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Deadly Divisions: Class and Stigma as Fundamental Social Causes of Spatial Health Inequalities

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Deadly Divisions:
Class and Stigma as Fundamental Social Causes of Spatial Health Inequalities

Misty L. Harris

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ABSTRACT

Deadly Divisions:
Class and Stigma as Fundamental Social Causes of Spatial Health Inequalities in the US

Misty L. Harris

The objective of this dissertation is to investigate how class and stigma influence spatial inequalities in health across the US, from the structural to the individual level. Class, stigma, and subsequent access to capital resources are not equally distributed across the US. Women, poor, and minority populations continue to have unequal access to capital resources across the country, though this is spatially determined. Similarly, while there are health inequalities along the same social cleavages at the national level, they differ significantly across localities. Research has not paid enough attention to the fundamental social causes of inequities, resulting in the inability to address questions about how the foundational structure of American society influences health and well-being.

I link the theory of the fundamental social causes of health inequalities to the theoretical toolkit of Pierre Bourdieu to investigate the influence of class and stigma on spatial health inequalities. I use a mixed-methods approach to capture data at multiple levels of analysis. First, I investigate how class and stigma at the structural level are related to spatial health inequalities in the US. I use national quantitative data from the U.S. Census Bureau, the Kaiser Family Foundation, the Robert Wood Johnson Foundation, and the United Health Foundation to investigate the distribution of economic and cultural capital in the US using Bourdieu's field of power as a heuristic device to explicate the relationship between access to capital resources and self-rated health and life-expectancy in the US. To further contextualize the place that West Virginia holds in the national social landscape I carry out a content analysis to determine how the state is represented in national media, with a focus on the portrayal of health.

I then use state level data to map the counties of West Virginia on the social field of the state based on access to economic and cultural capital. Finally, I turn to one county in the state of West Virginia, and the county high school, to carry out an ethnographic study following an academic cohort of adolescents. I pair participant observations in the high school and communities with surveys of nearly the whole class (n=71) at two time points and personal diaries recording daily practices in the lives of a subset of these students as they experience the coronavirus pandemic gripping the nation. I use this data to map students and families, and their health-related practices and behaviors on the social field, defined by the county parameters of available capital resources and youth's own perceptions of their place in the social hierarchy.

Place-based studies often end up disconnecting communities from the larger society and it is my aim to present a model that can be used to situate any community within the larger social fields in which they are embedded. Ultimately, it is my goal to contextualize, as richly as possibly, one community in America to understand the statistical and perceived differences and distances in the social structure to power, or economic and cultural capital, and how that position relates to health inequities. I use theory and method to facilitate a double gaze—up at how power is used to divide and categorize at the structural level and down at how social arrangements influence perceptions and outcomes—bridging the macro-level determinants and micro-level consequences of class and stigma in the production and reproduction of health inequalities.

DEDICATION

to Dr. Joseph J. Sudano, Jr., in loving memory

ACKNOWLEDGMENTS

While in the following pages I move from the macro to the micro, the study unfolded from the community, and the influence of residents are woven throughout. Without the residents of the county this study would not have been possible. After moving to the community, I finished my coursework, passed my comprehensive exams (which I read for while students completed surveys the first year), and refined much of the theoretical and methodological foundations of the study—the people here supported me through that too. It is my hope that I correctly capture their voices and perceptions, but I take full responsibility for any misunderstanding or misrepresentation and stand ready to correct the record.

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LIST OF ABBREVIATIONS

AAUW: American Association of University Women
ACS: American Community Survey
AHR: America's Health Rankings
BRFSS: Behavioral Risk Factor Surveillance System
CDC: Centers for Disease Control and Prevention
CNN: Cable News Network
COVID19: Coronavirus Disease 2019
CSDH: Commission on Social Determinants of Health
DALY: Disability-Adjusted Life Years
DC: District of Columbia
DOL: United States Department of Labor
NYT: *New York Times*
RWJF: Robert Wood Johnson Foundation
SDH or SDOH: Social Determinants of Health
SES: Socioeconomic Status
SRH: Self-Rated Health
US: United States
WHO: World Health Organization
WSJ: *Wall Street Journal*
WVU: West Virginia University

Chapter 1 Introduction

The deep divisions fracturing the US are turning ever more deadly to a rising percentage of the population. There is, first, a growing chasm between the rich and the poor that has been widening unchecked since the 1980s (Horowitz, Igielnik, and Kochhar 2020). Most of the wage growth of the last 40 years has gone to the top of the income distribution, with most workers' wages remaining stagnant and for some in the lower end of the distribution actually decreasing (Gould 2019b). Second, historically rooted social stigmas based on class, gender, race, and disability (among other stigmatized identities) remain reflected in unequal access to capital resources—demonstrated by unequal pay, positions, promotions, and possibilities—which is the outcome of sexism, racism, nationalism, and ablism (among other isms). Women continue to earn less than men across all levels of education (Blau and Kahn 2017; Day 2019; Gould 2019b). White, non-Hispanic Americans earn more than black and Hispanic workers, again across levels of education (Gould 2019a). Working Americans with disabilities earn less than those without a disability across many occupations and are less likely to hold full-time positions (Day and Taylor 2019; Yin, Shaewitz, and Megra 2014). Access to economic capital determines access to other capital resources, including cultural, social, and symbolic capital (Bourdieu 1986) or to knowledge and credentials, beneficial social connections, and prestige/status/power, which can be used not only to prevent, mitigate, and treat disease (Phelan, Link, and Tehranifar 2010) but also to ultimately define what good health is, what distinguishes the healthy, what practices characterize healthy lifestyles, and essentially who can *have* health (Bourdieu 1984; Huppatz 2015; Phelan et al. 2010; Williams 1995). High levels of income inequality and the unequal distribution of resources have been associated with lower self-rated health, higher mortality, and stagnating life expectancies (Chetty et al. 2016; McCartney et al. 2019; Woolf and Schoomaker 2019). Life expectancies have decreased for some in the States for the first time since 1959 and continue to slide further behind life expectancies in similar nations (Woolf and Schoomaker 2019). The richest 1% of men in America live nearly 15 years longer than men in the poorest 1% of the income distribution and women in the top 1% live on average more than 10 years longer than the women at the bottom (Chetty et al. 2016). This life expectancy inequality is growing over time, just as income inequality has.

Between 2001 and 2014 life expectancy for the top 5% of the income distribution increased by 2.34 years for men and 2.91 years for women, but barely increased at all for the bottom 5% (0.32 years for men and 0.04 years for women) (Chetty et al. 2016). And, as early as the 1990s those with the least education have faced decreasing or stagnating life expectancies, while the most educated groups have experienced consistent improvement over the decades. (Aburto and Vigezzi 2023). Further, while women have experienced longer life expectancies than men for decades, the gap is narrowing and projected to continue to do so under current social conditions (Medina, Sabo, and Vespa 2020). Life expectancy also differs significantly by race and ethnicity in the US (Kochanek et al. 2019). While this gap had been narrowing before the COVID-19 pandemic, black Americans entered the pandemic with life expectancies over three years shorter than non-Hispanic white Americans (Kochanek et al. 2019). Finally, while people with intellectual and developmental disabilities have experienced gains in life expectancy over the last several decades they still live an average of 10 – 20 fewer years than those without disabilities (Coppus 2013; Lauer and McCallion 2015). There is also a significant amount of variation within this population and by type of disability, but the relationship between disability and life expectancy is consistent (Coppus 2013). Disparities in life expectancy by class, sex, race, and disability status in the US cannot and should not be reduced to access to economic capital alone, but are also about access to knowledge and credentials, beneficial social connections, and prestige, status, or power. Practices and policies that limit access to such institutionalized capitals is what produces enduring structural inequities (Hummer 1996; Lariscy, Tasmim, and Collins 2019).

The inequalities in access to capital and their critical outcomes outlined above are not equally distributed across the US. In 2018 the gender-wage gap ranged from women earning 88% of what men earn in California to women in Louisiana earning less than 70 cents to every dollar earned by men in the state (AAUW 2020). Further, earnings disparities based on US Census Bureau's American Community Survey five year estimates (2014 – 2018) calculated and published by the US Department of Labor indicate Americans who are black working in Washington DC earn 53 cents to every dollar earned by white workers, compared to Montana where workers who are black earn 90 cents per every dollar earned by white workers (DOL 2020). While these figures are comparing all workers, the disparities represent unequal access to pay, positions, promotions, and opportunities between populations. While to the best of my

knowledge, the disability-wage gap has not been calculated by state, the employment rate for people with disabilities in 2017 ranged from a high of 56.3% in North Dakota to a low of 25.4% in West Virginia, and people with intellectual and physical disabilities are less likely to be employed full-time (Pauli 2019). Structured inequalities shaping access to capital by women and minority populations vary by place because each is shaped by its own history and biography.

Just as access to capital resources varies across time and within and between localities so too do outcomes related to the length and quality of life. Gaps in life expectancy across states and counties in America began widening in the 1980s (Woolf and Schoomaker 2019), with substantial divergences occurring in the 1990s (Dwyer-Lindgren et al. 2017). By 2016 there was up to a 7-year difference in life expectancies between the states (Woolf and Schoomaker 2019). A related rural-mortality penalty can be traced back to the same time frame (Cosby et al. 2008; Cossman et al. 2007) and is also growing (Cosby et al. 2018; Monnat 2020). At the end of the 20th century, it was found that those who live in states with higher income inequalities were 30% more likely to report their health as fair or poor, even after controlling for household income and personal characteristics (Kennedy et al. 1998). Differences between the states are due, in part, to each state having a unique set of economic and social policies and values that shape the life experiences and opportunities of their populations (Montez, Hayward, and Wolf 2017). In other words, the poor, women, those with disabilities, and minority populations have different life experiences and chances based on the state within which they are located, as well as their position within that state. In an analysis of men's life expectancy in 25 major American cities Fenelon and Boudreaux (2019) found that from 1990 to 2015, when overall life expectancy for men in the US increased by only 4.8 years, life expectancy increased by nearly 14 years for men in San Francisco and Washington, DC and 12 years for men in New York. Recent decreases in life expectancy and related increases in midlife mortality were greatest in the Ohio Valley, Appalachia, and upper New England—whereas many Pacific states were less affected (Woolf and Schoomaker 2019). The largest relative increases in midlife mortality occurred among those with less education in geographical areas with evidence of economic distress or diminished social capital (Woolf and Schoomaker 2019).

As scholars have noted, the changes in life expectancy in the contemporary United States accompany a related trend associated with shifts in the cause of death structure. The slowing—and in some states decreasing—life expectancies observed in the United States have been

explained as a culmination of mortality caused by what Case and Deaton (2017) call deaths of despair: suicides and poisonings (including drug overdoses and alcohol abuse) among young and middle-aged adults of all racial groups, with "an onset as early as the 1990s" (Woolf and Schoomaker 2019:1996). During the period that Case and Deaton were studying the deaths of despair they were primarily focused on a phenomenon observed among poor white populations, but this seems to have been related to a lag in outcomes. More current research has demonstrated that these deaths of despair should not be considered a white problem (Cosby et al. 2018; Woolf and Schoomaker 2019) as "the largest mortality disadvantage both historically and currently is experienced by Black Americans, particularly rural Black Americans" (Cosby et al. 2018:156). The COVID-19 pandemic has further revealed, exaspered, and entrenched inequalities in American society, not only increasing the mortality disadvantage experienced by Americans who are black but reducing "the mortality advantage that Hispanic people had so far maintained, overall improving non-Hispanic White people 's relative position" (Aburto and Vigezzi 2023).

There are considerable variations in cause-specific morbidity and mortality trends across states, counties, and cities, but throughout these localities those with lower education and income suffer disproportionately and the gradient has widened over time (Woolf and Schoomaker 2019). Moreover, across space and place in America being Black continues to be a mortality disadvantage. And as discussed above, while seeing decades of longer life expectancies women are losing ground and, with black Americans, are suffering greater despair. While deemed deaths of despair by Case and Deaton (2017), other researchers consider drug overdoses, alcohol poisoning, alcoholic liver disease, and suicides as the outcome of "stress conditions", which have been found to be "highest in counties with prolonged exposure to high poverty, unemployment, and stagnant household income" (Woolf and Schoomaker 2019:2005). Woolf and Schoomaker (2019) found this to be true in "the Central Valley and northern rural counties of California, the Ozark and Bootheel regions of Missouri, and the southwestern coalfields of Virginia" (2005). There has also been a "call for continued investigation of the possible weathering effects of tenacious high-effort coping with chronic stressors on the health of marginalized populations" (Geronimus et al. 2019:222) in lieu of a new focus on deaths of despair that explains more of the growing life expectancy inequalities among whites (Geronimus et al. 2019).

The connection of stress to health inequalities provides an important framework for understanding "how social arrangements influence the occurrence of mental and physical health"

differentially (Link, 2008:372), and allows researchers to gaze down at how structural inequalities shape health on the ground. There is also, however, a growing call in the health inequalities and neighborhood health research to "gaze up" at how power is used to categorize, divide, devalue and "other" (or keep in, out, and away) (Keene and Padilla 2018; Tyler and Slater 2018). I use a mixed-methods approach and link the theory of the fundamental social causes of health inequalities to the theoretical toolkit of Pierre Bourdieu and the stress process to investigate spatial health inequalities in the US through such a double gaze.

Stigma and socioeconomic status (SES) are considered fundamental social causes of health inequalities and are proposed to work through their influence on access to resources that can be used to treat, mitigate, or prevent disease, primarily through the practice of a healthy lifestyle (Hatzenbuehler, Phelan, and Link 2013; Link and Phelan 2001, 2014; Phelan et al. 2010). Link and Phelan developed the theory of the fundamental social causes of health inequalities in response to risk factor epidemiology, which focused on the mechanisms, or intermediary determinants of health inequalities. Most often the focus of risk factor epidemiology is on lifestyle risk factors. Link, Phelan, and colleagues, however, argue that intermediary mechanisms cannot explain the persistent inequality in health based on SES that had transcended the epidemiological transition from infectious diseases to chronic conditions. Nor could interventions upon such mechanisms hope to close the gap between the length and quality of life of the rich and poor, or between the dominant and minority populations, because as soon as one mechanism was addressed another would develop or the cause of death structure would shift and the wealthy and powerful would still be better positioned to prevent, treat, or mitigate most diseases.

Evidence for the theory of the fundamental social causes of health inequalities have been spotlighted during the COVID pandemic, as the death structure around the globe shifts under the pressure of an emerging infectious disease. The wealthy and powerful have largely been able to retreat to their home or homes where they have mostly safely continued with their employment. Some have been able to afford to have their children continue attending private schools while many more have been able to hire tutors. There were even reports of some wealthier Americans coming together to pay professors to educate small pods of their children. The great majority of Americans in the upper-middle classes and above were able to pivot to online education with relatively manageable challenges, and those with their own educational credentialing were armed

with a knowledge base necessary to guide their students at home. Wealthier Americans can have their basic needs met with minimal social interaction. Wealthy Americans have also found themselves some of the first in line for vaccinations while others recoiled in the collective memory of the Tuskegee experiment, and decades of mistreatment of women and minority populations by the American medical system, the public health system, the corrections system, the judicial systems, and the dominant society. In addition to vaccinations, the socially well-positioned early in the pandemic purchased their own ventilators and more easily accessed other life-preserving measures. Americans who are better positioned within the social hierarchy have also been afforded the opportunity to further capitalize on prior investments in their well-being. The narrative, however, has overwhelmingly been focused on what those less well-positioned lack, including healthy bodies and lifestyles. West Virginians were highlighted early in the pandemic as at particularly high risk of deadly consequences because of the prevalence of smoking, obesity, and related comorbid conditions, such as diabetes and heart disease.

While Phelan, Link and colleagues provide a roadmap to connect the fundamental social causes to health inequalities through resources at the individual and structural level, most of the health inequalities research using the theory of the fundamental social causes of health inequalities investigates the influence of resources at the individual and community level. The result is a transformation of structural determinants into individual attributes. Socially constructed categories are attached to bodies and biology and detached from history and biography. I argue that the challenge for connecting the fundamental social causes to resources at the structural level is due in part to the use of socioeconomic status instead of class. Whereas socioeconomic status describes the position held in a distribution of resources, the concept does not consider the recognition of a person or population's place within that distribution and how this is reflected in values, beliefs, and practices. For Bourdieu, this recognition of one's position is symbolically retranslated into lifestyles that distinguish the classes in important and enduring ways. Bourdieu also recognizes the role "social stigmata" plays in the process of producing distinctive lifestyles but does not expand substantively in his research. While there is also some confusion in the theory of the fundamental causes of health inequalities literature about the definition of stigma, Link and Phelan's conception of stigma power provides a useful foundation, particularly when developed using other recent research that encourages a rethinking of stigma in sociological research more generally. Finally, mapping Link and Phelan's resources of money,

knowledge, beneficial social connections, prestige, and power to Bourdieu's concepts of economic, cultural, social, and symbolic capitals facilitates understanding not only how the lack of access to resources shapes morbidity and mortality, but how their possession defines health.

I use multiple methods and levels of analysis to contextualize one community in the larger social field of the nation and state to investigate how class and stigma are associated with health from the structural to individual level. I use national quantitative data from the U.S. Census Bureau, the Kaiser Family Foundation, the Robert Wood Johnson Foundation, and the United Health Foundation to investigate the position held by West Virginia in the distribution of economic and cultural capital in the US using Bourdieu's social field as a heuristic device to visualize the relationship between access to capital resources and health outcomes at different spatial levels in the US. To further contextualize the place that West Virginia holds in the national social landscape I carry out a content analysis to determine how the state is represented through national media outlets. The first goal of the content analysis is to understand what the national narrative about West Virginia is, if this narrative relies on historical, placed-based stereotypes, and if so to what degree. I further focus on how the health of West Virginians is framed through the media and by major foundations that take as their task the ranking of the states and counties in the US based on the health of their populations—the results of which are translated through media and influence funding, policy, research, and intervention at the state and community level. Investigating the way that the national media portrays the health of West Virginians is the second goal of the content analysis and allows me to investigate if the media, relying on data and science produced from risk factor epidemiology relies on risk discourse, focusing on intermediate determinants, such as smoking and obesity and their outcomes, as opposed to the structural factors which determine opportunities for health and exposures to risk.

With West Virginia thus embedded in American society I use data like I did in the national-level analysis outlined above, at the county level, to map onto the social field – or the state field of power – the same distribution of place by the volume of capital resources. As with the state analysis, I look at the relationship between access to capital resources and the average length and quality of life. From here, I turn to one county in the state of West Virginia and, taking advantage of the county high school system, to an academic cohort of adolescents representing the county communities within which I carried out an ethnographic study. I pair participant observation in the high school and communities with surveys of the whole class at

two time points and personal chronological diaries (Zimmerman and Wieder 1977) recording the daily lives and practices of a subset of these students. I also ask students to reflect on how the coronavirus pandemic affected their daily lives, and if they would be willing to take a COVID19 vaccine. Students were also asked about their perceptions of the reputations of their town, county, and West Virginia and asked to identify where they believe they are situated in the hierarchy of American society, as well as the high school. Finally, students were asked to rate their health, complete a stress inventory, and answer questions related to coping resources and mechanisms and social support at both time points, both before and after the coronavirus pandemic led to wide reaching changes across the state. In my final analysis I investigate how the position an adolescent perceives they hold in their high school and American society is related to measures of spatial stigma and adolescent stress. Additionally, I analyze how these measures are associated with self-rated health, controlling for coping resources and mechanisms and social support.

Overall, I investigate how where someone lives in the United States – in this case West Virginia – influences health based on the position held on the social field (class), or access to capital resources, including income and educational or credentialling opportunities representing those knowledges most valued in American society at a moment in time in history that packaged together equate to power, prestige and status. Additionally, I seek to add an understanding of how a state, so positioned as West Virginia, is represented in the national media. And finally, from the ground up, I explore the perceptions of young people growing up in West Virginian about any stereotypes about where they live from outsiders, and whether those stereotypes are positive, negative, or neutral. I also ask how adolescents preparing to graduate view the state (and county and town) in which they live and connect these perceptions and attitudes to individual measures and perceptions of health or wellness, stress, and coping overtime, as well as longer-term outcomes (e.g., graduation, higher education, work, etc.). Sociology offers the theories and methods required to investigate spatial health disparities from multiple perspectives and the current study is a sociological exercise in theorizing about how place matters for health and wellness from the population to individual level in one country, state, county, and academic cohort in American society.

Chapter 2 Review of the Literature

CURRENT EXPLANATIONS FOR SPATIAL HEALTH INEQUALITIES

The most common framework used across fields to explain health inequalities is the Social Determinants of Health (SDOH). The World Health Organization's conceptualization is shown in Figure 2-1 below. The SDOH framework considers socioeconomic and political context and socioeconomic position, defined by social class, gender, and ethnicity and subsequent education, occupation, and income, as representative of structural determinants. In the SDOH model these structural determinants effect health equity through their influence on intermediate determinants, including material circumstances, behaviors, and biological and psychosocial factors, as well as on the health systems. Finally, social cohesion and capital are mediating the overall relationship between socioeconomic position and intermediate determinants. The bulk of health inequalities research focuses on the intermediate determinants, and specifically on individual-level behavioral factors or characteristics, often communicated as individual or community risk factors (National Academies of Sciences et al. 2017).

The socioeconomic and political context is often left unobserved in research and policies while culture and values are thought too out of reach for intervention. The impacts on the well-being of communities, however, depend upon this context. What is more, this context is directly formed by the systems of power that differentially distribute resources. Socioeconomic position and the social categories which define that position are transformed into individual attributes or characteristics that themselves become a risk. Social class is a determinant, being poor a risk, but the systems that maintain the social class hierarchy and poverty (and the reasons they do so) are invisible. Researchers have more recently described what is shown in the SDOH framework as the terrain on which "structural inequities produce health inequities" (National Academies of Sciences et al. 2017:100), and have recommended using the term social "contributing factors" instead of determinants in this model to express the distinction (National Academies of Sciences et al. 2017). This research argues that structural inequalities, or "the dimensions of social identity and location that organize or structure differential access to opportunities for health" (National Academies of Sciences et al. 2017:100) are the foundational determinants and explain how the structural determinants in the SDOH model lead "to systematic differences in the opportunities groups have to achieve optimal health" (National Academies of Sciences et al. 2017:100).

