	No
Colorado	2006	Initiative 44	21	1 oz.					No
Nevada	2006	Question 7	21	1 oz.			✓		No
California	2010	Proposition 19	21	Unlimited		✓	✓	✓	No
Colorado	2012	Amendment 64	21	1 oz.			✓	✓	Yes
Oregon	2012	Measure 80	18	Unlimited		✓	✓	✓	No
Washington	2012	Initiative 502	21	1 oz.		✓	✓	✓	Yes
Alaska	2014	Measure 2	21	1 oz./6 plants	✓	✓	✓	✓	Yes
Oregon	2014	Measure 91	21	8 oz./4 plants		✓	✓	✓	Yes
Ohio	2015	Issue 3	21	8 oz./4 plants 1 oz. (no lic.)		✓	✓	✓	No
Arizona	2016	Proposition 205	21	1 oz./6 plants	✓		✓	✓	No
California	2016	Proposition 64	21	28.5 g/6 plants	✓	✓	✓	✓	Yes
Maine	2016	Question 1	21	2.5 oz./6 plants			✓	✓	Yes
Massachusetts	2016	Question 4	21	1 oz.(10 oz.)/6 plants		✓	✓	✓	Yes
Nevada	2016	Question 2	21	1 oz./6 plants	✓	✓	✓	✓	Yes

*Notes:* Data collected from each state's Secretary of State website.

<sup>a</sup> For those states that chose to also reduce penalties.

Additionally, Figures 3.1 and 3.2 below depict the status of marijuana legalization in the United States in 2000 and again in 2016. These two maps reveal the drastic changes in marijuana policy, particularly the spread of legalization.

### 3.3 The Processes Behind Progressive Policy Change

What shapes the likelihood of progressive policy change? The issue of policy change has been a central theme in political sociology and political science. To understand variation in the adoption of marijuana legalization, I examine the relationship between political contexts, public opinion, and discursive opportunities.

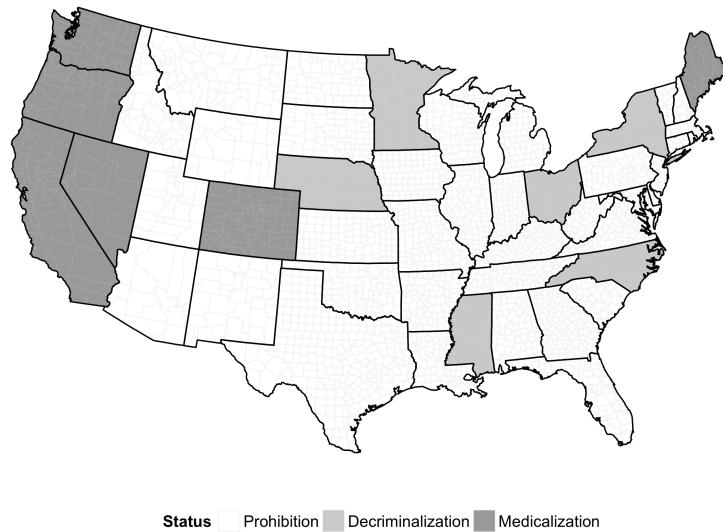


Figure 3.1: Marijuana Legalization Status in U.S. States, 2000

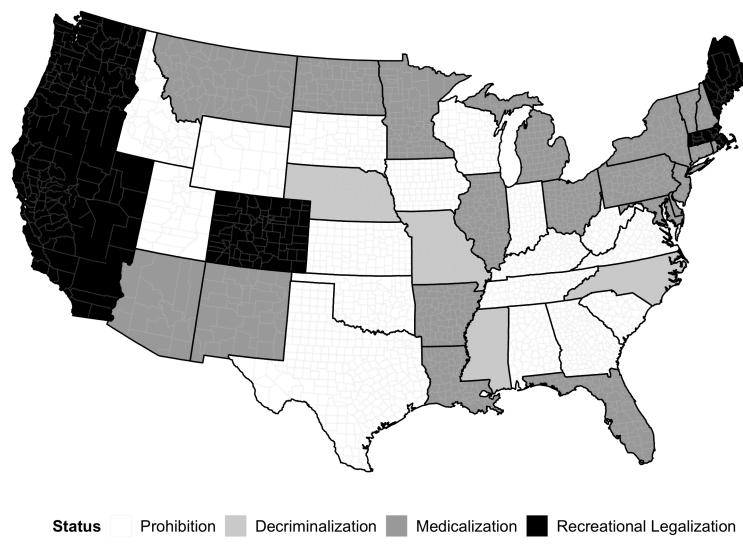


Figure 3.2: Marijuana Legalization Status in U.S. States, 2016

### 3.3.1 Political Institutional Contexts

Theories of political context center on how aspects of the institutional political environment affect the potential for policy outcomes. Often, these works focus on the role of elite allies (Amenta et al. 1994; Amenta 2006), and argue that successful policy change depends on the

presence of sympathetic political officials or state bureaucrats.

A specific version of this line of inquiry, institutional politics theory, focuses on the role of internal political processes, such as electoral results and public opinion on policy change. According to the theory, an important driver of progressive policy change is the presence of a left or reform-oriented regime in power (Amenta et al. 2005; Korpi 1983). Amenta and Elliott (2019) argue that this model is in line with the “responsible parties” model (Schattschneider 1942) in which an elected party enacts policy to make good on their campaign promises, rather than because of concerns about reelection. The election of majority left-wing parties sends signals to voters and other political officials that progressive policy change is possible. Importantly, when left-wing parties take control of majorities in houses of government, they gain the ability to outvote right-wing political officials. This view is supported by examples such as the ratification of the Equal Rights Amendment (Soule and Olzak 2004; Soule and King 2006), the rate of adoption of same-sex marriage bans (Soule 2004; McVeigh and Diaz 2009), and the expansion of old-age policy (Amenta and Elliott 2019; Amenta et al. 2005). Recent work has linked the institutional politics model to party control of state-level governments, such as Democratic control of the governorship and state legislative bodies (Amenta and Elliott 2019). This model is also in line with “party control” (aka trifecta) models in political science, which find that Democratic control of executive and legislative bodies increase the odds of progressive political changes (Ansolabehere and Snyder Jr 2006; Winters 1976; Abramowitz 1983; Campagna and Grofman 1990).

Institutional politics theory, in short, focuses on the role of political officials on progressive policy change. Because political officials have the final word on what does or does not become official policy, scholars argue that the process of policy change mediated by political officials (Amenta et al. 1994; Amenta 2006). In this formulation, because political officials are concerned with being responsible, they will sponsor or support policies that accord with the interests of their constituents (Amenta and Elliott 2019; Page and Shapiro 1983; Mayhew

1974; Downs 1957; Stimson et al. 1995).

Relatedly, while the composition of state governments may be important for policy change, election results may also reveal ideological contexts that may be more or less fertile ground for progressive change. As such, voters are an important factor in the political institutional contexts. Voters who either stand to benefit from policy change, or whose position reform-oriented or left-leaning may advocate for progressive policy change. Democratic voters, for example, are typically reform-oriented in relation to opportunity-creation as well as limiting barriers to the franchise (Amenta and Poulsen 1996; Key Jr 1957; Amenta et al. 2005; Hicks 1999; Amenta 1998; Amenta et al. 2002). Indeed, as informed by research at the individual level, compared to Republicans, Democratic voters are more supportive of legalization (Rosenthal and Kubby 1996; Caulkins et al. 2012).

Related to pressure on political officials is the amount of competition involved in the election. Research on policy change has demonstrated that competitive elections increase turnout, and thus increase pressures on politicians to conform to a majority of constituents' demands (Berry and Berry 1990; Soule and Olzak 2004; Boushey 2016). Much more than increasing turnout, in competitive elections, the interests of a large number of the members of society are better represented (Soule and Olzak 2004), especially those who are disadvantaged politically (Soule and Olzak 2004; Piven and Cloward 1977). In competitive electoral environments, it is likely that the future policies enacted by future political officials will be more liberal and inclusive.

Another aspect of institutional politics centers on the influence of public opinion (Burstein 1998, 2003). Scholars often argue that politicians will make policy in accordance with public opinion, especially if an issue is salient (Pacheco 2012; Nicholson-Crotty 2009). Public opinion is an important predictor of policy change insofar as it serves as a signal of constituents' preferences. When an issue is salient and has supportive public opinion, politicians are expected to abandon their previously opposing policy positions to avoid losing reelection

(Jacobs and Shapiro 2000; Page and Shapiro 1992). It is for this reason, scholars argue that when incorporated in models of political change, factors such as the influence of interest groups or even the makeup of government recede in importance in favor of public opinion (Burstein and Linton 2002; Burstein and Hirsh 2007).

Yet, institutionally-oriented policy change is but one pathway to policy change. Some issues may be especially risky for politicians to support in particular periods. During the “War on Drugs,” when the dominant perception if marijuana centered on danger and crime (Caulkins et al. 2012; Rosenthal and Kubby 1996; Alexander 2010), politicians may have been more fearful of supporting marijuana legalization and therefore supported prohibition in order to appear tough on crime. Supporting legalization, during this period may give the impression that an official is not tough on crime which can undermine support from their constituents. However, the same signals for policy change that result from Democratic control of political institutions and Democratic voter support may also signal to *voters* that the time is right to enact legalization by other means. Given the longstanding opposition to marijuana in the United States, and resistance amongst politicians, direct democratic processes such as citizen initiatives provide an opportunity for marijuana legalization, which renders allies in government less relevant for policy change. This is similar to the effect public opinion has on the influence of political officials on policy change.

This is important for the current study, where changes in policy can result from citizen mobilization. Many policies have been initiated outside of political institutions, including prohibition (Andrews and Seguin 2015; Gusfield 1963), same-sex marriage (Soule 2004), and abortion rights (McVeigh and Diaz 2009), all of which were set off by way of ballot initiatives rather than federal or state-level governmental action. Given these similarities, it is reasonable to expect that marijuana legalization was adopted across the states through a similar process.

### **3.3.2 Policy Feedback**

Policy feedback theory is concerned with how initial policies influence the likelihood of future policy change. Policy feedback theory holds that the creation of policy can initiate changes that reinforce or undermine the policy (Pierson 2000; Skocpol 1992). Policies provide rules, resources, and organization for enforcement, and retrenching spending or expansionary policies imposes direct costs on their beneficiaries (Pierson 1996). Therefore, policymakers often avoid retrenchment because they fear beneficiaries will make them pay electorally (Pierson 1996). Some of the positive feedback mechanisms that reinforce expansion, rather than retrenchment, include the support of organized constituencies, or gains in public opinion on the issue after policy implementation. In this formulation, initial policies on marijuana can lead to beneficiary groups – people who benefit from the policy. This creates a situation in which it becomes difficult to repeal the programs created by the policy – because those who are benefitting will likely oppose policy reversals (which are accompanied by their votes). In fact, it becomes more likely that the programs attached to the policy will be expanded. Medicalization of marijuana, therefore, presents an ideal case – making marijuana legal for medical purposes created a beneficiary group of users which came to be defined as “patients” (Newhart and Dolphin 2019).

