

American Governors and the Incarceration Epidemic

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I. Introduction

Throughout the latter part of the twentieth century the United States of America has experienced an incredible boom in the rate of incarceration of its citizens. This increase arguably began in the 1960's when the Nixon administration oversaw the beginning of the war on drugs in America. The U.S. now has one of the highest rates of incarceration amongst industrialized nations. The increase in incarceration has not impacted all groups of society equally. Citizens who have been incarcerated on drug charges have disproportionately been African American or other racial minorities, even though many studies have concluded that drug use is fairly equal amongst racial groups. In order to remedy this situation it is essential to first understand what causes and has caused rising incarceration rates.

In this research I explore gubernatorial rhetoric as a potential explanation for the epidemic of mass incarceration in the United States. Using SAS® Enterprise Content Categorization, SAS® Text Miner, and SAS® Contextual Analysis I gathered data from the state of the state speeches of governors from all 50 states. I find that gubernatorial rhetoric that is tough on crime corresponds strongly and consistently to an increase in the incarceration rate in the states.

The political phenomenon that I am trying to understand is how state government employees are affected by the tone that the chief executive of a state uses when discussing crime, and whether the actions of these state employees subsequently lead to higher rates of incarceration. The governor is the top government official in charge of employees of a state, so when this official addresses the state the employees may take the governor's message as an order for how they should do their jobs. While many political

factors may affect legislation and its enforcement, a governor has the ability to set the tone of a state when it comes to policy issues such as crime.

II. Literature Review

In this study I examine the language that the governor of a state uses at the annual (or biennial) state of the state address to see if there is a relationship between crime rhetoric and the subsequent rate of incarceration in that state. My theory is that government employees with the power to make arrests and impact how long an inmate remains incarcerated are influenced by the governor's message.

To demonstrate the increase in incarceration rates throughout the past several decades, I turn to Bruce Western's book "Punishment and Inequality in America" (2006). Western examines incarceration rates in inmates per 100,000 adults in the population from 1925 to 2003. He finds that the rate of incarceration in America was quite steady from 1925 to 1975 (50 years) at around 0.1%. Beginning in 1975, the rate of incarcerated adults rapidly increased, and by 2003 the incarceration rate was roughly 0.7%. While a number smaller than 1% may seem small, it is anything but insignificant. The change in those numbers means that from 1975 to 2003 (28 years) the rate of incarcerated adults grew to be seven times what it was in 1975. To put the United States in context with other developed nations, Western compares US incarceration rates with countries in Western Europe. In 2001, the US incarceration rate was 686 people per 100,000 adults, and the United Kingdom, which had the highest incarceration rate of any Western European country, experienced an incarceration rate of 126 people per 100,000 adults.

Western's numbers are calculated using the rate of incarceration, which negates the potential impact of an increase in population size.

Michael Tonry (1999) endeavored to understand why incarceration rates have increased so dramatically in the United States since the mid-late twentieth century. Tonry examines several potential factors; increased crime rates, public opinion on drugs, increased partisanship in politics, crime as a wedge issue, and a cyclical increase in crime which follows history. He concludes that there has not been a substantial increase in crime. Rather it follows historical patterns and public policy is slow to catch up to the incidence of crime. For example, Tonry argues that the strictest prosecution and policing of the war on drugs began after drug use started to decline. Tonry claims that Americans have fallen into Musto's paradigm- they are not concerned with the effectiveness of anti-drug policies, rather they are most concerned with denouncing drug use. A consequence of Musto's paradigm is the epidemic of mass incarceration. Michael Tonry's research attempts to understand why incarceration rates have been increasing in America, and his conclusion that crime rates have not been a factor further provides more context for my research which examines potential causes for incarceration rates in America.

Another potential explanation for the increased incarceration rates is a change in the demographics of the population of the United States. In his book, Franklin Zimring (2007) evaluates the "Usual Suspects: Imprisonment, Demography, and the Economy," which are three well-known potential causes of incarceration-rate increases in a country. The two age groups which are considered to be at the highest risk for committing crimes are 15-24 years old and 15-29 years old. Zimring examines the shifting age demographics of the United States from 1980 to 2000, and finds that both age groups (15-

24 and 15-29) experienced substantial decreases during the 20 year period. The 15-24 group declined in magnitude by 26% and the 15-29 group declined by 24%. Zimring explains that the smaller shares of the population in the high-risk age groups actually pushed crime rates downward; this affected violent crime only by “a few percent,” but this affected property crime rates by as much as 6%. Even though at the time reports by criminologists such as DiIulio (1996) expected a massive increase in “juvenile super-predators,” the exact opposite turned out to be true, as age demographics instead pushed crime rates downwards.

An increase in drug arrests is often cited as a cause of mass incarceration, particularly since President Nixon officially declared a war on drugs in 1971. In their research, Useem and Piehl (2008) demonstrate that the proportion of inmates imprisoned due to drug charges grew from 6% in 1980 to 21% in 2003. During that period of 23 years, the proportion of drug offenders grew to 3.5 times of what it was in 1980. The implementation of the war on drugs began with the chief executive of the United States, and I argue that it has been carried out at the state level by governors, the chief executives of the states. Since I include rhetoric about crime and drugs in my analysis, the Useem and Piehl study (2008) provides context for my hypothesis that gubernatorial rhetoric regarding crime corresponds to incarceration rates.

Gubernatorial rhetoric has not been a focus for much research concerned with determining the potential cause of increased incarceration rates. However, Unah and Coggins (2013) have conducted a study which examines the potential cause of increased incarceration rates which have persisted in the US for several decades (Unah 2013). Unah and Coggins test eight hypotheses attempting to explain the boom in incarceration and

find that gubernatorial rhetoric during the annual State of the state address has the most significant impact. My research expands upon the theory set forth by Unah and Coggins, in that the data that they used only covered content analysis from State of the state addresses from each state during the period of 2001 to 2004. Given the relationship that they discovered in their research, I will expand upon their findings and test their hypothesis during the years 2001 through 2013 to understand whether this is a sustainable theory.

Moreover, Unah and Coggins (2013) assumed that when the governor speaks, employees are listening. I move beyond that assumption to test via survey methods whether relevant state employees are listening to the state of the state speeches.

In order to claim that gubernatorial rhetoric affects incarceration rates, it is essential to understand how much power the governor of a state wields, and what affects that power. Ferguson (2003) examines the role that the chief executive, the governor of each state, plays in the legislative process. She examines the personal factors of the chief executive, institutional factors such as how much power they have in relation to other branches of government, political factors such as partisanship in government, and the condition of the economy as potential models of gubernatorial success. Ferguson finds that the factors which have the most impact on the efficacy of the chief executive are those over which they have little control such as political climate, institutional dynamics and the state of the economy. If I find that all of those are not in support of the governor when there is high correlation, then perhaps my findings are the result of a significant political or economic event which has occurred. Ferguson's data provides a context in which to understand my results.

All of this research contributes to our understanding of mass incarceration, however none of them but Unah and Coggins (2013) have examined gubernatorial rhetoric as a contributing factor to mass incarceration. I contribute to this gap in the research by expanding upon the findings in the Unah and Coggins (2013) study. I examine a longer time period, 2001-2013, and I implement a survey to test whether or not state employees pay attention to the governor.

III. Theory & Hypotheses

Mass incarceration is a rapidly growing problem that is facing our nation today. I attempt to discover why it has increased dramatically lately by answering the question “does gubernatorial rhetoric have an effect on the rate of incarceration in a state?” I examine the language that the governor of a state uses at the annual (or biennial) state of the state address to see if there is a correlation between crime rhetoric and the subsequent rate of incarceration in that state. My theory is that gubernatorial rhetoric is an important explanatory factor in the mass incarceration boom. This is possible because government employees with the power to make arrests and impact how long an inmate remains incarcerated are influenced by the governor’s message. My theory is based on the study by Unah and Coggins (2013), which found a statistically significant relationship between gubernatorial rhetoric and incarceration rates. In its simplest form, incarceration rate is the dependent variable and gubernatorial rhetoric is the independent variable.

I focus on the state of the state addresses because they occur on a regular and predictable basis, and that consistency makes them ideal for the purpose of this research.

The state of the state address is typically designed to give an overall status update on the condition of the state, which means that if crime is a politically salient issue it should be mentioned in the speech. I think that the governor's rhetoric in the state of the state address has an impact on incarceration rates, but it is also representative of the governor's other communications with their constituents and state employees.

In my examination of this phenomenon, I will focus on gubernatorial rhetoric from 2001 to 2013 as a causal mechanism for increased incarceration rates. I propose that when the governor holds a state of the state address and speaks about crime, the state employees in charge of enforcing and making laws listen. These workers include members of the legislature, judges, prosecutors, police officers, prison officials, and members of parole boards. All of these workers can have an effect, direct or indirect, on how many people are arrested in a state and how long they remain incarcerated.

A governor serves as the head of a state, and she or he has the power to set the tone for the upcoming year regarding crime when addressing it at the state of the state. While the legislature and chief executive are not always from the same political party, I hypothesize that the language a governor uses towards crime (i.e. saying they will be "tough on crime" versus expressing a wish for more rehabilitative measures) sets the tone for the legislative session. The legislature and chief executive must work together to pass legislation (except in the rarer cases where a legislature may override a veto or a governor may issue an executive action) and during this speech the governor clearly outlines her expectations for the legislative session.

When the governor addresses the state, members of various police departments across the state who listen may also be influenced by the governor's words. Individual

police officers have an incredible amount of discretion available to them in deciding whom to arrest and for which charges. If a governor stresses “cracking down” on crime, a police officer may interpret that as an order to patrol more vigorously and subsequently make more arrests. However if a governor speaks about lowering the rate of incarceration and working with individual communities to lower the incidence of crime, a police officer on the street may approach citizens differently in an attempt to follow the orders of the chief executive.

While prison officials and corrections officers do not control who comes in to the prison, they certainly have the ability to affect how long an inmate stays in prison. The supervisors of prisons manage the use of funds and may decide to divide resources evenly amongst education and rehabilitative programs, or they may decide to take a more “tough on crime” approach and devote all or most funds towards prison security. The decisions on how to distribute this money affects inmate attitude, and inmates who do not have the ability to participate in enrichment programs may end up breaking more prison rules because their time is unoccupied and they are frustrated with the situation.

The enforcement of the rules is also dictated by prison officials. If an inmate possesses contraband (as set by prison officials), corrections officers and their supervisors have the ability to enforce the rules and add time on to an inmate’s prison sentence. Thus, a prison official has tremendous power over how many people are incarcerated, and the duration of their incarceration. That official’s decisions do not occur in a social vacuum, and I argue that the decision is, in part, influenced by the tone set by the governor so that the official’s actions will fall in line with the actions of other officials

Members of parole boards have the final say in whether or not an inmate is released when they are eligible for parole. Parole boards have virtually unchecked power to decide whether or not prisoners must serve out the end of their sentence in physical custody of the state or on probation. Due to the amount of discretion available to them, if the parole boards are influenced by the climate the governor has set towards crime, the amount of prisoners who are released from jail can fluctuate dramatically.

The governor has influential power and the state of the state address is an opportunity for the governor to address the entire state with a coherent message. The governor's message may affect how crime is approached by the people of the state, and many of those people are involved in criminal corrections decisions. When the people who have the power to influence how criminal activity is enforced hear a strong message on crime from the governor, incarceration rates are affected.

The Tough Tone Hypothesis (Hypothesis 1): If a governor's tone in the state of the state address is tough on crime then the rate of incarceration will subsequently increase.

The Soft Tone Hypothesis (Hypothesis 2): If a governor's tone in the state of the state address is soft on crime then incarceration rates will subsequently decrease.

The Centrality Hypothesis (Hypothesis 3): If a governor devotes a substantial amount of the state of the state address to discussing the issue of crime, incarceration rates will increase.

The Aggressiveness Hypothesis (Hypothesis 4): The more aggressive a governor's tough on crime rhetoric, the more incarceration rates will increase.

The Expectancy Violation Hypothesis (Hypothesis 5): Incarceration rates will respond differently to tough on crime rhetoric from a Republican than from a Democratic governor.

IV. Are State Employees Paying Attention to Governors?

My hypothesis that the governor's rhetoric in the state of the state address influences incarceration rates rests upon the assumption that state employees are listening to the state of the state speech. In order to examine this assumption, I conducted a survey of North Carolina state officials from five job categories: prison wardens, police chiefs, parole board members, magistrates, and district attorneys, asking them about their attendance of and attention to the state of the state address. I selected these categories because they represent state employees that have influence over the criminal justice process.

Prison wardens can toughen or relax rule enforcement in their prison, which impacts a prisoner's behavioral and criminal record and in turn affects their eligibility for release. A prison warden could also increase or decrease funding toward rehabilitative and educational programs at the prison, which affect recidivism rates. Police chiefs can direct their officers to crack down on criminal activity and increase arrest rates, or they could encourage officers to get involved with the community and focus on crime prevention rather than punishment. Parole board members have direct involvement with the incarceration rate in a state, as they have authority over whether or not a prisoner can

be paroled. Magistrates are often the first member of the judiciary to become involved in criminal cases, as they have the power to issue warrants for arrest and set bail. A magistrate could take a more lenient approach and issue fewer warrants and lower bail, or they could take a tougher stance and issue more warrants and set higher bails. For this study I wanted to include both judges and magistrates, however the email addresses of judges in North Carolina are not publicly available, and I was not able to obtain access to them from the Administrative Office of the Courts. District attorneys are in charge of all prosecution in a judicial district and as such they have influence over the toughness of sentences sought, and the amount of plea deals they are willing to negotiate.