Figure 2-1 World Health Organization's Commission on Social Determinants of Health (CSDH) Conceptional Framework for the SDOH (Solar and Irwin 2010:6)
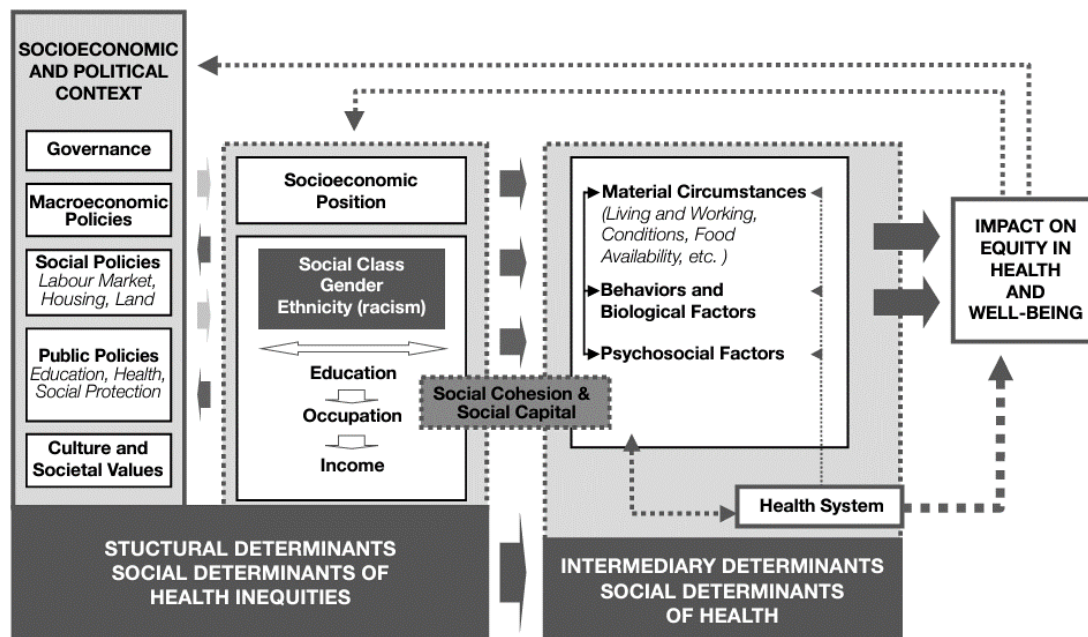
Factors is the language used by the models that rank the health of American states and counties. The United Health Foundation's America's Health Rankings (AHR) model includes "behaviors, community & environment, policy and clinical care categories [that] reflect the personal, social and environmental factors that influence … health outcomes" (United Health Foundation 2020a) used to rank states. Health outcomes for the United Health Foundation include cancer deaths, cardiovascular deaths, diabetes, health status (using SRH), frequent mental and physical distress, infant mortality, and premature death. Behaviors considered by the United Health Foundation include drug deaths, excessive drinking, high school graduation, obesity, physical inactivity, and smoking (United Health Foundation 2020b). For the community and environment, the model includes air pollution, children in poverty, infectious disease, chlamydia, pertussis, salmonella, occupational fatalities, and violent crime (United Health Foundation 2020b). The policy category prior to 2020 represented by immunization rates for adolescents and children, federal and state public health funding per person, and the percent of the population that is uninsured (United Health Foundation 2020b). Finally, for the clinical care measures, the United Health Foundation considers the number of practicing dentists/100,000 of the population, percent of low birth rate infants, number of mental health providers/100,000 of the population, preventable hospitalizations, and number of primary care physicians/100,000 of the population (United Health Foundation 2020b).

While many of these measures capture the mechanisms that create differential access to resources, as with the SDOH model, the structured inequities determining them are absent. For the United Health Foundation even high school graduation is related to behavior, as are morbidity and mortality related to despair, or stress conditions, and the percent of children in poverty as a measure for the community and environment is the only measure related to economic inequalities. What is largely missing here is the unequal distribution of power and resources based on structural inequities (National Academies of Sciences et al. 2017), or what Camara Phyllis Jones calls the social determinants of inequity–systems of power that can differentially distribute resources in populations (Jones et al. 2009).

While disparities are recognized by the United Health Foundation in their annual reports by demonstrating the different predictors and outcomes by gender, age, race/ethnicity, education and income groups at the state and national level, the words racism, ageism, sexism, discrimination, or even inequality do not appear in the entire 2019 report (United Health Foundation 2020a). The Robert Wood Johnson Foundation (RWJF), however, makes a point of speaking to health equity, which,

> means that everyone has a fair and just opportunity to be as healthy as possible. This requires removing obstacles to health such as poverty and discrimination, and their consequences, including powerlessness and lack of access to good jobs with fair pay, quality education and housing, safe environments, and health care (RWJF 2017).

Within the modelling of health outcomes, however, these influences of structural inequities are largely absent. The RWJF considers health behaviors, clinical care, social and economic factors, and the physical environment to be health factors that contribute to the length and quality of life in their ranking of counties within the states. The RWJF model includes the length and quality of life, measured as life expectancy and health status (SRH) (RWJF 2020).

Health behaviors for RWJF include tobacco use (percent of adults who are current smokers), diet and exercise (adult obesity, food environment index, physical inactivity, and access to exercise opportunities), alcohol and drug use (excessive drinking and alcohol-impaired driving deaths), and sexual activity (sexually transmitted infections and teen births) (RWJF 2020). Clinical care includes access to (percent uninsured, ratio of population to dentists and mental and primary health care providers) and quality of care (preventable hospital stays, mammography screening, and flu vaccinations) (RWJF 2020). Social and economic factors for

the RWJF include education (high school graduation and some college), employment (percent unemployed), income (children in poverty and income inequality), family and social support (children in single parent households and social associations, or the number of membership associations per 10,000 population), and community safety (violent crime rate and injury deaths) (RWJF 2020). Finally, the physical environment for RWJF include air and water quality (air pollution particle matter and drinking water violations) and housing and transit (severe housing problems, percent driving alone to work, and percent of those driving alone with a thirty minute or longer commute) (RWJF 2020).

Again, while RWJF does a much better job at researching and calling out the effects of structural inequalities overall (RWJF 2018), they do not include these measures as a part of their rankings, but instead largely recognize disparities by looking at the different outcomes across and within counties, for different marginalized populations. Both the United Health Foundation and the RWJF include other measures within their reports that are not included in the rankings but are presented. For the RWJF this includes measures of food access and limited access to healthy foods, drug overdose deaths and motor vehicle crashes all included under health behaviors (RWJF 2020). For education RWJF also includes disconnected youth, or the percent of 16 – 19-year-olds not working or going to school and reading and math scores (RWJF 2020). For income RWJF also includes median household income and children eligible for free and reduced-price lunches (RWJF 2020). For family and social support, they show the index of dissimilarity, or residential segregation (RWJF 2020). For community safety measures they also consider homicides, suicides, firearm fatalities, and juvenile arrests (RWJF 2020). And finally, for housing and transit, RWJF presents traffic volume, home ownership, and severe housing and cost burden (RWJF 2020). But again, these measures are not included in rankings, nor are the systems of power that determine access and exposure to all resources and risks included in the models.

The RWJF model also does not make it clear that there is a relationship between measures, nor do they demonstrate the ways in which all the factors related to health in their model are each individually shaped by structural inequities. If fully theorized, however, these fundamental determinants could be depicted in the model as related to each of the health factor's subcategories. Including more measures addressing such things as inequality in pay based on gender and race, political representation or voter access, incidents or rates of violence based on

group membership, including violence perpetuated by police officers and members of the military, or other manifestations of structural inequities that would allow for those using the data to better present possible interventions at the structural level, which could have far reaching consequences for health across vulnerable populations by addressing long-held and deeply embedded ideologies that have been used to divide the nation since its inception. But first, communities must understand the social inequities that define their place – does everyone in the community have equitable access to pay, positions, promotions, and possibilities? To answer these questions, it is important that interested parties or investigators are aware of the broader social context of which their community is embedded, including the historical context of development at the national, state, and local level.

THEORY OF THE FUNDAMENTAL SOCIAL CAUSES OF HEALTH INEQUALITIES

Ultimately, these models might also be considered the "terrain" upon which the fundamental social causes effect health (National Academies of Sciences et al. 2017). The theory of the fundamental social causes of health inequalities has been most notably developed by Phelan and Link[1], who were driven by an interest in explaining the persistent relationship between socioeconomic status and mortality, in the face of shifting mechanisms and changes in disease risks and causes related to the overall shift from infectious diseases to chronic conditions (House 2002; Phelan et al. 2004). A fundamental social cause of health inequalities must meet four primary criteria set out by Phelan, Link and colleagues: it "[1] influences multiple disease outcomes…[2] affects these disease outcomes through multiple risk factors…[3] involves access to resources that can be used to avoid risk or minimize the consequences of disease once it occurs…" and, [4] its association with health is "reproduced over time via the replacement of intervening mechanisms" (Phelan, Link, and Tehranifar 2010:s29). The flexible resources used to avoid risk or minimize the consequences of disease include power, privilege, money, knowledge, and beneficial social connections, operating "at both individual and contextual levels" (Phelan et al. 2010). Link, Phelan, and colleagues have provided the most substantial

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[1] The theory of the fundamental social causes of health inequalities was built on the concept of basic causes of disease developed by Stanley Lieberson and applied to the association between SES and mortality by House and colleagues (House 2002).

theoretical development of and evidence for SES and stigma as fundamental social causes of health inequalities.

In the development of the theory of the fundamental social causes of health inequalities Phelan and Link (2004) were challenging the dominant paradigm of risk factor epidemiology, the perspective in which scholars want to understand what and how particular risk factors mediate the SES-mortality relationship. The risk factor perspective also underlies the SDOH, United Health Foundation, and RWJF models presented above. Phelan and Link (2004) argued that the intervention upon proximal risk factors could not be expected to change the fundamental relationship between SES and health because the mechanisms will change, forever replaced by new mechanisms generating the same overall inequalities in growing population unless attention is turned to the social structure. Phelan and Link's theory proposes that individuals and groups with higher levels of SES use the resources afforded by their position in the social hierarchy to prevent or minimize the consequences of disease. Phelan, Link and colleagues note that particular status groups do not explicitly advocate for health-promoting conditions, but instead form lifestyles out of the cultural practices surrounding food, exercise, and other health-related practices that influence the behaviors of other status-group members, which "are shaped by the extant stock of health knowledge and pecuniary resources generally available in particular status groups" (Phelan et al. 2010:51S).

Camara Jones argues that the SDOH, such as those modelled by the WHO, the United Health Foundation, and the Robert Wood Johnson Foundation, help us to understand the social determinants of *health* (environment, neighborhoods, food access, etc.) but do not help us understand how health disparities arise and consequently how they are, at least in part, maintained. For Jones there are three dimensions of health intervention necessary to address population health inequalities. The first is addressing equitable access to quality health services. The second is to address the SDOH, and the third is to address the social determinants of equity, which she defines as systems of power that can differentially distribute resources in populations. Jones explains that the systems of structured inequity occur along many axes, including capitalism, racism, sexism, and geographic divides.

Along each axis is a system structuring opportunity and assigning value based on the social interpretation of how one looks, what one has or does not have, or where one is from that "unfairly disadvantages some individuals and communities, unfairly advantages other individuals

and communities, and saps the strength of the whole society through the waste of human resources" (Jones 2020). If it is economic and cultural capital that provide the resources necessary to realize good health, it is the systems of structured inequity that decide who gets what of the available resources to apply to that realization. In other words, it is the social determinants of equity, or class and stigma as fundamental causes of health disparities, that determines who has access to the SDOH. And it is those with the most capital who decide what "good" health is, and what "good" health looks like.

But what informs these lifestyles and cultural practices at any given time, or in any specific place? Where does the stock of knowledge that influences lifestyles and behaviors come from? And what is the relationship between the creation and use of knowledge and access to economic resources? More importantly, what are the consequences for those that are unable because of a lack of resources to follow the same cultural practices represented by the healthy lifestyle acted out by a "particular status group"? To begin answering these questions the theory of the fundamental social causes of health inequalities can be explicitly linked to the work of Pierre Bourdieu. First, it is necessary to shift from the conception of SES used in the theory of the fundamental social causes of health inequalities to class, as conceptualized by Bourdieu, which will allow for a theoretically based understanding of lifestyles. It will then be necessary to introduce Bourdieu's primary concepts of field, habitus, and capital. These three concepts are central to understanding power, social reproduction, and practices.

While the resources tied to the theory of the fundamental social causes of health inequalities map rather directly onto the subtypes of capital in Bourdieu's work, the relationship between the resources are often overlooked in the theory of the fundamental social causes, facilitating a false disconnection of non-monetary capitals from their economic roots. A more complex conceptualization of capital resources is also necessary for addressing power. While power is one of the resources used to prevent, mitigate, or treat disease in the theory of the fundamental social causes, for Bourdieu power is exercised through a symbolic system of domination.

Beyond Socioeconomic Status

Social class and socioeconomic status (SES) are often used interchangeably in the literature addressing health inequalities (Elo 2009; Krieger, Williams, and Moss 1997). The ways

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in which these concepts are operationalized and applied in health inequalities research vary substantially, limited by the data available to researchers. The availability of data has also determined, in part, the different ways in which class and SES are used in American and Western European research. The choice of whether to study social class or SES also reflects the political and social values of the societies under consideration. So the differences are not only because Western European nations have historically had better data on class (Elo 2009; Marmot and Wilkinson 2005), but also because Americans are "uncomfortable with the concept," (Isaacs and Schroeder 2004:1137), which goes against the belief that we "live in a society with such potential for upward mobility that every citizen's socioeconomic status is fluid" (Isaacs and Schroeder 2004:1137). The US Census Bureau began gathering data on occupational categories from the early 1900s (Krieger et al. 1997), but American researchers would not begin to explore the association between class and mortality until the second half of the twentieth century (Elo 2009). The US Public Health Service was established in 1912, and since its inception researchers have been using the data to ask questions about "racial/ethnic and socioeconomic disparities in health" (Krieger et al. 1997:342).

Similarly, the British Registrar General developed a social class schema in 1913, based on occupational status and skill (Krieger et al. 1997), and have been documenting mortality by occupational class since as early as 1851 (Elo 2009:554). French researchers and government actors have been concerned with morality and poverty since the second decade of the nineteenth century (Elo 2009). In Great Britain and other European countries vital statistics data, for the most part, is representative of occupational class, which has long been connected to morbidity and mortality within and across different regions (Elo 2009; Krieger et al. 1997; Marmot and Wilkinson 2005). The use of occupational status, however, has been challenged because it omits individuals who are not in the labor force, such as homemakers and retirees (Elo 2009). Even with such limitations, occupational class has been shown to have a robust relationship with health across time and within and between nations. Occupation is also "related to levels of education and income" (Elo 2009:555) while having the added benefits of 1) offering a "summary measure that captures a combination of social and economic characteristics relevant for health that are shared by individuals within similar occupational categories," (Elo 2009:555) and 2) capturing "social origins in addition to one's attained adult position in a country's social

and economic hierarchy" (Elo 2009:555). Studies in the US more often use measures of employment, income, wealth, education, or some combination of these to capture SES.

Researchers have pointed to the importance of employment both for the accompanying prestige and income it represents, as well as the type of exposures to "alienating work conditions" (Elo 2009:561) or "an unhealthy environment and boring, repetitive tasks" (Isaacs and Schroeder 2004:1140). People in lower classes are also more likely to experience low skill discretion and low influence at work, and higher levels of job insecurity (Bartley, Ferrie, and Montgomery 2005; Borg 2000). People in higher classes, on the other hand, are more likely to experience high psychological demand and conflicts at work but with more control over these factors than their lower-class counterparts (Borg 2000). Unemployment has also been shown to work through various pathways to affect health, including as a stressful life event that "also increases the likelihood of other adverse life events and lessens the psychological and social resources needed to cope with these," (Bartley et al. 2005:85) which in turn can lead to the use of "self-destructive behavior" to cope (Bartley et al. 2005:85). Work stress, or the psychosocial environment at work, has also been shown to be important to health (Marmot, Siegrist, and Theorell 2005). This research demonstrates that "high demand/low control conditions and high cost/low gain conditions at work are unequally distributed both between and within societies and may potentially provide a framework in which to understand the contribution of psychosocial factors at work to the development of disease" (Marmot et al. 2005:121). Understanding the shifting occupational and opportunity structures that support a community and what this means for the well-being of residents is particularly important when considering spatial health inequalities. The way society values work, and workers, is also important, as represented through wages.

Many researchers argue that it is the unequal distribution of income and wealth that are at the root of inequalities (Isaacs and Schroeder 2004). Income and wealth "signal access to economic resources available for the purchase of health-related goods and services" (Elo 2009:556). While income is the most frequently used measure of SES, it is widely recognized that wealth is not equally distributed, even among occupations and levels of income. Black Americans, for example, own substantially less wealth than whites at similar levels of income (Keister and Moller 2000; Omi and Winant 2014). In addition to monetary wealth, data might be gathered on housing quality, tenure, ownership, or the possession of other material goods, like

cars, computers, or broadband internet access (Elo 2009). Measures of income and wealth are most susceptible to a reverse-causation argument because it is often asserted that health can directly influence their attainment (Elo 2009; Subramanian and Kawachi 2004). The large body of evidence from public health, epidemiology, demography, and sociology, however, has demonstrated that, in general, income and wealth likely have a greater influence on health than does health on the ability to earn an income or accumulate wealth (Kaplan 2017). Income inequality can also be ascertained at the spatial level measured with inequality indexes (e.g., Gini correlation) and has also been associated with differences in population health (Rehkopf et al. 2006; Subramanian and Kawachi 2004).

Finally, education is often considered the most important measure of SES in the US (Mirowsky and Ross 1998), because it is considered "the key to economic and social advancement," (Isaacs and Schroeder 2004:1140) and has been proposed to also play a role in instilling values (including behavioral ones) in young people, while also providing "them knowledge to read about and understand health information and the capacity to solve problems" (Isaacs and Schroeder 2004:1140). Moreover, educational attainment is a widely available, stable measure, "not influenced by subsequent health impairments that can lead to changes in one's occupation, income, and wealth" (Elo 2009:556). Educational attainment, however, "is not entirely free of the influence of poor childhood health, which can determine both adult health and educational attainment" (Elo 2009:556). The use of education as a proxy for SES, however, is problematic because the education that is available to a child is dependent upon the class in which they are born into, and shapes the life chances and choices that are available (Lareau 2011; MacLeod and Rummel 2010; Willis 2017). Whether placed in the social hierarchy by occupation, employment, income, wealth, or education Pierre Bourdieu argues that the positions held within these statistical distributions only reflect one facet of the dual existence of class. Bourdieu argued that class also exists in "the contrasted classifications and representations produced by agents on the basis of a practical knowledge of these distributions such as they are expressed in lifestyles" (Bourdieu and Wacquant 2013). Because lifestyles are a compilation of practices, to move forward it is useful to turn to the full conceptualization of Bourdieu's field theory, including his concepts of habitus and capital. I will also discuss Bourdieu's framework for understanding systems of power, specifically his concepts of symbolic power, symbolic capital, and symbolic violence.

PIERRE BOURDIEU'S FIELD THEORY

Bourdieu's field theory states that "a field is a field of forces within which agents occupy positions that statistically determine the positions they will take with respect to the field" (Bourdieu 2005:30). Social fields are structured by the relations of opposing forces, between those wishing to conserve the status quo operating in the field and those who wish to transform the existing situation. Bourdieu's intent in the conceptualization of the social field was to extend beyond concepts such as the market or social institution, which he argued suggested consensus in a space more aptly defined by these opposing forces characterizing social life (Bourdieu 2005; Lareau 2011). Most opposition in the structure of the field is rooted in a struggle over what weight and value is given to the various species of capital, including their symbolic representations. Bourdieu also wanted a concept that would encompass "social worlds where practices are only weakly institutionalized and boundaries are not well-established" (Lareau 2011:363). This provides useful to the study of neighborhoods or communities, an area of research marked by struggles with the definition of what boundaries define such entities, and the recognition of opposition and power within a broadly defined space There are many social fields (e.g., education, art, journalism, medicine, public health, etc.), each with their own set of rules and their own status quo, and a shared belief in the logic underlying both. The power of an individual or institution on a social field is determined by their position—by the amount of economic and cultural capital they have brought to the field, or how many tools and the knowledge to use them has been provided or acquired since birth or beginning and validated as valuable by society. All social fields, however, are homologous to the *field of power*, and because of this the capital resources defining power are transferable across fields.

The field of power is defined by the volume of economic (high incomes, assets, and property) and cultural (educational credentials) capital, and the volume of these capitals determine the position and power held by agents. Bourdieu has also stated that he intended to move beyond the idea of a dominant class with the concept of the field of power. For Bourdieu "the social structure is a system of differences and distances, which define a historically given division of the work of domination" (Wacquant 1993). Struggles between the dominant class occurs because of a "difficulty of integrating and reconciling diverse forms of power" (Wacquant 1993) or to come to consensus on the weight or value given to the various forms of capital in the structure at any given time (Wacquant 1993). These struggles within the dominant

class are often mistaken for conflicts between classes. In 1993, however, Bourdieu commented that while in France the school system differentially sorted the wealthy into economic/business and culturally-based educational institutions and occupations, solidifying the opposition between money and culture, in America there seemed to be less conflict between the economically and culturally wealthy because "the dominant are all trained at the same schools…elite schools like Yale University and Harvard University bring the future business leaders and intellectuals closer together" (Wacquant 1993:20).

If this is true, it might explain, in part, the seemingly general acceptance of widening income inequality in the US. It may also be worth considering if what has been deemed a culture war in the US, is one being carried out primarily by (or incited by and in benefit to) those in power. A basic conceptualization of Bourdieu's social field is provided in Figure 2-2 below. The whole field represents the "field of the social classes…as a two-dimensional space structured around the axes of volume and type of capital" (Swartz 2012:142). The struggle in the field of power is between economic and cultural capital, and the values placed on their varying representations.

Figure 2-2 Bourdieusian Social Field (adapted from Thomson 2008 & Swartz 2013)
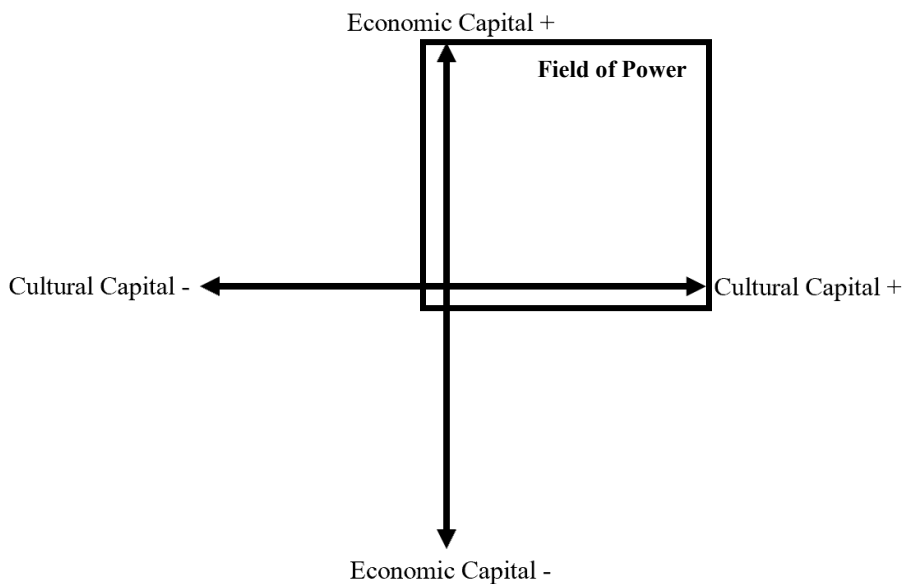
Practices, according to Bourdieu, are the product of the field (including the rules and logics) and the interaction of habitus and capital, which together provide the tools and knowledge that define the position on the field. It is also the position held in the distribution of resources that define lifestyles, or collections of practices—many of which are connected to health and well-being

through science and industry. Bourdieu provides the following formula with which to consider practices:

Practice = Field + (Habitus x Capital)

Habitus.