### **3.3.3 External Diffusion Effects**

Research in political science reveals the impact external environments have on internal likelihoods of policy change. A great deal of the work on policy diffusion has focused on progressive policy change, including taxes (Mikesell and Zorn 1986), lotteries (Berry and Berry 1990), and criminal justice policy (Boushey 2016). Research about state tax innovation and lotteries is useful in theorizing about the determinants of marijuana legalization, as factors that create the need for revenue (e.g economic downturn) can prompt the adoption of policies

that would generate said revenue. While many policies may be similar in the sense that they generate revenue, they differ in their likelihood of adoption and acceptance by voters (Berry and Berry 1990). Sales tax policy, for example, encounter resistance from voters because citizen payments are mandatory, whereas policy changes allowing lotteries encounter less resistance, given that participation in lotteries is voluntary, which leads to higher voter support (Mikesell and Zorn 1986).

The diffusion literature discusses the aforementioned internal (political institutional context) as well as regional effects (those from nearby localities) on policy change (Bradford and Bradford 2017; Berry and Berry 1990; Glick and Friedland 2014). Similarly, researchers studying policy change demonstrate the remarkable trend towards conformity across geographic units, including access to the franchise (Uggen and Manza 2002; Manza and Brooks 1999), extension of benefits (Amenta 2006; Amenta et al. 2005) and expansion of civil rights and liberties (Andrews 1997). Based on these bodies of work, internal effects align with the institutional politics theory, yet, scholars in political sociology often ignore the role of regional effects on policy change. As the theory goes, nearby states may enact progressive policies that put pressure on initial states to enact those same policies, and this is particularly the case for revenue-generating policies (Bradford and Bradford 2017; Berry and Berry 1990). Importantly, there is increased pressure for policy change in states where increasing numbers of neighbors are enacting policy change. These pressures are related to the type of policy to be enacted as well as internal, political institutional factors (Boushey 2016; Berry and Berry 1990).

### **3.3.4 Cultural Context**

Cultural or discursive contexts have impacts on policy change (Vasi et al. 2015). Discursive opportunity structure (McCammon et al. 2007; Ghaziani and Baldassarri 2011) is made up

of elements in the cultural environment, which includes artifacts (Vasi et al. 2015), beliefs (McCammon et al. 2007), and ways of talking about issues (Bail 2012; Bail et al. 2017) that increase their salience. This also includes hegemonic discourse or discussions about a particular issue in broader fields of discussion (Bail 2012; McCammon et al. 2007).

Much of this work has focused on how discourse about a subject may be critical for political and policy change. For example, recent work has argued how more coverage, and more positive coverage of controversial issues (Amenta et al. 2019, 2009) can alter discourse on a topic (Bail 2012; Ghaziani and Baldassarri 2011), which can ultimately impact political outcomes (Vasi et al. 2015). While this is sometimes related to the framing of issues in public discourse (Benford and Snow 2000; Snow et al. 2007), it is also relevant to consider the valence of these discussions (Vasi et al. 2015; Seguin 2016). Vasi et al. (2015), for example, find an effect of negative discussions about “fracking” on increasing the rate at which municipalities enacted *bans* on fracking. Therefore, on the issue of marijuana, the valence (positive or negative) of broader discussions should matter for increasing or decreasing the rate of legalization.

## 3.4 Predictions

Based on the above literature, I propose several arguments.

Democratic control of state governments may signal that the opportunity is right to enact marijuana legalization. Democratic control of state government should be important for increasing the rate of policy change. However, because marijuana legalization, in nearly all cases, occurred by way of ballot initiative and not through political officials in government, party control should matter less for the rate of policy change.

Because Democrats are left-leaning or reform-oriented, and reform-oriented parties tend to

support progressive policy change, I argue that states with larger percentages of voters supporting Democrats, will be more likely to adopt marijuana legalization.

While public opinion may best serve politicians' voting, it may also predict support for voter initiatives. Therefore, states with majority supportive public opinion on marijuana legalization may be prone to legalizing more quickly than others. Public opinion, however, may track with Democratic voter percents, so may have less effect on rate of policy change.

Given the narratives about patients and medicalization put forth in the previous chapter, I argue that states with longer histories of ballot initiatives devoted to medical marijuana should have faster rates of policy expansion towards marijuana legalization.

Diffusion effects should matter for marijuana legalization. However, these effects might matter more for smaller states where interstate travel puts increased pressure for focal states to legalize. As such, and given the size of the states that have legalized, diffusion should matter less for the rate of legalization.

Finally, positive discourse may have a recursive relationship with public opinion, party control, Democratic voters, and policy feedback, such that the presence of any one of these could contribute to increased positive discourse about marijuana, and this positive discourse could also contribute to higher rates of the others. Importantly, however, is that positive discourse should contribute to the rate of legalization.

### 3.5 Data & Method

To assess the relative impacts of political institutional contexts, policy feedback, and discursive contexts on the rate of legalization, I draw on longitudinal data from 1990 to 2016 for 49 U.S. states.<sup>1</sup> States as units of analysis provide comparative leverage to explain variation

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<sup>1</sup>I exclude Alaska for data reliability issues.

in the over-time likelihood of legalization because I can compare 49 states across 27 years. State level demographic data come from the 1990 and 2000 U.S. Census and the American Community Survey (ACS) 2005-2009.

The dependent variable, whether or not a state legalized marijuana in a given year, comes from the Secretary of State website for each state.<sup>2</sup> Because my main dependent variable of interest is dummy-coded and longitudinal – whether or not a state legalized marijuana for recreational use in a given year – I use event history analysis to estimate the models (Box-Steffensmeier and Jones 1997, 2004). I constrain my analysis to legalization between 1990 and 2016 because the first successful effort to legalize marijuana in any capacity (medical or recreational) appeared in California in 1996<sup>3</sup> and recent election data end in 2016. The key test of my arguments involve relative comparisons between the effects of political institutional contexts, feedback, and discursive opportunities on the rate of legalization across the U.S. Therefore, below, I highlight the data incorporated to test these arguments. In event history analysis, the results are presented as hazard ratios. The coefficients from the models represent the rate of passage, with significant positive coefficients indicating an increasing effect on the rate of passage (or that legalization is likely to occur faster in the state), whereas significant negative effects indicate a decrease on the rate, or a slowing effect on passage.

### **3.5.1    *Political Institutional Contexts***

Political contexts are those that signal the likelihood or potential for successful policy change. In the case of marijuana, this includes Democratic party control of state governments, the percentage of Democratic voters, public opinion on marijuana, and political competition.

First, I create a dummy variable for every state and every year between 1990 and 2016

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<sup>2</sup>These data are also confirmed through Ballotpedia, given that legalization in all states (through 2016) resulted from popular votes via the citizen initiative.

<sup>3</sup>California was the first to attempt medicalization, proposing a similar unsuccessful medicalization initiative in 1972. Given that this was the only case in the 1970s and 1980s, I exclude this from the analysis.

in which Democrats controlled the state government – the Governorship, and Democratic majorities in the state Senate and state Legislature.<sup>4</sup>

I draw on data from Congressional Quarterly's *America Votes* to calculate the percentage of voters who voted for the Democratic candidate in the 1988, 1992, 1996, 2000, 2004, 2008, 2012, and 2016 presidential elections. Because my data are state-years between 1990 and 2016, values for years between presidential elections are linearly interpolated. For 1990, these data come from the 1988 election, and represent the percentage of votes for Michael Dukakis.<sup>5</sup> For all other presidential elections, the data represent the percent of the vote for the Democratic candidate, including Bill Clinton (1992 and 1996), Al Gore (2000), John Kerry (2004) Barack Obama (2008 and 2012) and Hillary Clinton (2016).

I include data from the Roper Center for Public Opinion Research, which covers marijuana public opinion data from various polls from 1988 to 2016. I follow (Weakliem and Biggett 1999) and aggregate individual responses to obtain state-level measures of support. The data come from various sources and years, including marijuana public opinion from 1988 (ABC News Poll), 2001 (Gallup/CNN/USA Today Poll), 2003 (Gallup Poll), 2009 (CBS News Poll), 2010 (60 Minutes/Vanity Fair Poll), 2011 (CBS News/60 Minutes/Vanity Fair Poll), 2012 (USA Today Poll), 2013 (CBS News/60 Minutes/Vanity Fair Poll) and 2016 (CBS News Poll). Importantly, data between polls are linearly interpolated.

Political competition is an important signal of the openings or vulnerability of political systems and political officials to demands from citizens, as well as to policy change. I use the above voting data to construct a measure of political heterogeneity, or the amount of competition that exists in a state in a given presidential election, based on Peter Blau's

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<sup>4</sup>These data are confirmed using (Wikipedia 2019). Note that the state government for Nebraska consists only of the Governorship.

<sup>5</sup>The data for 1990 are interpolated from 1988 to 1992. Therefore, values for the year 1990 represent a linear trend for the number and percent of votes for the Democratic candidate between the 1988 and 1992.

heterogeneity index (Blau 1977a), measured as:

$$1 - \sum_{i=1}^k P_i^2 \quad (3.1)$$

where  $P_i$  is the proportion of the people voting for party/category,  $i$ , across  $k$  number of total parties. The heterogeneity index can range from 0 to 1, where 0 represents complete homogeneity – that all voters voted for the same party, and 1 indicates complete heterogeneity – that voters are more evenly dispersed across parties. The index represents the probability that two members randomly selected from the population of voters will have voted for different parties. Again, because these data are based on presidential election data from Congressional Quarterly's *America Votes*, values are linearly interpolated between election years.

### 3.5.2 External Diffusion Effects

External political contexts may also affect the rate of legalization. Boushey (2016) shows that policy innovations were more likely to diffuse to a focal state if nearby or neighbor states had previously, or simultaneously, enacted similar policies. External contexts increase pressure for internal compliance. As such, I include a measure for the proportion of a state's neighbors that legalized marijuana in or before that year. To create this measure, I create a dummy code for each state for the status of recreational marijuana in that year (1 = marijuana legal in this year; 0 = marijuana not legal in this year). Next, for each state, I create a list of each focal state's neighbor states (e.g. the list of states you would enter if you crossed the state line for a focal state). Then, for each focal state, I calculate the proportion of neighbor

states that had legalized in that year.<sup>6</sup> For some scholars, this variable would also serve as a measure of regional influence.

### **3.5.3 Policy Feedback**

As a measure of policy feedback theory, which states that initial policy change creates opportunities for future policy expansion and change, I focus on medical marijuana initiatives in a state. This can serve as a measure of the saliency of the marijuana issue for the general public. As such, I use data from the Secretary of State for each state to calculate the number of times medical marijuana was previously on the statewide ballot.

### **3.5.4 Cultural Contexts**

As I have argued, dominant cultural beliefs or discourse about marijuana may influence the likelihood of marijuana in a given year. I use data from the previous chapter to measure positive discourse on marijuana. To recap these data, I searched the ProQuest newspaper database for mentions of “marijuana” between 1990 and 2016. I constrain the analysis to 1990 and on because coverage on marijuana was relatively low prior to 1990, and because this time frame immediately followed Reagan’s intensified “War on Drugs” and “Just Say No” campaign.

