

THESIS

ALCOHOL POLICY AS DEFINED BY PATH DEPENDENCY AND PROHIBITION

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ABSTRACT

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Across the United States there is noticeable variance regarding alcohol regulations from state to state. More restrictive states allow for dry counties, Sunday sale bans, and tightly regulate the types of alcohol that can be sold outside of liquor stores. Conversely, less restrictive states allow for 24/7 purchase, drive through liquor stores, open container zones, and decreased regulation on type of alcohol sold at convenience stores. This variance is not explained by modern or historic partisanship, nor general religiosity of a given area. Religiosity classified by high amounts of Protestantism along with historic rates of Protestantism have the highest amount of explanatory value for states with more restrictive alcohol laws.

Utilizing the theoretical foundations of path dependency and increasing returns this paper posits that current variance in alcohol policies across states can be accounted for by the historic levels of support for the 18th Amendment and the temperance movement as represented by historic Protestantism in a given state. That is, after reaching a critical juncture in the passage of the 18th Amendment, states which had been more inclined to prohibit alcohol sales reached policy equilibrium that enabled regulation to persist. This paper will use an original data set that combines historical data from the U.S Census and archival data with modern measures of religiosity, along with constructed composite variables that rank each state's alcohol policy over time as most restrictive to least restrictive. This data, presented in a time series cross section analysis, will illustrate the historic relationship between Prohibition support and modern alcohol

policy. History has a prevailing, lasting impact on the modern era which can be illustrated through policy and the power paradigms that persist within our society.

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Introduction

Kansas and Missouri share a border, geographic elements, Cook PVI's, population demographics, and extremely similar religion statistics. Both states have a Cook PVI of R+11¹ with a majority of Republican representatives, and both were strong supporters of President Trump in the 2020 election. Kansas reports levels of Christianity at 77%,² Missouri at 76%,³ both states have majority white populations, the states even share a single city. Despite this incredibly close and uncommon relationship they have incredibly mercurial alcohol laws; Kansas is one of the most restrictive states while Missouri is one of the least restrictive states in the union. Across the United States there is great variation in alcohol policy that cannot be explained by politics, geography, population, or political culture.

Policy of the 21st century may appear upon first glance as isolated to the 21st century. It is easy to believe that policy in of itself is a modern conception that cannot be influenced by our past. Surely laws which regulate modern concepts cannot be swayed by times when the very technology our lives rely on did not exist. However this conception is incorrect. Policy, like our culture, is highly dependent on the actions and policies of the past. Human existence is short in comparison to the development of other species, and civilization itself only spans a few thousand years. Path Dependency illustrates that once a decision is made regarding a policy, an organization will continue down that given track as reversal costs are so high. Given the brevity of human history, and the incredibly short existence of the United States itself, it is possible to track the influence of a given policy track onto the modern day.

¹ Cook Political Report, "Cook Political Report: Partisan Voter Index, PVI of US States," 2021.

² Pew Research Center, "Religious Landscape Study: Adults in Kansas." Pew Research Center. 2014

³ Pew Research Center "Religious Landscape Study: Adults in Missouri." Pew Research Center. 2014.

Institutions may be thought of as the world's skeletal system - they reinforce the moral, social, and political fibers of our reality. Informal and formal institutions rule human behavior, ranging from accepted social norms to the entrenched governing systems over a given country. The history of our institutions, like an old break in a bone, can still be observed in the present day through individual policies such as state alcohol regulation.

Institutionalized norms (laws, policy, etc.) arise from critical moments in history such as war, government restructure, or social movements. In the United States there are many odd policies which derive from political trends in our history, or from highly organized movements that precipitated institutional change. Even when a law is repealed the impacts of that law can still have influence due to the remnants of that policy and the glacial nature of change of institutions. Overt political attitudes may shift over time, but past political attitudes can still have an impact on a given institution. In short, these scenarios are characterized by path dependency. The theory posits that policies can maintain themselves despite no longer holding the original support that propelled a policy into existence through an established equilibrium. A prime example of a policy that still has an impact on institutions and society today despite having been repealed is Prohibition.

Presently alcohol policy across the United States varies considerably, see Figure 1 below for visual reference. Though the drinking age was streamlined with the National Minimum Drinking Age Act⁴, there are very few states that treat alcohol the same as another. Kansas is one of the more restrictive states for alcohol sale and consumption – statewide Prohibition remained until the end of World War II, with on-premises sale of alcohol completely banned until 1987.⁵

⁴ Lipford, W. "National minimum Drinking Age: Provisions and Analysis," Congressional Research Service: The Library of Congress. 1984

⁵ Kansas Department of Revenue "Alcoholic Beverage Control," Kansas Department of Revenue. 2021.

Prior to the COVID-19 pandemic in 2020, 29 counties in Kansas still did not permit on-premises sales of alcohol, many counties ban Sunday sale, with sales completely banned state-wide for Christmas and Easter. Distilled spirits and wine cannot be purchased in grocery stores, and beer is only permitted if it is 6.0% alcohol by volume (ABV) or lower, which is a recent development, as the law changed from 3.2% ABV in April of 2019.⁶ For needed context the average beer is 4-7% ABV. Even with this recent change, alcohol in Kansas is completely state controlled. This is in stark contrast to its neighbor Missouri, one of the least restrictive states. Missouri allows for distilled spirits, wine, and beer to be sold in grocery stores and gas stations. The state does not have any open container laws, public intoxication laws, nor are there any dry counties.⁷ Modern Missouri is the third least restrictive state, following Louisiana and Nevada who both allow for the 24 hour sale of alcohol. What determines a state's likelihood to restrict alcohol? As can be seen in Figure 1, geographic factors may not play a substantial role. Is it partisanship? Is it religiosity? There must be some explanatory factor that can account for the variation across states. This paper contends that the answer may be found in past levels of support for federal Prohibition and past levels of Evangelical Protestantism.

⁶ Kansas Department of Revenue "Alcoholic Beverage Control," Kansas Department of Revenue. 2021.

⁷ Missouri Department of Public Safety: Alcohol and Tobacco Control, "Regulations and Statues," Missouri Department of Public Safety. 2021.