The habitus and capital develop together to define the positions held across social fields. The acquisition of capital happens through the habitus, which is formed first in the family and community (e.g., through care providers, religious groups, medicine, and early education). The *habitus* is a system of dispositions or attitudes that preexist the individual and reflect the habituses of ones' parents or caregivers and communities, but become embodied in the individual and change as they move through their lives in wider society (Bourdieu and Passeron 1990). The habitus is further developed through the education system, but it has been demonstrated that the habitus of poor and working class children and families do not align with the middle and upper-class habitus representative of those employed as educators and most often rewarded within that institution (Lareau 2011; MacLeod and Rummel 2010; Willis 2017). It is within the habitus that values and practices that define lifestyles originate (and the flexible resources that will be able to be invested in either will be born into). Bourdieu proposes that "the homogeneity of habitus that is observed within the limits of a class of conditions of existence and social conditionings is what causes practices and works to be immediately intelligible and foreseeable, and hence taken for granted" (Bourdieu 1990:58). Bourdieu also makes clear that when relating lifestyles and practices to the "classes of conditions of existence" the lifestyles and practices that are being observed are what he terms "lifestyles of necessity" and "practices of common condition" (Bourdieu 1984, 1990), which defines behaviors often seen as the failings of individuals and communities, instead of what they actually are.

> The fundamental proposition that the habitus is a virtue of necessity is never more clearly illustrated than in the case of the working class, since necessity includes for them all what is usually meant by the word, that is, an escapable deprivation of necessary goods. Necessity imposes a taste for necessity (Bourdieu 1984:372).

Bourdieu argues that if we look at practices and lifestyles based on class defined only by proximity in social space, instead of in addition to the ways in which groups distinguish themselves then we are certain to end up with something that looks like a culture of poverty when we are actually observing the social foil to which the practices and lifestyles of the affluent

are being opposed (Bourdieu and Wacquant 2013). It is important, therefore, to understand lifestyles and practices as they relate not only to access to necessities, but also of the understanding that people have of what it means to hold their positions in the social hierarchy and how they use this knowledge to distinguish themselves through their lifestyles. What goes into the construction of good health or a healthy lifestyle? What types of capital are necessary? Just as the habitus pre-exists the individual, so too are individuals born into the capital resources used to construct lifestyles. As previously stated, the resources outlined by Phelan and Link— money, knowledge, beneficial social connections, and prestige—map rather directly onto Bourdieu's species of capital—economic, cultural, social, and symbolic—but Bourdieu provides an opportunity to understand the important ways that these resources are interrelated, can be exchanged for one another, and the recognition that they all spring from and feed back into the economic capital that must be invested, an understanding at the root of the symbolic system of power and domination.

Capital

Bourdieu recognizes three primary species of capital, including economic, cultural, and social capital. He also recognizes symbolic capital, which can be considered a product of the three major types. Economic capital is money, assets, investments, and property, capitals that can be directly bought and sold or exchanged for one another. Cultural capital exists in three primary forms: "in the *embodied* state, i.e., in the form of long-lasting dispositions of the mind and body; in the *objectified* state, in the form of cultural goods (pictures, books, dictionaries, instruments, machines, etc.) …and in the *institutionalized* state" (Bourdieu 1986:47), such as through educational credentialing (Bourdieu 1986). Cultural capital, then, is about more than just knowledge, or know-how, but is represented in the very ways that people view and use their bodies and minds as inculcated since birth, and the way they express themselves through consumption or the investment of available economic capital. But it is also about what credentialing has been received, what societal recognition has been given to the ability of people to know the rules of the game, to share a belief in the underlying logic of those rules. Embodied cultural capital is particularly salient to health inequalities researchers, because as Bourdieu explains:

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Like the acquisition of a muscular physique…it cannot be done at second-hand (so that all effects of delegation are ruled out). The work of acquisition is the work on oneself (self-improvement), an effort that presupposes a personal cost…, an investment, above all of time, but also of that socially constituted form of libido, *libido sciendi*, with all the privation, renunciation, and sacrifice that it might entail. (Bourdieu 1986:48).

The relationship between embodied capital and health seems apparent in Bourdieu's work, but embodied cultural capital is not captured in the theory of the fundamental social causes. This is important because, as demonstrated in the quote above, the outcome (i.e., a muscular physique), becomes both something owned, and something viewed as earned almost entirely through personal will and sacrifice. As Bourdieu states, it "manages to combine the prestige of innate property with the merits of acquisition" (Bourdieu 1986:49). The money, time, knowledge, skills, and social support necessary to carve out the muscular physique become invisible and hard work and sacrifice the explanation. What is more, the muscular physique, and the practices necessary to achieve it (though still with little or no recognition of the other capital investments required for acquisition) have placed on them a high value, which is then recognized and legitimized across social institutions.

Objectified cultural capital is also only implied in the theory of the fundamental social causes, but the access to health-promoting products (or products that imply the health of their owners) is important because this objectified capital is similarly attached to the individual, exponentiated by complimentary embodied capital. The person with the muscular physique could get a certificate to train others in the way of acquisition and gain further, and the entire presence of a credentialing body provides legitimation. If the muscular physique is highly valued enough it might even enhance partnering prospects. But the value of the muscular physique is essentially arbitrary. For example, while indicative of good health a muscular physique is not necessary or sufficient for health.

The theory of the fundamental social causes of health inequalities does directly address social capital as "*beneficial* social connections" (Phelan et al. 2010, *emphasis mine)*, which is also explicated by turning to Bourdieu's concept of *social capital*:

the aggregate of the actual or potential resources which are linked to possessions of a durable network of more or less institutionalized relationships of mutual acquaintance and recognition—or in other words to memberships in a group— which provides each of its members with the backing of the collectively-owned

capital, a 'credential' which entitles them to credit, in the various senses of the word. (Bourdieu 1986:51)

Phelan and Link (2010) captured some of this in their use of the adjective "beneficial"—it is not simply about knowing people but about what those people have and know. Social capital is about access to a network of capital resources that can be relied on to provide support or back-up. Social capital is more than social support as traditionally conceived in health inequalities research, but it is not an entirely separate construct. Social support is one benefit of social capital, but a well-resourced network has other notable benefits as well. Another that is salient to health inequalities researchers are the practices that are shared (or not) across social networks. Social networks also reinforce the values arbitrarily placed on capitals and links people across social fields. A social network is acquired through inheritance and through an investment of "time and energy and so, directly or indirectly, of economic capital" (Bourdieu 1986:52). Each type "of capital can be derived from economic capital, but only at the cost of a more or less great effort of transformation, which is needed to produce the type of power effective in the field in question" (Bourdieu 1986:53-4).

Symbolic Capital.

For Bourdieu, *symbolic capital* is the legitimated, officially recognized form of economic, cultural, and social capitals (Bourdieu 1986; Bourdieu and Wacquant 2013), or what Link and Phelan express as prestige and power (Phelan et al. 2010). Bourdieu developed the concept of symbolic capital to "demonstrate the arbitrary and instrumental character of symbolic capitals as types of assets that bring social and cultural advantage or disadvantage" (Moore 2008:104) and to show "that through the process of transubstantiation, the fields of symbolic capital are homologous to the structure of the economic field" (Moore 2008:104). In other words, the structure of status, privilege, and other social rewards are those that are defined within the political, economic, and other fields by individuals with the power "to *define* what constitutes a highly valued activity and the reasons why particular social practices are valued more highly than others" (Lareau 2011:361). Symbolic capital is important to Bourdieu because of its ability to be misrecognized as something other than the economic capital truly underlying its symbolic expression, which is at the root of symbolic violence and undergirds symbolic power. While symbolic capital does not equate to power, it "represents the accumulated authority to be able to

exercise symbolic power" (Swartz 2013:94), and understanding symbolic capital can lead to a clearer understanding of how power is operating at the individual and structural level.

Symbolic Power

Lois Wacquant and David Swartz have argued that Bourdieu's concept of symbolic power is more important than his three primary concepts (habitus, capital, and field) combined (Swartz 2013; Wacquant and Akçaoğlu 2017). Wacquant defines *symbolic power* as "the capacity for consequential categorization, the ability to make the world, to preserve or change it, by fashioning and diffusing symbolic frames, collective instruments of cognitive construction of reality" (Wacquant and Akçaoğlu 2017:57). The power to categorize is the power to create the society in which you live, giving order to life; then, we struggle—politically and economically— to be able to give credence to the systems—that are really arbitrary historical artifacts created by those in power (Schubert 2008). Swartz explains: "*Symbolic power* is an internalized or incorporated power, one that resides in both cognitive schemes and bodily expressions. It orients individual and collective dispositions that generate practices" (Swartz 2013:94). What is often lost in the use of the theory of the fundamental causes of health inequalities is that the economic, cultural, social, and symbolic capital that those in power, or those in the dominant class, possess are used to define, promote, share, purchase, perform, practice, and embody health, and through these activations of capital people and groups become distinguished by their healthy lifestyles, but the outcomes are disconnected from their economic roots, legitimated through institutions, and misrecognized as having inherent value.

Finally, it is important to remember that all species of capital can be transformed back into economic capital or can be reinvested to be used in the service of further gain. The "structural dynamics of class relations" is according to Bourdieu an "often neglected aspect of the sociology of power" (Bourdieu 1977). Bourdieu (and others) argue that power is maintained not by physical force as it once was, but primarily through the symbolic domination of others that require little energy from the dominant class to maintain and is accomplished through the transformation of economic capital into symbolic capital that is then treated as if it has some intrinsic value and is hence granted legitimacy by the larger society (Bourdieu and Wacquant 2013; Schubert 2008). That health is left undefined in most health inequalities research is a product of such a taken-for granted system of domination. The dominating social class defines

what it means to be healthy based on the resources and knowledge available to them; this "healthy" lifestyle is then given some intrinsic value that should be equally desirable and beneficial to all regardless of social position, exposure to risks, or access to the resources needed to fashion such a lifestyle.

The power to define categories, however, is at the center of the social structure – particularly when these social categories are validated through scientific knowledge and the media, and become accepted as common-sense, not even needing to be defined to be widely used. Through a series of lectures in the 1970s and 1980s entitled "To Hell with Health" Ivan Ilyich defined health as "an unattainable ideal that makes no room for suffering, aging, dying, or other natural processes" (Metzl and Kirkland 2010:9). Metzl (2010) builds on his own work to define health as "a concept, a norm, and a set of bodily practices whose ideological work is often rendered invisible by the assumption that it is a monolithic, universal good" (9), as well as a "term replete with value judgments, hierarchies, and blind assumptions that speak as much about power and privilege as they do about well-being" (Metzl and Kirkland 2010:1-2).

POWER AND THE SOCIAL CONSTRUCTION OF HEALTH

Health inequalities in the US mirror the other social cleavages producing inequalities across institutions – social class, sex, gender and sexuality, race, ethnicity, disability, and place. While it is widely recognized that these demographic characteristics are associated with health inequalities they are most typically understood as individual or group attributes that increase risk to exposures. When individual attributes are thought to be at the root of health inequalities the resulting understanding is that inequalities are essentially based on individual behaviors or environments that need to be changed. Interventions aim to provide those with these attributes (usually geographically clustered by no accident) with the resources that it is believed are necessary to emulate the lifestyles of the dominant, and which have been attached to the long lives they experience. But the investment of capital resources in the construction of what is considered by the dominant class as a healthy body living a healthy lifestyle is grossly underestimated and the power required to categorize as healthy/unhealthy, normal/abnormal, able/disabled, at risk/not at risk is only recognized by a subsection in the field of medical sociology and rarely brought to bear in health inequalities research.

The literature on inequality speaks to the moralization evident when medicine labels groups "at risk" based on their identity (M. Robertson 2018). Often the instinct is to assume that the "at risk" are so based solely on biological or behavioral patterns in juxtaposition to those of the dominant group. Further, the rhetoric around the ideas of disease and disability has been challenged by sociologists such as Talcott Parsons (sick role) and Irving Zola (disability) as a *normativizing rhetoric* (Metzl and Kirkland 2010:5) and Zola (2018) and Conrad (2018) have both explored health as a *medicalizing rhetoric* that creates categories of who is healthy, or who can have health. Medicalization is an exercise of the power medicine and interest groups hold to take variation and transform it into normality and deviations from that normality. Medicalization is also seen as the convergence of the social construction of identities and a for-profit health care system (Anspach 2010).

Good health is a social construct—and not a cheap build. Health was the target of a $4.2 trillion global wellness market in 2017 (Global Wellness Institute 2018), the largest category of which is associated with beauty and anti-aging products and services $1,038B in 2017. It also includes services and products for: nutrition and weight loss ($702B), wellness tourism ($639B), fitness and mind-body ($595B), prevention and public health ($575B), traditional and complimentary health care ($360B), wellness real estate ($134B), spas ($119B), thermal/mineral springs ($56B), and workplace wellness ($48B) (Global Wellness Institute 2018). The economy clearly defines health as more than the absence of disease. What is more, the global well-being industry does not capture the advanced safety features available in newer, more expensive automobiles, nor does it account for the general access to safe homes, neighborhoods, and workplaces that are afforded to the well-positioned.

The mastery of a healthy lifestyle can be reinvested to gain capital—again in all its forms. When health is viewed as a cultural norm and variations from the norms are medicalized, moralized, and/or stigmatized the result is a detrimental othering of one group and in exchange the rewarding distinction of those able to realize the norm, purchased and performed with significant investment, but misrecognized as natural or earned through hard work alone because it is based on an innocuous conceptualization and presentation of health and well-being (and how they are achieved) that is legitimized across social institutions, including medicine, education, and even the family. As an example, lifestyle risk discourse has been present in American public schools since the middle of the nineteenth century and continues today. Deborah Lupton (2018)

has explored "lifestyle risk" discourse in modern public health education as a *moralizing rhetoric* that for those in higher classes lead to feeling rewarded while those without resources feel guilty or anxious. Lemuel Shattuck headed the Sanitary Commission of Massachusetts and assisted in the organization of the public-school system in late 19th century America (Allensworth et al. 1997). It was common at the time for "gentlemen" physicians to work in both medicine and education, extending the power of the dominant class to categorize and define across institutions (Bloom 2002; Starr 2008). In 1850 Shattuck wrote:

> Every child should be taught early in life, that, to preserve his own life and his own health and the lives and health of others, is one of the most important and constantly abiding duties. By obeying certain laws or performing certain acts, his life and health may be preserved; by disobedience, or performing certain other acts, they will both be destroyed. By knowing and avoiding the causes of disease, disease itself will be avoided, and he may enjoy health and live; by ignorance of these causes and exposure to them, he may contract disease, ruin his health, and die. Everything connected with wealth, happiness and long life depends upon health (Allensworth et al. 1997).

And today, the West Virginia Department of Education's website (see quote below) states that the goal of enhancing a healthy lifestyle is central, with nutrition, physical activity, and avoiding risky behaviors such as smoking, drinking alcohol, using drugs, or having sex playing a central role.

> Health literacy for all students is the fundamental goal of a comprehensive school health education curriculum. The health literate student is a critical thinker and problem solver, a self-directed learner, an effective communicator, and a responsible, productive citizen. Students must have the capacity to obtain, interpret, and understand basic health information and services and the competence to use such information and services in ways that enhance a healthy lifestyle. A comprehensive school health education curriculum from grades five to twelve is essential to enable students to acquire and apply health promoting knowledge, skills and behaviors (Raghun 2018).

At first read, the description of the health literate student above seems to make a lot of common-sense, but what image does it paint of the health "illiterate" student? Is their fate to become irresponsible and unproductive citizens? How are youth (and their families) to comprehend their "unhealthy" practices or elements of their lifestyles within this framework? Over the last century there have been exponential increases in the number of categories in mental and physical health

diagnostic manuals, decreasing the number of people who are free of disease and narrowing the definition of who can and does have "good" health (Metzl and Kirkland 2010).

The SDOH, United Health Foundation, and RWJF models rely on the World Health Organization's definition of health as "a state of complete physical, mental, and social well-being and not merely the absence of disease or infirmity" (WHO 2019). The theory of the fundamental social causes of health inequalities does not define health – it is defined in abstention as the absence of death but would benefit from not simply the broader WHO definition of health but a more sociological definition of health. In a rare instance of health inequality researchers defining health more broadly in their work, Mirowsky and Ross (2015) in the conceptualization of their "default" American lifestyle (an unhealthy lifestyle), claim:

> Being "healthy" means being vigorous, vital, and fit. The body's cardiovascular, respiratory, musculoskeletal, metabolic, endocrine, immune, and neurological systems work well. As a result, the individual feels healthy, functions well, and recovers naturally from infections, injuries, and cellular errors (297).

This is a high bar indeed. The words "vigorous," "vital," and "fit" are laden with subjective notions of the ideal human body. This definition of "health" further implies that vigor, vitality, and fitness must all be present simultaneously. There is little room in this definition for those with physical disabilities, those with congenital diagnoses, or even your average middle-aged American, the great majority of whom have obesity and related comorbidities. When people evaluate their own health, do they perform this "systems" check? Mirowsky and Ross (2015) also address the healthy/unhealthy lifestyle dichotomy, providing a succinct explanation of how the unhealthy "default" American lifestyle is the product of the social context, and the history of that social context. Mirowsky and Ross explain, "the default lifestyle [has] three elements: displacing human energy with mechanical energy, displacing household food production with industrial food production, and displacing health maintenance with medical dependency" (Mirowsky and Ross 2015:297). These are each certainly important influences on how people move, consume nutrition, and have become increasingly dependent on medicine with devastating consequences (i.e., the opioid epidemic) and they deserve greater attention in the health inequalities research. It seems natural that these structural conditions might be returned to when considering solutions, but Mirowsky and Ross instead turn to education as the most significant determinant because they view education as the place where "operators" can learn to "cancel" or

"override" the strong drive towards the unhealthy, "default" American lifestyle (2015). The school health movement, as we saw above, however, has been trying to do just that for nearly 170 years. The reason Mirowsky and Ross have such faith in their proposal is that they consider power as an individual attribute, disconnected from the capital its acquisition requires. Mirowsky and Ross also disregard the social reproduction of inequality that has been demonstrated as a sustained function of educational systems (Bourdieu and Passeron 1990; Lareau 2011; MacLeod and Rummel 2010; Willis 2017).

> This has little to do with material disadvantage, but instead the problem is that many individuals cannot see the dangers of the ordinary way of life, or they lack the ability to redesign their lives. Health depends on power: the power of knowledge, the power of critical thinking, and the power to design and direct one's own life toward better ends. Education puts the power in the hands of individuals. (Mirowsky and Ross 2015:298)

This is symbolic violence—the authority to define "health" as something nearly unattainable while being aware that health can also be bought, worn, and performed, and then claimed as a virtue the "other" only needs education (even in the face of material disadvantage!) to attain. The misrecognition of power occurs in large part because the underlying theory used by Mirowsky and Ross—among others—does not address the influence of class, and other social cleavages, on the attainment of education (Lareau 2011; MacLeod and Rummel 2010; Willis 2017) and consequently conceive of power and related resources as they might be exercised at the individual level, and not how they are determined structurally. Research challenging this focus on power at the individual level argues for the importance of "gazing up" at the political and economic power driving the reproduction of inequalities (Tyler and Slater 2018). Connecting the theory of the fundamental social causes of health inequalities to the work of Bourdieu facilitates this upward gaze. The fundamental social causes of class and stigma, when connected with the work of Bourdieu provide an opportunity to better understand the relationship between class and stigma and spatial health inequalities—without relying on moralizing, normativizing, and medicalizing rhetoric—by understanding the production and consequences of this rhetoric.

Stigma

Bourdieu recognized the importance of "social stigmata" in the development of the habitus and in the symbolic representation of one's position in the social hierarchy, or in

lifestyles. Bourdieu used the terminology "negative symbolic capital", which Swartz points out "overlaps with Goffman's classic analysis of stigma" (Swartz 2013:117), and which Bourdieu used when discussing the difficulties faced by North African adolescents in education and employment in France (Swartz 2013). Bourdieu, Swartz demonstrates, "evokes stigmatizing markers of 'body hexis…proper name, accent, and … place of residence' that function as a '*negative symbolic capital*' (Swartz 2013:117): 'The stigmatized pariah who, like the Jew in Kafka's time, or, now, the black in the ghetto or the Arab or Turk in the working class suburbs of European cities, bears the curse of negative symbolic capital' (Swartz 2013:117). To further investigate the role of stigma, however, I can also turn back to the theory of the fundamental social causes of health inequalities. Hatzenbuehler, Phelan and Link (2013) define stigma as "the cooccurrence of labeling, stereotyping, separation, status loss, and discrimination in a context in which power is exercised" (813), recognizing individual and structural discrimination as a key feature of stigma, which "encompasses multiple statuses and characteristics" (Hatzenbuehler et al. 2013:813). Like class, stigma meets all criteria to be considered a fundamental cause; it influences multiple health outcomes through various mechanisms, constrains access to structural, interpersonal, and psychological resources that can be used to avoid bad health or minimize its consequences, and facilitates "the creation of new, evolving mechanisms that ensure the reproduction of health inequalities" (Hatzenbuehler et al. 2013:819).

Hatzenbuehler argues that all the benefits of higher status outlined by Phelan and her colleagues are undermined by stigma, leading to poorer health outcomes (Hatzenbuehler et al. 2013). Regarding resources of power and prestige, Hatzenbuehler with Link and Phelan (2013) identify status loss as an "essential component of stigmatization" (814). Stigma also results in social isolation, either to avoid having the stigma revealed or from having to face the consequences of that stigma. For those with "concealable stigmas", fears of being exposed and negatively evaluated or rejected might lead them to avoid engaging in certain situations or forming close relationships (Hatzenbuehler et al. 2013). Further, it has been demonstrated that "stigmatized individuals use and deplete self-control to manage a devalued identity, which requires a flexible use of emotion regulation strategies in the short term" (Hatzenbuehler et al. 2013:816). In the long run, coping with stigma depletes psychological resources that negatively impact future abilities to "adaptively regulate their emotions, which can have negative consequences for both mental and physical health" (Hatzenbuehler et al. 2013:816). It has also

been found that those coping with stigma engage more often in maladaptive coping strategies (suppression, rumination, drinking, and drug use) to regulate emotions (Hatzenbuehler et al. 2013). And stigma is not only attached to characteristics associated with individuals or groups of individuals, places (and the people that live in them) can also be stigmatized with the same consequences as outlined above. In the development of their concept of "stigma power," Phelan and Link (2014) explicitly turn to Pierre Bourdieu and his concept of symbolic violence to explain how stigma is a process that "achieves the aims of stigmatizers with respect to the exploitation, control or exclusion of others" (24). Link, Phelan, and others have considered gender and race as fundamental social causes, but the concept of stigma as fully developed through the work of Hatzenbuehler, captures the consequences of these social identities. Omi and Winant (2014) explain how stigma are built into the American social structure, while demonstrating how inequalities based on social category are constructed by the dominate group:

> The corporeal distinction between white men and the others over whom they ruled as patriarchs and masters, then, links race to gender, and people of color to women. Whether they were defined by their racial status (as enslaved or "free," black, Indian, mestiza@), or by the patriarchal family (as daughter, wives, mothers), they were corporeally stigmatized, permanently rendered as "other than," and the possessions of, the white men who ruled (107-108).

Historical social stigmas based on gender, sexuality, race, ethnicity, and disability remain reflected in unequal access to capital resources and political representation. The WHO (2007) has recognized that "the differential status of men and women in almost every society across the globe is perhaps the single most pervasive and entrenched inequity" (842), and that "the relation between the genders represents as pressing a societal issue for health as the social gradient itself" (842). The same can be said of the treatment of racial minorities in the US – the relation between the races represents as pressing a societal issue for health as the social gradient itself. Therefore, all research must explicitly claim that when Americans who are black are at higher risk of some disease or illness (controlling for the usual litany of sociodemographic measures) that this is clearly and directly connected to the history that Omi and Winant capture so succinctly. Americans who are black live shorter lives than their white counterparts across socioeconomic status because of racism, which determines the distribution of resources (including access to health care and SDOH, like safe neighborhoods and quality education) and is sustained and maintained through stigmatization.