Because marijuana advocacy organizations may have had an impact on coverage, I separately searched for articles about marijuana in the absence of advocacy organizations, and articles about marijuana that included advocacy organizations. To accomplish this, I wrote a Python script to identify and download all local articles from Proquest that mention “marijuana”

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<sup>6</sup>Rather than using a measure of whether a neighboring state had legalized or not, I use the proportion of neighbors as a measure of increasing influence, as is the case for many scholars studying policy change (Boushey 2016; ?).

between 1990 and 2016.<sup>7</sup> Because national newspapers may be more likely to cover national issues over local issues (Earl et al. 2004) and local stories may matter more for local audiences (Amenta et al. 2012), I exclude national newspapers, including the *New York Times*, the *Los Angeles Times*, the *Washington Post*, and the *Wall Street Journal*. In addition, I exclude articles that mention at least one of the four main marijuana advocacy organizations. Therefore, I also exclude articles that mention National Organization for the Reform of Marijuana Laws (NORML), Marijuana Policy Project (MPP), Drug Policy Alliance (DPA), and Students for Sensible Drug Policy (SSDP), and their variants. In total, there were 14,163 articles mentioning marijuana. After removing duplicate articles, articles outside of the U.S. or located in the U.S. capitol<sup>8</sup>, short articles (e.g. articles with fewer than 100 words), and articles that are not fully searchable,<sup>9</sup>, I am left with 10,096 locally-based articles that mention marijuana in some fashion. In addition, I removed articles that come from “alternative” or sensationalized newspapers. To figure out whether or not the newspaper was an “alternative newspaper,” I searched the websites for each newspaper, removing any newspaper that claimed that it was an alternative newspaper. In sum, I am left with 5,893 articles about marijuana which do not include mention of marijuana advocacy organizations.

Because marijuana advocacy organizations’ discussion of marijuana may be important for discursive change on marijuana, I also include coverage of “marijuana” alongside coverage of marijuana advocacy organizations. As such, I wrote a separate Python script to identify and download all articles from Proquest that mention “marijuana” and any one of the four largest marijuana advocacy organizations (and the variants of their names) between 1990 and 2016. Therefore, the script was able to capture all coverage of “marijuana” coupled with coverage of marijuana advocacy organizations, including the National Organization for the Reform of Marijuana Laws (NORML), Marijuana Policy Project (MPP), Drug Policy

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<sup>7</sup>This does not include marijuana alternatives such as “cannabis” or “hemp.”

<sup>8</sup>ProQuest sometimes mistakenly identifies non-U.S. articles when only-U.S. articles are specified.

<sup>9</sup>Articles with fewer than about 900 words.

Alliance (DPA), and Students for Sensible Drug Policy (SSDP).<sup>10</sup> In total, there were 1,616 articles mentioning a marijuana movement organization. After cleaning the data set of articles by removing duplicate articles, I am left with 1,150 articles mentioning marijuana advocacy organizations. In addition, after removing and articles coming from alternative news sources, I am left with 787 marijuana organization-related articles. For these articles, I include a dummy code to represent that they include mentions of organizations. In sum, there are 6,680 articles used for the analysis.

From the previous chapter, I use data on positive coverage of marijuana over time. I code each article within each set with the assistance of a naïve Bayes classifier in R's **sentiment** package (Jurka 2012). The naïve Bayes algorithm uses a stock of trained text that has been associated with three types of polarity (positive, neutral, or negative), and categorizes each document as one of these polarities.<sup>11</sup> The algorithm compares the word stems in each article to word stems in these dictionaries and classifies each word in the article as negative, neutral, or negative. Next, the algorithm calculates the log likelihood that a given article is positive or negative based on a score: below '1' is negative, '1' is neutral, and above '1' is positive polarity. In sum, there are 357 positively coded articles about marijuana between 1990 and 2016. As can be seen in Figure 3.3 below, there has been an increase in the amount of positive attention to marijuana in newspapers from 1990 to 2016.

Because each article is geocoded, and has a publication date, I link each article's valence to the state-years within which they were published. This means that I aggregate the valence of each article to the state-year, to arrive at a measure of the number of positive articles about marijuana in a given state and a given year. As seen in Table 3.2 below, the 357 positively coded articles are distributed across 26 states between 1990 and 2016.

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<sup>10</sup>Importantly, I separate these sets of coverage for future empirical work on the impact of organizations on the discursive shift.

<sup>11</sup>The stock of trained text comes from Janyce Wiebe's subjectivity lexicon (Wilson et al. 2005), which can be found at: [https://mpqa.cs.pitt.edu/lexicons/subj\\_lexicon/](https://mpqa.cs.pitt.edu/lexicons/subj_lexicon/).

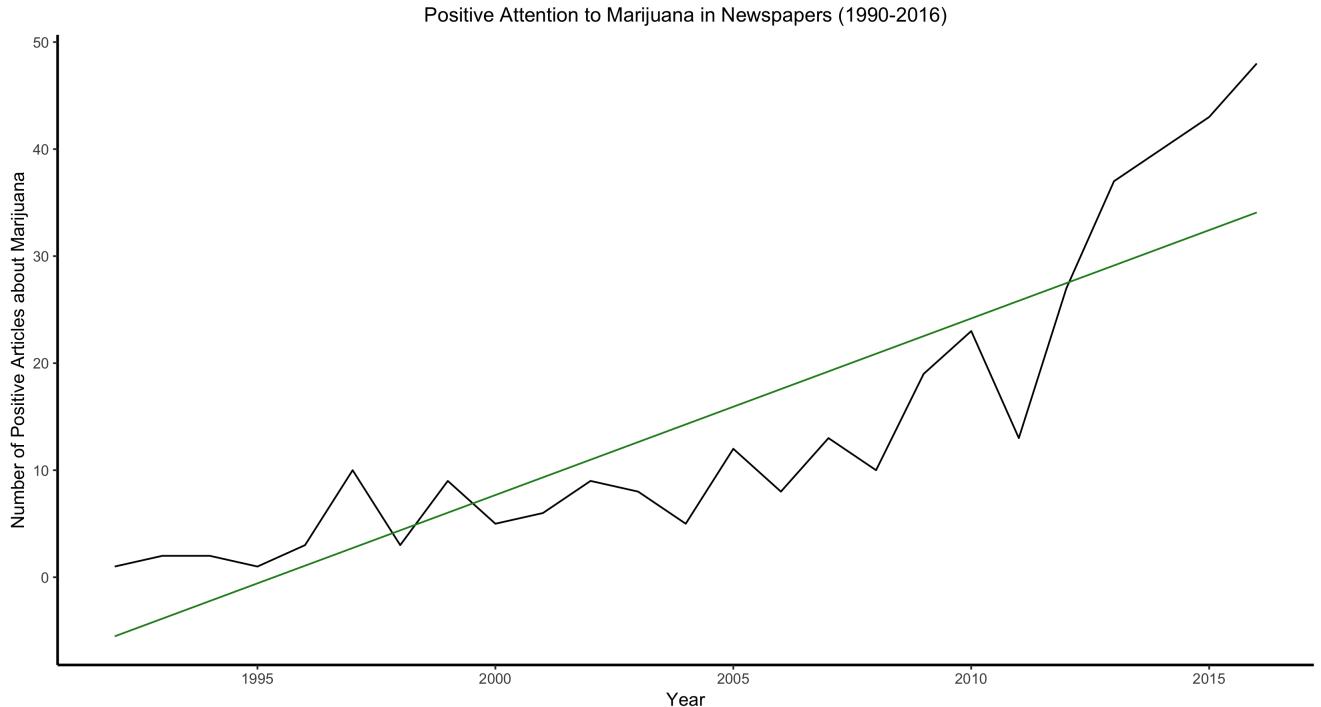


Figure 3.3: Growth in Positive Marijuana Coverage

### 3.5.5 *Control Variables*

To assess the effect of political institutional contexts, policy feedback, and discourse on legalization, it is necessary to account for several features of U.S. states that might also be associated with the rate of adoption of legalization. All control variables come from the Census or the American Community Survey. Support for legalization initiatives might also depend on population size (Soule and Olzak 2004; Soule and King 2006; Boushey 2016). I therefore include a measure for the natural log of the total population in a state. I control for the percentage of the population that identifies as Black or Latino, given that these groups exhibit considerable variation with respect to their views on marijuana legalization.<sup>12</sup> Education is associated with liberal attitudes towards marijuana (Pedersen 2009), and increasing support for marijuana legalization may be attributed, in part, to increases in the size of the

<sup>12</sup>A March 2010 Pew Research poll showed that Blacks and Hispanics had lower support, respectively 41 percent and 35 percent, for legalization than Whites (42 percent), although in 2013, Blacks showed the strongest support for legalization.

Table 3.2: *Positive Articles About Marijuana by State (N=357)*

State	<i>N</i>	State	<i>N</i>
California	63	New Jersey	6
New York	50	Texas	6
Colorado	30	Wyoming	5
Pennsylvania	29	Mississippi	4
Florida	27	Idaho	3
Michigan	26	Indiana	3
Washington	26	Montana	3
Illinois	15	Georgia	2
Tennessee	13	Louisiana	2
Massachusetts	10	Minnesota	2
Ohio	10	Wisconsin	2
Arizona	9	Nebraska	1
Maryland	9	Oregon	1

college-educated population (Rosenthal and Kubby 1996). I, therefore, include a measure of the percent of the population aged 25 or older with a bachelor's degree.

Table 3.3 below describes the variables in the data set. In addition, Table 3.5 provides a correlation matrix between all variables.

Table 3.3: *Descriptive Statistics for Variables (N=1,313)*

Statistic	Mean	SD	Min.	25 <sup>th</sup>	Median	75 <sup>th</sup> )	Max.
Status of Legalization	0.01	0.07	0	0	0	0	1
State Democratic Party Control	0.23	0.42	0	0	0	0	1
Percent Democrat <sup>a</sup>	46.27	8.65	21.88	40.44	46.11	52.15	71.85
Political Competition <sup>a</sup>	0.54	0.05	0.41	0.50	0.52	0.58	0.69
Percent Favoring Legalization <sup>a</sup>	34.59	17.22	0.00	23.08	33.33	44.33	100.00
Prior Medical Marijuana Initiatives	0.17	0.49	0	0	0	0	3
Proportion Neighbors Legalized	0.01	0.06	0	0	0	0	1
Positive Marijuana Coverage	0.24	0.88	0	0	0	0	10
Total Population (logged) <sup>a</sup>	15.10	1.00	13.02	14.37	15.22	15.68	17.41
Percent College <sup>a</sup>	15.66	2.94	7.52	13.70	15.65	17.76	22.86
Percent Black <sup>a</sup>	10.10	9.46	0.30	2.32	7.23	15.36	37.01
Percent Latino <sup>a</sup>	8.19	9.15	0.47	2.38	4.93	9.58	44.76

<sup>a</sup>Values linearly interpolated.

## 3.6 Results

Table 3.4 presents event history results for the rate of legalization of marijuana in each state from 1990 to 2016. Coefficients,  $b$ , in event history analysis are interpreted through exponentiation, where  $(e^b - 1) * 100$  gives the expected percent change in the hazard rate of the dependent variable that is associated with a one-unit increase in the independent variable, in the presence of controls.