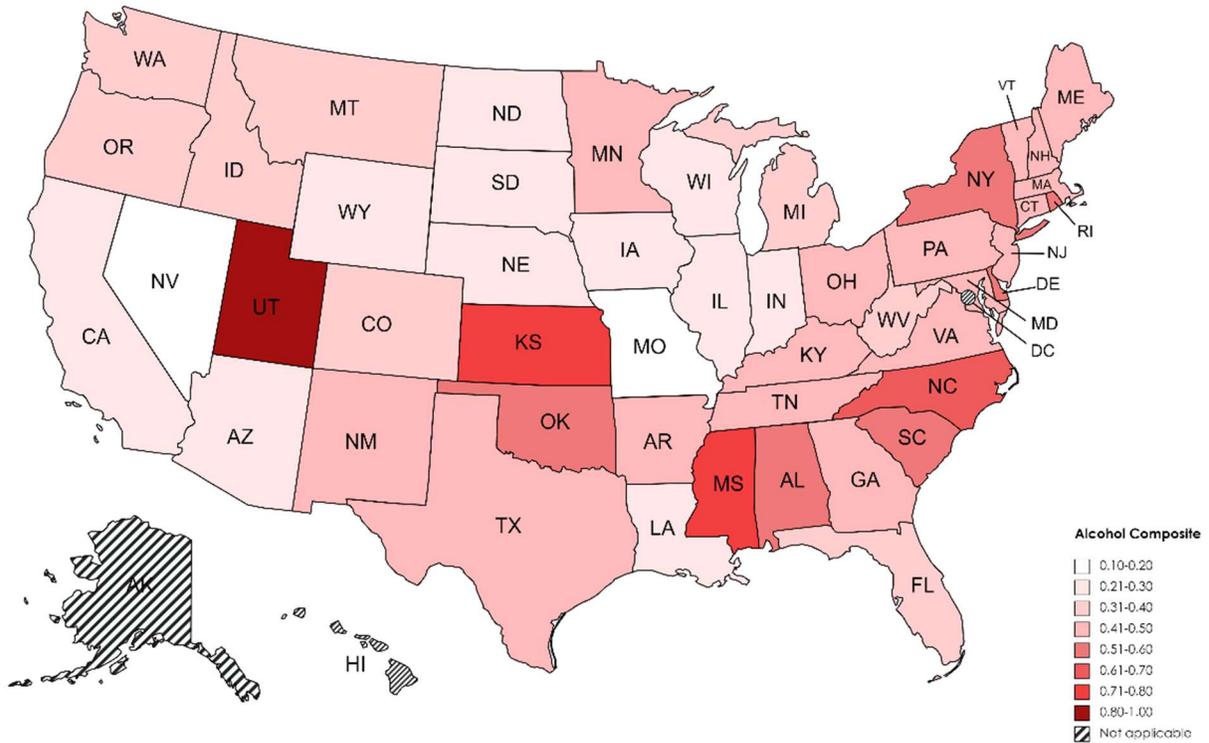


Figure 1: Illustration of 2020 alcohol composite scores (construction of variables discussed in Data section) with lighter shades equating to less alcohol regulation compared to darker shades. Scores vary from a 0.1-0.9 scale with zero states achieving a complete 1 or 0. Alaska, Hawaii and Washington D.C are omitted as non-applicable to this research.

In the modern political climate, Americans are accustomed to legislation determined along polarized partisan lines. However, partisanship did not influence the passage of Prohibition. A quick glance at the roll call vote for the amendment clearly displays this, with Republicans marginally approving the measure somewhat more so than Democrats at the time. 78% of Senate Republicans and 69% of House Republicans voted in support of the amendment, with 75% of Senate Democrats and 68.8% of House Democrats in favor.⁸ Considering that Democrats at this time were in favor of states' rights to legislate such things this exemplifies two vital elements to the story. First, the overarching popularity of Prohibition in 1917 managed to cross party lines. This is keeping in mind that levels of polarization at this time were low

⁸ American Association of Wine Economists. "Percentage of Senate and House votes in favor of, or against, the 18th Amendment to the US Constitution (Prohibition) in the United States in 1917." Chart. Statista. 2019.

compared to modern times; there were policy considerations that transcended partisan lines more easily one hundred years ago than today. Secondly, partisanship is not the explanatory factor to Prohibition in the past – nor is it in the present. The two examples aforementioned further add credence to omitting partisanship as an explanatory factor for modern laws – as both Kansas and Missouri are both R+11 states on the Cook PVI.⁹ It is recognized that though these are two examples out of forty eight; the data shows that there does not appear to be any correlation between partisanship and alcohol regulation when looking at all forty eight cases over time.

Modern levels of religiosity do not appear to yield answers to explain why some states are so highly regulatory compared to other states. Levels of religiosity have steadily dropped across the country with record numbers of Americans identifying as unaffiliated with any religion.¹⁰ To return to Kansas, as a more restrictive state, if religion were the explanatory factor we would see higher levels of religiosity in the state compared to others. Though Kansas ranks in the upper half of states, it is ranked 19th most religious state.¹¹ This is below Louisiana, ranked number 4 most religious state. This is notable considering that Louisiana is one of the least restrictive states in the country, allowing for 24 hour sale for on and off premise sale of alcohol. What makes these states vary so drastically in their alcohol policy? This research will purport that the history of the state, the historic levels of Protestantism as a proxy for support for Prohibition, will have a strong relationship to modern alcohol policy variance.

The 18th amendment was the result of a long fought battle of the Temperance movement to bar the consumption and sale of alcohol, however it was later repealed by the 21st amendment. However, despite this later repeal, at the time of passage there was overwhelming support in

⁹ Cook Political Report, “Cook Political Report: Partisan Voter Index, PVI of US States,” 2021.

¹⁰ Pew Research Center, “In U.S., Decline of Christianity Continues at Rapid Pace” Pew Research Center. 2019.

¹¹ Lipka, M and Wormald, B. “How religious is your state?” Pew Research Center. 2016.

Congress for Prohibition. To what extent does Prohibition still impact modern policies in regard to alcohol regulation? As a repealed amendment, a formalized law of only 14 years, surely the impact must be low. Would high levels of 20th century support for temperance and institutional prohibition result in more stringent alcohol policies in the 21st century? To answer this question I will be looking at the states that were extant during the passage of Prohibition, along with the past histories of these states to create a full picture of modern alcohol policy variance.

In order to provide sufficient historical and political context I will begin by engaging a quick outline of the historical scene that gave rise to Prohibition. This will include temperance organizations and pertinent periphery associations to the movement, along with formation of any notable legislative developments prior to the passage of the 18th amendment. This will primarily be conducted on the national and state level. After providing appropriate levels of context, I will engage in an overview of the theoretical foundations that ground this paper in Path dependency theory. Following this I will engage the correlation of religiosity and Prohibition as seen in the individual organizations advocating for temperance, and the arguments engaged by proponents for the movement. Though other elements impacted the popularity of Prohibition as an international movement, in the United States, religion had a unique impact on the legislation that was passed at the state and federal level. Thus religiosity is an integral facet of the research design. This exposition will expand to cover the second era of interest, the 1970's and 1980's. After the repeal of Prohibition states were then granted the right to regulate alcohol at their discretion, the state to state divergence will be discussed, leading to the federal age mandate of the National Minimum Age Act. It is within this section that my hypotheses will be established. After sufficient historical context is amassed to properly inform the construction of this study, I will develop the research design and proposed methods to test the hypotheses.

Historical Overview

Prohibition was the long fought battle of several temperance movements that culminated in the 18th amendment. Temperance was an international movement that gained incredible legislative headway in the United States. Though the 18th amendment was not ratified until 1919 the story of federal Prohibition begins nearly a hundred years prior in 1826 when the first American temperance organization was formed. This organization, the American Temperance Society, was founded by Presbyterian ministers. The very conception of this movement has strong religious ties directly with American Protestantism. It will be later shown that Protestantism was the single most important motivating factor of this movement. The initial goal of this organization was “to promote temperance while letting drunkards ‘die off and rid the world of ‘an amazing evil.’”¹² This society cropped up alongside many other anti-alcohol groups, reflecting a larger trend of ‘perfectionist’ movements that gained popularity in the 1820’s and 1830’s. This movement “took on the form of a religious, social, and patriotic crusade,” which differed from the international temperance movements in its classically American turn towards patriotism and Christian zeal.¹³ By 1832 there were temperance societies in every state except Alabama, Illinois, Maine, and Missouri. Members of these societies were frequently zealots, viewing temperance reform as the meaning to bring about a rapturous “Kingdom of God onto earth”¹⁴. The pressure these societies were able to exert was considerable considering that federal support for Prohibition first came in 1832 when the army ration for spirits was eliminated at the behest of these political groups.¹⁵ These societies frequently pressured candidates to sign the

¹² Aaron, Paul and Musto, David. “Temperance and Prohibition in America: A Historical Overview,” in *Alcohol in America: Taking Action to Prevent Abuse*. 1985.

¹³ Sprunger, K.L. “Cold Water Congressmen: The Congressional Temperance Society Before the Civil War.” 27: 498-515 (1965).

¹⁴ Frederick Marryat, *A Diary in America* (New York,, 1839). 230.