The spatial stigma literature also connects directly to the fundamental social cause theory, which some have characterized as a structural stigma framework arguing that social, economic, and political power are what help society socially construct and maintain stigma (Keene and Padilla 2018:287). That is, "spatial stigma is related to structural forces that produce and maintain inequality" (Keene and Padilla 2018:287). Spatial stigma is a "negative representation of a place, based on the symbolic meanings attached to them by the wider society (Keene and Padilla 2018). Essentially, the degrading mark of a "spoiled identity" (Goffman 1986) is the "blemish of place" (Keene and Padilla 2018; Wacquant 2008). Earlier work in the neighborhood and health literature recognized that "spatial concentration and segregation can mean that areas can become deprived, disadvantaged, or stigmatized" (Shaw, Dorling, and Smith 2005:208), or that an area's reputation "as displayed through the representations of the residents themselves and of other relevant actors" (Bernard et al. 2007:1841) influenced the relationship between place and health.

This place-based stigma is recognized by those living in a stigmatized area, such as how Jay MacLeod's respondents in *Ain't No Makin It* (2010) discussed how their addresses (in a poor inner-city neighborhood) on job applications indicated something about them to potential employers (e.g., lazy, have been to jail). Keene and Padilla (2018) suggest that spatial stigma may be one reason residents of structurally disadvantaged neighborhoods disproportionally experience poor health. Spatial stigma may effect health through micro-level factors like sense of self and personal experiences with stress, as well as through more macro-level factors like patterns of health behaviors and social interactions (Keene and Padilla 2018). Survey research asking about the perceived reputation of places has demonstrated that positive neighborhood perceptions correlated with better measures of self-rated health, even after controlling for individual and neighborhood correlates (Keene and Padilla 2018:286). Similarly, other survey research has found that participants who report living in a neighborhood with a bad reputation have higher body mass index as well as higher systolic blood pressure (Keene and Padilla 2018). Place-based stigma may also influence health through its effect on mobility, as explored in the neighborhood and health literature looking at racial residential segregation (Kramer 2018) and as discussed in *Ain't No Makin' It* (MacLeod 2010)—the place we live has long-reaching consequences on where we can go in the future and what is more, many people are stuck in the same type of places throughout their entire lives, shifted from one disadvantaged neighborhood

or area to another (Sharkey 2013). While spatial stigma research has focused primarily on urban "ghettos", or other places where spatial stigma is also reflecting, or intersecting with, racial stigma, there is substantial evidence of the stigmatization of rural places as well (Adamy & Overberg, 2017; Donnermeyer & DeKeseredy, 2013; Gullon & Lovast, 2018) , and Appalachia in particular (Snyder 2014). What is more, the stigma of rural places in America, including Appalachia, is also based on whiteness – simultaneously reducing all residents to a caricature of the poor white "other" while completely erasing the lived experiences of Appalachians of color.

Stress

Finally, as previously stated, the connection of the stress process to health inequalities research provides an important model for understanding how class and stigma might shape health and health-related practices on the ground. Social stress is consistently evoked in the medical sociology literature addressing racial (Takeuchi, Walton, and Leung 2010; Williams and Mohammed 2018) and gender (Rieker, Bird, and Lang 2010; Snow 2018) inequalities in health. Rooted in medical sociology, the stress process has been used in the study of mental and physical health across a range of outcomes (Thoits, 1995, 2010). Researchers have connected stress to addiction (Sinha and Jastreboff 2013), cardiovascular disease (Lynch and Kaplan 2000; Slopen et al. 2013), and obesity (Black 2006; Sinha and Jastreboff 2013). Stressors are associated with increased systemic inflammation (Fraga et al. 2015; Pietras and Goodman 2013; Stringhini et al. 2013) and allostatic loads (Rainisch and Upchurch 2013), which aggravate chronic conditions and lower resistance to infectious disease (Cohen et al. 2013; Slopen, Koenen, and Kubzansky 2012). Early and continual exposure to chronic and discrete stressors is predictive of poor physical and mental health later in life (Lynch and Kaplan 2000; Nurius et al. 2015), with many risk factors associated with both family socioeconomic status and stressors (Byrne, Davenport, and Mazanov 2007) related to daily (Johnson and Swendsen 2015) and environmental strains as well as life events and shifting statuses and roles (Heberle and Carter 2015; Novak, AhIgren, and Hammarstrom 2007; Pampel, Mollborn, and Lawrence 2014).

There has been a call from researchers concerned with the sociology of mental health for "incorporating stigma as a component of the stress process model" (Avison 2017:592). It has been demonstrated that "stigmatized individuals use and deplete self-control to manage a devalued identity, which requires a flexible use of emotion regulation strategies in the short

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term" (Hatzenbuehler et al. 2013:816). In the long run, coping with stigma depletes psychological resources that negatively impact future abilities to "adaptively regulate their emotions, which can have negative consequences for both mental and physical health" (Hatzenbuehler et al. 2013:816). Finally, there is evidence that those coping with stigma engage more often in maladaptive coping strategies (suppression, rumination, drinking, and drug use) to regulate emotions (Hatzenbuehler et al. 2013). Spatial stigma, in particular, has also been directly associated with poor SRH in adolescence, which it has been proposed act through the influence on personal identity and experiences of stress (Keene and Padilla 2018).

To fully understand how class and stigma result in poor health for populations and individuals it is necessary to turn to both macro and micro level theories. The theories outlined above, taken together, provide for what I refer to as a double-gaze, both looking up at how power is involved in the production and reproduction of inequalities and down at how social inequities affect the health of populations and people. Does the position that places and people hold in the distribution of capital resources in American society influence health? And on the individual level, do class and spatial stigma act through the stress process, affecting levels of stress, coping resources and mechanisms, social support, and ultimately health? To answer these questions, it is necessary to contextualize places and people using both quantitative and qualitative methods selected to complement multiple levels of theory and analysis.

Chapter 3 Study Methods

I use a mixed-methods approach to capture data at each level of analysis, and to contextualize one American county in the larger social fields of the nation and state. First, I investigate how class and stigma at the structural level are related to spatial health inequalities. I use national data from the U.S. Census Bureau's American Community Survey, the Kaiser Family Foundation, the Robert Wood Johnson Foundation, and the UnitedHealth Foundation to investigate the location of states within the distribution of economic and cultural capital in the US using Bourdieu's social field as a heuristic device to explicate the relationship between access to economic and educational capital, or power, and self-rated health and life-expectancy in the US. I use similar data, at the state level, to map onto the social field where the counties of one state in the nation—West Virginia—lay in the distribution of economic and cultural capital and how this relates to health outcomes. In addition to looking at the position the state and county holds in the distribution of capital, equitable access to the spoils of that capital is also considered by looking at wage gaps by class (income inequality), sex, race, and ability.

To further contextualize the place that West Virginia holds in the national social landscape I carry out a limited content analysis to determine how West Virginia is represented in national media, with a focus on how the health of the state is portrayed. I then turn to one county in the state of West Virginia and, taking advantage of the county high school system, to an academic cohort of adolescents representing the county communities within which I carry out ethnographic work. I pair participant observation in the high school and communities with surveys of the whole class (at two time points), personal diaries the year before they were set to graduate and interviews a year after they graduated from high school. I cobbled together ways to reach out and engage with students, working around the COVID19 pandemic restrictions, but would also rely on public records and field work to fill in the blanks. Ultimately, the data provide a snapshot of where the participants in the current study landed on key health and social measures over time, which can be compared with widely available county-level data to determine if the stress, coping resources and mechanisms, and social support in the cohort in my sample is representative of the area and state from which they hail, and what we can learn from their beliefs, attitudes, and practices in relation to the perceived health of themselves, and that of their families, as well as their own and others' perceptions of the city, county, and state they call home.

THE AMERICAN CONTEXT: POWER, INEQUALITY, AND HEALTH

To plot the states in the distribution of economic and cultural capital, using Bourdieu's social field as a heuristic device, I consider a state's median household income and the percentage of population over 25 years of age with an advanced degree. I also include the percent of the state reporting fair or poor health and the average life-expectancy for each state [both from the Kaiser Family Foundation analysis of the Centers for Disease Control and Prevention (CDC) Behavioral Risk Factor Surveillance System (BRFSS) 2013-2018 survey results], as well as the United Health Foundation's America's Health Rankings overall ranking for each state. I also add the Gini index of income inequality, which is calculated by the U.S. Census Bureau and ranges from zero (perfect equality) to one (total inequality), so as the index increases so too does income inequality. Finally, I include the states' average gender (median annual earnings ratio for full-time, year-round workers by sex), black-white (median annual earnings ratio for full-time, year-round workers by race), and disability (median annual earnings ratio for full-time, year-round workers by disability status) wage gaps to capture differential access to economic resources. Measures of unequal access to economic capital were taken from, or calculated using, the U.S. Census Bureau's 2018 American Community Survey (ACS) 5-year (2014 – 2018) estimates.

I, first, provide descriptive statistics for the states, including the above measures of economic and cultural capital and unequal access to economic capital, and health-related outcomes. With this data I provide the rankings of the states by each measure. I used Stata to assign ranks and used the convention of assigning the same rank to tied values to preserve the sum of the ranks. For example, if the first two values were tied, ranks 1 and 2 (sum of 3) would each become rank 1.5 and there would be no first and second rank. Second, I use simple bivariate analyses to investigate the associations between all the above measures. Third, I carry out regression analyses modeling the effects of access to economic and cultural capital on life expectancy at birth and the percentage of the population reporting fair or poor self-rated health (SRH). In the final models I controlled for unequal access to economic capital as measured by the Gini index, the gender-wage gap, the black-white wage-gap, and the disability wage gap. I carry out the above analyses using Stata (StataCorp, 2013).

I am primarily using the data above to contextualize one place within the distribution of resources available across the nation. All communities in the US are a part of American society

and if it is peoples' recognition of their place within the distribution of resources that is symbolically retranslated as lifestyles then their position within the larger society must be recognized. To investigate the position in the distribution of economic and cultural capital, or the power of the different states, in America I graph the states onto the Bourdieusian social field presented above. I do this by plotting each state based on average household income and percent of population with an advanced degree, with the two crossing at the median of both for the country. I select advanced degrees because it is clear from Bourdieu's writing that cultural capital in the field of power is about more than education. Advanced degrees are necessary to support the arts and sciences—specifically a well-endowed system of such provided as a public good. Institutions of higher education, natural history and arts museums, medical centers, orchestras, playhouses, parks, libraries, etc., each require a level of degreed managers, professionals, artists, scientists, and scholars in relation to their size.

Finally, I turn to one state in the national distribution—West Virginia—to see if similar patterns exist between the positions held in the social field of the state (access to economic and cultural capital) and SRH and life expectancy at the county population level. Here, I begin as I did at the national level and map the fifty-five counties on the social field of the state. I replicate the analysis done for states above, for all counties in West Virginia. At the county level I again consider median household income and the percentage of population over 25 years of age with an advanced degree. I include the average life expectancy of each county and the percentage of the county reporting fair or poor health, both measures from the Robert Wood Johnson Foundation. I rank these measures and include the RWJF County Health Rankings for each county. I also include and rank each county by the Gini index and again measure the impact of stigma on the distribution of resources at the structural level using the counties' gender-, black-white-, and disability-wage gaps to capture stigmas effect on access to economic resources, again ranking the counties. I repeat the analysis detailed for the states above, including one modeling life expectancy and one investigating self-rated health. I will, again, use Stata (StataCorp, 2013) for analysis.

THE SOCIAL CONSTRUCTION OF PLACE AND HEALTH: MAKING WEST VIRGINIA

To further contextualize the place that West Virginia holds in the national social landscape I also carry out a content analysis to explore how the state is represented in the

national media, or how power is used to construct a narrative about West Virginia and West Virginians in the context of the United States. I focus on *The New York Times* and *The Wall Street Journal*, leading national news outlets from different political perspectives – *The New York Times* being known for a progressive, democratic leaning and *The Wall Street Journal* conversely appealing to a more conservative audience. In addition to their differing political perspectives, *The New York Times* and *The Wall Street Journal* coverage should represent the major stories picked up from smaller outlets and cycled through other media sources, including social media where many Americans now receive their news. The twin objective of the content analysis is to further contextualize West Virginia and to determine if stories crafted at the national level portray the state mostly positive, mostly negative, or more neutrally represent both – and if the type of representation differs by publication. I am also interested in the representation of risk and West Virginia, and even more specifically, how risk is used to communicate about the health of the state's residents.

A ProQuest search returned 104,235 initial results for full-text newspaper articles published in English by the Wall Street Journal (35,818) and the New York Times (68,417) between August 1st, 2018, and July 31st, 2020, and available through the ProQuest library subscription at West Virginia University. Of these articles, 721 included "West Virginia" anywhere within the text, twenty-one of which had "West Virginia" in the title of the story, indicating the report was likely specifically about the state. An undergraduate research assistant and I reviewed the remaining 721 articles together to determine if they were *about* West Virginia, or if the article only included an uncontextualized reference to West Virginia. This initial analysis included 367 articles with West Virginia anywhere in the title or text that it was determined added to a public narrative about the state. Final decisions about codes and the coding structure, including whether an article added to a public narrative about the state, were determined by two researchers separately coding the news articles with West Virginia in the title.

Between August 1, 2018, and July 31, 2020, there were twenty-one articles that included the root "West Virginia" in the title (i.e., one article was about West Virginians), and so assumed to be about or add to a public narrative about the state. Overall, sixteen news stories were published that included West Virginia in the title by the *New York Times* and five by the *Wall Street Journal*. The twenty-one articles with West Virginia in the title were used to establish an interrater agreement with another researcher, Dr. Kat Williams, and refine the coding scheme. I

provided the coding structure developed (Appendix E, Figure E-1), as discussed above, along with a portable document format (PDF) and links to each of the twenty-one articles with West Virginia in the title. Dr. Williams was instructed to read each article, and indicate, first, if the article contributed to a narrative about the state of West Virginia (indicating yes or no on a provided spreadsheet). Responses were coded as "1" if the article added to the narrative about WV and "0" if not. If it was determined that the article did add to a narrative about the state Dr. Williams was then asked to indicate if the representation was positive, negative, or neutral. For both determinations Dr. Williams was invited to include notes expanding on their responses. The spreadsheet provided included a column for each code in the coding structure with the task being to indicate in each column if the code is represented in the article by copying and pasting the phrase or sentence representing that code/theme. And, each article had a column for open notes, which were transcribed into annotations and memos in NVivo (QSR International Pty Ltd 2020).

To test interrater reliability, I estimated Cohen's Kappa (K) using Stata (StataCorp 2016) and the results are provided in Table 3-1 below. First, we were in 90.5% agreement (K=0.767, p<.001) on whether the article was about West Virginia, or more specifically, if the article added to the narrative about West Virginia. We were in slightly less, but still high agreement (84.6%) on the sentiment (positive, negative, or neutral) of the article (K=.216, p=.001). Interrater reliability was between 84.6% and 100% for all but eleven codes. Only four codes indicated a statistically significant (p<.05) difference in rate of agreement from the expected. Agreement ranged from a low of 50% (K=-0.191, p=.803) for the legislative code to a high of 100% for three of the codes (Appalachia, drugs, and climate change). Finally, we were also in relatively high agreement (70% agreement; K=0.286, p=.101), though not statistically significantly higher than expected, on there being a code "other" than those provided.

Of the twenty-one articles with West Virginia in the title, it was determined that sixteen articles (76%) substantively added to a narrative about the state of West Virginia. Of the articles determined not to add to the narrative about West Virginia one is about college football (Oklahoma State and West Virginia University) (Anon 2018). Three of the articles are about the Catholic Diocese (Dias and Jacobs 2019; Maher 2019b; Rocca 2019), with one addressing a lawsuit brought by the state of West Virginia for putting the state's youth in the care of the diocese at risk (Dias and Jacobs 2019). And the final article, determined not to be *about* the state,

announced that the World Tennis Team would be conducting its season from the Greenbrier Resort in West Virginia (Stein 2020).

Table 3-1 Agreement with Cohen's Kappa for Interrater Reliability on each Code/Theme

Code	Percent Agreement	Expected Percent Agreement	Kappa	SE	z	Prob>z
Narrative	90.48%	59.18%	0.767	0.218	3.510	0.000
Sentiment	84.62%	46.75%	0.711	0.216	3.300	0.001
Health	90.48%	63.27%	0.741	0.211	3.510	0.000
Health Care	95.24%	78.91%	0.774	0.213	3.640	0.000
Drugs	100.00%	63.72%	1.000	0.218	4.580	0.000
Opioid	95.24%	66.21%	0.859	0.216	3.980	0.000
Food	95.24%	86.62%	0.644	0.204	3.160	0.001
Work	61.90%	45.58%	0.300	0.156	1.930	0.027
Unions	95.24%	86.62%	0.644	0.204	3.160	0.001
Politics	90.48%	50.57%	0.807	0.214	3.770	0.000
Government	61.90%	45.58%	0.300	0.156	1.930	0.027
Law	85.71%	65.31%	0.588	0.199	2.960	0.002
Crime	76.19%	71.20%	0.173	0.190	0.910	0.180
Judicial	90.48%	75.06%	0.618	0.202	3.070	0.001
Legislative	50.00%	58.00%	-0.191	0.224	-0.850	0.803
Place	80.95%	52.38%	0.600	0.214	2.810	0.003
Appalachia	100.00%	75.51%	1.000	0.218	4.580	0.000
Rural	80.95%	55.10%	0.576	0.213	2.700	0.004
Education	85.71%	72.11%	0.488	0.215	2.270	0.012
Students	80.95%	73.70%	0.276	0.151	1.830	0.033
Teachers	90.48%	68.71%	0.696	0.208	3.350	0.000
Environment	95.24%	78.91%	0.774	0.213	3.640	0.000
Climate Change	100.00%	90.93%	1.000	0.218	4.580	0.000
Natural Resources	95.24%	78.91%	0.774	0.213	3.640	0.000
Energy	85.71%	86.62%	-0.068	0.204	-0.330	0.630
Coal	76.19%	54.42%	0.478	0.186	2.570	0.005
Timber	90.48%	82.31%	0.462	0.184	2.510	0.006
Tourism	90.48%	82.31%	0.462	0.184	2.510	0.006
Religion	90.48%	63.27%	0.741	0.211	3.510	0.000
Sports & Leisure	90.48%	69.16%	0.691	0.218	3.170	0.001
Other	70.00%	58.00%	0.286	0.224	1.280	0.101

Notes: SE = Standard Error. Codes included in this table were included in the primary coding structure, see Appendix E.

There were two articles the researchers coded differently, including one covering the impeachment of West Virginian justices and another titled *West Virginia Teachers Walk Out Again*. I indicated the latter did not add to a narrative, while Dr. Williams indicated the opposite. The reverse was true for the first article. In short, I decided the article about the WV teachers striking was about teachers striking in general more so than about the state of West Virginia, and Dr. Williams noted that she "thought this one was going to build on a narrative of WV, but without any explicit reference to the history of unions in the state and the fact that after the first few paragraphs the article is primarily about education and teachers" she was unsure. I retained the theme because it is represented in the larger project and is an important topic to the individual students and teachers at the high school the first year of the study when early on in my observations, I note that there is a lot of talk about the teachers striking. Similarly, Dr. Williams noted that the article about the justices being impeached was " just politics not limited to WV" but I retained these articles because of the way the political culture being portrayed is still uniquely West Virginian in so far as the specific political methods used play on perceived values of the populace, including frugality as a demonstration of rugged individualism in response and in contrast to widespread poverty. After further review of the two articles and how other articles were coded by both researchers, including several covering the same stories, both were retained. Overall, sixteen of the twenty-one articles (76%) within the given time frame with West Virginia in the title, added to a narrative about the state, being woven on a national stage.

For those articles determined to add to a narrative about the state of West Virginia, both researchers coded the articles as having a positive, negative, or neutral sentiment regarding the state of West Virginia. Initially I coded nine articles as having a negative sentiment and Dr. Williams coded ten articles as negative out of the fifteen articles coded by each researcher. For the two articles that we disagreed on but ultimately retained in the analysis as being *about* the state we simply retained the coding for the researcher that indicated the article did add to the narrative. This resulted in a final count of two newspaper articles out of sixteen (12.5%) that added to the narrative about West Virginia with positive sentiment, ten (62.5%) that added to a narrative about West Virginia with a negative sentiment, and three articles (25%) that added to the narrative about the state with a neutral sentiment. We both agreed that it was challenging to separate what might be positive or negative sentiment from one's own political leaning, we both noted this in the same articles, and these articles were coded as having a neutral sentiment.

The agreement (76.2%) was slightly higher than expected (71.2%) on the crime code, but not statistically significantly so. Similarly, agreement (50%) for coding the article to the legislative code was lower than expected, but again, not significantly (p=.803). And the agreement (85.7%) with the energy code was only slightly lower than expected (86.6%) and not significantly so (p=.630). Dr. Williams and I reviewed the findings from the interrater reliability analysis of the original twenty-one articles together and agreed on the decisions outlined above. And, finally, I reviewed the discrepancies for articles coded to Politics-Government-Law-Crime-Judicial-Legislative, Work, Energy and Coal, and Risk and Drugs (under Health) to add further clarification for the coding structure and codes.

I coded seven of the sixteen articles that added to the narrative about the state as having a potential "other" category, with proposed codes including corruption (two articles), medical marijuana (one article), poverty (one article), trust (one article), and insider/outsider (one article). Dr. Williams recommended a code for social media (one article) and poverty (five articles). Corruption and trust may be the opposites of one idea, and they both apply to situations reported on in politics and religion. For medical marijuana, Dr. Williams used it as a phrase representing health care, so this is assumed under the larger theme of health care. Like notions of trust, an insider/outsider theme arises here and in the ethnographic field work. Finally, we both identified poverty as a theme that was not captured through prior work. This work informed the final codes and definitions, the coding structure (demonstrating the most frequently coded for themes), and the final narrative analysis. These efforts also culminated in a final review of all articles determined to be about the state of West Virginia following initial analysis and resulted in a smaller final sample of articles that were considered to add to the narrative about the state of West Virginia. For example, following the coding for the twenty-one articles with West Virginia in the title, articles from the whole sample that only reported on sporting events with only passing reference to the state of West Virginia in scores or ranks were excluded from the articles that were determined to add to a narrative about the state. A total of 62 articles were about Sports and 47 (76%) of those were about men's college basketball or football, and most of these were about West Virginia University. While individually the articles did not appear to add to a narrative, taken together they highlight the importance of West Virginia University to the state, and the value placed on *men's* sports at the national level.

Some themes were added after using NVivo to query frequently occurring words, excluding words less than three letters long and those words without substantive meaning (e.g., news, very, or maybe). Some of these frequently occurring words, as themes, also appeared in the data from the ethnographic work described below. Both informed the development of themes and subthemes. Firearms, for example, was not originally a theme but was informed from frequently occurring words, as well as classroom and community observations and surveys. All articles determined to add to the narrative about West Virginia were then searched for the terms; handgun, gun, firearm, pistol, sidearm, and rifle. All occurrences were reviewed, and articles coded to the Firearms theme only if the occurrence was related to West Virginia or West Virginians. Articles including the theme of Firearms were most often also included in the Government and Politics theme. Similarly, originally nested under the theme of Health, the articles coded to the Abortion theme covered the topic in relation to West Virginia politics, though some were captured under health care because they focused on the state (at the time) having only one abortion provider. Overall, I borrowed the slogan of West Virginia House of Delegates member, Caleb Hanna, "God, Guns, and Babies", to reflect the politic nature of the articles about religion, firearms, and abortion in the state.