Model 1 includes the measures of political institutional context, such as Democratic party control of state governments (a measure of Democratic control of the Governorship and state legislative bodies), percent Democrat, political competition, and marijuana public opinion, as well as the diffusion measure (the proportion of neighboring states that had legalized by that year), and the measure of policy feedback (the number of medicalization initiatives in that state up to and including that year). We see that state Democratic control is unrelated to the rate of legalization in a state. On the other hand, percent of Democratic voters in a state in a given year is significantly related to the outcome, such that a one-unit (one-percent) increase in percent of the state voting for Democrats in a given year is related to a 55 percent increase in hazard rate of legalization. In addition, the measure of political competition is significant, and positively related to the hazard rate, meaning that in contexts of high political competition, legalization is adopted more quickly. The coefficient for public opinion is significant in the presence of other political context, policy feedback, and diffusion variables. The policy feedback measure is significant, and positively related to the hazard rate – a one unit increase in the number of medicalization initiatives in a given state in a given year (across the states prior history) increases the rate at which legalization is adopted. Finally, for Model 1, the diffusion measure (proportion of neighbors that have legalized) is unrelated to the outcome.

Model 2 incorporates a measure of discursive contexts. We see that for this model, the

Table 3.4: *Rate of Legalization across the United States*

	(1)	(2)	(3)
State Democratic Party Control	0.297 (1.184)	-0.100 (1.416)	-0.335 (1.421)
Percent Democrat <sup>a</sup>	0.440*** (0.176)	0.452*** (0.199)	0.373** (0.186)
Political Competition <sup>a</sup>	109.498** (45.407)	138.743*** (57.725)	112.201*** (55.357)
Percent Favoring Legalization <sup>a</sup>	0.060* (0.035)	0.037 (0.039)	0.041 (0.049)
Prior Medical Marijuana Initiatives	2.290* (0.938)	2.661*** (1.117)	2.508*** (1.155)
Proportion Neighbors Legalized	-0.666 (3.020)	-2.635 (3.082)	-2.539 (3.582)
Positive Marijuana Coverage		0.484* (0.270)	0.663*** (0.367)
Total Population (logged) <sup>a</sup>			-0.734 (1.310)
Percent College <sup>a</sup>			0.050 (0.374)
Percent Black <sup>a</sup>			-0.105 (0.234)
Percent Latino <sup>a</sup>			0.014 (0.075)
Observations	1,313	1,313	1,313
Wald $\chi^2$	21.27	54.64	403.54
Log Likelihood	-14.74	-12.44	-11.61
AIC	41.48	38.89	45.23
BIC	41.15	38.51	44.63

Notes: Standard errors are in parentheses.

\* $p < .05$ ; \*\* $p < .01$ ; \*\*\* $p < .001$  (two-tailed test).

<sup>a</sup>Values linearly interpolated for years between Census<sup>b</sup>.

measure of positive discourse about marijuana is significantly related to the rate of passage. For my measure, a one-unit increase in positive discourse (an increase of one positively categorized article about marijuana in a given state, in a given year) is associated with a 62 percent increase in the rate of passage of legalization. We also see that the measure for public opinion has dropped to non-significance, which is contrary to claims by political scientists about the importance of public opinion over political contexts (Burstein and Linton 2002). In addition, measure of percent Democratic voters, political competition, and the number of prior medicalization initiatives remain significantly and positively related to the rate of passage. No other political context variables have significant impacts on the outcome.

Finally, Model 3 is the full model which includes controls for the natural log of the total population, the percent of state residents with a bachelors degree, percent Black, and percent Latino. We see here that the measure of discourse, or positive discourse about marijuana remains a significant positive predictor of the rate of passage in a state, whereas measures for political competition, percent Democrat, and the number of prior marijuana initiatives maintain their significance. Yet, based on the model fit indices, AIC and BIC, which are both measures of variance explained controlling for the number of parameters in the model (e.g. parsimony) – where the best models explain the most variance with fewer parameters, the best model excludes controls (Model 2).

## 3.7 Conclusions

Scholars of social policy often focus on why the U.S. has been a laggard in its adoption of policy change. Yet, in this chapter, I focus on the factors that increase the rate of policy change on marijuana legalization. I accomplish this by appraising various arguments about the likelihood of policy change, including those that focus on the role of political institutional contexts, the impact of policy feedback, and the impact of discourse or cultural contexts.

As I have demonstrated, each set of factors uniquely contributes to increases in the rate of legalization, and this rate varies substantially across states. Importantly, I find that some degree of political institutional contexts, policy feedback, and discourse all contributed to increasing the rate of legalization across the United States from 1990 to 2016.

For political institutional factors, I find that Democratic voting and political competition mattered, which are related to the distribution of voters' interests being represented during elections – particularly those previously excluded from the political system (Soule and Olzak 2004). Importantly, this chapter highlighted variation in the rate of adoption across states. For example, legalization occurred more quickly in places like Nevada, where amenable public opinion, political and discursive contexts were lacking, but also occurred in places like Oregon and Washington, where amenable institutional contexts were present.

Beyond political institutional contexts, I find that policy feedback mechanisms have a critical role – legalization occurred more rapidly in states that had increasing numbers of ballot initiatives devoted to marijuana medicalization. This indicates that for future contentious policies, and those in which users would have to pay (e.g. lotteries versus sales tax), it may be necessary to take a sort of “foot-in-the-door” approach (Cialdini 1984; Freedman and Fraser 1966). In this process, a version of the policy is put forth in ways that establish and support a beneficiary group (e.g. patients), which opens the door for future policy expansion.

Finally, I also find that positive discourse about marijuana contributed to increasing the rate at which states legalized. Although few articles were coded as positively about marijuana, their presence in these states (across time) was associated with increasing the rate of adoption. Although positive discourse may have occurred in states already experiencing supportive public opinion, or in Democratically controlled states (both in terms of government and voters), positive discourse did aid in speeding up the process.

In this chapter, I account for variation in the rate of legalization by considering how var-

ious aspects of state environments, influence the extent to which states adopt legalization of marijuana through citizen initiatives. After controlling for numerous other attributes of U.S. states, I still find a strong, statistically significant relationship between discursive opportunities, political contexts, and policy histories and whether a state legalizes marijuana or not, when it does.

The current study addresses gaps political sociology and political science by investigating political institutional, policy, and discursive effects on policy change. First, given the long-standing tradition in studies of marijuana legalization to investigate the individual precipitants of support, this work follows a more recent line of inquiry devoted to understanding the contextual influences on marijuana legalization, which provides general insights into patterns of support for policy change. Additionally, this work contributes to a growing chorus of scholarship on the consequences of discourse (Bail 2012; Vasi et al. 2015), with a focus on political outcomes. In particular, this research broadens the scope of scholarly study by empirically investigating the impacts of discourse and political opportunities on the pace of policy change.

Table 3.5: *Correlation Matrix for State-Year Variables (N=1,313)*

	1	2	3	4	5	6	7	8	9	10	11	12
1. Status of Legalization	1											
2. State Democratic Party Control	0.03	1										
3. Percent Democrat	0.06	0.24	1									
4. Political Competition	0	0.03	-0.15	1								
5. Percent Favoring Legalization	0.11	-0.03	0.19	-0.06	1							
6. Prior Medical Marijuana Initiatives	0.14	-0.04	0.10	-0.11	0.14	1						
7. Proportion Neighbors Legalized	0.23	-0.01	-0.08	-0.03	0.17	0.15	1					
8. Positive Marijuana Coverage	0.23	0.04	0.22	-0.14	0.12	0.18	0.17	1				
9. Total Population (logged)	0.03	0.01	0.25	-0.05	0.02	0.02	-0.04	1				
10. Percent College	0.08	-0.04	0.37	-0.33	0.29	0.16	0.11	0.15	1			
11. Percent Black	-0.05	0.10	0.08	-0.12	-0.16	-0.20	-0.12	0.04	0.41	1		
12. Percent Latino	0.06	0	0.17	-0.09	0.13	0.30	0.18	0.24	0.34	0.19	-0.14	1

# **Chapter 4**

## **Parental Segregation, Marijuana Legalization, and Concerns over the Mobility of Children**

### **4.1 Introduction**

Americans have become increasingly accepting of marijuana legalization (Caulkins et al. 2012; Rosenthal and Kubby 1996; Gallup 2013; Pew Research Center 2013). According to Gallup data, as recently as 2000 fewer than one third of Americans believed that marijuana should be made legal. By 2013, the percentage of people supporting legalization had reached 58 percent. Although marijuana remained illegal at the federal level, the Obama Administration shifted priorities away from prosecuting Americans for marijuana infractions (Ogden 2009). This shift was followed by a dramatic increase in the number of states placing medical and recreational marijuana on ballot initiatives.

Beginning in the 1970s, voters in states with citizen initiatives began to propose ballot initia-

tives designed to legalize medical marijuana. In 1972, California attempted to make medical marijuana legal through Proposition 19. Although this initiative failed, it set off a flurry of activity in which states attempted to medicalize through the 1990s. From 2000 to 2016, initiatives in eleven states had initiatives to legalize the recreational use of marijuana. As Table 4.1 Figure 4.1 demonstrate, statewide ballot initiatives exhibited considerable variation in community level support for legalization – from 17.18 percent in Kiowa County, Colorado to 73.73 percent in San Miguel County, Colorado. In addition to reflecting rapidly changing public opinion on a controversial political issue, these initiatives resulted in eight states legalizing marijuana.

Why are some communities in the United States more supportive of marijuana legalization? Voting data for marijuana ballot initiatives provide a unique opportunity to examine the sources of support for legalization. The battle over marijuana legalization is important in its own right because the outcome of the conflict has implications for millions of Americans who rely on the substance as medicine and those who choose to use it recreationally. Generally, these data provide an opportunity to examine how structural features of local contexts shape aggregate support on a controversial issue. The fight over marijuana's legality is a battle over meanings of morality, medicine, and addiction. These meanings are the product of social construction processes, developed through everyday social interaction, and are dependent upon the social contexts in which people are embedded. The ways in which various meanings associated with marijuana resonate with individuals should depend, to a great extent, on the patterns of social relations across local contexts. In this paper, I identify structural features of local contexts that affect the extent to which legal marijuana is perceived as non-threatening to the community, and lead to collective support for marijuana legalization.

Perceptions about, and therefore support or opposition to, marijuana are rooted in concerns about life outcomes, and are, to some extent, shaped by family structure (Mosher and Akins 2019; Caulkins et al. 2012). Parents, in particular, constitute a large source of opposition to

marijuana legalization (Elder and Greene 2019; Newhart and Dolphin 2019; Caulkins et al. 2012; Rosenthal and Kubby 1996). Many parents may oppose legalization out of concern for the wellbeing of children because they believe marijuana threatens children's ability to lead successful lives (Elder and Greene 2019; Newhart and Dolphin 2019; Mosher and Akins 2019; Lynskey and Hall 2000; Kandel et al. 1986; Lifrak et al. 1997; Fergusson et al. 2002; Kandel 2002). Indeed, while a majority of Americans may view marijuana relatively harmless, many may also believe that children should not be exposed to marijuana, and may fear that the drug will hinder a child's life outcomes(Ingraham 2017). I argue that support for legalization should be strong where residents with children are spatially segregated from those who are childfree, not just composition effects of large portions of residents that are childfree, and that these effects should be particularly strong in communities with high prospects for mobility. The absence of children in local contexts resulting from higher proportions of the childfree or the segregation of parents from nonparents, I propose, leads many community residents to view legalization as less threatening to the community as a whole. In communities where residents view marijuana as non-threatening, high prospects for economic mobility can contribute to a general sense that legal marijuana would do little to disrupt the social fabric of the community.