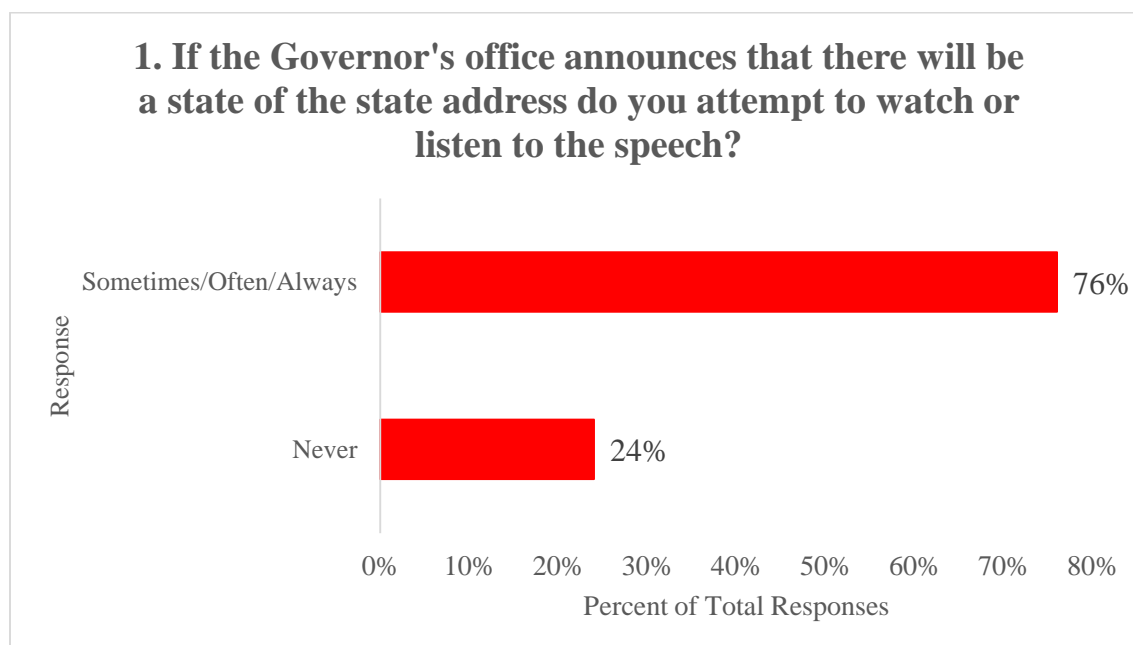
The Survey

I received approval for an online survey from the Institutional Review Board at the University of North Carolina at Chapel Hill, IRB #15-0206. I collected the email addresses of these public officials from publicly available employee contact databases hosted by the State of North Carolina. I sent the online survey administered by Qualtrics to 985 potential participants and received 241 completed responses, for a participation rate of 25%. The survey contained 10 questions, which were aimed at understanding if and why state employees pay attention to the governor. See Appendix A for the questionnaire. I sent a total of four emails to the potential respondents; an initial email asking them to take the survey and three follow up reminders. Each of the emails were spaced about one week apart, the highest response rate was recorded after the final email reminder was sent.

The responses to the survey expose the complexity of how state employees listen to the governor's message. Figure 1 shows the response to the survey question "if the

governor's office announces that there will be a state of the state speech do you attempt to watch or listen to the speech?" Over three quarters of respondents (76%) answered that they do attempt to watch or listen to the speech, and about one quarter (24%) said that they never attempt to do so. This overwhelming majority suggests that state employees do listen to the governor's speech, however the responses to the question in Figure 2 show a different phenomenon. In response to the question "did you watch or listen to the state of the state address the last time that the governor delivered the state address?" over three quarters of respondents answered no, and one quarter answered yes.

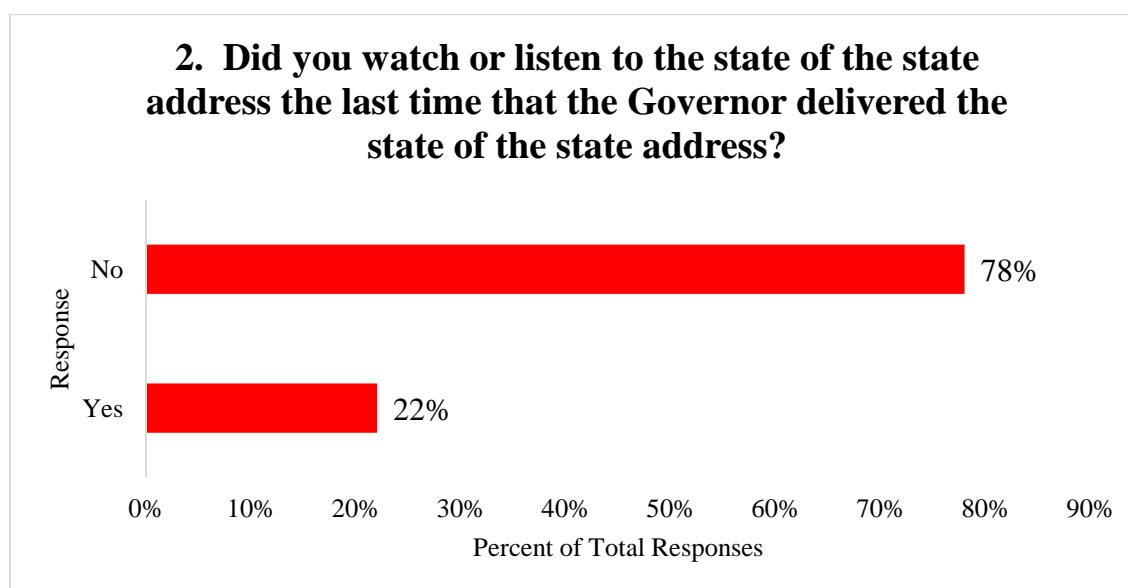
Figure 1- Responses to survey question 1



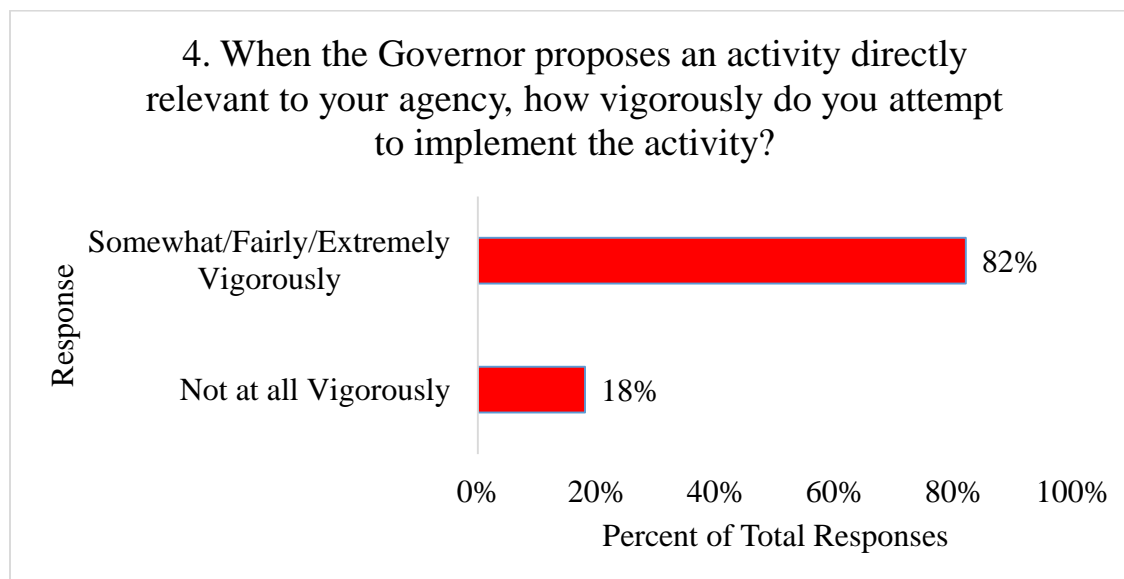
Somewhat surprisingly, the responses to questions one and two are flipped. This could be explained in several ways, one potential explanation is that the state employees do not actually pay attention to the governor and the responses to question one are the

result of the social desirability effect. The effect could cause respondents to indicate that they do attempt to listen to the speech in question one, even if they do not, because that is the more socially desirable choice. When those same respondents get to question two they are faced with two possible responses, and the socially desirable answer would force them to more directly lie.

Figure 2- Responses to survey question 2



Another possible explanation is that state employees do listen to the state of the state address, but that they had not yet watched or listened to it by the time they took the survey. I first sent out the survey on February 20th 2015, less than 3 weeks after the state of the state address on February 4th 2015. It is possible that some of the 78% of respondents who did not listen to the speech will listen to it or listened after they responded to the survey.

Figure 3- Responses to survey question 4

Additionally, this survey does not account for the possibility that a state employee may pay attention to governor's message via other methods such as press releases, policy memos, direct quotes in news reports, social media posts, or special television programming focused on the speech. The responses to question 4, which are in Figure 3, demonstrate that 82% of respondents attempt to implement the governor's policy proposals. This question does not specifically ask about policy proposals in the state of the state address, so the responses are more representative of how state employees interact with the governor's message more generally. Given the range of possible explanations it seems likely that state employees do in fact listen to the governor's message. They may not receive the message directly from the state of the state address, but it seems that they do pay attention to the governor's message.

Figure 4- Responses to survey question 9

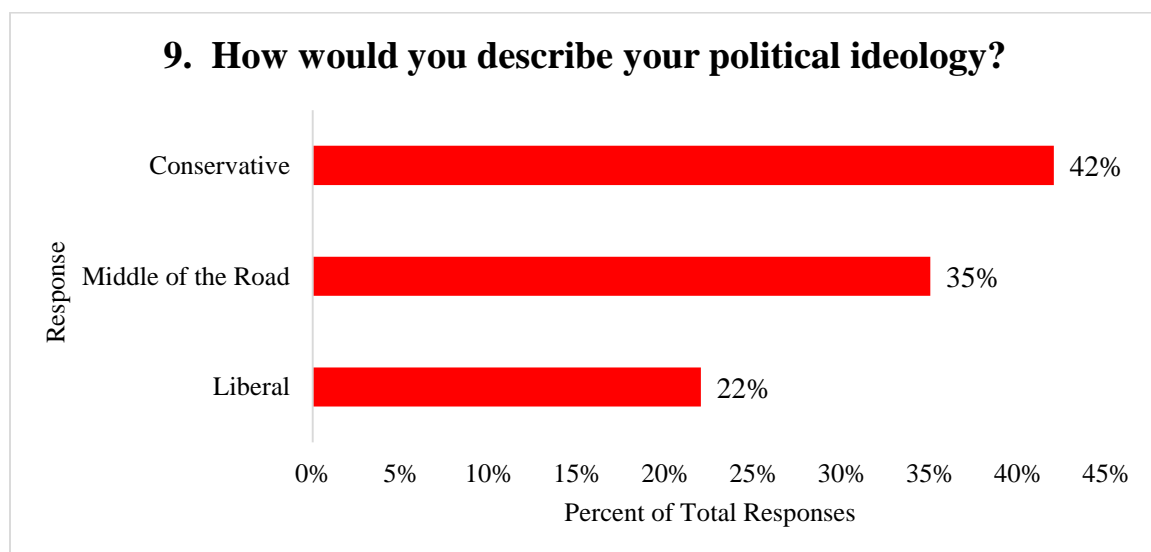


Figure 4 shows the self-reported political ideologies of the respondents, which are skewed towards conservative. This is reassuring because it is consistent with the overall politics of North Carolina. There was a significant amount of respondents who selected “middle of the road,” which could be the result of a general reluctance amongst the population to admit bias in one direction or another. It could also reflect a general sense amongst state officials, particularly in the judiciary, that neutrality is a key responsibility of their job.

Summary

The responses in the survey suggest that state employees do listen to the governor’s policy message and will willingly implement the policy proposals the governor makes. These findings provide some clarity on the causal mechanism of my theory that state officials listen to the governor and adjust their actions to reflect the governor’s message. Overall, this gives suggestive support for my hypothesis that gubernatorial rhetoric affects incarceration rates in a state.

To further develop this survey as a tool I would like to do it again for employees of each state. This would allow me to get a fuller understanding of how state employees interact with the state of the state address. If I had this data for each state, I could add state employee attendance rates as a variable in my overall dataset and use it as a predictor for incarceration rates. Additionally, it would serve the purpose of this thesis to include all state judges- district court, superior court, and supreme court, rather than just magistrates. While magistrates do have power and influence in the criminal justice system, a dataset with all types of judges as respondents would be more robust.