Some themes arose out of the intercoder reliability efforts. The theme of poverty, for example, was not included in the original coding structure, but was recognized as an additional theme by both coders and was present in eight of the sixteen (50%) newspaper articles that included West Virginia in the title and were determined to add to the national narrative about the state. Just as explained above, NVivo was used to search all articles for the key terms or phrases poverty, poor, low income, destitute, scarcity, hardship, impoverishment, or pennilessness. Of the 296 newspaper articles determined to add to the national narrative about the state, 167 (56.4%) included one or more of the key terms or phrases. These articles were individually reviewed, and just as with the firearms example above, were only coded to poverty if related to the status of the state or its residents. This process was used to arrive at the final coding structure, presented in Appendix E, along with the codebook. Overall, the results of the intercoder reliability analysis, paired with a detailed and chronological analysis of the articles with West Virginia in the title, informed the final themes for the analysis of 296 articles determined to add to a narrative about the state of West Virginia. NVivo (QSR International Pty Ltd 2020) was used to review, code, and analyze the articles based on coded themes and the positive, negative,

or neutral sentiment of the articles – analyses will consider the influence on the overall narrative about the state based on frequency, as well as that produced by each of the publications to determine if there are differences in the frequency of codes or themes, or the overall sentiment of the narrative, based on the political leaning of the publication producing the article.

MADE IN WEST VIRGINIA: PERCEPTIONS OF POSITION, PLACE, AND HEALTH

The West Virginia University Institutional Review Board (IRB) (protocol #1802013310) approved the research protocol for this portion of the study. Preliminary defense of an earlier draft of this proposal allowed me to secure IRB approval and to enter the field and become familiar with (and to) the community under study for this dissertation. The ethnography follows the trajectory of an academic adolescent cohort within their high school and county communities, and pairs questionnaires targeted at the entire cohort at two time points and chronological diaries (year three), in which students record their daily activities or practices, and interviews (year five). I place the characteristics and narratives of adolescents within the context of their place within the larger social landscape of the US to link the structural fundamental social causes of health inequalities to manifestations and consequences at the individual and community level.

School and Community Observations

Participants were observed in the school during the first year of the study for approximately four hours, two days per week, for 24 weeks. School observations were recorded using a classroom observation sheet (Appendix A). These sheets were transcribed into NVivo (QSR International Pty Ltd 2020). Mid-way through the first year I spent several days a week in the resources room, which used to be the library but was now essentially a computer lab, with the same tables that had once sat amongst shelves of books now scattered near rows of individual computer stations. During this time a teacher would send one to three students of her choosing to participate in the first version[2] of the survey produced for this study, using an iPad and directly entering their survey responses into the REDCap (Vanderbilt University 2013) system used to

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[2] The original survey included too many questions and was difficult for the students to complete in the time available during the school day. Based on feedback from the National Science Foundation and subsequence updates to the project (and in consultation with my committee chair) I reduced the survey to the primary measures of adolescent stress, coping resources and mechanisms, social support, grades, and SRH. The original version of the survey is available upon request.

enter and store all surveys throughout the study. Notes from these and similar interactions with students were also typed and entered first into REDCap for secure storage and then into NVivo (QSR International Pty Ltd 2020; Richards 1999) for analysis. Participant observations at school and community events were undertaken throughout the study and notes were taken following events or significant encounters. These notes were similarly typed-up and added to NVivo (QSR International Pty Ltd 2020; Richards 1999). Pseudonyms are used for all people and places from the beginning of the project, and every effort is made to protect the identity of adolescents. Detailed field notes during classroom and community observations were reviewed and annotated in NVivo (QSR International Pty Ltd 2020). I coded field notes for the final analysis applying themes developed through an iterative process, which included, in part, findings from the media content analysis and a priori research, as well as repeated observations or sentiments. This process was also informed by the participation of students in the study, both through my direct interactions with them as well as responses in surveys and daily journal.

Surveys of High School Academic Cohort

I focus on adolescence because it is when educational and occupational aspirations and expectations are developed (Beal and Crockett 2013) and the most common time for education to be truncated. Adolescence is a period when health behaviors (Sawyer et al. 2012) and sexual practices (Mahalik et al., 2013) take form and the stage is set for adult well-being (Sawyer et al., 2012). Health disparities are at their narrowest and physical robustness is peaked. The plasticity of the adolescent brain provides the potential to rebound from even adverse childhood experiences (National Academies of Sciences 2019). Finally, adolescents are in the process of creating their identities and, therefore, are particularly susceptible to normalizing, moralizing, and stigmatizing rhetorics, with their perceptions of their own health most likely to reflect how they perceive their social identity (Boardman 2006). A high school academic cohort also capitalizes on the county high school system to further contextualize the students. Because West Virginia uses a county high school system, most counties have a single high school, following consolidations of community high schools in the 1970s; so, each academic cohort represents a cross-section of the county (except students who leave school early or attend a private school).

The summer prior to the first year I mailed letters to the guardians of all students in one academic cohort providing the opportunity (a form and self-addressed stamped envelope) for

parents to opt-out of having their child participate. No parents returned the opt-out form. All students were invited to voluntarily participate in surveys and individually assented prior to filling out the first questionnaire. During the third year, assent forms for the survey were included in packets mailed directly to students. All students who completed the survey the first year were invited to participate in the second-year surveys. A sample of students were also invited to keep a daily journal of their activities, as will be discussed below.

First year student surveys included demographic variables (town, feeder elementary school, age, race, Hispanic ethnicity, sex, sexual orientation, and gender representation), self-reported grades in four primary subjects and calculated grade-point averages. The primary outcome, self-rated health (SRH) was asked in the same way at each time point as it is commonly inquired about in the literature, by asking: "In general, how is your health? Would you say…" and then providing five options ranging from excellent to poor (Boardman 2006). In analyses I will use this measure as a continuous scale, as a categorical variable (poor, fair, good, very good, and excellent, and as a dichotomous variable as commonly used in the literature – bad health (poor or fair) and good health (good, very good, and excellent) dependent on the available data. I then bring in the measures of the stress process, which it is hypothesized is the mechanism through which class and social stigma may influence health. The proposed relationships synthesized from the literature are shown in Figure 3-1 below (Elliott 2000; Pearlin et al. 1981; Thoits 1995). I ask about stress, coping resources, and strategies, which are thought to mediate the relationships between stress and health, and social support, which has been found to moderate that relationship. It has also been suggested, as discussed above, that stigma may influence coping resources and strategies (Hatzenbuehler et al. 2013:816).

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Figure 3-1 The Stress Process Model (Elliott 2000; Pearlin et al. 1981; Thoits 1991)
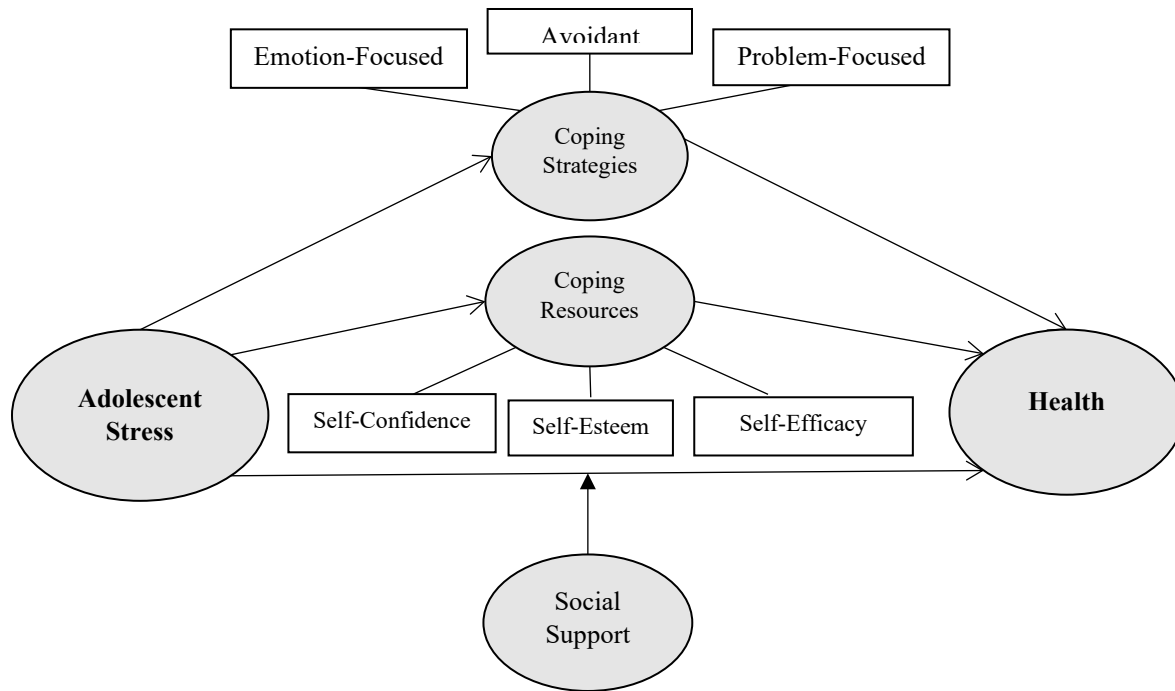
I include an inventory of adolescent stressors, the adolescent stress questionnaire (ASQ), which was developed by D.G. Byrne, S.C. Davenport, and J. Mazanov (Byrne et al. 2007). In the current study, nine domains of adolescent stress and an overall score are considered. The domains (and their ranges in the current study) include stress of home life (12 – 60), school performance (6 – 35), school attendance (3 – 15), romantic relationships (5 – 25), peer pressure (7 – 35), future uncertainty (3 – 15), school/leisure conflict (4 – 25), financial pressure (4 – 20), and emerging adult responsibility (2 – 15). Byrne and colleagues included ten domains, but one of the groups of questions (for the domain teacher interaction) was accidentally left off the printed versions of the survey the first year, so were unfortunately excluded from the analysis. Each domain of stress includes a different number of questions: stress of home life (12), school performance (7), school attendance (3), romantic relationships (5), peer pressure (7), future uncertainty (3), school/leisure conflict (5), financial pressure (4), and emerging adult responsibility (3). Byrne et al. have investigated the reliability and validity of the ASQ, and other researchers continue to do so across a range of countries (Ertanir et al. 2021; McKay, Andretta, and Perry 2019). For each question, respondents were given the following Likert scale as options: not at all (0), a little (1), moderately (2), quite (3), and very (4). The answers for each

question under each domain were summed. All analyses were carried out using this measure, as well as an averaged measure that returned the total score to the original scale.

Coping strategies are captured by the Brief COPE scale and include avoidant, emotion-focused, and problem-focused approaches (Carver, Scheier, and Weintraub 1989; Wilson, Pritchard, and Revalee 2005). Participants were given the prompt "When I'm stressed or anxious…" and a list of 17 coping strategies (see Appendix B). Five of the strategies represent avoidant coping, seven are emotion-focused strategies, and five signify problem-focused coping. For each strategy students were asked to choose a response from never (0), very rarely (1), rarely (3), occasionally (3), frequently (4), and very frequently (5). The answers for each question under each strategy were summed up. All analyses were carried out using this measure, as well as an averaged measure that returned the total score to the original scale.

Coping resources include self-esteem (Rosenberg and Pearlin 1978), self-efficacy (Snyder et al. 1991), and self-confidence (Pearlin et al. 1981). Self-esteem was measured using the Rosenberg Self-Esteem Scale (Rosenberg and Pearlin 1978). Survey takers were provided ten statements to which they were asked to rate their agreement on a six-point Likert scale, from strongly disagree (0) to strongly agree (5). Five questions were reverse coded, and then all were summed, with higher scores indicating higher self-esteem. Self-efficacy was measured using the Hope Scale, which included twelve statements that students were asked to rate on a six-point Likert scale as completely false (0) to completely true (5). Four of the twelve questions represent a pathways orientation (planning ways to meet goals), another four represent agency-based orientation (goal-directed determination), and four of the questions are filler questions. I will, however, take a closer look at several of these "filler" questions not included in the final self-efficacy scores for pathways and agency. These include: "I feel tired most of the time"; "I worry about my health"; and "I usually find myself worrying about something" (Snyder et al. 1991). Questions for pathways and agency were summed, with higher numbers equaling higher self-efficacy through each orientation. Finally, the Pearlin Mastery Scale, was used to measure self-confidence, and included seven statements, which, again, participants were asked to rate their agreement with, using the same six-point scale used for the self-esteem scale above. Five questions from the self-confidence scale were reverse coded, and all were summed. Just as with the prior measures, the higher the sum the higher the self-confidence.

Finally, for the stress process variables, the first year survey included The Multidimensional Scale of Perceived Social Support (Zimet et al. 1988). This scale includes twelve statements that respondents are asked to rate their agreement with, again on a six-point scale of strongly disagree to strongly agree. All summed questions provide a measure of overall social support, but there are four questions asking about support from a special person, four asking about family support, and another four asking about support from friends and so there are also individual scores for each of these groups. Zimet and colleagues, who developed the scale, indicate averaging the scale. Analyses for the current study were carried out using both the summed and averaged scores. Regardless, the higher the scores the higher the social support. The full Student Questionnaire for year one is provided in Appendix B.

During the third year I used all the questions from the first-year surveys (excluding those demographics that are ascribed) and added several closed- and open-ended questions to dig a bit deeper into how students think others perceive their communities and state, and how they view health, and the place they (and their families) hold within the social hierarchy. The full survey can be found in Appendix C. Specifically, I added questions about how long adolescents have lived in their home, how many people live in their home and who (individually indicating biological mother, stepmother, adoptive mother, father, stepfather, adoptive father, grandmother, grandfather, sisters, brothers, and other (family or friends) and if they have their own bedroom. I also added questions to the second survey addressing spatial stigma, adapted from work by Kelaher et al. (2010) and Duncan et al. (2016). I asked for adolescents' agreement [from strongly disagree (0) to strongly agree (5) that the town they live closest to has a good reputation with people living in surrounding areas, and similarly how they rate their agreement that the county and state have good reputations. Adolescents were also asked to rank the reputation of West Virginia, the image of the state in the media, and how West Virginians are seen in general, all on a six-point Likert scale from strongly negative (0) to strongly positive (5). Analyses use a dichotomous variable; negative (0) and positive (1). Teens were then asked if and why they agree or disagree with perceptions of West Virginia, and to provide their opinion on the best and worst things about WV.

In the year-three surveys adolescents were, again, asked to respond to stress process measures. I also asked how stressful the coronavirus pandemic had been for them, followed by several open-ended questions to further explore experiences during the pandemic (Appendix C).

After asking students to rate their health in the third year, I also ask them to discuss why they rate their health the way that they did, and to provide an example of (and describe) someone they perceive as being in excellent health. And, when students were asked about their grades during the second year, I also included a follow-up question regarding how the coronavirus pandemic had impacted their school year. Finally, I asked students to rank their family's social standing among other families in the US, as well as their social status within the school (Goodman et al. 2001, 2007). Students were provided with the image of a ladder and told:

> Imagine that this ladder pictures how American society is set up. At the top of the ladder are the people who are the best off - those who have the most money, the highest amount of schooling, and the jobs that bring the most respect. At the bottom are people who are the worst off - those who have the least money, little or no education, no job, or jobs that no one wants or respects. Please tell us where you think your family would be on this ladder.

> Now, imagine that this ladder is a way of picturing your school. At the top of the ladder are the people in your school with the most respect, the highest grades, and the highest standing. At the bottom are the people whom no one respects, whom no one wants to hang around, and who have the worst grades. Where would you place yourself on this ladder?

I am specifically interested in the distribution of self-rated health among adolescents based on measures of social position and spatial stigma. Data from the Adolescent to Adult Health (Mullan Harris and Udry 2005) study shows that 7.7% of rural teens and 7.10% of urban youth reported fair or poor health, compared with only 5.5% of suburban youth, reflecting consistency across findings, and similar distributions for adolescents and adults. Is it only the structural disadvantages of their communities as found by Monnat and Pickett (2011) that shape how adolescent residents rate their health, or do external perceptions of disadvantaged communities also become internalized? The literature suggests that residents of the state will either justify and apply the stigmatized identity to an "other" (e.g., the poor, the addicted, the unemployed, the disabled) or they will internalize the identity and may use it to purposefully separate themselves from those without the identity (Keene and Padilla 2018). For this reason, in year three students were also asked about what they thought of others' perceptions of the state, county, and town they lived in and whether they agreed with those perceptions using validated survey instruments.

Boardman (2006), using the Add Health database provides evidence that self-rated health (SRH) is stable across adolescence despite changing statuses in objective measures of physical and mental health, which he argues demonstrates that while SRH in adolescence "is in part a spontaneous health assessment [as would be demonstrated if SRH changed over repeated observations and in the direction of objective health measures as it often does for adults]… it is best understood as an enduring…aspect of an individual's self-concept" (1) among adolescents. Further, he finds that this is particularly true for those in early and middle adolescence: "This … relationship is evident among middle adolescents [14 – 17-year-old], where only 6.0% of the effect of Time 1 SRH is mediated by Time 1 physical and psychological health and changes in physical and psychological health from Time 1 to Time 2" (Boardman 2006:7). Boardman's study also provides support that "there is a convergence toward the spontaneous assessment understanding of self-rated health status as adolescents enter young adulthood [17 – 21-years-old]" (Boardman 2006:7), but does not address what these early self-conceptions of health represent. What defines an adolescent's self-concept of their health? How do health and identity intersect in adolescence? If SRH in adolescents is more closely representative of an enduring aspect of an adolescent's concept of self, how much of that self-concept is shaped by their knowledge about and internalization of external representations of where they live?

In addition to providing descriptive statistics (and changes in them) for all survey instruments and measures for both years, I also carry out bivariate and inferential statistics. First, I carry out two-sample tests of proportions using data from the current study and the study published by Byrne and colleagues in 2007, to compare my group of adolescents' stress to that from a larger US sample. I use the "prtesti" command in STATA and entered the sample sizes and proportions to compare (StataCorp 2016). Next, I investigate differences in SRH and all stress process variables at time one by sex (female or male), sexuality (straight/not straight), race (white/non-white), and Hispanic ethnicity. Data was limited, which is the only reason I reduce measures to dichotomous variables. I did, however, consider all categories during univariate analysis. All the stress process measures are continuous scores and, therefore, two sample independent t-tests were used to investigate differences by the dichotomous measures above. If tests of normality were not passed, however, the Wilcox Rank Sum (Mann-Whitney U) test was used. In addition to tests of normality by groups, all continuous-level variables compared by

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groups were also subjected to tests of equal variances on those groups to determine the type of independent t-tests to apply (with equal or unequal variances).

I also look at the correlation (using the Pearson's correlation coefficient and 95% confidence levels) between SRH and each of the stress process variables, at both time points. While there are only fourteen participants to compare, a basic appreciation of any changes can be observed, both in changes in the population over time, as well as changes in the relationships between the variables over time. I then compare the scores for SRH and all stress process measures at both time points, using dependent or paired t-tests. I calculate differences for each measure and check for the normality of the distribution of those differences. If the distribution does not meet the assumption of normality, the sign test for the median will be used to investigate observed differences. Qualitative data (perceptions of the reputations of the state and the rating of their health) are presented broken down by the way students rate their health during the third year and the media image of West Virginia as they perceive it (positive or negative). And finally, I compare SRH and all stress process measures by students' perceived reputation of West Virginia - positive or negative. I again use two samples independent t-tests to compare measures in each group. And again, if tests of normality fail, the Wilcox Rank Sum (Mann-Whitney U) test will be used. Tests of equal variance by groups will also be performed.

Students were given a $20 incentive for their participation in each questionnaire. I entered all surveys into the REDCap system (Vanderbilt University 2013) hosted by West Virginia University, as I did for the first year. I transcribed all survey short-answer questions from year two for each student, again using the REDCap system for storage. Within the REDCap system I removed all identifying information and added the deidentified qualitative data to the NVivo (QSR International Pty Ltd 2020; Richards 1999) project to be reviewed, annotated, and coded, again within the prior context of the broader social landscape. For all quantitative analyses I use Stata (StataCorp 2016).

Student Diaries and Interviews

While the original proposal for this research included interviews with students and families because of the coronavirus pandemic I was unable to interview students to supplement the surveys and observations. In place of interviewing, therefore, I switch to the use of personal diaries to supplement the ethnographic work and class surveys (Zimmerman and Wieder 1977).

Student diaries, or journals, are meant for having participants in an ethnography keep a chronological recording of activities that are inaccessible to the study investigator for a variety of reasons (Lofland and Lofland 1995; Zimmerman and Wieder 1977). Diaries are not intended to gather student thoughts or reflections, necessarily, but are intended to understand daily practices and behaviors.

I mailed second-year surveys to all students who took the initial questionnaire and expressed interest in continued participation (n=69). I then selected half of these students to participate in the diary portion of the project. I selected students based first on the goal of having representation from both sexes, as many races as available, and from each of the main towns with feeder elementary schools. During the first-year surveys the students considered the most disruptive or the least engaged were let out of class to sit with me in the resource room and take the first version of the survey, these ended up being the students facing some of the greatest challenges academically. They also ended up being the students I got to know the most about both through interactions and the early form of the survey, so I began by inviting these students to complete diaries. This group of students included one to two students from each primary town. I next purposefully selected students who identified as other than white or cisgender. Together race and gender accounted for another two students from each town.

To reach thirty students, with the aim of ultimately receiving at least ten student diaries, I then used students' study identification numbers and a random number generator to select the needed number of students to recruit 10 students (5 identifying as female, 5 identifying as male) from each town. In the package sent to the subset of students for the second year, I included the following invitation to participate in the keeping of a daily journal: "I would also like to invite you to complete a 1-week journal, recording your daily activities. I have included in this packet the journal, a pen, and instructions. You will need to write for about two hours a day for one week and you will receive an incentive of $140 after you return the journal to me in the stamped and addressed envelope I have included. You and your parents must provide consent for you to participate in the journal project. These consent forms are included and are like the ones you filled out last year." (Excerpted from invitation letter), and included a 5x7 soft side, ruled journal, with insert instructions for completing the daily diary (Appendix D), and a pen.

Students were provided a self-addressed, stamped envelope for both the year-two survey and the journal. When students returned the completed journal, they were sent an incentive of

$140 for recording their daily activities for seven days. I typed up the journal entries, removed all identifying information, and added the deidentified data to the NVivo (QSR International Pty Ltd 2020; Richards 1999) project storing all of the above qualitative data (including from media, state and county ranking reports, observations, and open-ended survey responses) for comparative analysis. In the recordings of adolescents' daily activities, I will look for practices related to healthy lifestyles, including broadly food, leisure time activities, work and chores, and coping strategies. I also look for mentions of specific types of online sources, television, movies, video games, music, or other media that students record using, and by which they may be distinguished from one another. Beyond the above it is difficult to determine what students might include in their journals. I indicate in the instructions that adolescents should provide the when, what, how, where, and with whom for everything they do throughout their day, including meals and all activities. The practices and preferences (once reviewed, coded across sources, and connected with prior themes) expressed through student narratives in the open-ended year-three survey questions should allow me to further group students in the social field. I will let these results guide inferential analyses as data permits. But I also link the journal entries with the other qualitative data from students (interviews), school and community observations, and the broader social context construed from the content analysis of national media.