## 4.2 Support for Progressive Policy and the Role of Social Structure

Research at the individual level shows that Americans' support for political issues centers on ideology and demographic characteristics. For example, support for progressive policy issues like same-sex marriage or abortion rights is high amongst the politically liberal, college-educated, younger populations, and the religiously unaffiliated (Baunach 2012; Zucker 1999; Pew Research Center 2017a,b). According to the secularization hypothesis (Treas 2004),

Table 4.1: *State Ballot Initiatives on Recreational Marijuana Legalization*

State	Year	Initiative	% Supporting Legalization	County Min	County Max	County Mean	County SD
Alaska	2000	Measure 5	40.88	NA	NA	NA	NA
Nevada	2002	Question 9	39.13	26.60	49.60	36.14	5.29
South Dakota	2002	Initiative 1	37.97	20.14	69.83	36.25	8.10
Alaska	2004	Measure 2	44.25	NA	NA	NA	NA
Colorado	2006	Initiative 44	41.08	17.18	73.73	37.61	14.21
Nevada	2006	Question 7	44.08	29.62	52.64	39.59	6.18
California	2010	Proposition 19	46.54	31.77	64.06	44.82	7.77
Colorado	2012	Amendment 64	55.32	31.97	79.19	52.25	10.35
Oregon	2012	Measure 80	46.75	27.73	60.77	40.87	6.82
Washington	2012	Initiative 502	55.70	37.83	68.29	50.63	6.76
Alaska	2014	Measure 2	53.23	NA	NA	NA	NA
Oregon	2014	Measure 91	56.11	31.28	71.38	47.60	9.46
Ohio	2015	Issue 3	36.35	18.00	42.65	33.57	4.98
Arizona	2016	Proposition 205	48.68	35.37	55.34	45.08	5.89
California	2016	Proposition 64	57.13	43.59	74.26	54.11	7.08
Maine	2016	Question 1	50.26	36.72	55.21	48.64	4.44
Massachusetts	2016	Question 4	53.66	48.14	65.76	56.18	5.86
Nevada	2016	Question 2	54.47	32.86	56.36	45.06	6.16

Note: Data collected from each state's Secretary of State website.

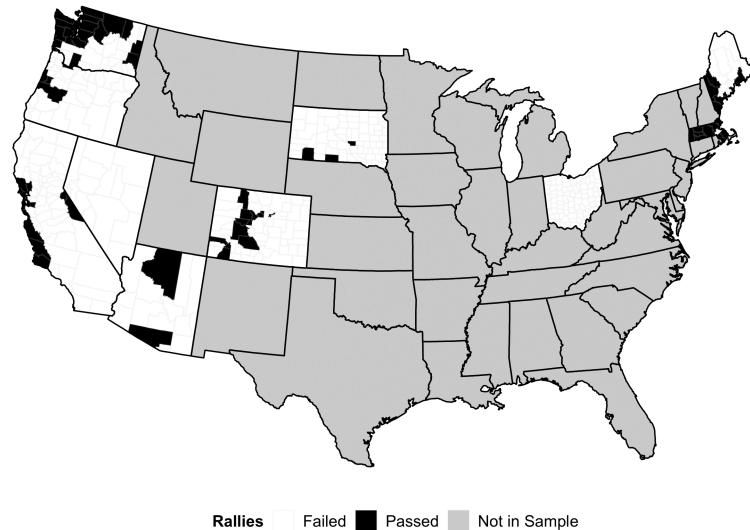


Figure 4.1: Marijuana Legalization Status in U.S. Counties, 2016

the shift away from religious affiliation and towards higher education, especially since the 1980s has contributed to younger people being more liberal on policy issues like abortion and marriage equality (Sherkat et al. 2011; Zucker 1999).

On the other hand, research demonstrates that parents constitute a large source of opposition to progressive or liberalization policy. Parents tend to be more conservative on political issues than nonparents (Kerry and Murray 2018). In particular, when compared to nonparents, parents tend to be more conservative on a variety of issues, including abortion, gun-control, and same-sex marriage (Weeden and Kurzban 2017; Pinsof and Haselton 2017; Kurzban et al. 2010). Parents are not innately opposed to liberalization. According to recent work on social role theory, the transition to parenthood can alter an individual's previous ideological position (Elder and Greene 2019). Importantly, concerns that the role of "parent" entails can lead parents to develop conservative positions on political issues, generally (Kerry and Murray 2018; Elder and Greene 2019). According to the theory, as individuals become parents, they become more risk-averse out of fear of protecting their families (Eibach and Mock 2011), which can lead parents to view outgroups (often those without children) as threatening (Gilead and Liberman 2014). These behaviors and perceptions about political issues directly aligns with support for conservatism (Crawford 2017).

Progressive political issues, thus, trigger concerns about the family. In particular, liberalization on social policy incites fear about children's likelihood of economic mobility and ability to reproduce their family's class and status (Beisel 1997; Gusfield 1963; Eskridge Jr. and Spedale 2006). Therefore, the moral stigma many parents attach to marijuana stems from fears about perceived negative consequences for their children and their families (Elder and Greene 2019; Lynskey and Hall 2000; Kandel et al. 1986; Lifrak et al. 1997; Fergusson et al. 2002; Kandel 2002; Rosenthal and Kubby 1996). Similar to what Beisel (1997:5) has argued, parents may believe that exposure will render children "unfit for desirable jobs and social positions," they will "not be hired, or will be excluded from desired social circles," and will be "excluded from the social networks vital to their future success" (Beisel 1997:199). Therefore, parents develop a personal stake in protecting their children from behaviors that could hinder chances at leading successful lives (Beisel 1997; Gusfield 1963).

Positions on policy issues do not form in a vacuum, however. There is a rich sociological literature on the role of social structure or contexts to opinion and attitude formation (Blau 1977a,b; McVeigh and Sobolewski 2007; McVeigh and Diaz 2009). That is to say that the formation of opinions is the result of social interactions and social construction processes in the contexts within which people are embedded (McVeigh and Sobolewski 2007; McVeigh and Diaz 2009). Social structure can impose constraints on social ties, interactions, and thus, the information people use to form opinions about political issues.

The structure of communities also relates to the distribution of people with various attributes within a community, and this distribution has important implications for the ways in which people gain information and form opinions about particular issues (Blau 1977b), above and beyond the simple size of the group sharing those attributes. Work in this vein has highlighted the role of segregation for attitudes and political outcomes (Olzak et al. 1994; Andrews and Seguin 2015).

### **4.3 Parental Segregation and the Protection of Child Mobility Prospects**

Residential segregation within communities is a manifestation of structural barriers that restrict access and choices individuals make about where to live – a sorting process has implications for the structure of communities. Research has demonstrated that life cycle changes such as marriage, new career opportunities, and childbearing increase the odds of residential relocation (Clark et al. 1994; Rossi and Shlay 1982; Rossi 1980; DaVanzo 1976; Clark and Davies Withers 1999; Dieleman et al. 1995). In fact, recent research shows that a majority of American parents reported relocating to new communities with a predominance of other families with children, and that they believed these areas were better places to raise

children (Taylor et al. 2008; Clark and Davies Withers 1999; Rossi and Shlay 1982). Yet, only recently have scholars given attention to how family residential relocation is influenced by a desire to protect children's economic mobility prospects (Owens 2016; Beisel 1997).

For many parents, family-predominant environments can provide a sense of solidarity, by increasing the likelihood of interaction with others who share similar lifestyles and perhaps goals for their families. These environments may also provide access to social and cultural capital necessary for maintaining and reproducing family privilege. Because many parents want their children to do as well as or better than they have in life, to increase their children's odds of economic mobility, and thus family privilege they may engage of strategies of individual or family-level segregation, such as the construction of private educational institutions (Andrews 2002; Nevin and Bills 1976) or relocating to areas with a predominance of families (Owens 2016), which can result in aggregate level residential segregation of parents and their families from nonparents.

Residential parental segregation results in a spatial concentration of parents. The concentration of parents facilitates interaction between people of similar household compositions, and potentially, similar beliefs about the role of the family, and the consequences of progressive or liberal policy change for their children. These relationships emerge and are maintained by local institutions including schools, clubs, and social events (Beisel 1997). Residential segregation also limits opportunities for contact, communication, and interaction between individuals with distinct household compositions (see (Blau 1977b,a)). In these segregated environments, nonparents are less likely to come into contact with parents, and thus, less likely to develop a similar stake in protecting children's mobility prospects or potential for reproducing family privilege.

### **4.3.1 Mobility Prospects in Structural Contexts**

More than beliefs about the prospects for children’s mobility, actual prospects for mobility can have implications for strengthening or weakening support. Thus, worldviews that position contentious political issues (like marijuana) as non-threatening might ring true in communities where actual prospects for economic mobility exist. Because stakes in the protection of child mobility prospects may be lower in segregated communities, actual prospects for mobility in the local context can further diminish concerns about the perceived negative consequences of policy change on children’s life outcomes. This process can contribute to support for policy change.

Scholars of economic opportunity have shown that both low inequality as well as high diversification in positions of employment signal economic expansion and opportunity (Blau and Duncan 1967; Moore 1966). For example, work in economics shows that the diversity and variety of occupations is critical for economic mobility (Kline and Moretti 2014; Chetty et al. 2014; Owens and Owens 1968). From this literature, we know that perceptions of opportunity track with the types of occupations in locales. Given this trend, residents in areas of high economic opportunity in terms of occupational diversity should be especially resistant to claims about the threats of policy change to the child (and therefore, family) mobility.

Relatedly, income inequality influences beliefs about prospects for child mobility. As recent research demonstrates, high levels of income inequality in locales restricts mobility (Corak 2013; Mulligan 1997). For example, this line of inquiry shows that locales with high levels of inequality also exhibit lower economic mobility (Corak 2013). Therefore, the high income inequality might hinder perceptions of prospects for mobility, which may further limit support for policy change.

## 4.4 Predictions

The literature mentioned above demonstrates both individual and aggregate effects. Importantly, however, I focus on aggregate effects, given that social contexts have influence on the development of perceptions about marijuana. For this reason, I am interested in the *places* that foster aggregate support for marijuana legalization. Below, I outline these predictions based on the above literature.

Support for progressive policies is highest amongst the politically liberal, college graduates, younger, and non-religious groups. Research on support for marijuana exhibits a similar trend (Schnabel and Sevell 2017; Pew Research Center 2015; Elder and Greene 2019; Eagly et al. 2004; Newhart and Dolphin 2019; Rosenthal and Kubby 1996; Caulkins et al. 2012). Therefore, I expect support for legalization to be high in contexts with higher proportions of liberal voters, college graduates, lower ages, and fewer religious adherents.

A key test of my argument is the role of the parent population. Research has shown that parents exhibit stronger opposition to marijuana legalization than nonparents (Elder and Greene 2019; Mosher and Akins 2019; Newhart and Dolphin 2019; Caulkins et al. 2012; Rosenthal and Kubby 1996). I argue that social contexts with higher proportions of parents should be particularly resistant to marijuana legalization – communities characterized by larger proportions of residents without children, on the other hand, should be more supportive of legalization. Because nonparents may develop different stakes in the legalization debate, marijuana may be perceived as non-threatening in these communities.