¹⁵ Aaron, Paul and Musto, David. “Temperance and Prohibition in America: A Historical Overview,”

temperance pledge, leading to notable political figures of the time appearing sympathetic to the Prohibition cause. The Congressional Temperance Society would form in 1833, in part due to the political pressure and political gain of associating with temperance.¹⁶ The former founder of the American Temperance Society, Justin Edwards would help form the Congressional Temperance Society alongside Senator Frelinghuysen of New Jersey and Senator Grundy of Tennessee. The Society grew, more due the political ramifications that would ensue in ignoring the inclinations of the electorate, rather than a personal commitment to temperance. This is to say that though politicians were not winning elections by connecting themselves to temperance, to be against temperance in that political climate would have been harmful to their electoral prospects.

There would be an early victory and a following setback for the temperance movement in Massachusetts, the first state to codify temperance in its legal code. This would be the first instance of state action on Prohibition. “In 1838, known as the “petition year,” appeals were made to six state legislatures to restrict the sales of alcoholic beverages,”¹⁷ though most appeals failed, the Massachusetts legislature decided to craft the first Prohibition law in the United States. The Fifteen Gallon Law was the first of its kind, which sought to regulate the sale of “spirituous liquors,” banning the sale of brandy, rum, mixed liquor, or any other spirituous drink sold in quantities below fifteen gallons.¹⁸ The law was widely unpopular, and was repealed two years later. However, this set a clear precedent for temperance groups to organize behind, and they began to apply more pressure to other states. This pressure succeeded in 1846 with the first outright prohibition of alcohol sale and consumption in Maine.¹⁹

¹⁶ Sprunger, K.L. “Cold Water Congressmen: The Congressional Temperance Society Before the Civil War.”

¹⁷ Aaron, Paul and Musto, David. “Temperance and Prohibition in America: A Historical Overview,” in *Alcohol in America: Taking Action to Prevent Abuse*. 1985

¹⁸ Dexter, Franklin and Hallet, Benjamin. “Investigation into the Fifteen gallon Law of Massachusetts,” State Library of Massachusetts. 1839. Retrieved from:

¹⁹ Okamoto, M. “The Maine Law of 1851: how the Prohibitionist made it.” *The American Review: A Whig Journal* 1982 (1982): 199-221.

Prior alcohol legislation must be taken into account to determine the historical support for Prohibition before the passage of the 18th amendment. By 1915, prior to the passage of the 18th amendment, there were numerous states that had already banned the sale of alcohol due to the influence of the temperance movement. By 1890 there were six states that had policies or amendments banning the sale of alcohol, Maine, Kansas, South Dakota, North Dakota, Vermont, and New Hampshire.²⁰ I arrive at the first hypothesis of this paper; *the first six states to pass prohibition laws which were strong proponents of the Temperance movement will be more likely to have more restrictive alcohol laws in 2020 compared to other states.*

Though the temperance movement was highly influenced by religiosity, it is important to consider the other motivators involved in the movement. Women's rights and white nativists were also concerned with the concept of temperance. The Women's Christian Temperance Union (WCTU) and the Prohibition Party were two such entities. The WCTU, founded in 1874 by Francis Willard, was not solely concerned with temperance, their primary focus was on women's rights. This perspective of women's rights informed the organizations concern with institutional prohibition. It recognized alcohol as a "moral snare," that had incredibly destructive impact on the family unit and society, and frequently championed related causes ranging from child labor to smoking.²¹ For more on the role of the Women's Christian Temperance Union on Prohibition see Massen (1997) and McCammon (2002). The Prohibition Party, still active, was formed in 1869 to pursue a number of platform concerns; Prohibition of course was the concern, but the party also verbalized its commitment to women's rights. With converging political interests with the WCTU, the Prohibition party was actively supported by the organization. Due

²⁰ Aaron, Paul and Musto, David. "Temperance and Prohibition in America: A Historical Overview,"

²¹ Aaron, Paul and Musto, David. "Temperance and Prohibition in America: A Historical Overview,"

to political machinations and power struggles within the party, they would eventually give up their leadership mantle in the struggle for Prohibition to the Anti-Saloon league.

Law and order framed the temperance movement, as numerous proponents of Prohibition listed the saloon as a place of “criminal propensities,” that caused moral corruption in those driven to drink. Saloons were also painted as enemies of the government, as locations of lawlessness in society. The undertone of religiosity can be found within the law and order rhetoric. In the charges against the saloon, proponents often connected Sunday sale to the saloons’ blatant disregard for morality, “saloons likewise defy authority and contravene the laws of the state by keeping open bar on the Sabbath.”²² From the women’s rights angle, temperance was seen as a way to combat domestic and sexual violence which was thought to stem from the pervasiveness of the saloon and then travel to infect the home.²³

Lastly, though the women’s movement and anti-crime groups were more prominent allies to Prohibition, the temperance movement’s connection to less favorable groups cannot be ignored. Though the Ku Klux Klan (KKK) was not solely concerned with Prohibition, the white nativist inclination of American temperance is a key element of the Prohibition story. Recent research suggests that it is possible that other temperance groups worked in tandem with the KKK in the passage of the 18th amendment, and later in enforcement.²⁴ In fact, the third wave of temperance begun in response to increased immigration and urban growth, however the anti-Catholic and anti-immigrant edge of temperance had existed prior to the third wave.

²² Barker, J. “The Saloon Problem and Social Reform,” Boston: Everett Press. 1905.

²³ Masson, E. "The Woman's Christian Temperance Union, 1874-1898: Combatting Domestic Violence," *William & Mary Journal of Women and the Law* 3: 163-188. 1997.

²⁴ Pegram, Thomas R. "Hoodwinked: The Anti-Saloon League and the Ku Klux Klan in 1920s Prohibition Enforcement." *The Journal of the Gilded Age and Progressive Era* 7, no. 1 (2008): 89-119.

The Anti-Saloon league, operating as “the church in action,” was incredibly effective in their political maneuvering²⁵. The league was described as militantly focused on the single issue of Prohibition, without consideration to the partisan politics of the time, and it operated strategically to achieve their goal of Prohibition. Rather than choosing the Republican or Democrat party to herald their interests, they indiscriminately chose to back whatever candidates that supported anti-liquor legislation. The Anti Saloon league had the most overt ties to the KKK, though this connection was brought about more in the enforcement of Prohibition than the passage of the amendment. For more on the Anti Saloon league see Kerr (1980), Pegram (1997) and Pegram (2008).

During World War I President Wilson temporarily placed a wartime prohibition in order to save resources for food, this was the chance that temperance organizations had been waiting for.²⁶ In 1917, the same year of the temporary ban, Congress proposed the 18th amendment, eventually passing the amendment and overriding a presidential veto on the amendment. The amendment was ratified by 1919. The Volstead Act – the means of enforcing the new amendment was passed in January of 1920. After nearly a century of fighting prohibition became national law.

Policies frequently have unintentional consequences, and this can easily be observed in the case of the 18th amendment, a great legislative failure of the 20th century. Though Prohibition was intended to stop the legal sale of alcohol and thus slash substance abuse and crime, the amendment ended up having the inverse effect on American society. Rather than curb alcohol intake, the amendment increased intake across populations. Those who did not imbibe widely

²⁵ Pegram, Thomas R. "Hoodwinked: The Anti-Saloon League and the Ku Klux Klan in 1920s Prohibition Enforcement." *The Journal of the Gilded Age and Progressive Era* 7, no. 1 (2008): 89-119.

²⁶ Nishi, D. "At issue in history: Prohibition." Greenhaven Press: Michigan. 2004

prior to the federal mandate began to drink in opposition to the amendment “they drink, not because they like the vile stuff, but because they are under a delusion that the act is a protest.”²⁷ Speakeasies crop up across the states, by 1922 there was an estimated five thousand in New York state, by 1929 over ten thousand were suspected across Chicago. Millions of gallons were suspected of being brewed at home, methods of which are dubious, resulting in bad alcohol deaths across the nation. Organized crime increased across the nation, profiting off of bootlegged liquor, giving rise to infamous mob leaders such as Al Capone. These unintended consequences were near immediate, which led to the quick (in relative institutional terms) repeal of the 18th amendment in 1933 with the passage of the 21st amendment.