Finally, I conduct interviews with students who responded to the second time-point request for surveys and the daily journals. The now adult participants were invited to partake in a one-to-two-hour interview at a public location of their choosing (park, library, coffee shop, or eatery). An interview guide was created in REDCap and is included in Appendix D. The interview guide is based on an earlier (pre-COVID) version of the interview guide that had been approved as a part of the original study protocol and would have been used had the pandemic not intervened. The interview guide used takes advantage of what has already been learned from participants in the process of the study and addresses the participants as adults who are no longer in school, including questions about how high school went and where they are in life at the present time. In addition, questions will be asked about perceived health and social standing, and perceptions about West Virginia.

In the following chapters, relying on the theories and methods presented above, I will answer the research questions listed in Table 3-2 below with the following aims:

(1) Contextualize one county's place within the distribution of resources in the US.
(2) Investigate the relationship between access to power (volumes of available economic and cultural capital) and health at the structural level.
(3) Explore the ways in which those in power may or may not enact spatial stigma through national representations of places, people, and health.
(4) Consider how class and stigma "get under the skin" and influence health.

Table 3-2 Research Questions

Theory	Method	Research Questions
Theory of the Fundamental Social Causes of Health Inequalities (Phelan & Link) and Field Theory (Bourdieu)	Quantitative analysis (descriptive, regression, and correlation) using state and county level data from multiple resources.	• Where does West Virginia lie in the distribution of power in the US? • What is the effect of a state's median level of economic and proportion of cultural capital on Self Rated Health (SRH) and life expectancy, controlling for equitable access to economic capital? • Within West Virginia, what is the effect of a county's median level of economic and proportion of cultural capital on SRH and life expectancy, controlling for equitable access to economic capital?
Spatial Stigma (Keene & Padilla) Risk Discourse (Lupton)	Quantitative content analysis of national media coverage.	• How is West Virginia and West Virginians represented in national media? ○ Does the media rely on rural or Appalachian stereotypes? • How is the health of West Virginia discussed at the national level? ○ Does the media rely on lifestyle risk discourse?
Stress (Thoits) Self-Rated Health Spatial Stigma (Keene & Padilla) Stigma (Hatzenbuehler) Class (Bourdieu)	Quantitative and Qualitative analysis of student surveys, and journals, interviews and observational data.	• What are the levels of and relationship between self-rated health (SRH) and stress, coping (resources and strategies), and social support (stress process) among one academic cohort of rural West Virginian adolescents? • How does SRH and measures of the stress process differ by sex, sexuality, race, and ethnicity? • What changes are seen in SRH and the stress process measures from the first to the third year of high school (and from before to during the COVID pandemic)? • Where does a cohort of young adults in West Virginia place their families and self in the hierarchy of American society and their high school, respectively? • How do young adults in West Virginia perceive the reputation and media image of the state? • How do SRH and the stress process measures differ by the perceived reputation of West Virginia?

Chapter 4 The American Context: Class, Power, Inequality, and Health

In this chapter I investigate the relationship between the amount of power (economic and cultural capital) a state or county has, the equality of access to economic capital in the state or county, and the health of its residents. I will do this primarily to situate West Virginia, and one county within WV, in the distribution of the states and counties based on the median levels of economic and cultural capital. I will also, however, consider the association between measures of economic and cultural capital and the inequitable distribution of economic resources by including the Gini index of income inequality, and the wage gaps for each state based on gender, race, and disability status. Finally, I will look at how these measures of economic and cultural capital and unequal access to economic capital are related to the percent of the population that reports fair or poor health (as opposed to good, very good, or excellent health), the average life expectancy in the state, and (visually) the United Health Foundation's America's Health Rankings and the RWJF's County Health Rankings.

WHERE DOES WV LIE IN THE DISTRIBUTION OF POWER IN THE US?

The distribution of the states and the District of Columbia (DC) by access to economic and cultural capital is shown in Figures 4-1 and 4-2 below. In the bottom left quadrant of the figures are states with the lowest economic and cultural capital, while in the bottom right quadrant are states that have high levels of cultural capital but lower levels of economic capital. On Bourdieu's social field these states fall outside of the field of power, where the tension between economic and cultural capital and the struggle for power plays out. Half of the states fall in the bottom-left of the figure. On the top left of the figure are states with high levels of economic capital but lower levels of cultural capital, while those states in the upper right have the highest levels of both economic and cultural capital. These states on Bourdieu's social field would represent the major players in the field of power. In Swartz's conceptualization of Bourdieu's broader social field, the field of power would be best represented by the top right quadrant in Figures 1 and 2, by those states above the mean of the total volume of capital (Swartz 2013). It is here where the status quo faces off with those wanting change. Bourdieu would also consider those states outside of the field of power. While Swartz argues that the political field and the field of power are not the same, there are important connections between the two, with the most important being shared concentrations of power.

As a heuristic device this allows me to state that West Virginia has the second to lowest levels of economic capital (Mississippi has the lowest) and the lowest levels of cultural capital in relation to all other states holding a distinct place in the distribution of the states, not simply below averages, but at the bottom. While I do not include DC in subsequent analysis, I show it in Figure 4-1 to demonstrate the relationship between power and politics, as evidenced by the concentration of economic and cultural capital in the nation's capital. Further, I have colored the markers for each state and DC in Figure 4-1 to indicate which of the states' electoral colleges voted for Donald Trump and which voted for Joe Biden in the 2020 presidential election. The way in which the political divisions fall along the axis of power in Figure 4-1 provides evidence of the struggle argued for by Bourdieu, through which the dominant class has trouble reconciling sundry forms of power or come to agreement on the value placed on forms of capital in the structure.

Symbolically, I would argue that the position of DC is representative of the autonomy of the political field for which Swartz argues (Swartz 2013). Like mirror images of one another it also becomes clearer to see the red and blue that is often boiled down to a culture war, as instead the foil to the lifestyles of those in the field of power. This is not to say that the cultures represented throughout these states are less-than in any way, the cultures represented outside of the field of power, however, according to Bourdieu would represent those that largely stand outside of (or as other than) the dominant, or popular, culture. Based on social field theory this likely becomes truer the farther away one is on the pole of cultural capital from the dominant culture as well, with many in the middle that incorporate both or strive to imitate the popular. And as we will see when we move to the county-level analysis, players outside of the field of power in one context, may not be so in another. This is both one of the great struggles and benefits of using Bourdieu's field theory – fields are flexible and can be used to contextualize any space in which "production, circulation, and appropriation of goods, services, knowledge, or status, and the competitive positions held by actors in their struggle to accumulate and monopolize these different kinds of capital" (Swartz 2012:121) exist.

While the divisions represented in Figures 4-1 and 4-2 below could be dismissed as a conflict between classes, it is more likely that what is being observed is the difference between those in power trying to maintain the status quo and those struggling for change, using the populous to find support. Further, as Bourdieu suspected might be the case in American society,

there appears little distinction between states with high levels of economic and cultural capital, implying there is less conflict between the economically and culturally wealthy because they are primarily educated at the same elite schools (Wacquant 1993). And, as I have previously argued, may support a broad-based acceptance of the growing income inequality in the US. It may also be worth considering if what has been deemed a culture war in the US, is one being incited by and in benefit to those in place to find favor or stoke division. With a better understanding of where West Virginia lies in the statistical distribution of economic and cultural capital, I turn now to the influence of economic and cultural capital on SRH and life expectancy at the state level, controlling for unequal access to economic capital.

Figure 4-1 Distribution of States and District of Columbia based on Median Household Income and Percent of the Population with an Advanced Degree
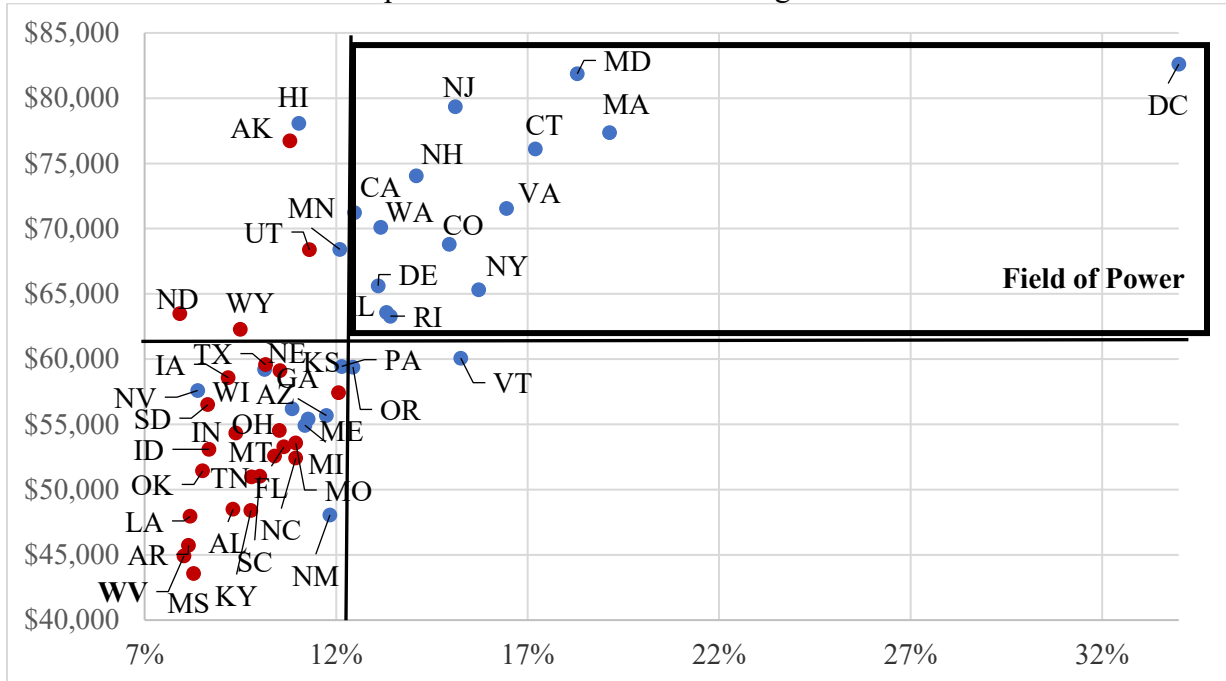
Notes: States with red markers voted for Trump in 2020 presidential election and states with blue markers voted for Biden. Source: U.S. Census Bureau's American Community Survey (ACS) 2018 Five-Year (2014 – 2018) Estimates

Figure 4-2 Distribution of States based on Median Household Incomes and Percent of the Population with an Advanced Degree
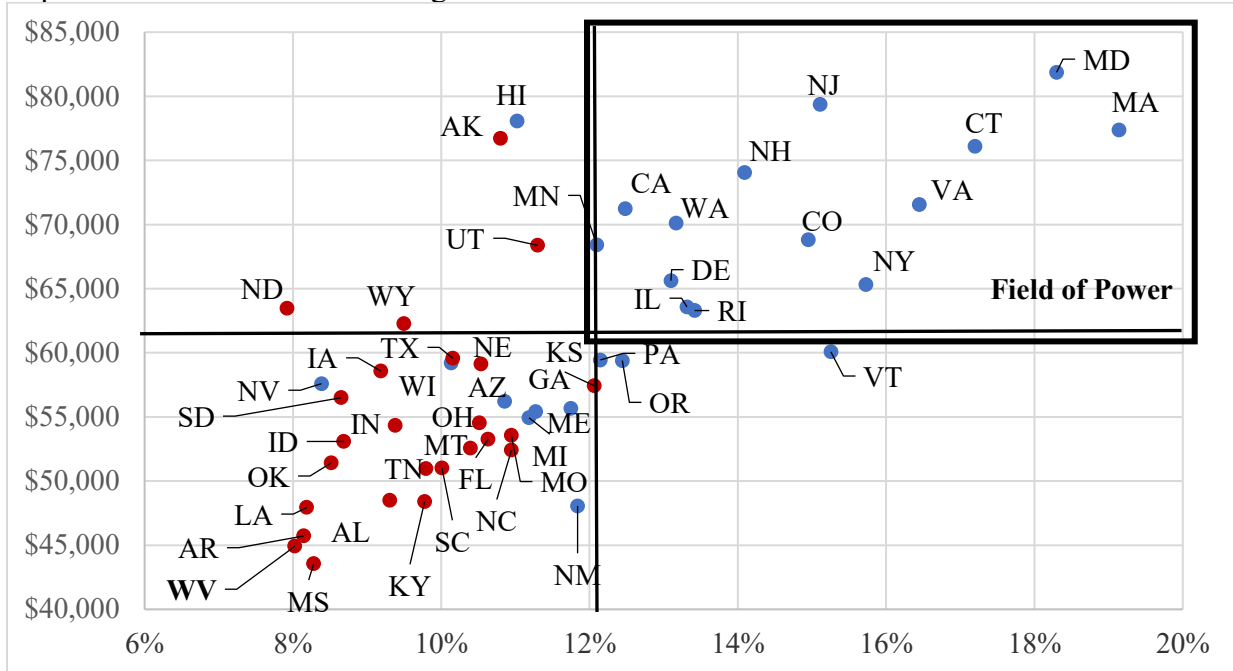
Notes: States with red markers voted for Trump in 2020 presidential election and states with blue markers voted for Biden. Source: U.S. Census Bureau's American Community Survey (ACS) 2018 Five-Year (2014 – 2018) Estimates

THE EFFECT OF A STATE'S CAPITAL ON SRH AND LIFE EXPECTANCY

For the US overall, based on data from the 2018 American Community Survey (ACS) five-year (2014-2018) estimates, the median household income was $60,293 and 12.1% of the population had an advanced degree. The Gini index for the US according to the Census Bureau's 2018 5-year (2014-2018) estimates is 0.48 overall. Based on the same Census Bureau estimates, the gender, black-white, and disability wage gaps [calculated as ratios of median earnings in the past 12 months (in 2018 inflation-adjusted dollars] are 0.70, 0.76, and 0.67, respectively. Tables E-1 and E-2 in Appendix E provide the values for all measures (and related ranks) for each state. Table E-1 includes median household income, the percent of the state with an advanced degree (master's, professional, or doctorate), Gini index of income inequality, and the gender, black-white, and disability wage gaps.

Median household income ranges from a high of $81,868 in Maryland, where nearly one in five (18.3%) residents have an advanced degree, to a low of $43,567 in Mississippi and only 8.3% have an advanced degree. Only West Virginia has a lower percent of the population with an advanced degree (8.0%). West Virginians also have the second lowest median household income at $44, 921 a year, and only 33.5% of workers are employed in professional occupations.

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Alaska has the lowest income inequality among the states, with a Gini coefficient of 0.42, while New York had the highest income inequality (0.51). The gender wage gap for the states ranges from women making 80 cents for every dollar earned by a man in Nevada, to women in Utah making only fifty-five cents for every dollar a man earns. The Black-white wage gap is narrowest in Texas with Americans who are black earning on average 89 cents for every dollar a white American earns and widest in Maine, where residents who are black earn only 54 cents for every dollar earned by white Maine residents. Finally, the disability wage gap is most notable in Minnesota where full-time workers who are disabled earn 55 cents for each dollar earned by their non-disabled colleagues. In Nevada, the wage gap between workers who are disabled and those who are not is the narrowest of all the states at 82 cents on the dollar. Again, based on data from the 2018 ACS five-year (2014-2018) estimates, the median household income in West Virginia (in 2018 adjusted dollars) was $44,921 and 8% of the population had an advanced degree. Further, in West Virginia the Gini coefficient is 0.46 (income inequality is moderate), women earn 66 cents for every dollar a man earns (one of the top 10 highest gender wage gaps in the country), West Virginians who are black make 70 cents for every dollar white West Virginians earn and disabled full-time workers of the state make 69 cents for every dollar earned by full-time workers who are not disabled.

Table E-2 in Appendix E contains the values and ranks for the percentage of the population reporting fair or poor health and life expectancy at birth [both from the Kaiser Family Foundation analysis of the Centers for Disease Control and Prevention (CDC) Behavioral Risk Factor Surveillance System (BRFSS) 2013-2018 survey results], as well as the United Health Foundation's AHR for all states. Tables 4-1 and 4-2 below provides values and ranks on all study measures for the ten top and bottom ranked states by United Health Foundation's America's Health Ranking. More than a quarter (25.9%) of West Virginian adults report their health as fair or poor – the highest percentage of any state in the country. At the other end of the distribution, only 12.7% of Minnesotans rated their health as fair or poor (as opposed to good, very good, or excellent). On average people in Hawaii can be expected to live to 82 years of age, while people in Mississippi on average do not quite make it to their 75th birthday (74.9-year life expectancy) and on average West Virginians barely live to see theirs at 75.3 years. Georgia, Kentucky, Oklahoma, South Carolina, Tennessee, West Virginia, Alabama, Arkansas, Louisiana, and Mississippi, respectively, receive the lowest overall rankings.

The state ranked highest overall by the United Health Foundation is Massachusetts, followed in order of ranking by Hawaii, Vermont, Utah, Connecticut, Minnesota, Colorado, New Hampshire, Washington, and New York. While there are differences between AHR, and the ranks based on SRH, and life expectancy presented in Tables 4-1, 4-2, and E-2 there is a lot of cross-over and the relationship between all three health measures and economic and cultural capital is quickly apparent. The America's Health Rankings are a complex measure including the sum of the weighted *z*-scores of all ranked measures (United Health Foundation 2020a) for each of the broad factors – social and economic (community and family safety, economic resources, education, and social support and engagement), physical environment (air and water quality, housing and transit), clinical care (access to care, preventive services, and quality of care), behaviors (sleep, nutrition and physical activity, sexual health, and tobacco use), and health outcomes (behavioral health, mortality, and physical health, including frequent physical distress, low birthweight, the low-birth weight racial gap, multiple chronic conditions, and obesity).

Table 4-1 Health and Capital for Ten Top and Bottom Ranked States by America's Health Ranking

State (America's Health Ranking)	% Fair or Poor SRH (rank)	Life Expectancy (rank)	Median Household Income (rank)	% 25+ with an Advanced Degree (rank)
Massachusetts (1)	15.2 (11)	80.7 (6)	77,378 (4)	19.1 (1)
Hawaii (2)	14.8 (8)	82.0 (1)	78,084 (3)	11.0 (24)
Vermont (3)	14.1 (4)	80.0 (12)	60,076 (20)	15.0 (6)
Utah (4)	13.6 (2)	79.8 (15)	68,374 (13)	11.3 (21)
Connecticut (5)	14.5 (6.5)	80.9 (5)	76,106 (6)	17.2 (3)
Minnesota (6)	12.7 (1)	81.0 (3.5)	68,411 (12)	12.1 (1)
Colorado (7)	14.5 (6.5)	80.5 (7.5)	68,811 (11)	15.0 (8)
New Hampshire (8)	13.9 (3)	80.1 (10.5)	74,057 (7)	14.1 (9)
Washington (9)	16.0 (16.5)	80.3 (9)	70,116 (10)	13.2 (12)
New York (10)	17.3 (23)	81.0 (3.5)	65,323 (15)	15.7 (5)
Georgia (41)	18.5 (30)	77.7 (36)	55,679 (31)	11.7 (20)
Kentucky (42)	25.5 (49)	75.9 (44)	48,392 (45)	9.8 (37)
Oklahoma (43)	21.6 (44)	75.8 (45)	51,424 (41)	8.5 (44)
South Carolina (44)	19.3 (37)	77.0 (40)	51,015 (42)	10.0 (42)
Tennessee (45)	21.3 (42)	76.3 (41)	50,972 (43)	9.8 (36)
West Virginia (46)	**25.9 (50)**	**75.3 (47)**	**44,921 (49)**	**8.0 (49)**
Alabama (47)	23.3 (46)	75.5 (46)	48,486 (44)	9.3 (40)
Arkansas (48)	24.2 (47)	76.0 (42.5)	45,726 (48)	8.2 (48)
Louisiana (49)	22.9 (45)	76.0 (42.5)	47,942 (47)	8.2 (47)
Mississippi (50)	25.3 (48)	74.9 (48)	43,567 (50)	8.3 (46)

Notes: Sources: 2019 United Health Foundation's America's Health Ranking; 2017 Henry J. Kaiser Family Foundation; 2018 US Census Bureau's American Community Survey (ACS) 5-year (2014-2018) estimates.
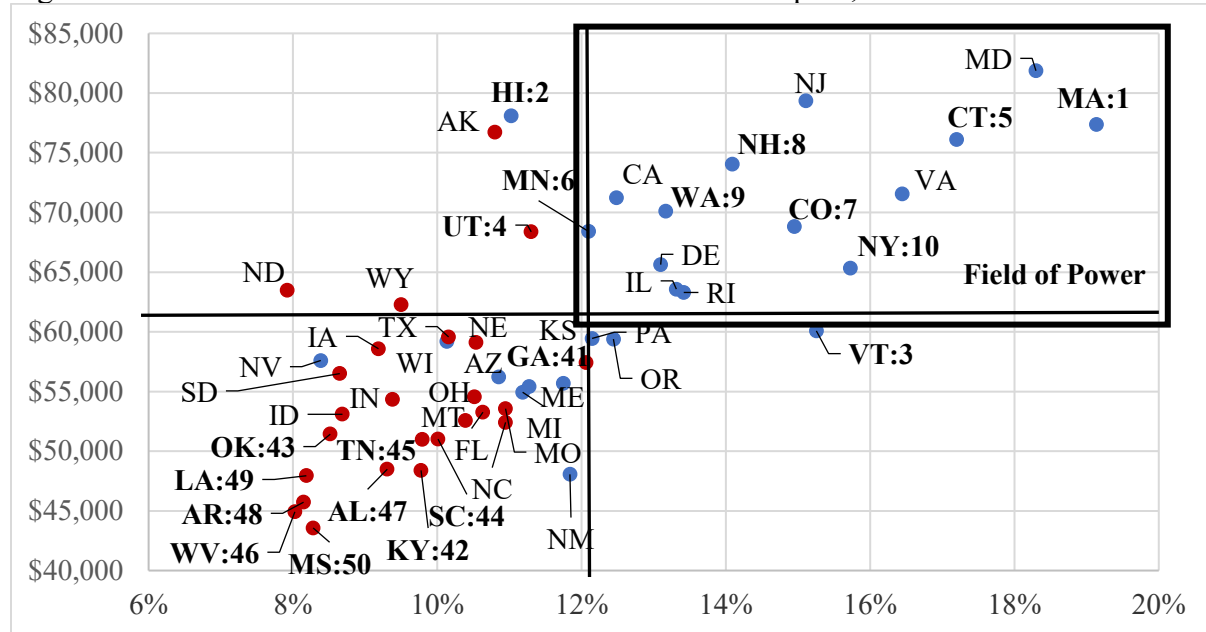
Table 4-2 below focuses on those measures related to the unequal access to economical capital, within the same ranking structure. Table 4-3 shows bivariate associations between all measures included in Tables 4-1 and 4-2 (not including rankings).