Beyond the size of the population of nonparents in communities, the segregation of parents from nonparents structures and hinders contact. Because people often consider the potential influence on children when forming attitudes about marijuana, segregation has implications for constraining information available for opinion formation amongst each group, making it increasingly difficult for members of different groups to understand or develop a stake in the

other's concerns (Herek and Capitanio 1996). Therefore, the segregation of parents from nonparents can influence aggregate patterns of support or opposition to legalization. For example, when people with children are integrated into the community, it can contribute to cultural understandings of marijuana as harmful, a perception that is different from those that may develop in places where few children reside. I therefore expect contexts with high degrees of parental segregation can be conducive to the development and resonance of attitudes about marijuana's impact on children's future mobility.

The segregation of parents influences aggregate political behavior. Recent work shows that segregation's political impact extends into voting, particularly where exposure to threats or outgroups is increasingly prevalent (see Andrews and Seguin 2015). Concern for children's ability to reproduce class status is a source of anxiety that encourages opposition to various progressive and morality-based policy issues, including abortion, anti-prohibition, obscenity, gambling (Owens 2016; Schnabel and Sevell 2017; Luker 1984; Gusfield 1963; Beisel 1997). Therefore, where nonparents are spatially segregated from parents, the lack of interaction can increase the likelihood that nonparent residents will 1) not develop a stake in protecting children's mobility prospects and 2) view marijuana as non-threatening. Thus, in these communities, nonparents are free to embrace marijuana legalization, given that they are not regularly exposed to children. Similarly, parents feel less threat of having their children exposed to marijuana or residents who may be more likely to use the substance, and therefore may be less opposed to legalization than they might otherwise be. Support for legalization should be high under these conditions because 1) residents with children can expect that others will be reluctant to use marijuana around children, and marijuana use in distant communities is of little concern and 2) residents without children, especially when spatially segregated from residents with children, may be more inclined to support legalization without regard thinking that marijuana may be perceived as harmful. These patterns, in segregated contexts, should result in aggregate patterns of support.

Moreover, actual prospects for mobility play an important role in perceptions of contentious issues, and therefore, support for these issues. I expect support for marijuana legalization to be especially strong in areas of low income inequality and areas with high levels of diversification in occupations.

## 4.5 Data & Method

To assess the importance of the distribution of parents and nonparents on support for legalization, I draw on cross-sectional data from 2000 to 2016 for U.S. counties in the ten states where recreational marijuana legalization initiatives appeared on the ballot.<sup>1</sup> To mitigate the issue of multiple legalization initiatives during the observed years, I use voting data from a state's first initiative, which ensures that the voting data closely correspond with the Census and ACS data used as independent variables.

Counties as units of analysis provide comparative leverage to explain variation in support for legalization because I can compare 413 counties across ten states. Given that the lived experience of residents in a state may be distinct in different parts of the state (e.g. see McVeigh and Sobolewski 2007), a county level analysis allows me to account for intrastate heterogeneity that may be associated with views on marijuana legalization. County level demographic data come from the 2000 U.S. Census and the American Community Survey (ACS) 2005-2009. Voting outcomes between 2000 and 2008 are matched with 2000 Census data and votes between 2009 and 2016 are matched with ACS 2005-2009 data.

The dependent variable, the percent of votes in support of marijuana legalization in each county, comes from the Secretary of State website for each state. Because my main dependent variable of interest is a percentage, I use ordinary least squares regression to estimate the models. I constrain my analysis to ballot initiatives between 2000 and 2016 because the

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<sup>1</sup>I exclude Alaska for data reliability issues.

first recreational use initiative appeared in 2002 and the most recent election data end in 2016. To account for boundary changes in counties and county equivalents in Colorado, I construct county clusters for each period by aggregating data for those counties. This procedure amounted to one Broomfield County<sup>2</sup> cluster from five county units in Colorado, which results in 409 counties for the analysis. Because variation in voting may be associated with state level differences, such as the phrasing of the initiative or the year it was on the ballot, I control or variation between states by holding state effects constant, using state level fixed effects models. Doing so is analytically similar to including a dichotomous variable for each state. The state level fixed effects approach controls for all unobserved, time-invariant state level characteristics.

#### 4.5.1 Parental Segregation

The key test of my argument involves determining whether counties with higher percentages of parent households, and segregation of parent from nonparent households, exhibit higher support for recreational marijuana. I take data from the Census and the American Community Survey and use the index of dissimilarity to construct a measure of parental segregation.<sup>3</sup> The dissimilarity index for each county is represented as:

$$\sum_{i=1}^d \frac{t_i |p_i - P|}{2TP(1 - P)} \quad (4.1)$$

where  $t_i$  is the total number of households in a Census block group,  $p_i$  is the proportion of households in a Census block group with children,  $T$  is the total population of households in the county, and  $P$  is the proportion of county households with children (see Massey and

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<sup>2</sup>In 2001, Colorado's Broomfield County was created from portions of Adams County, Boulder County, Jefferson County, and Weld County.

<sup>3</sup>A household with at least one related or unrelated child under the age of 18 is considered a parent household. I consider the extent to which households with children are distributed unevenly across Census block groups within each county.

Denton 1988). The dissimilarity index can range from 0 to 100, where 0 represents complete integration and 100 indicates complete segregation. The value indicates the percentage of households with children that would have to be relocated to a different Census block group to create an even distribution of parent households across all Census block groups in a county. To illustrate the parental segregation measure for a hypothetical county, let us assume there were 10 houses in a Census block group ( $t_i = 10$ ), and three of those households in the block group have children ( $p_i = \frac{3}{10} = .30$ ). The total number of households in the county is 1,000 ( $T = 1000$ ), and the number of households in the greater county with children is 450 ( $P = \frac{450}{1000} = .45$ ). Therefore, the segregation measure for one block group in the hypothetical county would equal:

$$\sum_{i=1}^1 \frac{10 |.30 - .45|}{2 * 1000 * .45(1 - .45)} = .003 \quad (4.2)$$

This is the calculation for one hypothetical block group within a county. The measure should be summed over all block groups for each county, to arrive at a measure of parental segregation within each county. As shown in Table 2, parental segregation varies substantially across the U.S. counties, with at least one county having a high of over thirty-five percent. In addition, a total of five counties contain a single block group and, therefore, have a value of zero on the segregation measure since there are no block groups across which segregation can occur. I estimate the models with these cases included and obtain similar results to the findings when these cases are excluded.<sup>4</sup>

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<sup>4</sup>These include San Juan County, Colorado; Hinsdale County, Colorado; Mineral County, Colorado; Campbell County, South Dakota; Jones County, South Dakota.

#### **4.5.2** *Percent Nonparent Households*

Through a lack of contact, the spatial segregation of parents from nonparents facilitates support for marijuana legalization. In addition, I have argued, the aggregation of nonparents within locales should be relevant for increased support for legalization, given that these places would not develop the same stake in protecting children’s mobility. As such, I include a measure for the percentage of county households without children.

#### **4.5.3** *Prospects for Economic Mobility*

As I have argued, fears about children’s prospects for mobility are at the heart of positions on moral issues, including marijuana. It is therefore necessary to include cross-sectional measures of mobility. Many studies of mobility incorporate longitudinal measures, capturing intergenerational mobility by comparing children’s wealth, job, and income to that of their parents. While important, these measures of actual mobility tell us nothing about how parents’ perceptions of their children’s future mobility equally inform and shape parents’ behavior. I, therefore, use data from the Census and ACS to construct two measures of the county’s overall potential for economic mobility. First, I use the Gini coefficient of income inequality as an estimate of inequality in economic opportunity (Corak 2013; Kuznets 1955). Put another way, with more equality in income, residents may be more likely to view their community as having the potential for maintaining or improving their class status. Residents may also view their communities as having the potential for mobility where heterogeneity in occupations exists. The placement of residents across a diverse set of occupations can signal opportunities for mobility through various occupations. As such, I use Census and ACS data to construct a measure of occupational heterogeneity, based on Peter Blau’s heterogeneity

index (Blau 1977a), measured as:

$$1 - \sum_{i=1}^k P_i^2 \quad (4.3)$$

where  $P_i$  is the proportion of the population in each occupational category,  $i$ , across  $k$  number of occupational categories. The data are aggregated to each of 13 occupational categories: (1) management, business, and financial (2) professional, (3) healthcare support, (4) protective service, (5) food preparation and serving-related, (6) building, grounds cleaning, and maintenance, (7) personal care and service, (8) sales and related, (9) office and administrative support, (10) farming, fishing, and forestry, (11) construction, extraction, and maintenance, (12) production, and (13) transportation and material moving. The heterogeneity index can range from 0 to 1, where 0 represents complete homogeneity – that all population members are in the same occupational category, and 1 indicates complete heterogeneity – that the population members are more evenly dispersed across occupational categories. The index represents the probability that two members randomly selected from the population will be in different occupational categories.

#### 4.5.4 Control Variables

To assess the effect of parental segregation, it is necessary to account for several features of U.S. counties that might also be associated with support for legalization. Unless otherwise noted, all variables come from the Census or the American Community Survey. Political partisanship is also associated with support. Indeed, compared to Republicans, Democratic voters are more supportive of legalization (Rosenthal and Kubby 1996; Caulkins et al. 2012). I use data from Congressional Quarterly's *America Votes* to calculate the percentage of voters who voted for the Democratic candidate in the presidential elections that coincide

with or immediately precede the decennial data. For example, for marijuana votes during the 2000 period, I use the percent of the vote for Al Gore in 2000 and for the ACS 2005-2009 period marijuana votes, I use percent of the vote for Barack Obama in 2008. I also include data from the *Association of Religion Data Archives* (ARDA) to calculate measures of Evangelical Protestants and Catholics as a percentage of the total population in a county. I include measures of religious adherence because opposition to marijuana remains strong among those affiliated with these religious denominations (Caulkins et al. 2012; Palamar 2014). In order to ensure that religious adherence data precede marijuana voting data and the independent variables from the Census, I match data from the 2000 ARDA county file with county data from both decennial periods.

Support for legalization initiatives might also depend on population size. I therefore include a measure for the natural log of the total population in a county. Importantly, parental segregation may result from parents' movement to suburban communities. Because measures of percentage of urban and rural land area are not comparable across Census and ACS data, I use population density as a proxy for percent urban. To ensure that the effects of parental segregation do not reflect differences in income, I also include a measure of median household income. I control for the percentage of the population that identifies as African American or Latino, given that these groups exhibit considerable variation with respect to their views on marijuana legalization.<sup>5</sup> Education is associated with liberal attitudes towards marijuana (Pedersen 2009), and increasing support for marijuana legalization may be attributed, in part, to increases in the size of the college-educated population (Rosenthal and Kubby 1996). I, therefore, include a measure of the percent of the population aged 25 or older with a bachelor's degree. Also from the Census, as a proxy for the age of the population<sup>6</sup>, I include a variable measuring the percentage of the population that is age 65

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<sup>5</sup>A March 2010 Pew Research poll showed that Blacks and Hispanics had lower support, respectively 41 percent and 35 percent, for legalization than Whites (42 percent), although in 2013, Blacks showed the strongest support for legalization.

<sup>6</sup>Because the 2000 Census and 2005-2009 American Community Survey use median age measures that are not comparable, I use the size of the aged population as a proxy.

or over. Descriptive statistics for these and all other variables included in the regression models are presented in Table 2, below.