²⁷ Thompson, A “Law Observance,” 1929 in Nishi, D “At issue in History: Prohibition.” Greenhaven Press: Michigan, 2004.72-78

Theoretical Foundations

Consider for a moment - the city of Florence as a modern European city, equipped with public transit, traffic lights, automated traffic barriers, and electric charging stations for their public service vehicles -the picture of a 21st century city. However, this city has maintained nearly 2,000 years of structure. The roads which run throughout the city center lay on the former Roman roads, the modern buildings were constructed on the stone foundations of early Medieval structures. Be it city planning, institutions, policy, or political attitudes the past forms our immediate present with great acuity.

Many people would not initially think that the past has much of an impact on our current reality, especially in a country as young as the United States. Certainly, people accept the dominion of the Constitution, a 235 year old document, over the laws of the United States. Beyond that, many tend to perceive reality in a given moment rather than view reality as a culmination of events. Humans are reactive creatures and tend to take in current events as singular, isolated incidents when the reality is that the present is the result of countless numerations of the past. Policy and political attitudes are reflective of the immediate present as it exists in a given time unit - shaped by modern reason. Therefore, when presented with a non-polarized policy, most would assume that there is some logical, modern explanation for its existence and the policy will continue to exist. This is not to say that all people react to policy with benign acceptance – as many policies are altered or removed every year. However, some policies reach a state of social equilibrium as discussed by path dependency theory.

Simply put, path dependency argues that ‘history matters’ and that is exactly what this paper contends. When there is a failure in modern explanatory factors, such as partisanship, we must consider the lifetime of the institution itself. Institutional development frequently has unintended consequences that have cascading effects across a given institution in a given instance and

temporally. Temporal considerations to the development of a given institution give insight into the modern state. I posit that within the path dependency framework that institutional Prohibition was the result of the critical juncture of the temperance sociopolitical movement. Typically critical junctures arrive from the result of great strife, economic crisis or wartime.²⁸ However, it is possible for a powerful social movement overtaking a country, capturing broad support, to reify such a critical juncture needed for institutional change. This is of course recognizing that within this context World War I created the policy opening for this powerful social movement to enact their proposed legislative agenda. Using path dependency to trace the institutional life of a policy is not new, with several identifiable advantages.²⁹ It provides for the difficulty to reform institutions even with the removal of particular policies. Path dependency has been used to understand the development of health care policy in the US,³⁰ and the lasting impact of slavery on modern southern politics.³¹ Many of these studies focus on cases of unchanged policy. Policies that may have evolved over time by building off of a preexisting policy and constraining the behavior of policy makers. This paper seeks to trace the impact of a policy after its institutionalization and subsequent removal from the institution.

Path Dependence theory states that once a country or region has started down a track, the costs of reversal are very high. Another way to look at the theory is in the reshaping of terms, "...the better metaphor is a tree rather than a path. From the same turn there are many different branches and smaller branches. Although it is possible to turn around and clamber from one to

²⁸ Hall, Peter A., and Rosemary C. R. Taylor. "Political Science and the Three New Institutionalisms." *Political Studies* 44, no. 5 (December 1996): 936–57

²⁹ Kay, A. "A Critique of the Use of Path Dependency in Policy Studies." *Public Administration*, 83: 553-571. (2005)

³⁰ Wilsford, D. "Path Dependency, or Why History Makes It Difficult but Not Impossible to Reform Health Care Systems in a Big Way," *Journal of Public Policy*, Cambridge University Press, vol. 14(3), pages 251-283, 1994.

³¹ Acharya, A. Blackwell, M. and Sen, M. "Deep Roots: How Slavery still Shapes Southern Politics." Princeton University Press. 2018.

the other and essential if the chosen branch dies the branch on which a climber begins is the one she tends to follow.”³² Using a state like Kansas which was discussed earlier in this paper can help frame the concept. The state was highly dedicated to maintaining Prohibition on the state level even after the federal amendment had been abolished. Prohibition was the reality of Kansas from 1881³³ to 1948. Consider this as 67 years to be running along one single branch of a tree, backtracking down the branches takes time and is influenced by the starting point of long term Prohibition. It is easier to keep regulating the sale of alcohol opposed to making a drastic change to the policy. The closer ‘branches’ to full on Prohibition are ‘branches’ that involve more alcohol regulation.

Path dependent cases have frequently been framed under the economic concept of increasing returns, policy perpetuating policy at a state of equilibrium.³⁴ This is the theoretical foundation for the continuance of alcohol regulation in states – despite the differing forms of a given policy. Though outright Prohibition no longer exists in any state, the sociopolitical inclination to regulate alcohol extensively, in some states, remains. Pierson details the settings which path dependence is defined by the dynamic of increasing returns display; *multiple equilibria*, *contingency*, *a critical role for timing*, and *inertia*.³⁵

Multiple equilibria can be best described as a set of *initial conditions* that were conducive to increasing returns that could produce a number of possible outcomes. In the case of Prohibition, the initial set of conditions, wartime rationing, nearly a century long temperance movement pushing for legislative change, and the indication that prohibition may lead to decreased crime

³² Pierson, Paul. “Increasing Returns, Path Dependence, and the Study of Politics.” *The American Political Science Review* 94, no. 2 (2000): 251–67.

³³ Kansas Historical Society. “Prohibition.” *Kansaspedia*: Kansas Historical Society. 2001

³⁴ Pierson, Paul. "Increasing Returns, Path Dependence, and the Study of Politics." *The American Political Science Review* 94, no. 2 (2000): 251-67.

³⁵ *Ibid.*

indicated that the policy may be beneficial. This thought resulted in the popularity and passage of the amendment.

Contingency and the critical role for timing work in tandem. Contingency suggests that small events occurring at the correct moment can have enduring consequences. The critical role for timing plays directly into this dynamic in that the ‘when’ in a given event chain can be more vital than the ‘what’ of a given event. The window in which temperance activists moved legislation exemplifies the importance of timing, had there not been the temporary rationing of alcohol due to World War I, national prohibition would not have been so palatable to the masses.

Inertia refers to the positive feedback loop of policy, that is, a state of equilibrium occurs which sustains a policy. Once a state of increasing returns is established, a positive feedback loop forms in a stabilizing manner which enables the policy to remain at equilibrium within an institution until exogenous shocks remove the state of equilibrium. Absence of exogenous shocks, the equilibrium is resistant to change, sustaining policy that only existed due to archaic purposes. In the narrative of alcohol regulation, though Prohibition was formally removed – it has persisted in the states through lesser forms of alcohol regulation.

Though federal Prohibition was formally removed in 1933 it should be noted that this was solely at the federal level – states were still given the option to retain strict alcohol regulation at their discretion (Kansas kept statewide Prohibition for an additional decade). This is largely due to federalism as a governing structure. Beyond its origins in federalism and onto a more cogent point regarding the American economy, this meant that alcohol was considered exempt from the commerce clause, allowing for striking variation across localities much less individual states.³⁶

³⁶ Wiseman, Alan E., and Jerry Ellig. “The Politics of Wine: Trade Barriers, Interest Groups, and the Commerce Clause.” *The Journal of Politics* 69, no. 3 (2007): 859–75.