V. Methods

Dependent Variable Selection

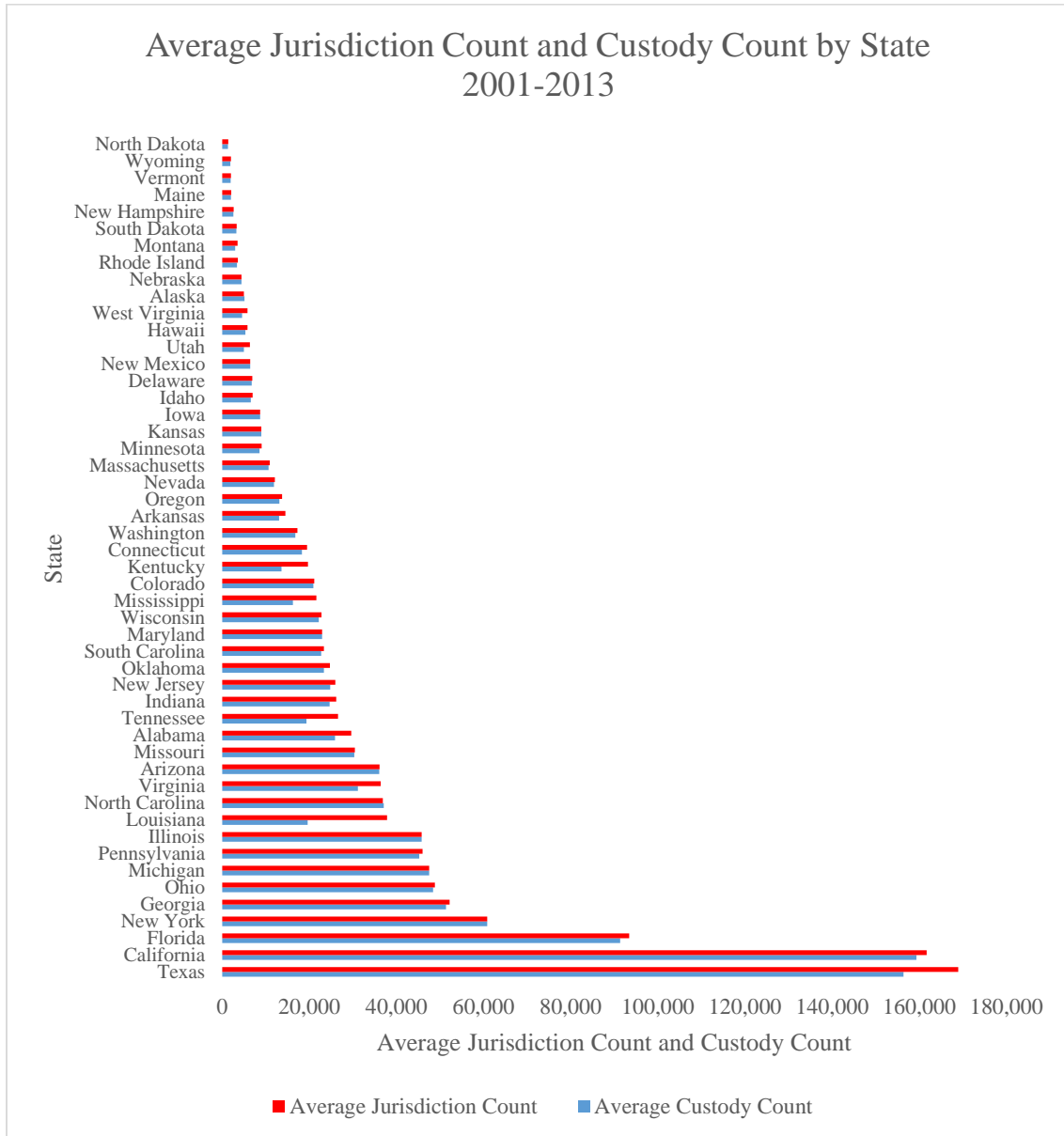
The dependent variable I examined is the incarceration rate of each state from 2001 to 2013, however there are several different metrics to measure incarceration rate. The two main forms of the dependent variable are custody rate and jurisdiction rate. The data are recorded at yearend by the Bureau of Justice Statistics and reported in the Corrections Statistical Analysis Tool. Calculation descriptions of all variables are available in Appendix C.

Jurisdiction numbers are almost always higher than custody numbers because they represent the entire population of inmates over which the state corrections agency has authority, regardless of their physical location inside or outside the state. In contrast, “custody [numbers] include all inmates held within a state's facilities, including inmates

housed for other states. The custody [numbers] exclude inmates held in local jails and in other jurisdictions” (Bonczar 2015).

I analyze the jurisdiction and custody variables for this project, but based on the two major differences between custody and jurisdiction, it seems that custody is more relevant to the purpose of this project. The first difference between the variables, that custody excludes prisoners who are housed in facilities out of state, impacts the political salience and consequences of incarceration. If prisoners are sent to other states for incarceration, issues of overcrowding and money invested in the prison system are not as much of a pressing concern to the public since they are less visible. Governors typically address the most relevant political topics in the state of the state address and since I am interested in the political consequences of incarceration, custody numbers are more relevant. The second difference in the variables, that custody excludes inmates housed in local jails, suggests that custody numbers only include people sentenced to a prison term greater than one year. Typically sentences of less than one year are served in local jail facilities. By focusing on custody numbers, I restrict my data set to more severe convictions, which are more salient for public concerns.

Figure 5- Average jurisdiction counts and custody counts by state

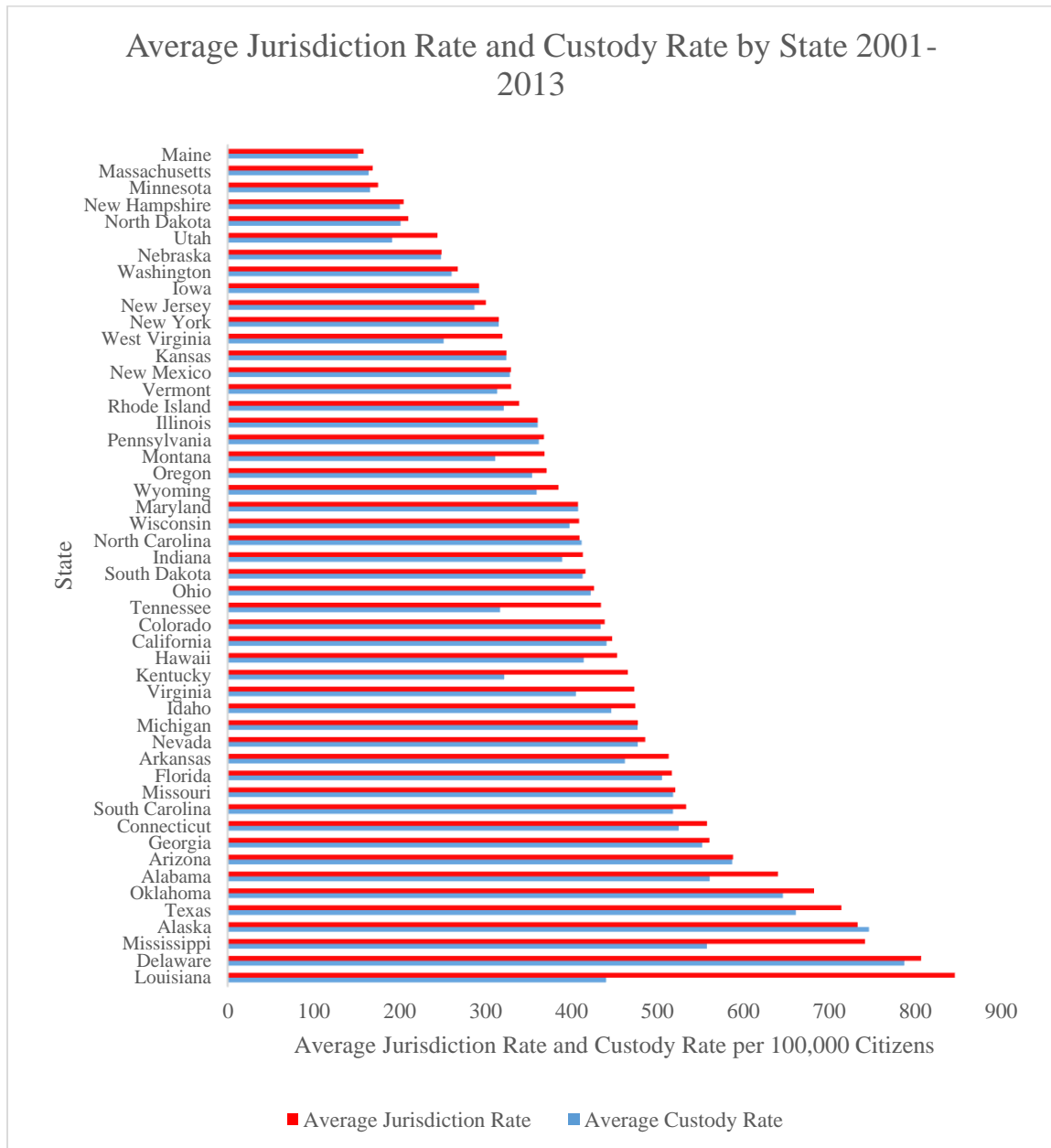


I am least interested in custody count and jurisdiction count because they do not account for the population of a state, which misrepresents incarceration data and skews it towards bigger states. Figure 5 shows that Texas, California, and Florida have the highest average jurisdiction and custody counts from 2001-2013, but those are some of the

largest states in the union. Figure 6 adjusts those counts for population size, and shows that Louisiana, Delaware, and Mississippi have the highest jurisdiction and custody rates.

Louisiana has the highest jurisdiction rate out of all of the states, but it is tenth in jurisdiction count. From 2001 to 2013, Louisiana had on average jurisdiction over 845 prisoners per 100,000 citizens, which is much higher than the mean of 432 per 100,000 for all states. During the same period, Louisiana had on average jurisdiction over 37,865 total prisoners, which is still higher than the mean of all states of 27,016. However, this number pales in comparison to Texas' average jurisdiction count of 168,944, but Texas is much larger than Louisiana. Another similar case is Delaware which had the second highest average jurisdiction rate of 805 per 100,000 citizens, but the 36th highest jurisdiction count of 6,923 prisoners because it is a small state. If I used plain jurisdiction or custody count as my dependent variable, I would not get an accurate understanding of the level of incarceration in a state.

Figure 6- Average jurisdiction rates and custody rates by state



Although custody count change and jurisdiction count change are based on the less reliable counts, they are acceptable because they deal with proportions. Each variable represents the percent change in count from the last year to the current year. By converting these variables to rates, they are viable to be used as dependent variables for robustness checks.

Independent Variable Selection

My main independent variable of interest, gubernatorial rhetoric on crime, is not as easily quantifiable as is incarceration rate. In order to capture and analyze the rhetoric, I used SAS® text analytics software to examine and code each paragraph of every speech as either tough or soft on crime. I used a combination of SAS® Text Miner (TM) and SAS® Contextual Analysis (SCA) to explore the data, and SAS® Enterprise Content Categorization (ECC) to score the speeches. The final text analysis model was created in collaboration with Teresa Jade, David Bultman, and Michael Wallis, developers at SAS Institute who focus specifically on text analytics.

I collected all of the speeches I used from Stateline.org, a Pew Charitable Trust. In total I had 626 speeches which covered the years 2001-2014, every state does not require a state of the state address each year. For example, it is convention in North Carolina for the governor to hold a state of the state address in odd-numbered years even though the NC Constitution only requires that “the Governor shall from time to time give the General Assembly information of the affairs of the State and recommend to their consideration such measures as he shall deem expedient” (Art 2, § 5). I used the text analysis model to analyze the 41 speeches from 2014, but they are not included in my analysis because the incarceration data has not yet been published.