Table 4-2 Measures Representing Equal Access to Capital for Top and Bottom Ranked States by America's Health Ranking

State (America's Health Ranking)	Percent Fair or Poor SRH (rank)	Gini Index (rank)	Gender Wage Gap (rank)	Black-White Wage Gap (rank)	Disability Wage Gap (rank)
Top 10 States					
Massachusetts (1)	15.2 (11)	.48 (45)	.70 (27)	.70 (38)	.59 (48)
Hawaii (2)	14.8 (8)	.44 (5)	.77 (3)	.87 (3)	.80 (3)
Vermont (3)	14.1 (4)	.45 (10)	.76 (6)	.65 (45)	.62 (44)
Utah (4)	13.6 (2)	.43 (2)	.55 (50)	.83 (6)	.70 (17)
Connecticut (5)	14.5 (6.5)	.50 (49)	.69 (32)	.67 (44)	.62 (42)
Minnesota (6)	12.7 (1)	.45 (13)	.72 (19)	.61 (48)	.55 (50)
Colorado (7)	14.5 (6.5)	.46 (19)	.73 (16)	.80 (11)	.68 (24)
New Hampshire (8)	13.9 (3)	.44 (4)	.69 (33)	.69 (41)	.59 (46)
Washington (9)	16.0 (16.5)	.46 (17.5)	.66 (44)	.75 (25)	.68 (27)
New York (10)	17.3 (23)	.51 (50)	.76 (5)	.77 (18)	.64 (37)
Bottom 10 States					
Georgia (41)	18.5 (30)	.48 (44)	.73 (17)	.76 (19)	.74 (5)
Kentucky (42)	25.5 (49)	.48 (36)	.71 (22)	.75 (27)	.67 (30)
Oklahoma (43)	21.6 (44)	.47 (28)	.68 (34)	.76 (20)	.77 (4)
South Carolina (44)	19.3 (37)	.47 (32)	.73 (18)	.70 (37)	.72 (10)
Tennessee (45)	21.3 (42)	.48 (40)	.73 (15)	.82 (7)	.72 (11)
West Virginia (46)	**25.9 (50)**	**.46 (26)**	**.66 (43)**	**.70 (35)**	**.69 (21)**
Alabama (47)	23.3 (46)	.48 (39)	.67 (39)	.72 (32)	.71 (14)
Arkansas (48)	24.2 (47)	.48 (34)	.74 (11)	.77 (16)	.71 (12)
Louisiana (49)	22.9 (45)	.49 (48)	.62 (47)	.60 (49)	.71 (13)
Mississippi (50)	25.3 (48)	.48 (37)	.71 (25)	.68 (42)	.72 (8)

Notes: Sources: 2019 United Health Foundation's America's Health Ranking; 2017 Henry J. Kaiser Family Foundation; 2018 US Census Bureau's American Community Survey (ACS) 5-year (2014-2018) estimates.

Figure 4-3 Plot of States based on Economic and Cultural Capital, with United Health Rankings

The percentage of the population reporting fair or poor health is negatively associated with life expectancy, a finding consistently supported in research. The percentage of the population reporting they have fair or poor health are also associated with the percent of the population with an advanced degree, median household income, the Gini index of income inequality, and the disability wage gap. Life expectancy, on the other hand, while also associated with measures of economic and cultural capital is not associated with any other study variables. All measures of unequal access to economic capital, however, are retained in the analyses.

Table 4-3 Pairwise Correlations of State Variables

	1	2	3	4	5	6	7
1. Percent of Population Rating their Health as Fair or Poor							
2. Life Expectancy (years)	-0.84**						
3. Percent of the Population with an Advanced Degree	-0.49**	-0.61**					
4. Median Household Income	-0.68**	-0.79**	0.73**				
5. Gini Index	0.47**	-0.17	0.19	-0.22			
6. Gender Wage Gap	0.09	0.17	0.22	0.04	0.30*		
7. Black-White Wage Gap	0.09	0.15	-0.01	0.08	0.07	0.18	
8. Disability Wage Gap	0.37**	-0.28	-0.39**	-0.12	-0.04	0.14	0.56**

Notes: Sources: 2019 United Health Foundation's America's Health Ranking; 2017 Henry J. Kaiser Family Foundation; 2018 US Census Bureau's American Community Survey (ACS) 5-year (2014-2018) estimates. Pearson Correlation Coefficients. Significance *p<.05, **p<.01.

The Gini index is positively associated with the gender-wage gap, meaning that higher income inequality is associated with a smaller gender-wage gap, or where the gender wage gap is narrower income inequality is higher. This implies that on average states that are narrowing the gender-wage gap may only be effectively doing so for women at higher incomes and credentials. When turning to the relationship between economic and cultural capital and SRH and life expectancy, it becomes clear that the relationship between these measures is not linear. I transformed the measure for the percent of the population with an advanced degree as it was not normally distributed, but even with this transformation a non-linear relationship remains. From the two left panels in Figure 4-4 below we see that the relationship between median household income and SRH (top) and life expectancy (bottom) both curve at about the point of the median income, beyond which, the relationship appears weaker. The same pattern can be seen for the relationship between the percentage of the population with an advanced degree on the right side of the figure. The values below the US average of 12.1% (natural log -2.12) of the population with an advanced degree have greater variability and tighter clustering.

Figure 4-4 Relationships between Adults Reporting Fair or Poor Health and Life Expectancy at Birth with Median Household Income and Percent of Population with an Advanced Degree
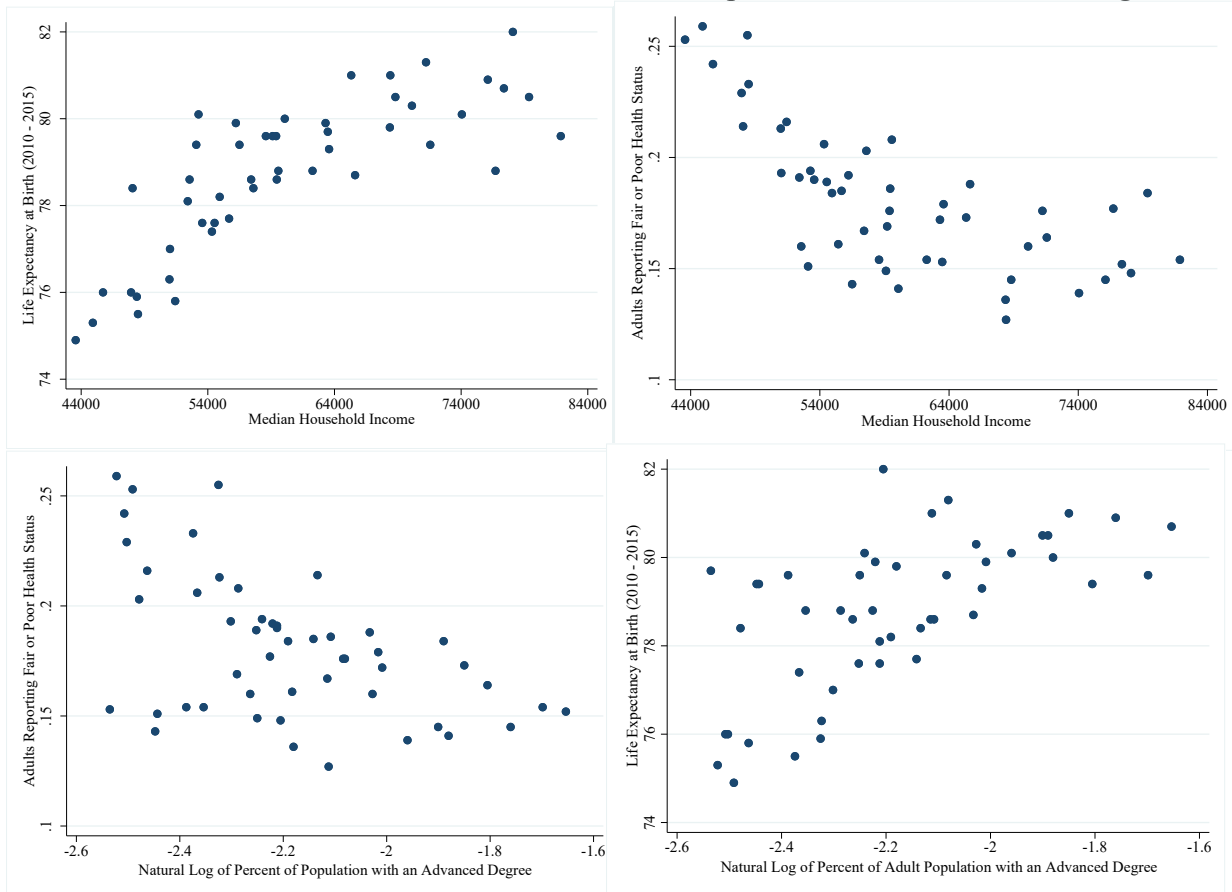
Notes: Sources: 2017 Henry J. Kaiser Family Foundation; 2018 US Census Bureau's American Community Survey (ACS) 5-year (2014-2018) estimates

Another way to visualize these relationships is presented in Figures 4-5 through 4-8 below, with each considered based on the states position held within the broader social field. Whether looking at SRH or life expectancy the relationship between these measures and those of economic and cultural capital is the strongest for those states that are low on both. In the other three quadrants, the states are near one another but generally lay along a horizontal line with less variability between them compared to the states with the least average capital resources.

Figure 4-5 Fair or Poor Health and Median Household Income by Position on the Field
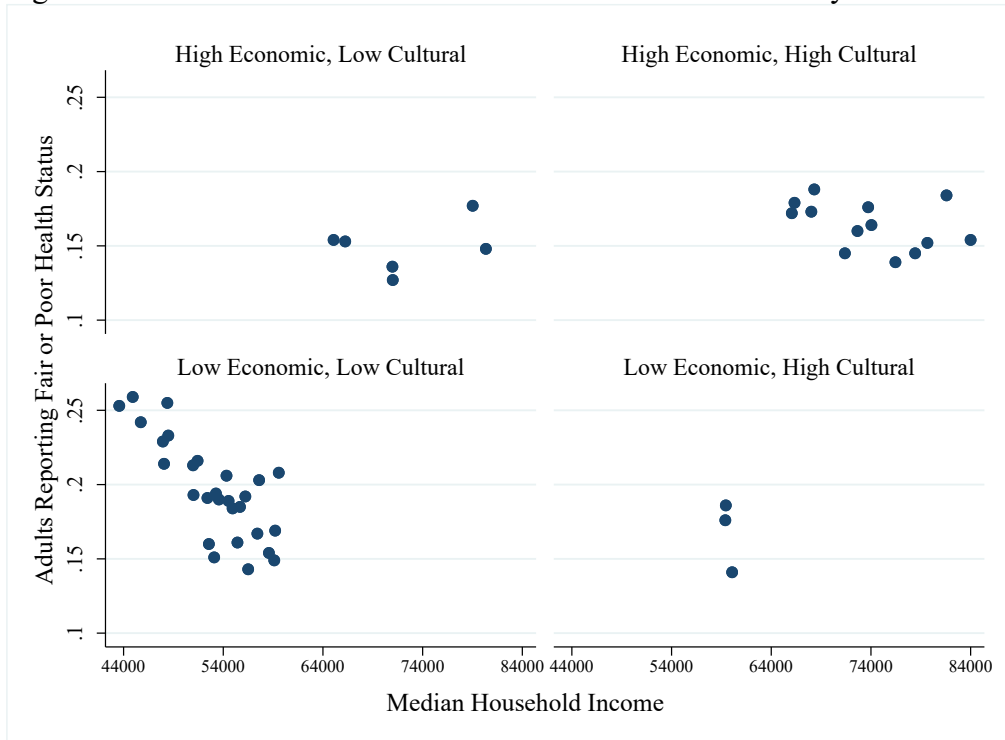
Notes: Sources: 2017 Henry J. Kaiser Family Foundation; 2018 US Census Bureau's American Community Survey (ACS) 5-year (2014-2018) estimates

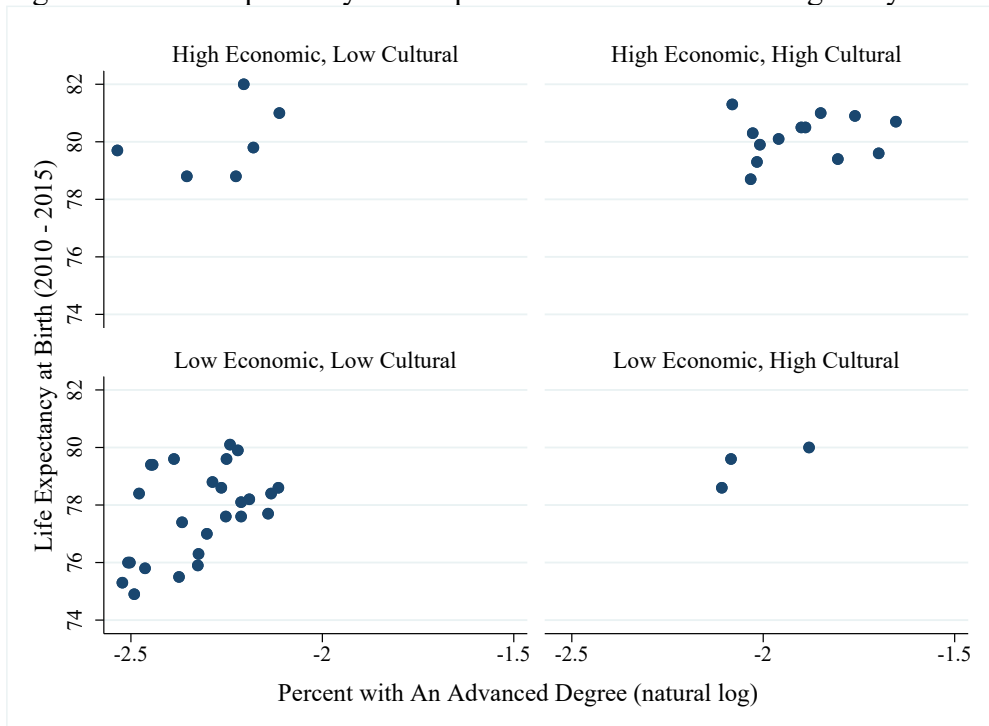Figure 4-6 Life Expectancy and Median Household Income by Position on the Field
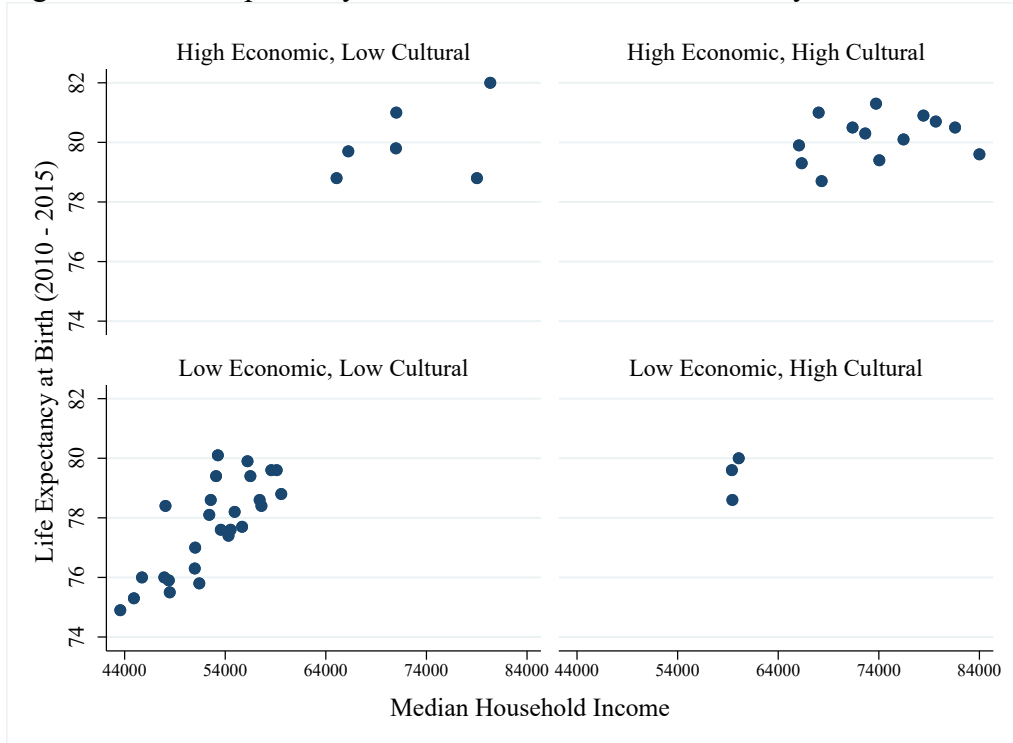
Notes: Sources: 2017 Henry J. Kaiser Family Foundation; 2018 US Census Bureau's American Community Survey (ACS) 5-year (2014-2018) estimates

Figure 4-7 Fair or Poor Health and Population with Advanced Degree by Position on the Field
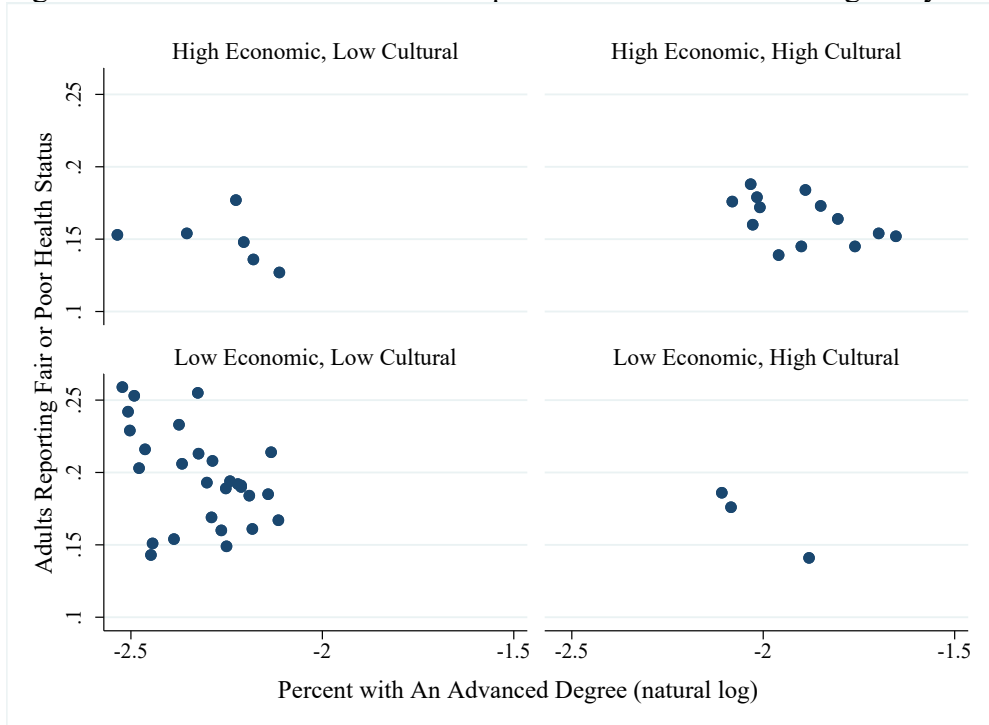
Notes: Sources: 2017 Henry J. Kaiser Family Foundation; 2018 US Census Bureau's
American Community Survey (ACS) 5-year (2014-2018) estimates

Figure 4-8 Life Expectancy and Population with Advanced Degree by Position on the Field

Notes: Sources: 2017 Henry J. Kaiser Family Foundation; 2018 US Census Bureau's
American Community Survey (ACS) 5-year (2014-2018) estimates

Yet another way to investigate the relationships, then, would be to ask if it is the same for those states in the field of power (upper right quadrant) and those outside of it – the data available, reduced to the number of states, barely allows for this limited analysis but the results support the visualizations. There is a significant influence of median household income on both the percentage of adults reporting fair or poor health and life expectancy for those states outside of the field of power (considered together), while no such relationship is evident for those states within the field of power. Further, economic and cultural capital explain much more of the variation in both SRH, and life expectancy compared to the same models for those states within the field of power. While there are not enough data points available to investigate the relationship between unequal access to economic capital and SRH and life-expectancy, there is also no evidence that the relationship between these measures (Gini index and gender, black-white, and disabilities wage gaps) are related to the position on the social field. In fact, of the five states with the lowest percentages of the population reporting fair or poor health several are ranked low on various measures of inequity. For example, Minnesota – ranked first by SRH – ranks 48th on the black-white wage gap and 50th based on the disability wage gap. The gender wage gap is similarly variable across the states with the highest and lowest SRH. Income inequality, however, does appear to be lower amongst the states with high levels of the population reporting fair or poor health.

Table 4-4 Fair or Poor Health and Life Expectancy Regressed on Measures of Economic and Cultural Capital

Dependent Variables	(1a) Percent Reporting Fair or Poor Health Within the Field of Power	(1b) Percent Reporting Fair or Poor Health Outside the Field of Power	(2a) Life Expectancy Within the Field of Power	(2b) Life Expectancy Outside the Field of Power
Independent Variables				
Median Household Income	-.000000048 (.0000)	.000000294*** (.0000)	.0000335 (.0000)	.0001485*** (.0000)
Percent of Population with an Advanced Degree	-.0428 (.0386)	-.0466 (.0271)	-.1036 (2.4559)	2.601952* (1.0988)
Intercept	.1169 (.1449)	.2451*** (.0895)	77.5797*** (7.6918)	75.8540*** (3.8350)
Observations	13	37	13	35
Adjusted R-squared	.11	.53	.12	.63

Notes: Unstandardized coefficients with robust standard errors in parenthesis. Tests of significance are two-tailed; *p<.05, **p<.01, ***p<.001. Source: U.S. Census Bureau's ACS 2018 Five-Year Estimates. Life expectancy data was not available for Maine and Wisconsin.

Table 4-5 below includes the results of the regression analyses investigating the percentage of the population reporting fair or poor health and life expectancy for all states. In models three (percent reporting fair or poor health) and four (life expectancy) I control for median household income, whether a state is in the field of power, and the interaction between being in the field of power and median household income. As was suggested by earlier analyses, the influence of median household income on both the percent of adults reporting fair or poor health and life expectancy is dependent on where a state is in the social field. While the percent of the adult population reporting fair or poor health is not affected by the percent of the population with an advanced degree, life expectancy *is* influenced by this measure, with each additional percent increase in the population with an advanced degree increasing life expectancy by 2.17 years ($t^*=2.14, p<.05$).

Table 4-5 Fair or Poor Health and Life Expectancy Regressed on Measures of Capital and Stigma-Related Access to Economic Capital

Dependent Variables	(3) Percent Reporting Fair or Poor Health	(4) Life Expectancy	(5) Percent Reporting Fair or Poor Health	(6) Life Expectancy
Independent Variables				
Median Household Income	.00000029*** (.0000)	.0001519*** (.00)	.00000025*** (.0000)	.0001952*** (.0000)
Field of Power	-.1394*** (.0571)	9.6456** (2.9845)	-.1290* (.0509)	8.5761** (2.5757)
Median Household Income X Field of Power	.00000025*** (.0000)	.0000453** (.0001)	.00000021** (.0000)	.0001399*** (.0000)
Percent of Population with an Advanced Degree	-.0460 (.0238)	2.1646* (1.0136)	-.0250 (.0244)	-.7696 (.9730)
Gini Index			.4717* (.1839)	8.6502 (8.4798)
Gender Wage Gap			.0109 (.0505)	5.4106^ (2.7541)
Black-White Wage Gap			-.0341 (.0512)	6.2904** (2.1087)
Disability Wage Gap			.2048* (.0843)	-13.0779*** (3.0596)
Intercept	.2468*** (.0813)	74.6614*** (3.6140)	-.0714 (.1165)	62.0859*** (5.9761)
Observations	50	48	50	48
Adjusted R-squared	.54	.67	.67	.75

Notes: Unstandardized coefficients with robust standard errors in parenthesis. Tests of significance are two-tailed; ^p=.057 *p<.05, **p<.01, ***p<.001. Source: U.S. Census Bureau's ACS 2018 Five-Year Estimates. Life expectancy data was not available for Maine and Wisconsin.