It is difficult to rationally bound a policy that was so federally disastrous under the concept of ‘increasing returns’ as national prohibition explicitly did not generate increasing returns for the country (moral returns are possible). However, if a policy exists, under bounded rationality there must be a reason which substantiates its perseverance under such negative social conditions that brought about the repeal of Prohibition. Despite organized crime, the Great Depression, and later World War II, states continued to regulate (up to the point of complete bans of) alcohol sale. Therefore, there must have been some benefit yielded from such policies despite national abhorrence for federal prohibition. Following the above framework, it is not necessary for initial conditions to be currently extant for a policy to remain based upon a self-sustaining equilibrium, as long as the policy is not shaken by external changes to the institution. As such, current conditions in the states allow for the level of alcohol policy to remain, through the persistence and normalization of the given policy.

Another facet of the path dependency framework can be found in work regarding ‘status quo bias’ as discussed by Fernandez and Rodrik,³⁷ and by Samuelson and Zeckhauser.³⁸ If we reject increasing returns as it pertains to Prohibition and alcohol policy, it is still possible to connect Prohibition to path dependency theory due to the status quo bias found in policy making and reform. Fernandez and Rodrik argue that policy makers are confronted by reforms that would potentially create a more efficient environment, or be more politically pleasing to their constituents. However these policy makers are forced to reckon with the “uncertainty regarding the distribution of gains and losses from reform....there is a bias towards the status quo,”³⁹ and a

³⁷ Fernandez, Raquel, and Dani Rodrik. “Resistance to Reform: Status Quo Bias in the Presence of Individual-Specific Uncertainty.” *The American Economic Review* 81, no. 5 (1991): 1146–55.

³⁸ Samuelson, W., Zeckhauser, R. Status quo bias in decision making. *J Risk Uncertainty* 1, 7–59 (1988).

³⁹ Fernandez, Raquel, and Dani Rodrik. “Resistance to Reform: Status Quo Bias in the Presence of Individual-Specific Uncertainty.”

corresponding bias against reforms. A given polity has functioned well up until a given temporal point – changing policy in the favor of efficiency presents uncertainty. Will this new policy be better than the one before, or will it present new issues that are yet to be identified? It is easier – better to maintain course than risk unknown consequences. Status quo bias is found even in circumstances which a policy would “prove quite popular after” the reform.⁴⁰

The drawbacks to path dependency often arrive from the historical basin which the theory would refer to in order to confirm hypotheses. In order to empirically test path dependent theories, there must be a presence of data – this is easier done in the realm of policy, but there are still limitations incongruent with modern quantitative methods. Namely, accuracy of such historical data must always be considered cautiously as historical methods do not follow the current academic norms for data collection. Information, should it exist, would be instrumental in proving many theories which rely on path dependence. However, in theories based on the history – data is in short supply. With this topic, the original research design would have called for the location of temperance organizations in order to gauge statewide support for the amendment. Such information is either inaccessible, or does not exist.

Furthermore, there are questions as to how strong of an explanatory factor path dependency can be, as it can determine the impact of bygone events – it cannot describe future phenomena.⁴¹ It is true that path dependency works in the retrospective realm, parsing through historical data and policy to arrive at current events. It describes stability more so than it can describe change. However, the claim that path dependency cannot have implications for future events is short sighted. It may not be predictive, though there is an argument to be made that much of political

⁴⁰ *ibid*

⁴¹ Raadschelders, Jos C.N. “Evolution, Institutional Analysis and Path Dependency: An Administrative-History Perspective on Fashionable Approaches and Concepts.” *International Review of Administrative Sciences* 64, no. 4 (December 1998): 565–82

science is not predictive, but it is able to draw conclusions from the past. A policy which has remained stable to this point, despite great institutional changes, despite the loss of whatever juncture brought is likely to remain stable without exogenous shocks to the system. However, this paper will make no such contentions about the future of alcohol policy, rather seek to explain the variation in policy across states as a condition of their path dependence.

Path dependency receives criticism as a viable theory of political science as it does not model change, only stability. In the case of alcohol policy, variation across the states and the persistence of regulation that harkens to puritanical standards is the crux of this question. Path dependency explains stability, and it is for that very reason that it suits this research. For this situation, where I am not measuring change over time, rather variation over time, path dependency can lend light unto the state of policy equilibrium. This paper does not seek to explain why alcohol laws change – for the reasons behind this I can provide a quorum: crime, drunk driving rates, federal highways, economic crisis, global pandemics. Rather, this paper seeks to unveil what influence that Prohibition as an institution driven by enduring social forces has on modern alcohol policy across states.

With Prohibition every state was subject to a strict baseline for alcohol policy variance, and at the moment of federal appeal the states were then left to create their own baseline policy regarding alcohol. Following the theoretical outline of path dependency, it would imply that all states that were subject to Prohibition would still be influenced by the policy despite the repeal at the time of creating their own baseline alcohol policies.

Religiosity

Religiosity is a key element of this story, as Prohibition was framed as a moral imperative. The organizations dedicated to national prohibition: the American Temperance Society, the Woman's Christian Temperance Union, the Anti-Saloon league, Church Temperance Society, the Ku Klux Klan etc., were impacted in some level or another by religion – as can be plainly taken from some of their names. It is widely accepted that religiosity plays a huge role in the passage of the 18th amendment, but there is a certain type of religiosity that garnered support for temperance and eventual Prohibition.

Primarily, it is Protestantism that generates these temperance movements.⁴² Notably, though the focus of this paper is on America, the connection to Protestantism in particular to temperance is an international occurrence. This connection forms a “temperance culture” which is primarily found in Nordic countries and some English speaking countries (USA, UK, Australia, New Zealand). The tie between Protestantism and American Prohibition has been extensively documented. Post World War II there was a revival of Prohibition politics in both conservative and liberal protestants, attempting to reduce American alcohol consumption.⁴³ Despite the legislative failure in the lifetimes of many activists, these protestants still saw prohibition efforts as a vital element to a moral society. Scholars have classified Prohibition as the Protestant crusade, a sociopolitical attempt to curb private behavior through legislating morality.⁴⁴ These members of the church sought to impose a Christian morality upon the states, the ‘correct’

⁴² Levine, Harry. “Temperance Cultures: Concern About Alcohol as a Problem in Nordic and English-speaking Cultures.” in *The Nature of Alcohol and Drug-Related Problems*. New York: Oxford University Press, 1993, pp.16-36.

⁴³ Pennock, Pamela E. ""The Number One Social Problem of Our Time": American Protestants and Temperance Politics in the 1950s." *Journal of Church and State* 54, no. 3 (2012): 375-405

⁴⁴ Harding, Susan F. "American Protestant Moralism and the Secular Imagination: From Temperance to the Moral Majority." *Social Research* 76, no. 4 (2009): 1277-306.

Christian morality. Beyond this academic record, this is observable in the majority of prominent organizations which supported the 18th amendment. The literature does recognize that there have been anti-alcohol movements in countries that were not primarily Protestant. However, these movements are typically short lived and sporadic in nature.⁴⁵ Many Muslim majority countries ban the consumption of alcohol, however these modes of Prohibition differ from the temperance movement which permeated the political landscape of America as these countries are non-secular in nature.

In a similarly minded study concerning alcohol policy by county, Evangelical Protestantism and religious fervor are considered the strongest indicators for stringent alcohol regulation in modern times.⁴⁶ The linkage between Protestantism and the American temperance movement is well documented in the literature (see DeMent 1983, Levine 1993, Merrill 1988, Harding 2009, Warner 2009), and therefore can be utilized in gauging the support for the temperance movement.

Qualification as a Protestant Christianity does produce a small amount of contention. For the sake of variable construction there does need to be some acknowledgement for what qualifies as a Protestant religion or church.⁴⁷ There are varied religious organization across the United States, with general Christianity marking a clear majority over other religions. Following the outline laid out from the Pew Research Center⁴⁸ most Christian sects will be considered Protestant for the sake of this paper – clearly omitting Catholicism from that numeration.

⁴⁵ Levine, Harry. "Temperance Cultures: Concern About Alcohol as a Problem in Nordic and English-speaking Cultures."