Figure 7- SAS Contextual Analysis process overview (from SCA User's Guide)

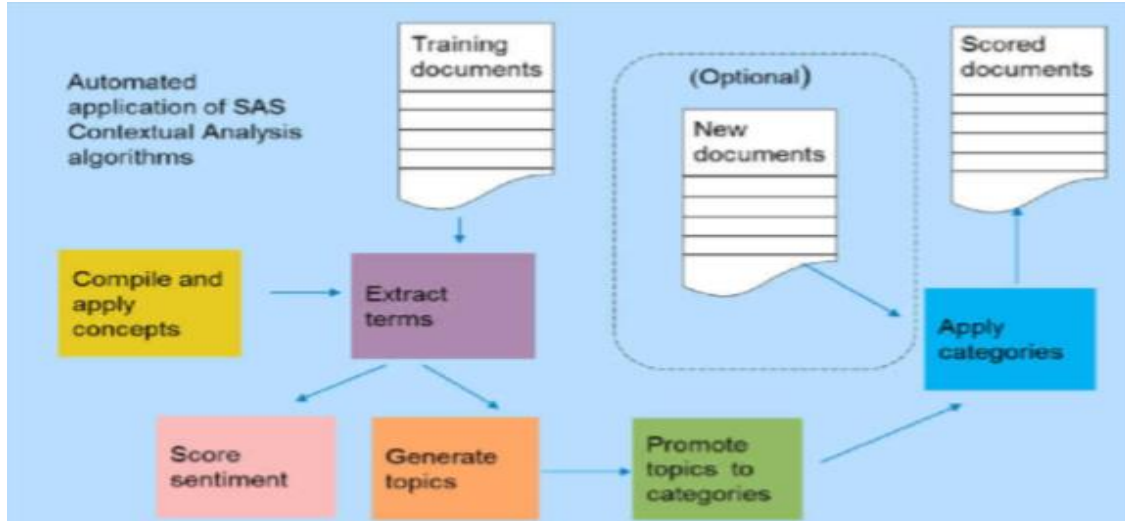
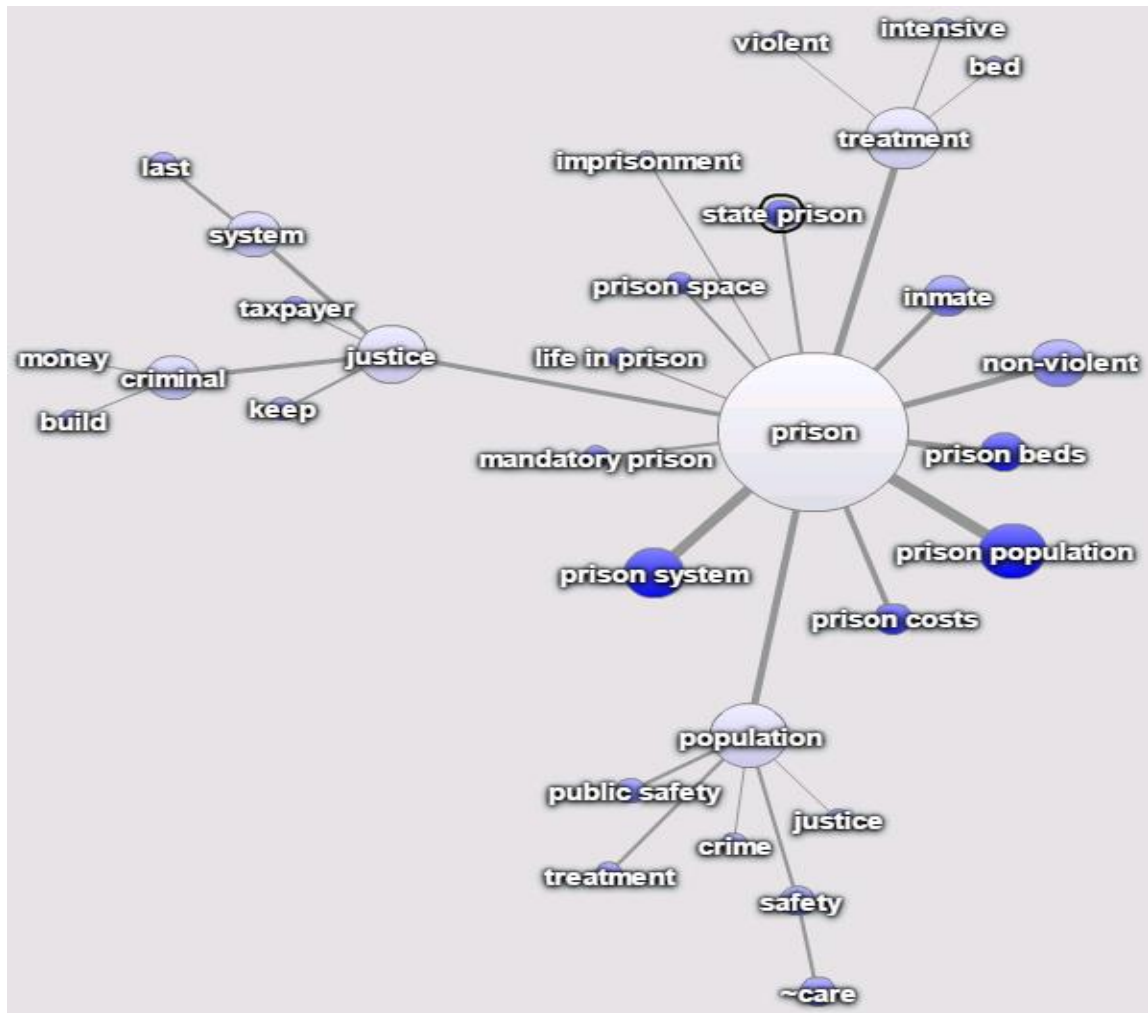


Figure 7 shows the process overview of SAS Contextual Analysis, which starts by using training documents, which are all of the speeches for this project, to extract terms and generate topics (SAS 2014). During the word extraction process, SCA excludes words it deems not valuable to the analysis such as articles, conjunctions, and other insignificant terms. SCA “combines the machine-learning capabilities of SAS Text Miner with the rules-based linguistic methods of categorization and extraction in SAS Enterprise Content Categorization” (SAS 2014).

Figure 8- Prison term map (from SCA)



For this project, I used SCA to extract terms and generate topics to get a sense of the kind of rhetoric governors use, particularly about crime, in their speeches. Many of the generated topics were not about crime, the most popular topics were medicare, education, and social security. For the few automatically generated crime concepts, like recidivism and prison, I created term maps to explore the connections between other commonly used terms. In a term map, the color of a circle indicates the conditional probability that it is found in a document given that the parent term exists. Dark circles designate a high probability and light circles designate a low probability. The size of the

circle indicates the number of documents which contain that term in relation to its node, a large circle represents a high observation count.

Figure 8 shows the term map of the node “prison.” The prison term map reveals that the terms most commonly used in conjunction with prison are prison population, prison system, and non-violent. The expanded branches of the term justice indicates that when governors talk about justice in relation to prison, they are often talking about criminals and money. This helped me piece together the rules for the text analysis program, because it allowed me to understand the connections between the words governors use to describe crime.

Figure 9- Recidivism term map

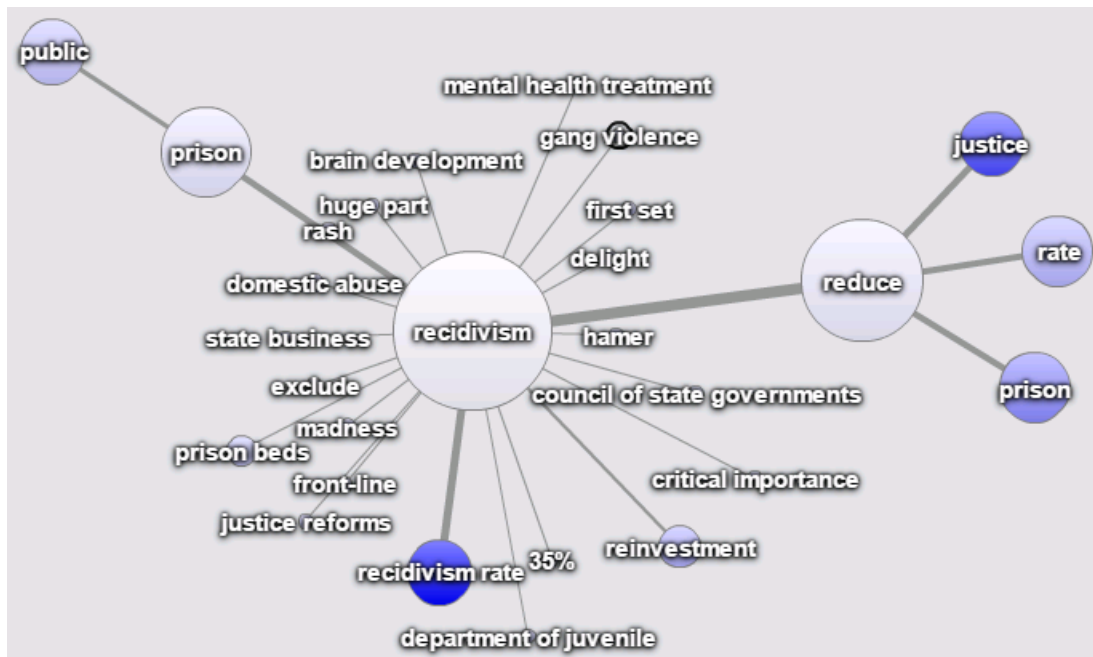


Figure 9 shows the term map for recidivism, which has many related terms. One of the biggest patterns that this term map uncovers is the tendency for governors to talk

about reducing the rate when they talk about recidivism. It is also likely that a governor is talking about reinvestment or gang violence in the context of recidivism. Many of the terms directly connected to recidivism suggest a sense of prevention and reduction, which is not a “tough on crime” concept. As a result, I classified recidivism as a concept in the soft on crime category. I was able to repeat this process for all of the crime topics automatically generated by SCA, which vastly improved my understanding of the data.

I used SAS Text Miner in a similar data exploration process to make informed decisions about my rules for the text analysis. I used SAS Enterprise Content Categorization for the actual building of the model because it allowed me to create more detailed custom rules and topics. Since I was specifically looking for crime language, SCA was not a good choice to build the model because there were not many significant automatically generated crime topics for all of the speeches. SCA would have been a more appropriate model building tool if my goal was to understand the most common themes and concepts of the speeches, rather than to have a complex understanding of one topic. SAS Enterprise Content Categorization is a software program that is “designed to develop and deploy categorization and extraction rules to classify unstructured content” (SAS 2013). The model for this project is based off of a user-created hierarchy of rules, concepts, classifiers, and match strings that are specific to this project.

When defining what counts as tough and soft, my approach was to base it on whether or not the ultimate goal of the text was to increase incarceration by increasing sentence length or arresting more people. If so, it counts as tough, but if it is about decreasing sentences and prison populations or encouraging rehabilitation then it is soft on crime. This is designed to represent the two main approaches governors often take

towards crime- punitive or correctional. For example, I chose to put drug court in the soft category because even though it is a court that can and does dole out prison sentences, the main focus of the program is treatment and rehabilitation in lieu of imprisonment. Words like “crack down,” however, are in the tough category because they indicate a governor’s intention to more aggressively fight and punish crime.

To create my model I created different sets of rules to classify whether a piece of text is tough or soft on crime. A detailed list of the concepts which comprise the rules is in Appendix B. The first rule, Crime Words, indicates whether text is about crime, regardless of the tone. A subset of the Crime Words rule is Tough Words, which when found in the context of Crime Words indicates the text is tough on crime. Tough Words must be found within a distance of sixteen tokens from Crime Words. In this case, a token represents a break on white space in a text. Another subset of Crime Words is Soft Words, which operates in the same manner as Tough Words, but it indicates whether a text is soft on crime.

Next, there is the “Tough On” rule and the “Soft On” rule, which label each paragraph as either tough on crime, soft on crime, or neither. The Tough On rule is Crime Words plus Tough Words and stand-alone terms. The stand-alone terms are words such as “sexual predator” or “terrorism” that always indicate a tough on crime stance, regardless of the surrounding words. The Soft On rule operates in the same manner as Tough On, but the standalone terms are words like “reform the justice system” and “rehabilitative sentences.”

Using the Tough On rule and the Soft On rule, each paragraph is deemed by the model to be tough, soft, or neither. In the few cases where a paragraph was matched to

both tough and soft terms, I read it and decided which label was most appropriate. From this label, I was able to create a variable indicating the proportion of the speech that is tough on crime. This is calculated by the number of tough paragraphs divided by the total number of paragraphs in a speech. I also created variables for soft proportion, and crime proportion which are calculated in the same manner.

Each of the paragraphs labeled tough on crime has a corresponding tough match string. This match string is the specific concept of the rule that the text contains. For each tough match string, Dr. Isaac Unah and I ranked its level of aggressiveness on crime. Dr. Unah and I made the rankings together and compared any differences in our rankings in an attempt to create rank consistency across match strings. For each match string, we read a sample of the concordance of the observations to determine if there was a pattern to the aggressiveness of the rhetoric. We ranked the aggressiveness on a scale of 1 through 5, with 5 being the most aggressive. The numerical ranking of each match string is contained in Appendix D.

We measured aggressiveness based on level of imminence of the sentiment. This is based on the legal doctrine on speech announced in *Schenck vs. United States*. *Schenck* is a Supreme Court case in which a standard of “clear and present danger” was set for government interference in free speech when the evil in the speech is imminent (1918). While this is applied to a different context, it is the same concept. For example, according to our rankings “bomb threat” is less imminent and thus less aggressive than “bombing.” Additionally, if a governor talks about sexual crimes or crimes against children it is pretty tough because of the implications. Once we ranked each of these match strings, we took the highest one for each paragraph and summed the total of all paragraphs in a speech for

the aggressiveness variable. For example, if a speech has two paragraphs that are tough on crime, one with a match and rank 1, and another with two matches of rank 5 and 3, the total for the speech would be 6.

There are many well-documented factors which affect incarceration rates, so I included some of the most relevant variables in my dataset to improve the explanatory power of my models. One of these such variables is the region of the country where each state is located. I coded this variable as a dummy South or non-South since that is where there is the most variation between regions in punishment politics. To measure the political ideology of the governor, I added to the dataset the governor's political party affiliation. This gives a sense of the political leaning of the state at the time of the speech, and it also allows us to examine any link between crime rhetoric, incarceration, and the political party identification of the governor. As an indicator of demographics of a state, I added a variable for the percent of a state's Black population since Black citizens are incarcerated at a higher rate than white citizens (Yates and Fording 2005). I retrieved this information from the Statistical Abstract of the United States (Bureau of Census 2013 & 2014). Finally, I included a variable for the interaction between South and percent Black, since the Black population in the US is highly concentrated in the South.