Table 4.2: *Descriptive Statistics for Variables (N=409)*

Statistic	Mean	St. Dev.	Min	Max
Percent Support for Legalization	40.35	10.26	17.18	73.73
Parental Segregation	17.70	7.33	0.00	39.88
Percent Households without Children	66.84	6.63	31.24	82.48
Income Inequality	0.43	0.03	0.34	0.58
Occupational Heterogeneity	0.88	0.02	0.77	0.91
Percent Democratic	43.69	13.36	8.76	85.36
Total Population (logged)	10.57	1.79	6.32	16.10
Population Density (logged)	3.45	1.96	-1.31	8.71
Percent Latino	10.48	14.01	0.10	79.87
Percent African American	2.07	3.52	0.00	28.81
Percent College	13.90	5.97	4.22	40.02
Percent Evangelical	25.85	14.83	0.00	96.71
Percent Catholic	39.92	19.53	0.00	97.93
Percent Married	55.13	6.52	30.34	73.25
Median Income (\$1000s)	43.71	12.25	12.69	87.73
Percent Age 65 or Older	14.58	4.53	3.00	31.22
Percent Employed	57.86	7.73	30.10	83.65

## 4.6 Results

Table 4.4 presents ordinary least squares estimates (with controls for state level effects) of the percentage supporting legalizing recreational marijuana. In the first column, I include only the measures relevant from literature on progressive policy change, including county-level measures of the percent support for Democratic presidential candidates, the percent of the county population with a college degree, the percent of the county population that are adherents in Evangelical religions as well as Catholic religions, and the percent of the county population that is 65 years of age or older. As we can see, the measures for Democratic voters and college degree have a significant positive association with the outcome – counties

with higher percentages of support for Democratic presidential candidates, or counties with higher percentages of residents with at least a college education experienced increases in support for marijuana legalization initiatives. In addition, we see that counties with higher percentages of older residents saw decreases in support for legalization initiatives. These findings lend support to prior research on the role of ideology, education, and age in support for progressive policy. However, Model 1 also demonstrates that religion has little effect on support for (or opposition to) marijuana legalization.

Model 2 includes only the measures of interest, including the primary measure of parental segregation, a control for the percent of the county nonparent households, the measure of income inequality, and the measure of occupational heterogeneity. All four measures are associated with outcome. First, and most importantly, I find that every one unit (one percent) increase in parental segregation, there is a .41 percent increase in support for legalization. This finding lends support for my argument that the segregation of parents from nonparents creates contexts conducive to support for legalization. I have argued that the reason for this support results from the resonance of beliefs about marijuana as non-threatening, generally, and non-threatening to the mobility prospects of children, specifically. In addition, I find that contrary to my predictions, support for legalization is high in counties with high levels of inequality, and low in counties with high diversity in occupations. These findings signify general county-level trends with regard to support for legalization, without regard to how these effects combine with other attributes of communities.

For didactic purposes, I examine two cases: Alpine County, California (2010), and Mahoning County, Ohio (2015). Interestingly, both cases are similar in terms of their level of support for Democratic candidates, their occupational differentiation, their level of income inequality, and their percentage of nonparents in the county. However, as can be seen in 4.3, these two counties differ in terms of their level of parental segregation, and, additionally, support for legalization.

Table 4.3: *Comparison Cases*

	Alpine County, CA	Mahoning County, OH
Percent Support	59.92844	37.68281
Parental Segregation	0.5737855	20.18725
Percent Nonparents	71.39639	70.33915
Income Inequality	0.4530000	0.464
Occupational Heterogeneity	0.8413754	0.8897825
Percent Democrat	60.98266	62.24146

In column 3 of Table 4.4, I include all theoretically-relevant variables as well as control measures. The measure of parental segregation, net of controls, maintains a positive effect on support for legalization.<sup>7</sup> This finding yields support for my argument that perceptions of marijuana as non-threatening to “ring true” in places where higher percentages of nonparents reside and in places where parents are spatially segregated from nonparents. Thus, negative perceptions of marijuana do not resonate in communities where residents have limited contact with parents and their children. In addition, with their inclusion, the measures of percent Democratic, percent college, and percent over 65 all maintain their relationships with the outcome. I also include measures for population size, population density, percent Latino, percent Black, percent Married, median household income, and percent employed. In this model, increases in all control measures (except population density and median income) significantly decrease support for legalization.

#### 4.6.1 *Strengthening Perceptions about Legalization*

I have argued that parental segregation increases support for legalization by shaping perceptions about the threat of marijuana to children’s mobility prospects. If I am correct about these underlying mechanisms, I expect the effect of parental segregation to be strengthened in locales where high prospects for future mobility exist. That is, I expect support to be strongest in places with a high degree of occupational diversity and where income inequality

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<sup>7</sup>The size of the effect is small, where Cohen’s  $f^2 = .018$ .

Table 4.4: *Percent Supporting Recreational Marijuana Legalization in U.S. Counties: OLS Regression Estimates with Controls for State-Level Effects*

	(1)	(2)	(3)
Percent Democratic	0.365*** (0.030)	0.312*** (0.035)	
Percent College	0.477*** (0.059)	0.442*** (0.111)	
Percent Evangelical	-0.035 (0.031)	-0.009 (0.028)	
Percent Catholic	-0.036 (0.024)	0.033 (0.023)	
Percent Age 65 or Older	-0.265*** (0.074)	-0.670*** (0.124)	
Parental Segregation	0.409*** (0.070)	0.145** (0.056)	
Percent Households without Children	0.174** (0.059)	0.343*** (0.078)	
Income Inequality	42.483*** (12.724)	-8.294 (11.112)	
Occupational Heterogeneity	-133.617*** (26.203)	24.388 (22.886)	
Total Population (logged)		-0.871* (0.415)	
Population Density (logged)		-0.407 (0.412)	
Percent Latino		-0.081* (0.034)	
Percent Black		-0.202* (0.093)	
Percent Married		-0.272** (0.082)	
Median Household Income (\$1000s)		0.057 (0.060)	
Percent Employed		-0.132* (0.059)	
Observations	409	409	409
R <sup>2</sup>	0.526	0.206	0.665

*Notes:* Standard errors are in parentheses.

\* $p < .05$ ; \*\* $p < .01$ ; \*\*\* $p < .001$  (two-tailed test).

is low. As seen in Table 4.5, these expectations are confirmed. The first column of Table 4.5 introduces an interaction between the parental segregation measure and income inequality. The variables in the interaction are centered at their mean values. When included, the main effect of parental segregation remains positive and significant, which indicates that when income inequality is at its mean, parental segregation has a predicted positive effect on support for marijuana legalization. The significant coefficient for the interaction term indicates that this positive effect is weaker in places with higher than average levels of income inequality. In places with high inequality, there are diminished beliefs about prospects for mobility. Thus, legal marijuana would further hinder mobility through what limited opportunities that currently exist. Relatedly, in the second column, parental segregation has a positive effect on support for legalization when occupational heterogeneity is set at its mean, and this positive effect is stronger in counties with higher than average levels of occupational diversity. Where actual opportunities for mobility exist, by way of occupational diversity, residents may view issues like marijuana legalization as less threatening to children's ability to lead successful lives.

To illustrate the the interactive relationship between parental segregation and either income inequality or occupational heterogeneity, I present predicted values for legalization, for both interaction models, in the tables below. Importantly, values in the table represent regression coefficients from the prior two models, where every variable is centered at its mean. In addition, low, medium, and high values presented in the tables represent the first quartile, the median, and the third quartile cutoffs.

As seen in Table 4.6, we see that the positive effect of parental segregation on support for legalization gets weaker at higher levels of income inequality. Conversely, in Table 4.7, we see that the positive effect of parental segregation on support for legalization gets stronger at higher levels of income inequality. For both relationships, predicted support for legalization increases as a result of higher parental segregation, but its effect on legalization is moderated

Table 4.5: *Percent Supporting Recreational Marijuana Legalization in U.S. Counties, Interaction Effects: OLS Regression Estimates with Controls for State-Level Effects*

	(1)	(2)
Percent Democratic	0.312*** (0.035)	0.319*** (0.033)
Percent College	0.423*** (0.111)	0.444*** (0.106)
Percent Evangelical	-0.016 (0.028)	-0.008 (0.027)
Percent Catholic	0.027 (0.023)	0.036 (0.022)
Percent Age 65 or Older	-0.676*** (0.123)	-0.653*** (0.119)
Parental Segregation	0.190** (0.058)	0.189*** (0.054)
Percent Households without Children	0.357*** (0.078)	0.372*** (0.075)
Income Inequality	-11.460 (11.112)	-10.809 (10.626)
Occupational Heterogeneity	24.725 (22.734)	48.485* (22.219)
Total Population (logged)	-1.011* (0.417)	-0.930* (0.397)
Population Density (logged)	-0.311 (0.411)	-0.148 (0.396)
Percent Latino	-0.081* (0.034)	-0.086** (0.032)
Percent Black	-0.173 (0.093)	-0.213* (0.089)
Percent Married	-0.290*** (0.082)	-0.317*** (0.079)
Median Household Income (\$1000s)	0.062 (0.060)	0.126* (0.058)
Percent Employed	-0.119* (0.059)	-0.202*** (0.058)
Parental Segregation X Income Inequality	-2.559* (1.032)	
Parental Segregation X Occupational Heterogeneity		10.421*** (1.702)
Observations	409	409
R <sup>2</sup>	0.670	0.695

Notes: Standard errors are in parentheses.

\* $p < .05$ ; \*\* $p < .01$ ; \*\*\* $p < .001$  (two-tailed test).

by actual prospects for mobility in locales across the United States.

Table 4.6: *Predicted Values: Support for Legalization. Parental Segregation and Income Inequality Interaction*

		Income Inequality		
		Low	Medium	High
Parental Segregation	Low	39.69081	39.67629	39.65912
	Medium	40.8282	40.58547	40.29836
	High	41.88791	41.43254	40.89394

Table 4.7: *Predicted Values: Support for Legalization. Parental Segregation and Occupational Heterogeneity Interaction*

		Occupational Heterogeneity		
		Low	Medium	High
Parental Segregation	Low	39.51446	39.752	39.91886
	Medium	40.40448	40.64202	40.80888
	High	41.23371	41.47125	41.6381

## 4.7 Conclusions

Longstanding parental opposition to morality-related issues remains a common argument for the laggard pace of marijuana policy change in the United States. Yet, as I have demonstrated, the character of opposition varies substantially across local contexts, namely as a function of the size and distribution of parents (and their children) across counties. For example, there is strong support for legalization in places like San Francisco County, California and San Juan County, Washington, where parental households are in the minority, but it is also strong in places like Shannon County, South Dakota, where parents predominate. What these counties have in common is high levels of parental segregation.

In this chapter, I account for variation across local contexts by considering how the organization of social life in local settings influences the extent to which community residents

view legal marijuana as threatening or not. After controlling for numerous other attributes of U.S. counties, I still find a strong, statistically significant relationship between parental segregation and support for legalizing recreational marijuana. As I have argued, this relationship can be explained in terms of strong support amongst nonparents. Segregated communities, in my characterization, are contexts where characterizations of marijuana as non-threatening to children resonate, particularly because daily interactions less frequently parents and children.

The current study addresses broad gaps in literature on sociology of the family and policy change by investigating the structural effects of parenthood on voting for controversial issues. First, given the longstanding tradition in studies of marijuana legalization to investigate the individual precipitants of support, this work follows a more recent line of inquiry devoted to understanding the structural influences on marijuana legalization, which provides general insights into patterns of support for policy change.