⁴⁶ Frensdreis, John, and Raymond Tatalovich. "'A Hundred Miles of Dry': Religion and the Persistence of Prohibition in the U.S. States." *State Politics & Policy Quarterly* 10, no. 3 (2010): 302-19.

⁴⁷ Newman, Simon. "One Nation under God: Making Historical Sense of Evangelical Protestantism in Contemporary American Politics." *Journal of American Studies* 41, no. 3 (2007): 581–97.

⁴⁸ Pew Research Center, "Religious Landscape Study: Appendix B: Classification of Protestant Denominations." Pew Research Center, 2015.

Mormonism will also be included in the ‘religiosity’ variable. This was determined after a great deal of deliberation.⁴⁹ Some would classify Mormonism – as evolved from Protestantism, a Protestant sect. However when reading the text’s and doctrine of the Mormon church one could argue that the denomination more closely resembles Catholicism (in organizational terms).⁵⁰ It becomes important to place Mormonism historically as it relates to temperance and Prohibition. The first temperance organization was established in 1826, and Mormonism developed as a religion in 1829, officially releasing the Book of Mormon in 1830.⁵¹ Given that the religion developed alongside the growth of temperance movements is compelling for connecting Mormonism to Prohibition. Though it may not have had a national impact, it certainly could impact a state where the religion exists in a majority. More compelling is from doctrine equivalent texts, namely the Doctrine and Covenants. Plainly stated “the use of wine, strong drinks, tobacco, and hot drinks is proscribed”⁵² the Mormon position on consumption of alcohol is not ambiguous. That is not to disregard that adherents to religions can disregard portions of their own religious text and still be considered an adherent to themselves and others – or considered a part of a religious culture. However, given the historic context of Mormonism and the clear commitment as an organized religion to abstain from alcohol it seems proper to include Mormonism as a sect alongside myriad Protestant sects in the religiosity variable.

At this juncture there is not available or verifiable data for the number of temperance organizations per state. Therefore, there is a need for a proxy variable in order to create a

⁴⁹ Special thanks Mormon friends who contacted church elders to weigh in on how to classify Mormonism within the confines of this research and advised on how to best represent the religion as a part of the temperance movement.

⁵⁰ The Church of Jesus Christ of Latter-Day Saints, “The Book of Mormon: Another Testament of Jesus Christ.” Church History. 2022.

⁵¹ The Church of Jesus Christ of Latter-Day Saints, “The Book of Mormon: Another Testament of Jesus Christ.” Church History. 2022.

⁵² The Church of Jesus Christ of Latter-Day Saints. “Doctrine and Covenants: Section 89:1-9.” Scriptures. 1833.

semblance of historic support for the Temperance movement and Prohibition. Temperance movements and organizations were predominantly influenced by Protestantism of various sects. Though temperance was a movement that included many sentiments, race and anti-immigration among them, the commonality between these groups was religious in nature. Prohibition is the result of constant efforts of the temperance movement to codify these convictions. It follows that a proxy variable can be created to simulate temperance support in a given state as measured by Protestant religiosity. My second hypothesis derives from this line of logic, *states that had higher support for Prohibition, as defined by historical religiosity, will have more restrictive alcohol regulations now*. It is important to separate modern religiosity from this scenario, as it is the past levels of religiosity that are the determining and explanatory factor for modern state regulations.

1970s -1980's

In order to create a chronological picture of path dependence, use of multiple time points can give more details to the Prohibition narrative while simultaneously providing a robustness check. Therefore it is imperative to test other periods in time to create a semi-linear path. In 1984 the National Minimum Drinking Age Act was passed in Congress, which elevated the drinking age nationally to 21 –withholding federal funds for highways if states did not comply.⁵³ Prior to this the states varied considerably on their drinking age, it was common policy to employ a two-tier drinking age based on the legal age for beer and wine, another age for distilled spirits. Notably, in Kansas, Oklahoma, and South Dakota the two tier drinking age was utilized based on ABV rather than type of alcohol. During this period the lowest legal age was 18. If states are highly regulatory and restrictive now due to the influence of Prohibition on their policies, it should follow that the same would be true when states were less constrained by federal law.

⁵³ Lipford, W. "National minimum Drinking Age: Provisions and Analysis," Congressional Research Service: The Library of Congress. 1984

Data/Methods

The scope of this paper involves all states that were states at the time of the 18th amendments ratification. With this in mind, Hawaii, Alaska, and Washington D.C will be omitted from this study as they were not formal states at the point of ratification. Though they very likely were impacted by Prohibition as a lasting institutional artifact, it is not possible to measure the formal institutional level support within these states as non-voting members of the country. As alluded to, this study will be concerned with states, rather than counties, for a similar reason. Data collection for county support for Prohibition would be incredibly difficult, partially due to the shifting nature of counties over a hundred year period. Though analyzing counties may give a more detailed look to the specific impact of Prohibition and the temperance movement in a narrow area, I am looking for the broad state by state impact of the policy and spurring social movement.

Each state will be given a restrictive/non-restrictive score ranging from 0-1 for each decade, states with higher scores are more restrictive than those with lower scores. The composite is constructed by examining individual laws present in the state at a given time interval that restrict individual access to alcohol, omitting laws that limit business access to alcohol. For example, numerous states regulate the minimum age to serve alcohol, this will not be considered in a state's restrictive score, whereas presence of a Sunday sale ban is considered in the overall composite as it restricts the access of alcohol. A full breakdown of the composite will be included in Appendix A. These composites are stable across time in that the factors that are considered in 1920 will be considered in 2020. This is done in order to create a score that can be compared across time – opposed to compared at a single time unit. All states in 1920 will receive a restrictive score of 1 to account for the total ban of alcohol. A note should also be

offered in consideration of the 2020 restrictive/nonrestrictive scores for each state. In March of 2020 most states altered laws and regulations in regards to the sale of alcohol as a result of COVID-19. The laws taken in consideration for the 2020 composite will be the laws that existed prior to the shutdowns as the permanence of these laws cannot be yet qualified.

The primary methodology utilized for this research will be panel data methods. Though it would be preferable to utilize time series cross sectional methods, that is beyond the scope of this paper. This is due to the first important element of this data that warrants further discussion. As it may have already been observed in the formatting of the paper, the temporal units must be organized by the decade unit rather than successive years. This is due to issues in data collection that have presented in vital variables needed for analysis.

Panel methods were selected, in part, due to the gaps of the data. Locating historical data for religiosity is difficult due to issues of reliability. However there is a pool of information on religiosity deemed accurate by academia⁵⁴ that spans from 1905-1935 from the U.S decennial census. Data from 1905, 1915, and 1925 is considered reliable and accurate. However, gaps begin to present in 1935 onwards to 1970. Though the 1935 data was collected by the U.S Census Bureau there are still issues regarding the reliability of this data as it was collected during the height of the Great Depression. With scarce resources and concerns of higher magnitude the last of the religious bodies decennial census was less reliable and will not be considered for this data set. This is done to create a reasonable starting variable for religiosity at the time of the 18th amendments passage. This data will be used for two variables – modern religiosity and historic.

⁵⁴ Christiano, Kevin J. "'Numbering Israel': The U.S. Census and Religious Organizations." *Social Science History* 8, no. 4 (1984): 341-70.

Each state will have a religiosity variable for the given year along with a religiosity variable for 1916, which will be used to estimate the influence of support for Prohibition.

The 1916 Religious Bodies census data is used as the baseline for the support for Prohibition over the 1926 data.⁵⁵ It was determined that it would be more explanatory to use the rates prior to the passage of the amendment rather than the rates after passage and enforcement of Prohibition. The data involved included numerous delegations and churches. In order to create the religiosity variable the church data for anything that was not clearly Protestant was omitted. Obvious decisions such as Jewish or Catholic congregations were removed from the religiosity rate. However, in the 1936 dataset there was a section allocated for ‘all other bodies,’ as these bodies cannot be verified as Protestant, they were omitted.