VI. Data & Results

Regression Models

To determine if there is a statistically significant relationship between gubernatorial rhetoric and incarceration rates, I use the Generalized Least Squares

Regression technique to estimate the parameters of several models. Since the data is sorted by state and year, I treat it as panel data to do a cross sectional time series analysis. There is a lag of almost one year built in to the data because the state of the state is given at the beginning of the year and the incarceration information is recorded at yearend.

Table A- Regression model on state corrections custody rate by governor's political party

Explaining State Corrections Custody Rate by Governor PID, 2001-2013			
	All Governors	Republican Governor	Democratic Governor
Variable	Model 1	Model 2	Model 3
Governor PID	14.42*** (4.53)		
Tough Proportion	295.48** (144.57)	-8.67 (332.11)	537.32*** (205.86)
Soft Proportion	93.52 (336.59)	470.77 (388.54)	-226.83 (441.14)
South	69.77*** (3.60)	113.36*** (12.39)	38.70*** (15.19)
Percent Black	4.03*** (0.40)	1.53*** (0.60)	6.05*** (0.67)
Constant	327.26*** (6.60)	357.92*** (9.50)	303.52*** (4.40)
Clustered by year, calculated with robust standard error.	Sample size = 648 Wald Chi Sq.= 5193; P<.0001 R ² =0.2183	Sample size = 338 Wald Chi Sq.= 298; P<.0001 R ² =0.2120	Sample size = 302 Wald Chi Sq.= 2573; P<.0001 R ² =0.2298

*p<.1 or better, **p<.05 or better, ***p<.01 or better

I determined that model 1, shown in Table A, is the best model. It includes all of the independent variables and has an R² of 22%. I used robust standard error for this model to make it more resilient to a change in the variables. This improves the reliability of the model. I use custody rate as the dependent variable because rate is a widely

accepted method of measuring incarceration, and as I previously described custody is more ideal than jurisdiction in this context.

In model 1, the governor's political party identification, the tough proportion of the speech, South vs non-South, percent of Black citizens, and the constant are all statistically significant. The only independent variable that is not significant is the proportion of the speech that is soft on crime. This model suggests that for every 1% increase in the proportion of speech that is tough on crime, the custody rate increases by 295 inmates per 100,000 citizens, holding all other variables constant. Thus, the value for this parameter is consistent with hypothesis 1. Model 1 also suggests that a state in the South has a custody rate of 70 inmates per 100,000 citizens higher than states outside the South, and that for every 1% increase in the population of Black citizens in a state, custody rate increases by 4 inmates per 100,000 citizens. Finally, the model suggests that if all of the independent variables in the model are valued at 0, the custody rate will be 327 inmates per 100,000 citizens.

Models 2 and 3 are variations of model 1; model 2 is specific to Republican governors and model 3 is specific to Democratic governors. Compared to model 1, model 2 is no longer significant for tough proportion and model 3 is more significant, with a higher coefficient. This means that the significance of tough proportion in model 1 was because of the Democratic governors. The interpretation of this finding is that when a Democratic governor is tough on crime, the custody rate increases by 537 inmates per 100,000 citizens for every 1% increase in tough on crime rhetoric, but when a Republican governor is tough on crime the custody rate is not affected. I believe this to be the result of political expectations; Republicans are expected to use a tough on crime narrative so

when they do, nothing changes because it is normal and expected. Democratic governors are not generally expected to employ a tough on crime narrative, so when they do people listen. It is also possible that Democratic governors use tough on crime rhetoric in response to a highly salient event, like a violent tragedy, and that could also contribute to the increase in incarceration.

Table B- Regression model on state corrections jurisdiction rate by governor's political party

Explaining State Corrections Jurisdiction Rate by Governor PID, 2001-2013			
	All Governors	Republican Governors	Democratic Governors
Variable	Model 4	Model 5	Model 6
Governor PID	16.56*** (5.15)		
Tough Proportion	194.84 (135.89)	1.09 (242.32)	372.96* (200.69)
Soft Proportion	-103.84 (376.00)	178.63 (478.21)	-352.85 (470.69)
South	116.76*** (6.46)	142.64*** (11.53)	97.24*** (19.00)
Percent Black	5.45*** (0.46)		
Percent Black Centered		4.23*** (0.43)	6.10*** (1.02)
Constant	333.95*** (6.30)	402.06*** (9.16)	382.67*** (8.66)
Clustered by year, calculated with robust standard error.	Sample size = 648 Wald Chi Sq.= 31710; P<.0001 R ² =0.3720	Sample size = 338 Wald Chi Sq.= 674; P<.0001 R ² =0.3845	Sample size = 302 Wald Chi Sq.= 360; P<.0001 R ² =0.3383

*p<.1 or better, **p<.05 or better, ***p<.01 or better

Table B shows models 4, 5, and 6, which are almost identical to models 1, 2, and 3, but with jurisdiction rate as the dependent variable. For models 5 and 6 I included the variable percent Black centered to test whether or not the centering of this variable would

have an effect. The percent Black and percent Black centered variables were consistent with each other, so I concluded that percent Black is reliable as an indicator on its own. The findings are similar to those of models 1, 2, and 3, but tough proportion is not significant in model 4, and it is less significant in model 6. This suggests that custody rate is a more reasonable metric than jurisdiction rate for explaining incarceration numbers by gubernatorial rhetoric. Models 5 and 6 show the same relationship to governor party affiliation as models 2 and 3, which supports hypothesis 5.

Table C- Regression model on state corrections jurisdiction rate change

Model 7: Explaining State Corrections Jurisdiction Rate Change, 2001-2013			
Variable	Coefficient	S.E.	Z value
Tough Proportion	0.0994**	0.0464	2.14
Soft Proportion	-0.0651	0.0753	-0.86
Governor PID	-0.0001	0.0019	-0.09
South	0.0078	0.0053	1.47
Percent Black	-0.0015***	0.0004	-3.35
Black & South Interaction	0.0007*	0.0004	1.76
Constant	0.0134**	0.0056	2.4
Clustered by year, calculated with robust standard error.	Sample size = 648 Wald Chi Sq.= 23; P<.0007 R ² =0.0487		

*p<.1 or better, **p<.05 or better, ***p<.01 or better

Model 7, in Table C, is a variation of model 1 with jurisdiction rate change as the dependent variable and Black & south interaction added as in independent variable. Tough proportion is still significant, which supports hypothesis 1. Compared to model 1, south is no longer significant in model 7 which suggests that there is a difference in behavior of states that are in the South and non-South. The behavior of the percent Black variable is contingent on whether we are talking about a Southern or non-Southern state,

so the region matters. Percent Black is a complex variable, just because there are more Black people in a state does not mean that there will be a higher incarceration rate, it depends on if the state is in the South.

Table D- Regression model on state corrections custody rate change

Explaining State Corrections Custody Rate Change, 2001-2013		
Variable	Model 8	Model 9
Tough Proportion	0.1405*** (0.0423)	0.1035*** (0.0412)
Soft Proportion	-0.0131 (0.0578)	0.0072 (0.0497)
Governor PID	0.0015 (0.0016)	0.0017 (0.0016)
South	0.0016 (0.0052)	0.0099*** (0.0041)
Percent Black	-0.0016*** (0.0005)	-0.001*** (0.0003)
Black & South Interaction	0.0008* (0.0005)	
Constant	0.0135** (0.0061)	0.0109** (0.0052)
Clustered by year, calculated with robust standard error.	Sample size = 648 Wald Chi Sq.= 33; P<.0001 R ² =0.0427	Sample size = 648 Wald Chi Sq.= 31; P<.0001 R ² =0.0387

*p<.1 or better, **p<.05 or better, ***p<.01 or better

Models 8 and 9 in Table D are variations of model 1 with custody rate change as a dependent variable and with the Black & South interaction variable added to model 9. Both models 8 and 9 show higher significance for tough proportion than model 1, but governor party identification is no longer significant in model 8 or 9. Since I

demonstrated with models 2, 3, 5, and 6 that governor party identification is significant, I conclude that custody rate change is not as good of a dependent variable as custody rate for this topic. When Black & South interaction is removed from model 8, the results are in model 9; percent Black and now has a negative coefficient and South is more significant. This is consistent with the finding in model 7.

Table E- Regression model on state corrections jurisdiction count change

Explaining State Corrections Jurisdiction Count Change, 2001-2013		
Variable	Model 10	Model 11
Tough Proportion	0.1025** (0.0470)	0.0835* (0.0449)
Soft Proportion	-0.0665 (0.0717)	-0.0598 (0.0678)
Governor PID	0.0006 (0.0018)	0.0011 (0.00181)
South	0.0072 (0.0051)	0.0198*** (0.0037)
Percent Black	-0.0020*** (0.0004)	-0.0013*** (0.0003)
Black & South Interaction	***0.0012 (0.0003)	
Constant	***0.0246 (0.0054)	0.0204*** (0.0050)
Clustered by year, calculated with robust standard error.	Sample size = 338 Wald Chi Sq.= 298; P<.0001 R ² =0.2120	Sample size = 302 Wald Chi Sq.= 2573; P<.0001 R ² =0.2298

*p<.1 or better, **p<.05 or better, ***p<.01 or better

Models 10 and 11 in Table E have the same independent variables as models 8 and 9, but now jurisdiction rate change is the dependent variable. The only difference in results from models 8 and 9 is that tough proportion is no longer significant at the p<.01 level, rather it is now significant at the p<.05 for model 10 p<.1 level for model 11. This

loss in significance indicates that custody rate change is more reasonable than jurisdiction count change among as a dependent variable, which is consistent with my earlier conjecture that custody is more reasonable than jurisdiction and that rate is more appropriate than count for this project.

Table F- Regression model on state corrections custody count change

Explaining State Corrections Custody Count Change, 2001-2013		
Variable	Model 12	Model 13
Tough Proportion	0.1467*** (0.0415)	0.1147*** (0.0407)
Soft Proportion	-0.0215 (0.0557)	-0.0046 (0.05)
Governor PID	0.0022522 (0.0016)	0.0028* (0.0016)
South	0.0008 (0.0051)	0.0149*** (0.0038)
Percent Black	-0.0021*** (0.0005)	-0.0013*** (0.0003)
Black & South Interaction	0.0013*** (0.0004)	
Constant	0.0248*** (0.0059)	0.0202*** (0.0052)
Clustered by year, calculated with robust standard error.	Sample size = 648 Wald Chi Sq.= 48; P<.0001 R ² =0.0626	Sample size = 648 Wald Chi Sq.= 46; P<.0001 R ² =0.0525

*p<.1 or better, **p<.05 or better, ***p<.01 or better

Models 12 and 13 in Table F are the same as models 10 and 11, but with custody count change as the dependent variable instead of jurisdiction count change. In model 12, the coefficient of tough proportion is higher than in model 10, and it suggests that for

every 1% increase in the tough proportion of a speech, custody count will increase by 15% from the previous year. Additionally, governor party identification is significant in model 13 but not model 12, which means that the exclusion of the interaction effect in model 12 enhances the coefficient for governor party affiliation in that model.

Table G- Regression model on state corrections custody rate with alternative variables

Explaining State Corrections Custody Rate by Crime Proportion and Aggressiveness, 2001-1013		
Variable	Model 14	Model 15
Tough Proportion	262.56 (322.06)	266.73 (298.89)
Soft Proportion	449.78 (385.34)	95.12 (294.86)
Governor PID	13.81*** (5.14)	14.41*** (5.15)
South	71.03*** (15.56)	70.02*** (15.72)
Percent Black	3.96*** (0.77)	4.02*** (0.77)
Crime Proportion	536.49** (246.54)	
Aggressiveness		0.11 (0.89)
Constant	322.43*** (8.78)	327.07*** (8.65)
	Sample size = 648 Wald Chi Sq.= 185; P<.0001 R ² =0.2241	Sample size = 648 Wald Chi Sq.= 179; P<.0001 R ² =0.2184

*p<.1 or better, **p<.05 or better, ***p<.01 or better

Models 14 and 15, shown in Table G, are similar to model 1 but with the crime proportion and aggressiveness variables added, respectively. Additionally, models 14 and 15 are not clustered by year and do not use robust standard errors. Typically robust standard errors are used to decrease the standard error of a model and thus increase

resiliency, but it had the opposite effect this time so I used normal standard errors. Model 14 suggests that for every 1% increase in the proportion of a speech that is about crime, the custody rate increases by 536 inmates per 100,000 citizens. The parameters of the other independent variables remained roughly the same, except that tough proportion is no longer significant. Since I have demonstrated the resiliency of model 1, I am confident that support for hypothesis 3 is generalizable across the other potential models. Model 15 does not support hypothesis 4 since aggressiveness is not statistically significant. I expected this finding because the aggressiveness variable was formed by my ranking of aggressiveness by match string, which is difficult to consistently and out of context.