Additionally, this work contributes to a growing chorus of scholarship on the consequences of parenthood (Beisel 1997; Owens 2016), with a focus on political outcomes. In particular, this research broadens the scope of scholarly study by empirically investigating the impacts of parenthood on voting. Continuing along this line of inquiry will allow scholars of the family and of political sociology to generate stronger theoretical claims about the role of parenthood in politics more generally.

What do the findings of this study mean for the study of progressive policy change more generally? Based on previous literature, we know that being a parent shapes individual level politics—parents tend to become more conservative over time. This trend is important for understanding progressive policies more generally. Work in political sociology finds that progressive policies are often difficult to pass (Amenta and Elliott 2019). Progressive policies encounter a great deal of opposition from businesses and other powerful interests (Amenta and Halfmann 2000). While marijuana legalization resembles more of a lottery-type policy

(Berry and Berry 1990) rather than a taxation policy, and given that marijuana is not a strong part of the economic and social life for a majority of Americans, there is still a strong moral stigma attached to marijuana use – and that stigma often centers on fears about children, families, and mobility. Therefore, while progressive policies are difficult to pass, marijuana legalization has encountered an added barrier to passage.

In light of these findings, however, we can see that progressive policies can pass. Progressive policy change regarding issues with a long history of stigma are much more difficult to pass. Yet, as we can see from marijuana legalization, direct democratic processes like the citizen initiative proved critical. Beyond this, structural conditions matter. Marijuana legalization is a unique case – a progressive policy about a contentious issue with long stigma histories – but one that places few requirements on citizens (unlike sales taxes), but one that has large beneficiary groups (e.g. communities reap economic benefits from taxes). For cases like these, as I have shown, ballot initiatives may be most successful in locales where oppositional groups have less interaction with one another, and develop less of a stake in each other's battle for or against.

In this chapter, I focused on how structural patterns of relations shape perceptions of and voting on controversial political issues. Although public support for marijuana legalization is above fifty percent nationally, it is my hope that this work will stimulate research on why marijuana policy change has stalled in the face of a growing positive discourse around, and majority public support for, marijuana legalization.

Table 4.8: Correlation Matrix for County Level Variables (N=409)

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
1. Percent Support for Legalization	1																
2. Parental Segregation	0.42	1															
3. Percent Households without Children	0.20	-0.02	1														
4. Income Inequality	0.32	0.19	0.08	1													
5. Occupational Heterogeneity	-0.21	0.11	-0.05	-0.23	1												
6. Percent Democratic	0.66	0.54	0.06	0.34	-0.07	1											
7. Total Population (logged)	0.30	0.69	-0.15	0.05	0.03	0.57	1										
8. Population Density (logged)	0.23	0.57	-0.09	0	-0.06	0.59	0.88	1									
9. Percent Latino	0.08	0.29	-0.40	0.14	0.23	0.18	0.29	0.09	1								
10. Percent African American	0.08	0.34	-0.05	0.18	-0.07	0.36	0.53	0.55	0.10	1							
11. Percent College	0.54	0.19	0.22	0.26	-0.57	0.35	0.31	0.32	-0.04	0.13	1						
12. Percent Evangelical	-0.30	-0.02	0.15	-0.15	0.23	-0.35	-0.08	-0.10	-0.15	-0.14	-0.25	1					
13. Percent Catholic	0.35	0.22	-0.18	0.23	-0.10	0.40	0.29	0.19	0.50	0.23	0.27	-0.68	1				
14. Percent Married	-0.57	-0.57	0.08	-0.43	0.01	-0.69	-0.48	-0.42	-0.18	-0.40	-0.16	0.21	-0.29	1			
15. Median Household Income (\$1000s)	0.36	0.45	-0.03	-0.16	-0.25	0.43	0.66	0.66	0.12	0.26	0.15	-0.16	0.26	-0.25	0.37	1	
16. Percent Age 65 or Older	-0.26	-0.17	0.58	0.03	0.15	-0.21	-0.35	-0.31	-0.28	-0.20	-0.33	0.20	-0.25	0.37	-0.38		
17. Percent Employed	0.06	-0.12	0.01	-0.20	-0.38	-0.04	0.08	0.20	-0.15	-0.03	0.60	-0.23	0.09	0.21	0.41	-0.35	1

# Chapter 5

## Conclusion

I came to this project wanting to know how policy change happens. In this dissertation, I have examined newspaper coverage, as well as voting on ballot initiatives, from 1990 to 2016. In this process, I have tried to describe the ways in which marijuana has been discussed differently, as well as the various factors that contributed to the adoption of and support for marijuana legalization. Central to this project was the question: how does policy change occur on contentious issues? More specifically, this project has focused on how the politics of marijuana legalization have evolved over time. I chose to pursue these question through examinations of voting on ballot initiatives, as well as marijuana coverage in news media.

### 5.1 Evaluating Perspectives

Throughout my analyses, I was guided by five perspectives from the policy change literature that offered potential explanations for why policy change occurs. My goal in each chapter of the dissertation has been to evaluate the effectiveness of the perspectives. I now turn to describe the effectiveness of each approach.

### **5.1.1 Political Institutional Contexts**

Across the empirical chapters, I was able to show that, even in the case of marijuana legalization, political institutional contexts matter (Amenta and Elliott 2019). In chapters 3 and 4, I incorporated measures of political contexts, including state-level party control, support for Democrats, political competition, and even public opinion. In most cases, political institutional factors matter for support for and the adoption of marijuana legalization. However, public opinion did not matter for policy change. Public opinion, in fact, had no effect on the rate of legalization in Chapter 3, while at the same time, measures of Democratic support, and political competition mattered.

### **5.1.2 Policy Feedback**

Policy feedback focuses on the trajectory or history of policy related to the political issue. Importantly, policy feedback perspectives were only explored in Chapter 3. The idea behind policy feedback is that initial policy begets future policy. Specifically, once a policy is set into motion, benefits are conferred to a constituency in the form of financial or legitimacy. The presence of beneficiary groups makes it difficult for politicians to retrench those policies (Pierson 2000). In Chapter 3, policy feedback arguments faired well – in places where initial marijuana policy had passed in the form of marijuana medicalization, there was an increased likelihood of marijuana legalization over time.

In sum, it seems as though arguments about policy feedback prove useful for understanding controversial policies, especially those associated with stigma. Policy feedback centers on the assumption that lower-impact policies are required for future expansion – which is similar to the psychological phenomenon of “foot-in-the-door.” As such, controversial political issues may benefit from this policy feedback process.

### **5.1.3 Cultural Context/Discourse**

In Chapter 2, I explore variation in discourse about marijuana over time. I find that local newspaper coverage of marijuana, and organization-related marijuana coverage differed in terms of the amount of coverage each set received as well as the frames deployed and the valence of their coverage. Through this chapter, I was able to examine temporal trends in coverage as well as the changing nature of that coverage. I find that general marijuana coverage deployed more frames, and that the of the frames deployed, a majority contributed to decreasingly negative attention to marijuana in news articles.

Discourse also mattered for increasing the rate of adoption of legalization. I find that in addition to the effects of other perspectives, positive discourse about marijuana increased the rate of legalization.

### **5.1.4 Advocacy Organizations**

Although much of the literature on advocacy organizations has focused on their activity, marijuana advocacy organizations engaged in very little protest activity. In fact, a majority of their action was limited to gaining coverage in newspapers so that they could disseminate their own perspectives on the marijuana issue. As such, I examined the differences between organization-related coverage of marijuana as well as general coverage. In short, advocacy organizations had little impact on policy change for marijuana. Where other organizations may have sponsored legislation, the four main marijuana advocacy organizations stayed relatively distant from the legalization process.

### 5.1.5 Structural Contexts

I find, most of all, that social structure matters for political outcomes, as expected from the sociological literature. I find that measures of segregation or the spatial distribution of interests across localities are relevant for support and ultimate adoption of legalization in the United States.

The story that emerges from these findings is that political contexts, discourse, and social structure all contribute to support for and ultimate adoption of policy change on controversial issues. I find that both positive discourse, as well as the distribution of beliefs about marijuana help shape aggregate support for legalization. Not only do I describe the ways in which discourse about marijuana has evolved over time, but I also take a longitudinal approach to understand the rate of and support for legalization.

## 5.2 Limitations

This project has several limitations that prevent a fuller analysis. First, my analysis of discourse is restricted. In particular, I focus on local level articles about marijuana-only, as well as local *and* national articles about marijuana and marijuana advocacy organizations. These discrepancies limit a full analysis of coverage, given that my data represent a sample of the coverage of marijuana. Additionally, my analysis is restricted to the search terms I used to locate newspapers and the database I used. I relied on the ProQuest database to locate the articles used in my analysis. While ProQuest provides a relatively comprehensive collection of newspapers, identifying the population of articles can be tricky due to their system. As such, I relied on searching for the term “marijuana” instead of “cannabis” and the like.

My analysis of frames is limited, as well. I rely on keyword searches as measures of frames

about marijuana. Ideally, I would have liked to read each article and code the frames using a content analytic approach. In chapter 2, I focus on 6 main frames as explained by prior research. Ideally, I would have liked to develop frames inductively, generating frames about marijuana from the data.

While marijuana issues were rarely if ever brought up for a vote in state houses of government, they were discussed by political officials. Therefore, I would have liked to include any state-level legislative discussion of marijuana into the data set. Doing so would have allowed me to examine the ways in which politicians discussed this and other contentious political issues, and how their frames differed from general marijuana discourse and organization-related discussions of marijuana.

Relatedly, it was difficult to amass data on organizational mentions of marijuana. The main marijuana advocacy organizations rarely publish newsletters or pamphlets. As such, I had to rely on coverage of marijuana *in addition to* mentions of any one of the marijuana advocacy organizations. Ideally, I would have liked to include data from their social media posts, as well as more detailed information about their chapters across the United States.

Finally, my analysis was limited to between 1990 and 2016, given data availability and the takeoff in the medicalization and recreational legalization of marijuana. A fuller analysis should incorporate a breadth of historical data on changes in marijuana policy.

### 5.3 Next Steps

My results, as well as the limitations, provide suggestions for future research. While, in Chapter 2, I have shown that discourse has changed over time, this discourse is limited to local level (regional and ethnic newspapers). A project that incorporates all news media coverage of marijuana would provide a richer analysis of discursive change over time. Moreover,

such an analysis should include data from social media to allow for the inclusion of discourse not shaped by news values. Finally, these data should include discussions of marijuana by political officials as a way to incorporate their take and stake in the legalization battle. Moreover, future work should augment the sample of discourse by using additional search terms as well as cross-checking results with additional databases (e.g. America's News).

In Chapter 3, I explored the factors that contributed to the adoption of legalization. While I included measures of discourse, scholars of diffusion typically include measures of salience. Unfortunately, measures of salience usually include data on Google searches on a specific topic, yet, given the period I examined, I could not include these data. Therefore, future studies should go beyond measures of public opinion to include measures of salience from Gallup's Most Important Problem, or the like.

Finally, in Chapter 4, while my analysis is structural, many of my arguments about the role of parents in the marijuana legalization process can be explored using individual level data. As such, future research should incorporate individual level data, with respect to parents, on support for marijuana legalization. Doing so will provide a richer theoretical narrative about the process by which people come to support or oppose marijuana legalization, and how this contributes to the evolving nature of policy change on marijuana.

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