In 1984 the National Minimum Age Act was put into effect which altered alcohol regulations across states and shifted the equilibrium of the states. In the early 1980’s there was higher variation across states for the drinking age in part due to the passage of the 26th amendment in the 1970’s. The 26th amendment added protections against bias age for individuals at least 18 years in age, as a result of this numerous states altered their alcohol laws to allow for individuals 18 and up to purchase alcohol. This varies across states. For instance, the state of Kansas allowed for individuals at age 18 to purchase beer, but restricted liquor purchase to age 21. Whereas Oklahoma restricted the sale of alcohol to men until the age of 21 and women were allowed to purchase weaker alcohol beverages at age 18. To deal with this variation in the 1980 composite states which allow any individual under the age of 21 to purchase alcohol

⁵⁵ U.S. Government, “United States Census of Religious Bodies, State File, 1916,” The Association of Religion Data Archives, 1916.

will be given a '0' for nonrestrictive in the drinking age category. As a result the 1990-2020 composites will all receive a '1' for restrictive in the drinking age category.

Modern religiosity levels (as defined by Protestantism) will be used as the first important control for this research. Clarification surrounding the term modern may be needed to fully understand the methods used for this research. 'Modern' refers to the corresponding date for each observation, while maintaining a static historic variable for each observation. Levels of religiosity past 1920 will be considered the 'modern' level of religiosity for a given temporal unit. This data does present issues for the project as it is taken from a different source than historical religiosity with varied collection methods. Taken from the Association of Religious Bodies Data Archives (ARDA) there is comprehensive data for 1980-2020.⁵⁶ Though the 1936 Religious Bodies Census is not as reliable as the previous three, the data is still considered viable for academic research and is used to construct the 1930's variable. Due to the requirement for corresponding religiosity to be calculated for each decade, the number of temporal units is limited to 1930, and 1980-2020. This variable is not accounting for the overall religiosity of a state, only for the presence of Protestant religiosity (including the various subsections of Protestantism – Baptists, Methodists, Quakers, etc.). This is done to ensure that religious levels of the modern day do not impact modern alcohol policy.

Beyond modern religiosity, the controls for partisanship and region will be considered. Partisanship does not appear to show any explanatory power for changing alcohol policy variance, but it will be considered on both the state level (legislator and governor possession) and allocation of presidential vote. Partisanship is being measured as a control to show that modern

⁵⁶ Grammich, C., Hadaway, K., Houseal, R., Jones, D. E., Krindatch, A., Stanley, R., & Taylor, R. H., "Longitudinal Religious Congregations and Membership File, 1980-2010 (State Level)," The Association of Religion Data Archives. 2022.

polarization or partisanship does not impact alcohol policy meaningfully. The control for partisanship is presidential vote and sitting governor.

Per presidential vote there were some coding difficulties given that the religion data is formatted by decade (1930, 1980, 1990, 2000, 2010, 2020), and presidential votes do not line up explicitly with the aforementioned dates. The first instance of coding discretion would be when a decade had three presidential elections, so in this instance 1980, 1984, and 1988 were presidential election years. In such decades the party that won two out of three elections would be coded in favor of that party. Further discretion was taken when the decade was split. For example the 1990's had two presidential elections- in the event a state was split between two party candidates in this decade the elected senators of that year would be taken into account before awarding the state to either the Democrat or Republican party. In the rare (irritating) occurrence which these elections also corresponded with Senators from opposing parties, I was forced to look at the elected representatives from this decade. In the worst case scenario which there was a complete split through the decade for federal representatives at all levels, I then took the percentages from the presidential election and subtracted them. The party with the marginally higher number would be awarded the state for the decade.

Governors were treated in the same manner – in the event of a decade split other representatives were taken into account before denoting a party to the given state. If there has yet to be a gubernatorial election in the decade of 2020 then the current incumbent will be used to designate the state. In the event the governor was a listed Independent then the same strategy of

comparing other elected officials at the time of their tenure was applied. Data for governors was found at the National Governors Association.⁵⁷

⁵⁷ National Governors Association. "Former Governors." National Governors Association, 2022.

Analysis

At this point, data concerning modern religiosity, states, time, historical religiosity, region and alcohol restriction scores will be considered in the analysis. I ran basic regressions for all variable relationships I was considering to determine whether OLS would produce a statistically significant result. The first OLS test was used to compare current religiosity rates and historic rates. Modern religiosity and the alcohol policy composite did not show a statistically significant relationship at this level, however historic religiosity and the alcohol policy composite did. The variable of region on alcohol policy did not yield any statistically significant results at any stage of diagnosis. Though running a GLS regression with random effects gave the closest to a statistically significant relationship when considering region. However, it was still above the threshold of 0.05.

In order to properly diagnose the relationship, it was vital to push past basic regression to ensure that issues of the assumptions of OLS, particularly assumptions related to independent observations, are not ignored. Though it would be convenient to use simple regression techniques to illustrate the relationship between variables, there are problems that can arise when OLS is applied incorrectly. This will result in spurious connections between variables, biasing the data and thwarting accuracy. In order for OLS to estimate relationships between variables accurately, a series of assumptions to be correct; 1.) Errors within units must have the same variance across units; 2.) Errors must be independently caused from other errors within a single unit; 3.) Errors must be spatially independent over time; 4.) There cannot be unmodeled heterogeneity, all variance between units has to be accounted for in the model by differences in the independent variables. Though my thesis will assert that some of these assumptions are correct (spatial units are not related to one another) there are assumptions that will be violated by

the nature of this dataset. Simply put, OLS demands that observations are independent from one another in order to properly calculate a relationship. As the spatial units are not independent (Alabama in 1990 is not independent from Alabama in 1980) using panel data methods is called for.

Random effects Generalized Least Squares (GLS) is the method for estimating unknown elements in regression models, a more elevated version of Ordinary Least Squares (OLS). GLS takes into account that variance is not constant across observations. Though the variance across temporal units in this study is constant, a year is a year for the purposes of data, the spatial units will have inconsistent variance over time. It is the inconsistency in variance that prompted this research to begin with. Therefore, attempting a GLS model may be the most practical option for modeling the relationship of alcohol policy over time.

At the moment this data set contains five temporal units. It is due to the low number of temporal units that panel methods were selected. The low amount of temporal units will also influence the need for fixed and random effects. Researchers can employ Fixed or Random Effects to further solve the issue of potential unmodeled heterogeneity across spatial units. For instance, one could be measuring change over time in religious affiliation across states with county level data. An average change can be generated, and with Fixed/Random effects it is possible to create models that account for variance among those spatial units. Observations in both Panel data and TSCS observes units over a span of time, making these observations dependent on previous observations. As previously discussed OLS assumes observations are completely independent from each other. As the very nature of panel data is dependent, running OLS regression will produce incorrect standard errors. This is done via clustered standard errors, solving the issue of within unit unmodeled heterogeneity. Fixed Effects (FE) and Random effects

(RE) come into play when there is concern that there is unmodeled heterogeneity across units in a dataset.

Random effect modelling seems to yield the best results while maintaining a statistically significant relationship between alcohol policy and historic rates of religiosity. However, it is expected that this will change when more temporal units are added to the data set. Fixed effects elucidate standard error estimation, however they do have a drawback as it pertains to this dataset. The very contention of this paper is that policy can enter a state of equilibrium that is difficult to deviate from over the course of time. Fixed effects are inefficient, making it difficult to see change in a slow changing variable over time. On the other hand, random effects aren't typically utilized when spatial units do not change over time. Alabama does not change over time to incorporate different areas. Had data been available from a time when state borders were in more flux random effect modeling may be more logical, but such data does not exist. For the purposes of this paper, random effects were stronger, and that may still be the case in consideration of the slow movement of policy over time when more temporal units are added.