Table H- Summary of findings by hypothesis

Hypothesis	Supporting Models
1	1, 3, 6, 7, 8, 9, 10, 11, 12, 13
2	None of the models
3	14
4	None of the models
5	2, 3, 5, 6

Table H contains a summary of the findings across all models by hypothesis. Hypothesis 1, which maintains that tough rhetoric contributes to an increase in incarceration rates was widely supported. Hypothesis 2, that soft on crime rhetoric contributes to a decrease in incarceration rates, was not supported by any models. The support for hypothesis 1 and the lack of support for hypothesis 2 suggests that tough rhetoric is more powerful than soft rhetoric. Hypothesis 3, that an increase in crime rhetoric contributes to an increase in incarceration rates was supported by model 14,

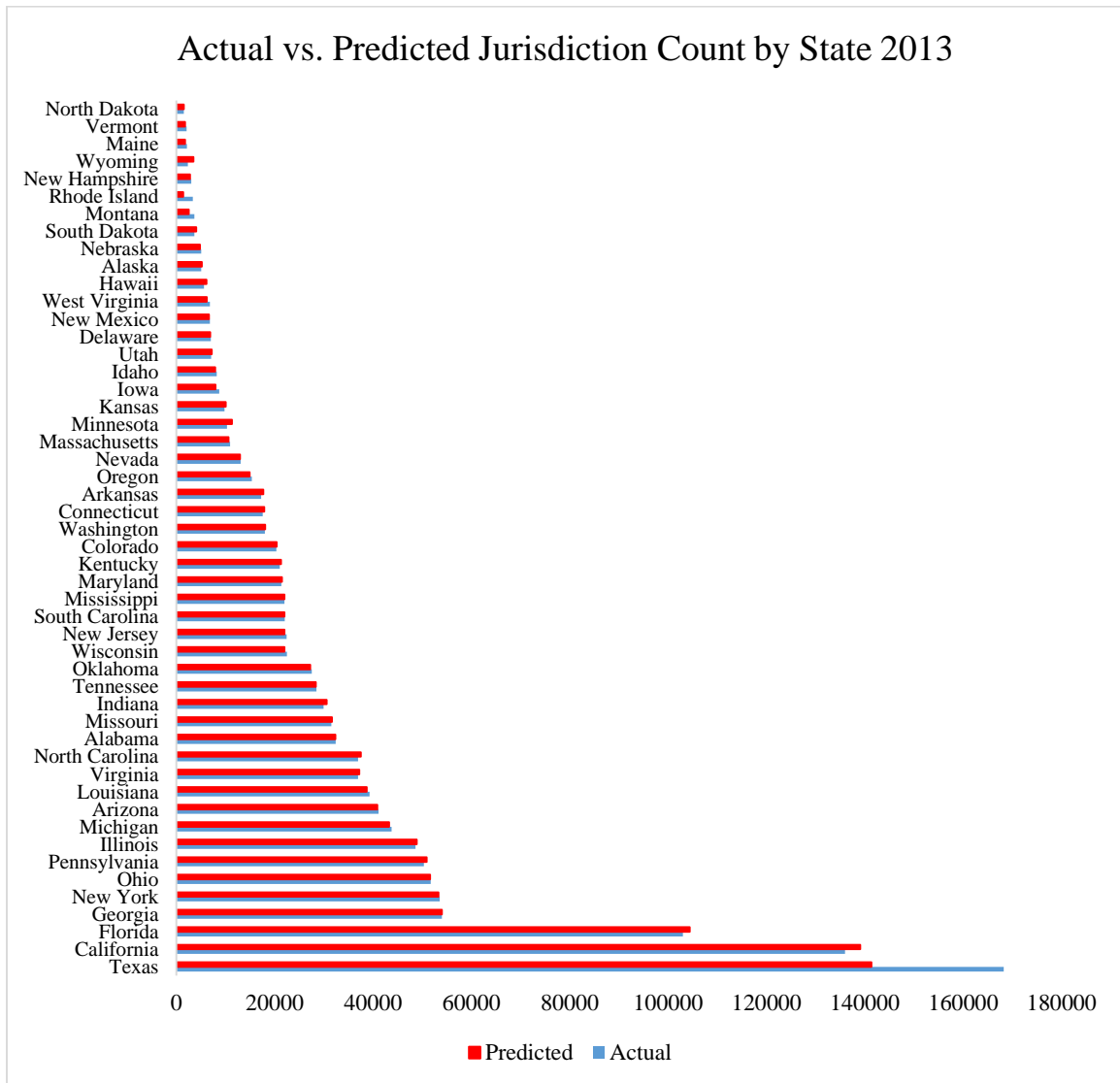
which is a form of the general model 1. Hypothesis 4, the more aggressive a governor's rhetoric is the more incarceration rates increase, was not supported in any of the models. Hypothesis 5, that incarceration rates respond differently to Democratic governors versus Republican governors was supported by models 2, 3, 5, and 6.

This project did not rely on the same set of variables or the same text analysis technique as Unah and Coggins (2013), but it is consistent with their findings. This further supports the finding that tough on crime gubernatorial rhetoric contributes to an increase in incarceration rates.

Predictive Analysis via Machine Learning

The data that I used for the regression analysis can also be applied to a predictive analysis model. Using SAS Enterprise Miner Neural Network, I created a model to predict the jurisdiction count in a state based on the rhetoric in the speech. This particular modeling node is configured with a multilayer perceptron using an "average error" model selection criterion. The model takes into account the singular value decomposition (SVD) values produced by the text topic node, such as specific crime topics, along with other structured variables, like state, and year, etc. This model shows that we can obtain a good fit for predictive capabilities. A plot of the predicted versus actual jurisdiction counts for each state in 2013 is in Figure 10. As the plot shows, this trained model is incredibly accurate, the only state for which there is a noticeable difference between predicted and actual is Texas.

Figure 10- Jurisdiction count predictions by state for 2013



This predictive analysis model uses jurisdiction count as the dependent variable because that is what the neural network selected as the most accurate variable to predict. For this purpose, count is more accurate because rate is dependent on population, which we also do not know. More training of the model, which can happen with more input variables and more predictions with known residuals, the machine learning will improve so that we can forecast future values with this model.

VII. Conclusion

The key finding of this research project is that the tougher a governor is on crime in the state of the state address, the more we can expect incarceration rates to increase. This result was consistent across 10 of the models I tested, which implies that it is fairly robust and generalizable. There are many researched variables that affect incarceration rates, and my analysis suggests that gubernatorial rhetoric is a contributing factor to increasing incarceration rates.

While there has been much attention to and research on the mass incarceration epidemic, there is not substantial exploration of gubernatorial rhetoric as a causal mechanism. Unah and Coggins' (2013) research examines this, but only for a period of four years. The text analysis model in this project is the first of its kind on this topic, and it can be quickly and easily applied to new speeches through an automated process.

This project could be improved with a time period expansion, especially to the 1960's, which would give a fuller picture of the mass incarceration epidemic. That would allow us to see how, if at all, gubernatorial rhetoric's influence on incarceration has changed over that period. Another area for improvement is in the refinement text analysis model. While the model that I have is robust and was created in conjunction with experts, there is always room for improvement, particularly with the soft on crime category. Soft on crime sentiment is harder to capture than tough on crime because when someone is soft on crime it is more subtle than when someone is tough on crime. Because of that, there are fewer rules soft on crime rules, which could be further explored. The addition of more control variables like poverty levels, wealth inequality, and crime victimization rates, could improve the explanatory power of the model. Finally, this project could be

expanded to examine gubernatorial rhetoric outside of state of the state addresses. For example, one could also analyze gubernatorial rhetoric in policy memos and press conferences, which would drastically increase the size and robustness of the dataset. This is possible with more sophisticated web crawling techniques.

It is essential to understand as much as possible about the phenomenon of mass incarceration in order to affect change. My findings show that gubernatorial rhetoric contributes to incarceration rate increases, which points to an area to target for affecting change- the governor and his or her rhetoric.

I have developed the beginning of a predictive analysis model of incarceration, which could be used to better understand, explain, and predict how incarceration rates will change as a result of input variables.

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IX. Appendices

Appendix A- Survey Questions and Responses

1. If the Governor's office announces that there will be a state of the state address do you attempt to watch or listen to the speech?

#	Answer	Response	%
1	Never	57	24%
2	Sometimes	136	56%
3	Often	31	13%
4	Always	17	7%
	Total	241	100%

Statistic	Value
Min Value	1
Max Value	4
Mean	2.04
Variance	0.65
Standard Deviation	0.80
Total Responses	239

2. Did you watch or listen to the state of the state address the last time that the Governor delivered the state of the state address?

#	Answer	Response	%
1	Yes	54	22%
2	No	187	78%
	Total	241	100%

Statistic	Value
Min Value	1
Max Value	2
Mean	1.77
Variance	0.18
Standard Deviation	0.42
Total Responses	239

3. Did the last state of the state address contain any policy information relevant to your agency?

#	Answer	Response	%
1	Yes	108	51%
2	No	103	49%
	Total	211	100%

Statistic	Value
Min Value	1
Max Value	2
Mean	1.48
Variance	0.25
Standard Deviation	0.50
Total Responses	209

4. When the Governor proposes an activity directly relevant to your agency, how vigorously do you attempt to implement the activity?

#	Answer	Response	%
1	Not at all vigorously	41	18%
2	Somewhat Vigorously	67	30%
3	Fairly Vigorously	83	37%
4	Extremely Vigorously	33	15%
	Total	224	100%

Statistic	Value
Min Value	1
Max Value	4
Mean	2.48
Variance	0.92
Standard Deviation	0.96
Total Responses	222

5. Before the most recent state of the state address did your supervisor encourage you to watch or listen to it?

#	Answer	Response	%
1	Yes	23	10%
2	No	215	90%
	Total	238	100%

Statistic	Value
Min Value	1
Max Value	2
Mean	1.90
Variance	0.09
Standard Deviation	0.30
Total Responses	236

6. How long have you worked in your current position?

#	Answer		Response	%
1	Less than 2 years		22	22%
2	2 years to less than 5		20	20%
3	5 years to less than 10		23	23%
4	10 years to less than 20		24	24%
5	20+ years		12	12%
	Total		101	100%

Statistic	Value
Min Value	1
Max Value	5
Mean	2.841584
Variance	1.774653
Standard Deviation	1.332161
Total Responses	101

7. What is the title of the agency for which you work?

Agency	Number of Responses
Administrative Office of the Courts	51
Custody Mediation	1
District Attorney	7
District Court	2
Department of Transportation	1
DPS Adult Corrections	1
Family Court	4
Judicial Branch	9
Magistrate	9
Police Department	14
State of North Carolina	1
Supervisor	1

Statistic	Value
Total Responses	101

8. Which of these options best describes your position?

#	Answer	Response	%
1	Prison warden	2	1%
2	Police chief	14	7%
3	Parole board member	0	0%
4	Judge	73	39%
5	Prosecutor	14	7%
6	Other	84	45%
	Total	187	100%

Other	
Title	Number of Responses
Administrator	4
Business Officer	1
Case Manager	3
Correctional Sergeant	1
Court Administrator	3
District Court Trial Coordinator	1
Engineer	1
Family Court Administrator	2
Gang Intelligence	1
Judicial Assistant	6
Magistrate	54
Medical	1
Prison Management	1
Secretary	1
Teacher	1
Trial Court Coordinator	2
Victim Witness Legal Assistant	1

Statistic	Value
Min Value	1
Max Value	6
Mean	4.98
Variance	1.59
Standard Deviation	1.26
Total Responses	221

9. How would you describe your political ideology?

#	Answer	Response	%
1	Very liberal	5	2%
2	Moderately liberal	24	11%
3	Liberal	20	9%
4	Middle of the road	75	35%
5	Conservative	57	27%
6	Moderately conservative	20	9%
7	Very conservative	13	6%
	Total	214	100%

Statistic	Value
Min Value	1
Max Value	7
Mean	4.26
Variance	1.87
Standard Deviation	1.37
Total Responses	213

10. How do you identify your gender?

#	Answer	Response	%
1	Male	118	54%
2	Female	100	46%
3	Other	0	0%
	Total	218	100%

Other

Statistic	Value
Min Value	1
Max Value	2
Mean	1.46
Variance	0.25
Standard Deviation	0.50
Total Responses	217

Appendix B- Speech Rules

Crime Rules

Crime Words:	Crime Words Far:
<p>NO_BREAK: prescription drug use</p> <p>#CONCEPT: public safety</p> <p>#Verb or Noun</p> <p>CONCEPT: law violator@N</p> <p>CONCEPT: felony@</p> <p>CONCEPT: misdemeanor@</p> <p>CONCEPT: habitual offender@N</p> <p>CONCEPT: infraction@</p> <p>CONCEPT: drug dealer@N</p> <p>CONCEPT: drug deal@</p> <p>CONCEPT: drug cartel@N</p> <p>CONCEPT: drug trade</p> <p>CONCEPT: homicide@N</p> <p>CONCEPT: homicidal</p> <p>CONCEPT: exploitation</p> <p>CONCEPT: gang prevention</p> <p>CONCEPT: dog fighting</p> <p>#illegal</p> <p>CONCEPT: sale of drugs</p> <p>CONCEPT: illegal video poker</p> <p>CONCEPT: illegal videopoker</p> <p>CONCEPT: illegal casino@N</p> <p>CONCEPT: illegal distribution</p> <p>CONCEPT: illegal narcotics</p> <p>CONCEPT: illegal perscribers</p> <p>CONCEPT: illegal substance</p> <p>CONCEPT: illegal profits</p> <p>#CONCEPT: loophole@</p> <p>CONCEPT: violation of the law</p>	<p>CONCEPT: crime@</p> <p>CONCEPT: criminal@</p> <p>CONCEPT: offense@</p> <p>CONCEPT: prey on</p> <p>CONCEPT: those who prey on others</p> <p>CONCEPT: scam artist@N</p> <p>CLASSIFIER: incarceration</p> <p>CONCEPT: child abuse</p> <p>CONCEPT: abuse and neglect</p> <p>CONCEPT: abused and neglected children</p> <p>CLASSIFIER: trafficking</p> <p>CLASSIFIER: trafficked</p> <p>CONCEPT: trafficker@N</p> <p>CONCEPT: are illegal</p> <p>CONCEPT: is illegal</p> <p>CLASSIFIER: punishable</p> <p>CONCEPT: the killer</p> <p>CONCEPT: the killers</p> <p>CONCEPT: club drugs</p> <p>CONCEPT: drug ring@N</p> <p>CONCEPT: illegal drug@N</p> <p>CONCEPT: hard-core drugs</p> <p>CONCEPT: hard drugs</p> <p>CLASSIFIER: meth</p> <p>CLASSIFIER: methamphetamine</p> <p>CONCEPT: opiate@N</p> <p>CONCEPT: war on drugs</p> <p>CONCEPT: drug war</p> <p>CONCEPT: drug laws</p> <p>CONCEPT: illegal gambling</p> <p>CONCEPT: illegal gun@N</p>