The random effects model was superior to the random coefficient model at this point in data collection, see Table 1 below for details. Both models provided statistically significant results between the historic religiosity rate and alcohol policy composite. The random effects model was able to account for variance at a higher rate than the random coefficient model was. Though the difference wasn't fantastic, it was enough to garner support for the slightly more parsimonious model.

Table 1 pictures results from a random effects GLS regression and Mixed-effects ML regression. It should be noted that variance explained was rounded a bit higher than normally would be done. The RCM model's variance was calculated by hand, the variance of the RE model was altered to share that format.

Table 1		
	Random Effects GLS Model	Mixed-Effects ML (RCM) Model
Alcohol Policy	Historic religiosity	Historic religiosity
Coefficient	0.4161	0.3395
P> z	0.002	0.017
Standard Error	0.1333	.1422
Variance explained	0.464 (fraction of variance due to random intercept)	0.049 (sdcon/ sd residual +sdcon)

The random effects model provides a lower standard error along with a higher level of variance described by the construction of the model itself (with the generation of random effects from partial pooling). The random coefficient model makes use of random and fixed effects, and it is possible that when more temporal data points are collected a RCM model will become superior. As it is, explaining less variance with a slightly higher standard error, the RE model better simulates the data relationship.

When looking at the various controls in Figure 3 it is clear that the incumbent governor has zero impact on the alcohol composite for the states over time. This is an important piece of the puzzle, considering that any changes to state-wide alcohol policy would go directly through a sitting governor. Region does not appear to have any statistically significant explanatory value either when running either model, though in the Mixed-Effects model it did have marginally more explanatory value despite not being statistically significant. Oddly, Presidential vote did seem to have some explanatory value with the model, while sitting Governor did not. As these variables were meant to be taken together as elements of partisanship, I cannot fully disregard partisanship from the equation. What I will suggest is that presidential vote reflects national trends, and from the 1930's onward, the national trend was to incrementally deregulate alcohol

so it is possible that presidential vote is displaying the temporal element to this study. Modern religiosity does play some role as it comes to alcohol policy, however that impact is in the inverse (as is the impact of Presidential Vote for the decade). It has the highest impact on the composite outside of historic levels of religiosity.

Table 2 pictures the various controls implemented in this study, their coefficients, standard errors, and p values

Table 2

	<i>Controls for Random Effects GLS Model</i>		
	Coefficient	Standard Error	P> z
<i>Modern Religion</i>	-0.4359	0.09339	0.00
<i>Presidential Vote</i>	-0.1395	0.02786	0.00
<i>Governor</i>	-0.0128	0.02541	0.62
<i>Region</i>	0.0035	.01405	0.81

The model that best explains the relationship of the alcohol composite score seems to remain a GLS model, but one that accounts for the impacts of that decades presidential vote and the religiosity at the time. This model shows that historic religiosity has the highest impact on a given alcohol composite over time, while the current rate has a moderate inverse impact on alcohol policy, and Presidential vote has a small but meaningful effect on alcohol policy.

Table 3 illustrates the final model for this study including controls along with their corresponding coefficients, standard errors, and p values.

Table 3

	<i>Final Random Effects GLS Model</i>		
	Coefficient	Standard Error	P> z
<i>Historic Religiosity</i>	0.9467	0.1491	0.00
<i>Modern Religiosity</i>	-0.4793	0.0921	0.00
<i>Presidential Vote</i>	-0.1479	0.0269	0.00

Discussion

As a reminder of the intent of the independent variable – historic religiosity is meant to serve as a proxy variable for support for Prohibition. Considering this, it appears that support for Prohibition in 1920 has the highest level of explanatory value compared other variables, particularly when controlling for modern levels of religiosity and state presidential vote. This is in direct support of the original hypothesis of this research. There are three vital points of discussion which must be addressed; 1.) the limitations of such a study due to the nature of political history research, alongside data restrictions that lead to points of expansion for future research; 2.) immediate and direct conclusions about alcohol policy throughout the years; 3) the overarching conclusions that add value to political history research.

This research is innately limited due to the restrictions placed upon it by the data. A clear point of expansion for this would be adding more temporal points – expanding from the decade unit to yearly. However, some limitations cannot be overcome due to the cavernous absence of data from 1940-1970 in regards to accurate religious data. Additionally, gathering accurate data for alcohol policies prior to the Minimum Drinking Age Act requires more resources than available to this research at this time. The composite scores cannot be considered fully accurate as the access to previous legislation is difficult to obtain with current resources. This would require extensive archival work for each individual state to ascertain the complete picture of alcohol policies over time. Though archival work was undertaken in order to create the composites, it cannot be considered fully comprehensive due to the presence of ‘varied’ alcohol policies. The ‘other’ category in the composition of the composite was meant to encapsulate more unique laws intended to prohibit access to alcohol – largely used for laws from Utah. However, there are ‘other’ laws that may have existed in other states that went undocumented

due to their lack of presence in other states. Work in political history research involving quantitative methods is intrinsically limited due to concerns for reliable data. Attempting to measure the impact of change over time requires more data than frequently is available. It was fortunate that the United States Decennial Census on Religious Bodies exists for even four numerations, otherwise such research would be rendered impossible. Another limitation from the data comes in the form of measuring support for Prohibition and temperance. Though using religiosity as a proxy variable functions as a good measure to gauge support for the 18th amendment, it would be more accurate to gather data surrounding temperance organizations in the states. Moreover, the decennial structure of the data is limiting, condensing numerous times points into one generates losses in detail and nuance.

Points of expansion arise from the limitations of this paper. It is unlikely that more religious data will crop up that will be more reliable than the data used in this paper for the religiosity variable. However it may be possible to project levels of religiosity based on other data from the time to create the 1940-1970 variables. The alcohol composite can also be refined. With time, measuring the impact of historic religiosity on post-pandemic alcohol policies would also add further clarity to the strength of the relationship.

Despite this cavity of religious and policy data, it does seem possible to draw meaningful conclusions about the relationship between alcohol policy and the American Temperance movement. The data has shown that there is a clear relationship between historic levels of religiosity as defined by this paper in a given state do explain variance in the alcohol policy composite scores. States with higher rates of religiosity correspond to higher alcohol composite scores in all decades. That is, the religiosity of 1926 highly relates to what alcohol policy is in

2020 at pre-pandemic levels. Knowing the history behind Prohibition and the theoretical foundations of path dependency does make these conclusions appear obvious.

Deeper implications from this paper may not be obvious upon first glance. From the data analysis it is clear that there is a relationship between historical levels of religiosity and modern alcohol laws. As the historical levels of religiosity were used as a proxy for Prohibition as supported by the literature, the effects of a bygone social movement can still be clearly felt in modern institutions. Modern factors such as religiosity, or partisanship, do not show strong relationships to modern laws. Though alcohol laws and legislation may not be considered the most salient of policies which people may be concerned with, tracing policy through its lifetime to its roots can provide context. Beyond that, if one policy can be plainly and quantifiably be traced a hundred years into the past, it supports how other political sentiments stubbornly remain entrenched in our institutions. Policies, political attitudes, institution none are free from the power of the past – for they exist due to the past. History has a prevailing, lasting impact on the modern era which can be illustrated through policy and the power paradigms that persist within our society.

History can often be regulated to that, the past and irrelevant, however the weight of the past can be observed in the above data. Modern policies are clearly impacted by the religious attitudes of the past. It can be taken, from this conclusion, that there are other elements of our institutions which hold the weight of their history. Events from a hundred years in the past still have resounding impacts, social movements that started two hundred years in the past do impact the cultural reality of our present. Once policy becomes institutionalized, even for a brief time, it is incredibly difficult to fully excise the impact of that policy.

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