<p> CONCEPT: bootlegging CONCEPT: bootlegger@N CONCEPT: bootleg copy@N CONCEPT: drug activity CONCEPT: deadly drugs CONCEPT: human traffic CONCEPT: human smugglers CONCEPT: human smuggling CONCEPT: child molester@ CONCEPT: child molestation CONCEPT: rape@ CONCEPT: domestic abuse CONCEPT: domestic violence CONCEPT: family violence CONCEPT: elder abuse CONCEPT: illegally trespass@V CONCEPT: shooting@N CONCEPT: shooter@N CONCEPT: shot and killed CONCEPT: using drugs #Noun CLASSIFIER: criminality CLASSIFIER: mafia CLASSIFIER: pornography CLASSIFIER: pornographic CONCEPT: pornographer@N CLASSIFIER: assault CONCEPT: violence CONCEPT: murder@ CONCEPT: murderer@N #Moved to ToughOn #CONCEPT: sexual predator@N #CONCEPT: sexually _w predator #CONCEPT: sex offender@N CONCEPT: reckless drive@V </p>	<p> CONCEPT_RULE: (SENT, "_c{steal@}", (OR, "car@N", "vehicle@N", "timber", "gun@N", "television")) CONCEPT: identity theft CONCEPT: identity thief@N CONCEPT: stolen identity@N CONCEPT: reckless driver@N CLASSIFIER: unlicensed </p>
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<p> CLASSIFIER: DUI CLASSIFIER: DWI CLASSIFIER: drunk CLASSIFIER: fraud CONCEPT: fake IDs CONCEPT: arson@N CONCEPT: robbery@N CONCEPT: burglary@N CONCEPT: this killer CLASSIFIER: gunman CLASSIFIER: gunmen CLASSIFIER: narcotic CLASSIFIER: narcotics CONCEPT: drug addiction CONCEPT: drug addict@N CONCEPT: addiction to drugs CONCEPT: addictions to drugs CONCEPT: drug problem@N CONCEPT: drug abuse CONCEPT: substance abuse CONCEPT: drug use CONCEPT: drug habit@N CONCEPT: drug offender@N CLASSIFIER: pseudoephedrine CLASSIFIER: heroin CLASSIFIER: cocaine CONCEPT: flow of drugs CONCEPT: drug bust@N CONCEPT: culture of drugs CONCEPT: culture of violence CONCEPT: minor violation@N CONCEPT: gambling CONCEPT: slot machines #Adj CLASSIFIER: violent #CLASSIFIER: illegal CLASSIFIER: drunken driving </p>	
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<p>CLASSIFIER: driving drunk</p> <p>##phrases</p> <p>CONCEPT_RULE: (SENT, "_c{parole}", (OR, "violation", "violate@"))</p> <p>CONCEPT_RULE: (SENT, "_c{drive@}", (OR, "drunk", "intoxicated", "inebriated", "drugs", "texting"))</p> <p>CONCEPT_RULE: (SENT, "_c{run@}", (OR, "light@N", "stoplight@N", "red light@N"))</p> <p>CONCEPT_RULE: (DIST_8, "_c{drugs}", (OR, "push@", "deal@", "dealer@"))</p> <p>CONCEPT_RULE: (DIST_8, "_c{drug@N}", (OR, "illegal"))</p> <p>CONCEPT_RULE: (SENT, "_c{abuse@}", (OR, "seniors", "elder@N"))</p> <p>CONCEPT_RULE: (DIST_8, "_c{drug test@N}", (OR, "fail@", (DIST_4, "not", "pass@"))))</p>	
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Tough Rules

Tough Words:	Tough On:
<p>REMOVE_ITEM: (ALIGNED, "_c{ToughWds}", "DisambigSoft")</p> <p>REMOVE_ITEM: (ALIGNED, "_c{ToughWds}", "SoftOn")</p> <p>#CONCEPT: fight@</p> <p>CONCEPT: leader in fighting</p> <p>CONCEPT: leader in the fight</p>	<p>#CONCEPT_RULE: (UNLESS, "AlienWds", (SENT, (DIST_8, "_c{ToughWds}", "CrimeWds")))</p> <p>CONCEPT_RULE: (UNLESS, "AlienWds", (DIST_8, "_c{ToughWds}", "CrimeWds"))</p> <p>CONCEPT_RULE: (UNLESS, "AlienWds", (DIST_15, "_c{ToughWds}", "CrimeWdsFar"))</p> <p>CONCEPT_RULE: (SENT, (OR, "_c{death penalty@}", "_c{execution}", "_c{capital punishment}")), (OR, "subject@", "proponent", "violent", "violence", "mandatory", "face@", "support@", "option", "institute@V"))</p> <p>CONCEPT_RULE: (UNLESS, "not", (DIST_8, (OR, "_c{penalty@}",</p>

<p>CONCEPT: take the fight to</p> <p>CONCEPT: committed to fighting</p> <p>CONCEPT: aggressive in fighting</p> <p>CONCEPT: aggressively fight@</p> <p>CONCEPT: fought the scourge</p> <p>CONCEPT: fought it back</p> <p>CONCEPT: measures to fight</p> <p>CONCEPT: ramp up our fight</p> <p>CONCEPT: striking back against</p> <p>CONCEPT: we went after</p> <p>CONCEPT: too many incidents</p> <p>#CONCEPT: combat@</p> <p>CONCEPT: crack down</p> <p>CONCEPT: cracked down</p> <p>CONCEPT: cracking down</p> <p>CONCEPT: cracks down</p> <p>CONCEPT: prosecute@</p> <p>CONCEPT: fullest extent</p> <p>CONCEPT: put an end to</p> <p>CONCEPT: work with me to stop</p> <p>CONCEPT: failure to address</p> <p>CONCEPT: close the loophole@</p>	<p>"_c{fines}", "_c{punishment}"), (OR, "increase@", "enforce@", "stiffen@", "toughen", "tougher"))</p> <p>CONCEPT_RULE: (DIST_8, "law@N", (OR, "_c{teeth}", "_c{stronger}", "_{anemic}", "_c{strengthen}", "_c{enforce@}"))</p> <p>CONCEPT_RULE: (SENT, (OR, "_c{mandatory}", "_c{mandate@}", "_c{double}", "_c{lengthen}", "_c{toughen}"), (OR, "jail", "prison", "sentencing", "sentence@N", "penalty@"))</p> <p>CONCEPT: strong death penalty law</p> <p>CONCEPT_RULE: (SENT, (OR, "_c{child abuse}", "_c{abuse and neglect}", "_c{abuse and exploitation}", "_c{abused and neglected}"), (DIST_6, "_c{abuse}", "neglect")), (OR, "held accountable", "too many incidents", "protect@", "shield@"))</p> <p>CONCEPT: sexual predator@N</p> <p>CONCEPT: sexually _w predator</p> <p>CONCEPT: sex offender@N</p> <p>CONCEPT: consumer protection@</p> <p>CONCEPT: predatory lender@</p> <p>CONCEPT: tough law@</p> <p>CONCEPT: tougher law@</p> <p>CONCEPT: lawlessness and corruption</p> <p>CONCEPT: abetted by</p> <p>CONCEPT: rampant violation of the law</p> <p>CONCEPT: ensuring the safety</p> <p>CONCEPT: safety and security of our citizens</p> <p>CONCEPT: obtain DNA samples</p> <p>CONCEPT: require DNA samples</p> <p>CONCEPT: submit DNA samples</p> <p>CONCEPT: DNA samples immediately</p> <p>CONCEPT: obtain DNA samples</p> <p>CONCEPT: strengthen our security</p> <p>CONCEPT_RULE: (SENT, (OR, "_c{assault weapon@}", "_c{military-grade weapon@}"), (OR, "ban@", "prohibit@", "no place in our state"))</p> <p>CONCEPT: threats to our security</p>
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<p>#Release CONCEPT: prevent the release CONCEPT: preventing the release CONCEPT: release@V _w early CONCEPT: release@V _w dangerous criminal@N CONCEPT: prior to release CONCEPT: before we release CONCEPT: awaiting release</p> <p>##Keep this one only with Remove item rule above CONCEPT: arrest@</p> <p>CONCEPT: lock up CONCEPT: locking up CONCEPT: prosecute@ CONCEPT: pass a law</p> <p>CONCEPT: new legislation CONCEPT: propose legislation CONCEPT: proposes legislation</p> <p>CONCEPT: proposing legislation CONCEPT: new law@N CONCEPT_RULE: (DIST_6, (OR, "loophole@", "deficiency@", "reform@", "enact@", "re-write"), (OR, "_c{law@}", "_c{legislation}", "_c{statutes}")) CONCEPT: new bill CONCEPT: new penalties CONCEPT: throw the book at CONCEPT: punish@ CONCEPT: punishment CONCEPT: severe consequences CLASSIFIER: thugs CONCEPT: cowardly CONCEPT: cowards CONCEPT: incarcerate@ CONCEPT: license revocation CONCEPT: lose their license CONCEPT_RULE: (SENT, (OR, "_c{lose@}", "_c{revoke@}", "_c{suspend@}"), "license")</p>	<p>CONCEPT: acts of aggression CONCEPT: act of aggression CONCEPT: homeland security CONCEPT: bomb threat@N CONCEPT: bomb@V</p> <p>CONCEPT: bombing@N CONCEPT: anthrax threat@N CONCEPT: chemical weapon@N CONCEPT: biological weapon@N CONCEPT: terrorist act@N</p> <p>CONCEPT: terrorist action@N CONCEPT: bio-terror CONCEPT: bio-terrorism CONCEPT: false terrorist threat@N CONCEPT: terrorism CONCEPT: terrorist@ CONCEPT: terroristic CONCEPT: terror tactics CONCEPT: terrorism-related CONCEPT: war on terror CONCEPT: war against terror CONCEPT: defiance of tyranny and terror CONCEPT: threats of terror</p> <p>CONCEPT: threat of terror CONCEPT: enemies of freedom CONCEPT: war against freedom CONCEPT: weapon of choice is fear CONCEPT: face of terror CONCEPT: stand against terror CONCEPT: fight against terror CONCEPT: global threat@N CONCEPT: freedom from terror CONCEPT: protection from terror CONCEPT: terror alert@N CONCEPT: fight terror CONCEPT: fighting terror</p> <p>CONCEPT: fought terror</p>
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<p> CONCEPT: background check@ CONCEPT: lifetime supervision CONCEPT: against a child CONCEPT: against children CLASSIFIER: revolving door CONCEPT: abolished parole CONCEPT: abolish parole CONCEPT: abolishing parole CONCEPT: abolishes parole CLASSIFIER: uninvestigated CONCEPT: zero tolerance CONCEPT: not be tolerated #CONCEPT: severe #CONCEPT: severely CONCEPT: long past time CLASSIFIER: automatic CLASSIFIER: tough CLASSIFIER: tougher CLASSIFIER: toughest CONCEPT: rest of their lives CONCEPT: life sentence CONCEPT: entire sentence CONCEPT: should face life CONCEPT: full sentence #CONCEPT: minimum sentence #CONCEPT: minimum sentencing CONCEPT_RULE: (UNLESS, "reform", (SENT, (OR, "_c{minimum sentencing}", "_c{minimum sentence@N}")))) CONCEPT: 100% of their sentence CONCEPT_RULE: (DIST_6, "_c{serve@}", "sentence") CONCEPT_RULE: (DIST_6, "_c{close@}", "loophole@N") CONCEPT: justice for victims CONCEPT: behind bars CONCEPT: off the streets CONCEPT: no sympathy CONCEPT: no regrets CONCEPT: bad for our families CONCEPT: biggest hustle CONCEPT: child predators CONCEPT: chronic </p>	<p>CONCEPT: terror alert@</p>
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<p> CONCEPT: bad people CONCEPT: eliminate parole CONCEPT: eliminating parole CONCEPT: eliminated parole CONCEPT: eliminates parole CONCEPT: without parole CONCEPT: out of circulation CONCEPT: vigorous enforcement CONCEPT: enforce@ CONCEPT: drug enforcement CONCEPT: held without bail CONCEPT: swiftly jail CONCEPT: repeat offender@N CONCEPT: habitual offender@N CONCEPT: get off light CONCEPT: get off lightly CONCEPT: got off light CONCEPT: got off lightly CONCEPT: conviction rate CONCEPT: real punishment CONCEPT: clear message CONCEPT: strongest possible message CONCEPT_RULE: (DIST_4, (OR, _c{legislation}", "_c{law@N}"), (OR, "protect@", "safety", "safe")) CONCEPT: before they have _w chance to CONCEPT: make it a felony CONCEPT: will find you CONCEPT: track down CONCEPT: tracking down CONCEPT: tracked down CONCEPT: frivolous appeals CONCEPT: statute of limitations CONCEPT: gun reform #CLASSIFIER: prison #CLASSIFIER: jail CONCEPT: putting _w in prison CONCEPT: putting _w in jail CONCEPT: from prison early CONCEPT: from jail early CONCEPT: keep you in jail CONCEPT: keep you in prison CONCEPT: will lock you up CONCEPT: serious prison time </p>	
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<p>CONCEPT: serious jail time CONCEPT: instead of going to jail CONCEPT: instead of going to prison CONCEPT: automatic jail CONCEPT: automatic prison CONCEPT: minimum jail CONCEPT: minimum prison CONCEPT: prison for at least CONCEPT: jail for at least CONCEPT: life in jail CONCEPT: life in prison CONCEPT: mandatory prison CONCEPT: mandatory jail CONCEPT: deserve to be in jail CONCEPT: deserve to be in prison CONCEPT: deserves to be in jail CONCEPT: deserves to be in prison CONCEPT: swiftly jail@ CONCEPT: belong in prison CONCEPT: belong in jail CONCEPT: where they belong CONCEPT: stay in prison CONCEPT: stay in jail CONCEPT: they can't hurt CONCEPT: no further harm CONCEPT: tragic CONCEPT: tragedy</p>	
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Soft Rules

Soft Words:	Soft On:
<p>REMOVE_ITEM: (ALIGNED, "_c{SoftWds}", "DisambigTough")</p> <p>CONCEPT: justice reforms CONCEPT: prison reform@N</p> <p>CONCEPT: criminal justice resources</p>	<p>#CONCEPT_RULE: (UNLESS, "AlienWds", (SENT, (DIST_8, "_c{SoftWds}", "CrimeWds")))) CONCEPT_RULE: (UNLESS, "AlienWds", (SENT, (DIST_8, "_c{SoftWds}", "CrimeWds")))) CONCEPT_RULE: (UNLESS, "AlienWds", (SENT, (DIST_8, "_c{SoftWds}", "CrimeWdsFar"))))</p> <p>CONCEPT_RULE: (SENT, (OR, "_c{child abuse}", "_c{abuse and neglect}", "_c{abuse and exploitation}"), "_c{abused and neglected}", (DIST_6,</p>

<p>CONCEPT: criminal justice personnel</p> <p>#CONCEPT: crime lab@N</p> <p>CONCEPT: investigate@</p> <p>CONCEPT: investigation@</p> <p>CONCEPT: did not commit</p> <p>CONCEPT: exonerate@</p> <p>CONCEPT: exoneration@</p> <p>CLASSIFIER: technology</p> <p>CONCEPT: high-tech tools</p> <p>CONCEPT: solve@</p> <p>#CONCEPT: address@V</p> <p>CONCEPT: tackle@V</p> <p>#CONCEPT: end@V</p> <p>CONCEPT: provide a safe haven</p> <p>CONCEPT: safe haven from abuse</p> <p>CONCEPT: provided safe haven</p> <p>CONCEPT: safe haven for survivors</p> <p>CONCEPT: somewhere safe</p> <p>CLASSIFIER: overcrowded</p> <p>#CONCEPT: build more prisons</p> <p>CONCEPT: prisoner@N</p> <p>CLASSIFIER: supervision</p> <p>CONCEPT: full restitution</p> <p>CONCEPT: prison is not</p> <p>CONCEPT: prison space</p> <p>CONCEPT: prison beds</p> <p>CONCEPT: jail crowding</p> <p>#CONCEPT: release@</p> <p>CONCEPT: collaborative releae effort@N</p>	<p>"_c{abuse}", "neglect")), (OR, "small investment", "ways to reduce", "stem@", "prevent@", "address@", "services"))</p> <p>CONCEPT_RULE: (SENT, "repeal@", "_c{background check@}")</p> <p>CONCEPT: local communities join forces</p> <p>CONCEPT_RULE: (SENT, "_c{shared service}", "police")</p> <p>CONCEPT_RULE: (SENT, "_c{partnership}", (OR, "police", "troopers", "law enforcement"))</p> <p>CONCEPT_RULE: (SENT, (OR, "_c{work together}"), "police and communities")</p> <p>CONCEPT: drug court@N</p> <p>CONCEPT: reform the justice system</p> <p>CONCEPT: reform _w drug policy@N</p> <p>CONCEPT: drug reform</p> <p>CONCEPT: drug policy reform</p> <p>CONCEPT: drug policy</p> <p>CONCEPT: smart on crime</p> <p>CONCEPT: criminal justice resources</p> <p>CONCEPT: criminal justice personnel</p> <p>CONCEPT: backlog of criminal cases</p> <p>CONCEPT: free legal services</p> <p>CONCEPT: community sentencing</p> <p>CONCEPT: release and re-integration</p> <p>CONCEPT: less time in jail</p> <p>CONCEPT: less time in prison</p> <p>CONCEPT: prevent incarceration</p> <p>CONCEPT: indiscriminate prison sentences</p> <p>CLASSIFIER: correctional</p> <p>CONCEPT: drug rehabilitation</p> <p>CONCEPT: drug treatment</p> <p>CONCEPT: reclaiming lives</p> <p>CONCEPT: reclaiming a life</p> <p>CONCEPT: rehabilitative services</p> <p>CONCEPT: struggle with addiction</p>
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<p>CONCEPT: discretion to release CONCEPT: supervised release</p> <p>CLASSIFIER: probation CLASSIFIER: offender accountability CONCEPT: incarceration</p> <p>CONCEPT: rehabilitation CONCEPT: rehabilitate@V CLASSIFIER: services CONCEPT: mental health services</p> <p>CONCEPT: mental-health services #CONCEPT: help@</p> <p>CONCEPT: from returning to prison</p> <p>CONCEPT: stay out of jail</p> <p>CONCEPT: treatment</p> <p>CONCEPT: teach@ CONCEPT: educate@ CONCEPT: education CONCEPT: make the transition</p> <p>CONCEPT: conference@N CONCEPT: resources CONCEPT: costs CLASSIFIER: funding CLASSIFIER: expensive CONCEPT: fiscal CONCEPT: per day CONCEPT: prison spending CONCEPT: prison costs</p>	<p>CONCEPT: crime prevention CONCEPT: recidivism</p> <p>CONCEPT: mere possession CONCEPT: merely arrested CONCEPT: wrongful convictions CLASSIFIER: minor violations CONCEPT: non-violent CONCEPT: nonviolent</p> <p>CONCEPT: second amendment right@N</p> <p>CONCEPT_RULE: (SENT, "offender", (OR, "_c{treatment}", "_c{re-entry}", "_c{supervision}", "_c{addiction}", "_c{addict@N}")) CONCEPT_RULE: (SENT, (OR, "release@", "discretion"), (OR, "_c{non-violent}", "_c{nonviolent}")) CONCEPT_RULE: (SENT, (OR, "_c{death penalty@}", "_c{execution}"), (OR, "institute@V", "ban@", "repeal@", "eliminate@", "recommendation@", "abolish@", "expensive", "ineffective", "opposed")) CONCEPT_RULE: (SENT, (OR, "_c{partnership}", "_{working together}"), (OR, "police", "law enforcement"))</p>
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<p> CONCEPT: deter@ CONCEPT: prevent@ CLASSIFIER: prevention #CLASSIFIER: possible CLASSIFIER: reducing CLASSIFIER: reduction CLASSIFIER: lowering CONCEPT: all-time low CONCEPT: all time low CONCEPT: was down CONCEPT: is down CLASSIFIER: rate </p> <p> CONCEPT: drug and alcohol CONCEPT: drugs and alcohol CLASSIFIER: addiction CONCEPT: addict@N CONCEPT: safe harbor </p> <p> CLASSIFIER: scripture CONCEPT: compassion #CONCEPT: common sense CONCEPT: have to balance CONCEPT: second chance CONCEPT: first-time CONCEPT: first time </p> <p> CONCEPT: technical violator@N C_CONCEPT: being _c{arrested} C_CONCEPT: merely _c{arrested} C_CONCEPT: be _c{arrested} </p> <p> CONCEPT: victim@ advocate@ CONCEPT: correction system </p>	
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Additional Rules

<p>Other Terms</p> <p> AlienWords ##Only Classifier or Regex rules; due to use with UNLESS CLASSIFIER: alien CLASSIFIER: aliens CLASSIFIER: immigration CLASSIFIER: border </p>

CLASSIFIER: borders
CLASSIFIER: deportation
CLASSIFIER: deport
CLASSIFIER: deports
CLASSIFIER: departing
CLASSIFIER: deported

DisambigSoft

##These are phrases that Tough will pick up incorrectly without a Remove Item rule

C_CONCEPT: being _c{arrested}
C_CONCEPT: merely _c{arrested}
C_CONCEPT: be _c{arrested}
C_CONCEPT: not only tough

DisambigTough

##These are phrases that Soft will pick up incorrectly without a Remove Item rule

C_CONCEPT: _c{prevent} and prosecute
C_CONCEPT: cannot _c{prevent}

Appendix C- Variable Descriptions

Variable	How it is measured	Source
Jurisdiction Count	The total number of inmates under the jurisdiction of a state's corrections system	Bureau of Justice Statistics-Corrections Statistical Analysis Tool (Prisoners)
Jurisdiction Rate	The number of inmates under the jurisdiction of a state's corrections system per 100,000 state residents.	Bureau of Justice Statistics-Corrections Statistical Analysis Tool (Prisoners)
Custody Count	The total number of inmates in the custody of a state's corrections system	Bureau of Justice Statistics-Corrections Statistical Analysis Tool (Prisoners)
Custody Rate	The number of inmates under the custody of a state's corrections system per 100,000 state residents.	Bureau of Justice Statistics-Corrections Statistical Analysis Tool (Prisoners)
Jurisdiction Count Change	The percent change in jurisdiction count. Calculated by the jurisdiction count this year minus jurisdiction count last year divided by jurisdiction count last year.	Jurisdiction Count variable
Jurisdiction Rate Change	The percent change in jurisdiction rate. Calculated by the jurisdiction rate this year minus jurisdiction rate last year divided by jurisdiction rate last year.	Jurisdiction Rate variable
Custody Count Change	The percent change in custody count. Calculated by the custody count this year minus custody count last year divided by custody count last year.	Custody Count variable
Custody Rate Change	The percent change in custody rate. Calculated by the custody rate this year minus custody rate last year divided by custody rate last year.	Custody Rate variable
Tough Proportion	Number of paragraphs with tough on crime rhetoric	Text analysis model

	divided by the total number of paragraphs in a speech	
Soft Proportion	Number of paragraphs with soft on crime rhetoric divided by the total number of paragraphs in a speech	Text analysis model
Governor's PID	Coding of the governor of each speech as republican=1, independent=0, or democratic=-1	Speeches
South	Coding of each state as south=1 or non-south=0	State regions
Percent Black	The number of Black citizens in a state divided by the population	Statistical Abstract of the US, table 19 (2011) & table 20 (2013)
Percent Black Centered	The percent of Black citizens in a state with the mean of 10.65 removed	Percent Black variable
Black & South Interaction	Percent Black variable multiplied by the South variable.	Percent Black variable and South variable

Appendix D- Aggressiveness Rankings

Match String	Aggressiveness 1-5, 5=most tough
Fines	1
Closed	1
Double	1
we went after	1
uninvestigated	1
Close	1
bad people	1
Instead of going to jail	1
Arrested	2
Incarcerated	2
background checks	2
Incarcerate	2
Strengthen	2
Arrest	2
proposing legislation	2
ensuring the safety	2
Tragic	2
pass a law	2
Incarcerating	2
bio-terrorism	2
safety and security of our citizens	2
Stronger	2
strengthen our security	2
statute of limitations	2
leader in the fight	2
too many incidents	2
Tragedy	2
Serve	2
work with me to stop	2
Arrests	2
false terrorist threats	2
Served	2
propose legislation	2
bio-terror	2
war against freedom	2
protection from terror	2
awaiting release	2
gun reform	2

lifetime supervision	2
bad for our families	2
abetted by	2
License Revocation	2
background check	2
failure to address	2
leader in fighting	2
global threat	2
global threats	2
Homeland Security	3
enemies of freedom	3
defiance of tyranny and terror	3
clear message	3
Prosecute	3
Teeth	3
Abuse	3
Legislation	3
Mandatory	3
Enforce	3
Mandated	3
Laws	3
new penalties	3
Penalties	3
consumer protection	3
drug enforcement	3
freedom from terror	3
Enforcing	3
Law	3
obtain DNA samples	3
Enforced	3
act of aggression	3
Prosecuted	3
acts of aggression	3
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