The number of states allow easily for models three and four, while models five and six push the boundaries for the number of independent variables allowable in the model so the results should be interpreted with some caution. In models five and six I again find that the influence of median household income on the outcomes is dependent on where the state is in the social field. Of the measures of unequal access to economic capital included in model five the Gini index (*t=2.57, p<.05) and disability wage gap (*t=2.43, p<.05) are both associated with the percent of the population reporting fair or poor health, holding all else constant. Turning to model six, the influence of the gender wage gap is weaker than the associations with the other wage gaps, but the trend is that for each one cent narrowing of the gender wage gap there is an increase of 5.41 years of life expectancy (*t=1.96, p=.057), all else held constant. The relationship between the black-white and disability wage gaps is stronger. With each one cent narrowing of the black-white wage gap there is a resultant increase of an additional 6.29 years of life expectancy (*t=2.98, p<.01), controlling for the other variables in the model. The relationship between the disability wage gap and life expectancy, however, moves in the other direction – for each one cent narrowing of the disability wage gap life expectancy would be expected to decrease by just over thirteen years (*t=-4.27, p<.001), controlling for all other variables. I will next ask if similar patterns are observed at the state level. In other words, within West Virginia do we see the same relationships between access to capital and SRH and life expectancy for counties?

THE EFFECT OF A COUNTY'S CAPITAL ON SRH AND LIFE EXPECTANCY IN WV

Table E-3 in Appendix D provides the measures and rankings for the same measures of capital access as was explored for the state for each county in West Virginia, including median household income, percent of the population with an advanced degree, income inequality, and the gender, black-white, and disability wage gaps. Table 4-6 and 4-7 below provides most of the study variables for the Robert Wood Johnson Foundation ten top and bottom ranked counties in the state. While over a quarter (25.9%) of West Virginian adults report their health as fair or poor (as opposed to good, very good, or excellent) – the highest percentage of any state in the country – there is a lot of variation within the state. At one end of the distribution 32% of McDowell County residents rated their health as fair or poor, compared to only 18% of Jefferson County residents reporting their health thusly. Doddridge, Monongalia, and Putnam counties each have

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just 19% of the population reporting fair or poor health. West Virginians on average live to be 75.3 years, but again there is notable variation across the counties. People in Doddridge County live on average to be 79.1 years, while residents of Marion County live on average 68.6 years – an over 10-year difference. Just as there is variability in the outcomes of SRH and life expectancy, similar variation is seen across the measures gauging access to economic and cultural capital.

For West Virginia overall, the average median household income is $44,921, the median household income in the state ranges from a low of $26,547 in Marion County to a high of $76,503 in Jefferson County. On average 8.0% of the state of West Virginia has an advanced degree, which is the lowest in the nation. There is variability in the state, but only nine of fifty-five counties have percentages higher than the state average. Monongalia County, which is the home of West Virginia University, has the highest percentage of people with an advanced degree at 20.1%, followed by Jefferson (12.0%), Ohio (11.9%), Cabel (11.1%), Kanawha (10.5%), Putnam (10.1%), and Marion, Wood, and Harrison (~8.5% each) counties. Only Jefferson and Monongalia County meet or exceed the national average of 12.08% of the population 25 and over with an advanced degree. The counties that are ranked the healthiest by the RWJF, those with low percentages of the population reporting fair or poor health, and those counties with the longest average life expectancies, well as those counties with the highest level of capital resources (power), however, just as with the states, are not necessarily the ones with the lowest levels of inequality, as demonstrated in Tables 4-6 and 4-7 below.

Table 4-6 Measures of Health and Capital for Top and Bottom Ten Ranked Counties by Robert Wood Johnson Foundation County Health Rankings

County (RWJF Health Ranking)	Percent Fair or Poor SRH (rank)	Life Expectancy (rank)	Median Household Income (rank)	% 25+ with an Advanced Degree (rank)
Monongalia (1)	19 (3)	79 (2.5)	49,926 (6)	20.1 (1)
Jefferson (2)	18 (1)	77.6 (4)	76,503 (1)	12.02 (2)
Putnam (3)	19 (3)	76.7 (17.5)	59,626 (3)	10.12 (6)
Doddridge (4)	19 (3)	79.1 (1)	46,449 (14)	3.68 (50)
Pleasants (5)	22 (20.5)	76.2 (23)	48,563 (9)	4.93 (37)
Mineral (6)	20 (8.5)	76.4 (21)	46,354 (15)	6.34 (23)
Berkeley (7)	20 (8.5)	75.4 (30.5)	60,615 (2)	6.97 (16)
Brooke (8)	20 (8.5)	76.5 (20)	49,772 (7)	7.21 (11)
Ritchie (9)	22 (20.5)	76.7 (17.5)	44,472 (21)	4.54 (42)
Monroe (10)	23 (29)	77.1 (10.5)	36,493 (48)	5.08 (34)
Wayne (46)	26 (48.5)	74.1 (40)	55,679 (31)	11.7 (20)
Raleigh (47)	25 (42)	73.1 (44)	48,392 (45)	9.8 (37)

County (RWJF Health Ranking)	Percent Fair or Poor SRH (rank)	Life Expectancy (rank)	Median Household Income (rank)	% 25+ with an Advanced Degree (rank)
Mercer (48)	25 (42)	72.7 (46)	51,424 (41)	8.5 (44)
Wyoming (49)	26 (48.5)	72.1 (49)	51,015 (42)	10.0 (42)
Lincoln (50)	25 (42)	71.9 (50)	50,972 (43)	9.8 (36)
Cabell (51)	23 (29)	71.4 (52)	44,921 (49)	8.0 (49)
Boone (52)	27 (52.5)	71.8 (51)	48,486 (44)	9.3 (40)
Logan (53)	26 (48.5)	70.1 (54)	45,726 (48)	8.2 (48)
Mingo (54)	28 (54)	71 (53)	47,942 (47)	8.2 (47)
Marion (55)	20 (8.5)	68.6 (55)	43,567 (50)	8.3 (46)

Notes: Sources: U.S. Census Bureau's American Community Survey (ACS) 2018 Five-Year (2014 – 2018) Estimates, and 2019 Robert Wood Johnson Foundation County Health Ranking and Roadmap Data.

Just as with the state level measures above, Table 4-7 below focuses on measures related to the unequal access to economical capital, within the same ranking structure. And Table 4-8 shows bivariate associations between all measures in Tables 4-6 and 4-7 (excluding rankings).

Table 4-7 SRH and Access to Capital for Top and Bottom Ten Ranked Counties

County (RWJF Health Ranking)	Percent Fair or Poor SRH (rank)	Gini Index (rank)	Gender Wage Gap (rank)	Black-White Wage Gap (rank)	Disability Wage Gap (rank)
Monongalia (1)	19 (3)	0.53 (55)	0.74 (10)	0.80 (12)	0.60 (46)
Jefferson (2)	18 (1)	0.41 (5)	0.59 (44)	0.79 (14)	0.59 (48)
Putnam (3)	19 (3)	0.44 (20)	0.65 (29)	0.86 (11)	0.67 (37)
Doddridge (4)	19 (3)	0.42 (7)	0.71 (13)	--	0.72 (28)
Pleasants (5)	22 (20.5)	0.47 (46)	0.54 (49)	--	0.62 (43)
Mineral (6)	20 (8.5)	0.41 (6)	0.65 (30)	0.43 (27)	0.87 (9)
Berkeley (7)	20 (8.5)	0.39 (2)	0.64 (32)	0.65 (17)	0.60 (45)
Brooke (8)	20 (8.5)	0.39 (1)	0.61 (37)	0.35 (29)	0.68 (35)
Ritchie (9)	22 (20.5)	0.45 (34)	0.63 (35)	--	--
Monroe (10)	23 (29)	0.44 (22)	0.75 (8)	1.29 (1)	0.74 (24)
Wayne (46)	26 (48.5)	.48 (44)	.73 (17)	.76 (19)	.74 (5)
Raleigh (47)	25 (42)	.48 (36)	.71 (22)	.75 (27)	.67 (30)
Mercer (48)	25 (42)	.47 (28)	.68 (34)	.76 (20)	.77 (4)
Wyoming (49)	26 (48.5)	.47 (32)	.73 (18)	.70 (37)	.72 (10)
Lincoln (50)	25 (42)	.48 (40)	.73 (15)	.82 (7)	.72 (11)
Cabell (51)	23 (29)	.46 (26)	.66 (43)	.70 (35)	.69 (21)
Boone (52)	27 (52.5)	.48 (39)	.67 (39)	.72 (32)	.71 (14)
Logan (53)	26 (48.5)	.48 (34)	.74 (11)	.77 (16)	.71 (12)
Mingo (54)	28 (54)	.49 (48)	.62 (47)	.60 (49)	.71 (13)
Marion (55)	20 (8.5)	.48 (37)	.71 (25)	.68 (42)	.72 (8)

Notes: Sources: U.S. Census Bureau's American Community Survey (ACS) 2018 Five-Year (2014 – 2018) Estimates, and 2019 Robert Wood Johnson Foundation County Health Ranking and Roadmap Data.

In West Virginia, overall, the Gini coefficient is 0.46 (income inequality is moderate), but the Gini ranges within the state from a low of 0.39 in Brooke County to a high of 0.53 in Monongalia County. And, while in the state women earn 66 cents for every dollar a man earns (one of the top 10 highest gender wage gaps in the country) this ranges within the state from a

low of women earning 43 cents for every dollar earned by a man in Wirt County to completely equitable pay by gender in Gilmer County. And there was even more notable variation in the black-white wage gap. Whereas black West Virginians make 70 cents for every dollar white West Virginians make, in Hampshire County workers who are black earn less than thirty cents on every dollar earned by their white neighbors. In Gilmer County, where there was no gap in pay between men and women, residents who are black earn only 31 cents on every dollar earned by white residents.

The data available for the black-white wage gap measure are limited because the US Census Bureau suppressed median household income due to small populations of West Virginians who identified as black and were employed full-time. For this reason, the ratio could only be calculated for 32 counties, and of these 32 counties half have black-white wage gaps wider than the state's average. There are, however, four counties in West Virginia where workers who are black earn equal to or slightly more than their full-time employed white peers: Monroe, Mason, Hardy, and Harrison. While Monroe and Mason counties have less than 1% of their population identifying as black, in Hardy and Harrison 5.5% and 1.7% of the population, respectively, identify as black. Further the Pearson's correlation coefficient for the relationship between the black-white wage gap and the percent of the population of the county that is black was not significant ($r=-.089$, $p=.626$). This suggests that there is more to this variation than the proportion of the population that identifies as black, but it could be related to the exclusion of those who are employed part-time or the influence of a specific, localized combination of demographic, economic, and social factors.

Similar variability as seen for all other study measures can be observed for disabled full-time workers, who at the state level make an average of 69 cents for every dollar earned by full-time workers who are not disabled. Within West Virginia the disability wage gap ranges from .41 in Summers County to over one (or full equality in pay) for those in Calhoun, Pendleton, Nicholas, and Boone counties. I did not investigate the relationship between the percent of the population that are disabled, and the potential explanations are likely the same as those just discussed above – localized differences in the social field. All the above demonstrates the need to understand how resources are being distributed at the local level based on gender, race, ability, and beyond – before investigating the relationships between these social categories and health.

Just as with the states, there are no clear patterns between the power a county holds and inequality, instead each state and county appear to have developed a specific distribution of resources, beyond the data available in this study, based on specific demographic, economic, environmental, and social pasts and presents, or the history and biography of the place. Table 4-8 below shows bivariate associations between all measures. Again, the percentage of the population reporting fair or poor health is negatively associated with life expectancy, which is to be expected as discussed previously with the state analysis. Levels of the population reporting they have fair or poor health are also associated with the percent of the population with an advanced degree, and median household income. Life expectancy, on the other hand, is only associated with median household income. Percent of the population reporting fair or poor health and life expectancy are not associated with any other study variables, though the relationships between the Gini index and the percent of the population reporting fair or poor health (p=.095) and life expectancy (p=.066) are weakly related. All measures of unequal access to economic capital, however, will be retained in the final analyses.

Table 4-8 Pairwise Correlations of County Variables

Variables	1	2	3	4	5	6	7
1. Percent of Population Rating Health as Fair or Poor							
2. Life Expectancy at Birth (years)	-0.43**						
3. Percent of the Population with an Advanced Degree	-0.56***	0.17					
4. Median Household Income	-0.62***	0.47***	0.46***				
5. Gini Index	0.23	-0.25	0.34*	-0.31*			
6. Gender Wage Gap	-0.04	0.19	0.19	-0.06	0.06		
7. Black-White Wage Gap	0.10	0.14	-0.08	0.07	0.05	-0.06	
8. Disability Wage Gap	0.22	0.02	-0.27*	-0.17	-0.12	-0.09	0.25

Notes: Sources: 2019 Robert Wood Johnson Foundation County Health Ranking and Roadmap Data and 2018 US Census Bureau's American Community Survey (ACS) 5-year (2014-2018) estimates. Pearson Correlation Coefficients. Significance *p<.05, **p<.01, ***p<.001.

The percent of the population with an advanced degree and median household income is associated with the Gini index, while the percent of the population with an advanced degree is also associated with the disability wage gap. At the county level, as the percent of the population with an advanced degree increases the Gini index also increases (income inequality increases), but as median household income increases the Gini index decreases (income inequality decreases). The relationship between the percent of the population with an advanced degree and

the disability wage gap is also negative, meaning again, the more of the county that has an advanced degree the more inequality in access to income for those who are disabled. Unlike with the state analysis, the disability wage gap is not significantly associated with the black-white wage gap, and the Gini index is not associated with the gender-wage gap in bivariate analysis.

The relationships between the measures of economic and cultural capital and SRH and life expectancy are shown in Figure 4-9 below. The top two panels show the relationships for percent of the population reporting fair or poor health and median household income (left) and percent of the population with an advanced degree (right). As with the state analysis I transformed the measure for the percent of the population with an advanced degree because it was not normally distributed, and even with this transformation there again seems to be a bend or a dissolving of the relationship at about the point of the median income, beyond which, the relationship appears weaker. The same general pattern can be seen for the relationship between the percentage of the population with an advanced degree (right).

Figure 4-9 Relationships between Adults Reporting Fair or Poor Health and Life Expectancy at Birth with Median Household Income and Percent of Population with an Advanced Degree
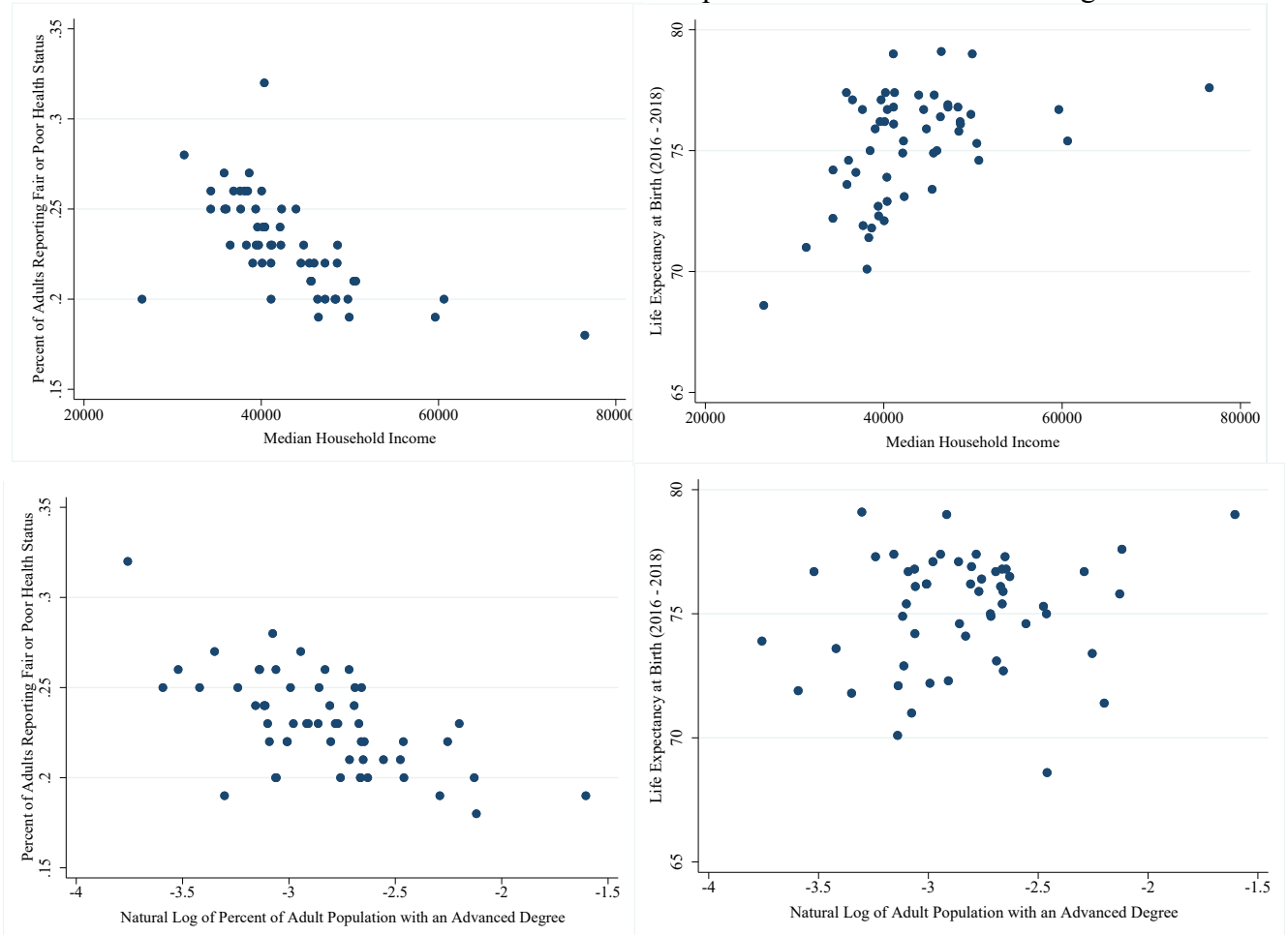
Notes: Sources: 2019 Robert Wood Johnson Foundation County Health Ranking and Roadmap Data and 2018 US Census Bureau's American Community Survey (ACS) 5-year (2014-2018) estimates.

The relationships demonstrated in Figure 4-9 above are explicated in Table 4-9 below, showing simple linear models for percent of the population reporting fair or poor health and life expectancy regressed on the two measures of capital – median household income and percent of the population with an advanced degree. Both measures of capital influence the percent of the population reporting fair or poor health. For each dollar increase in a county's median income the percentage of the population reporting fair or poor health decreases (t^*=-2.93, p=.005), though the impact is relatively small. Similarly, as the percent of the population with an advanced degree increases, the percent of the population reporting fair or poor health decreases (t^*=-2.62, p=.011). For life expectancy, however, only median household income is a significant predictor. For every dollar increase in median household income, life expectancy increases by

.0002 years, which means that a difference in $20,000 in median household income would equate to two years more of life for county residents on average. Median household income and the percentage of the population with an advanced degree explain 51% and 20% of the variance in the percent of a county reporting fair or poor health and life expectancy, respectively.

Table 4-9 Fair or Poor Health and Life Expectancy Regressed on Measures of Capital

| Dependent Variables	(1) Percent Reporting Fair or Poor Health	(2) Life Expectancy
Independent Variables		
Median Household Income	-0.00000015*** (.00)	0.0001522*** (.00)
Percent of Population with an Advanced Degree	-.03** (.01)	-.45 (1.02)
Intercept	.21*** (.05)	67.39*** (4.59)
Observations	55	55
Adjusted R-squared	.51	.20

Notes: Unstandardized coefficients with robust standard errors in parenthesis. Tests of significance are two-tailed; *p<.05, **p<.01, ***p<.001. Source: U.S. Census Bureau's ACS 2018 Five-Year Estimates.

Table 4-10 below includes the results of the regression analyses investigating the percentage of the population reporting fair or poor health and life expectancy for all counties with available data on all measures. In Models three (percent reporting fair or poor health) and four (life expectancy) I include the capital predictors as I did in the simple models in Table 4-9 and add controls for unequal access to economic capital using the Gini index, and the gender, black-white, and disability wage gaps. There are only 32 states included in these models because there was missing information for 23 states. Income by race (for 22 states) and disability status (for 1 state) was suppressed by the US Census Bureau due to small populations of West Virginians who were black and/or disabled.

Once these variables were included in the model, the relationship between median household income and percent reporting fair or poor health (Model 3, Table 6-4) becomes insignificant, though the relationship between percent of the population with an advanced degree remains influential with both increasing impact and significance (*t=-11.85, p=.000). In Model four, the relationships between economic and cultural capital and life expectancy remain similar to that seen in the simple model above (Table 4-9, Model 2). Controlling for those measures, however, as well as the Gini index and the black-white and disability wage gaps, the gender-

wage gap is a significant predictor of life expectancy. As the gender wage gap increases (narrows toward equality) by one cent a county's population is expected to increase average life expectancy on average by over nine years (*t=2.66, p=.033). While models three and four are limited to the data available they do explain more of the variation in the percent of the population reporting fair or poor health and life expectancy for the 32 counties included than the simple models (Table 4-9) did for all the counties – explaining 80% and 27% of the variation in the percent of the population reporting fair or poor health and life expectancy, respectively (compared to 51% and 20%). Because of the large number of counties missing data on income for West Virginians who are black I ran the same models excluding the black-white wage gap.

Table 4-10 Fair or Poor Health and Life Expectancy Regressed on Measures of Economic and Cultural Capital, controlling for unequal access to economic capital.

Model	(3)	(4)	(5)	(6)
Dependent Variables	Percent Reporting Fair or Poor Health	Life Expectancy	Percent Reporting Fair or Poor Health	Life Expectancy
Independent Variables				
Median Household Income	.0000000057	.0001717*	.000000085	.0001543*
	(.00)	(.00)	(.00)	(.00)
Percent of Population with an Advanced Degree	-.07***	-.12	-.04**	-.46
	(.01)	(1.46)	(.01)	(1.20)
Gini Index	.45***	3.17	.29*	-6.15
	(.10)	(15.81)	(.11)	(14.62)
Gender Wage Gap	.05*	9.63*	.01	5.88^
	(.02)	(4.27)	(.04)	(3.02)
Black-White Wage Gap	-.003	.66	--	--
	(.01)	(1.47)		
Disability Wage Gap	-.03	2.45	.01	-1.52
	(.02)	(3.25)	(.01)	(1.87)
Intercept	-.19**	56.94***	-.01	65.00***
	(.06)	(13.12)	(.12)	(12.28)
Observations	32	32	54	54
Adjusted R-squared	.80	.27	.56	.23

Notes: Unstandardized coefficients with robust standard errors in parenthesis. Tests of significance are two-tailed; ^p=.057 *p<.05, **p<.01, ***p<.001. Source: U.S. Census Bureau's ACS 2018 Five-Year Estimates. Income by race and disability status was suppressed by the US Census Bureau due to small populations of West Virginians who are black or disabled.

The final two models in Table 4-10 provide the results for the same regressions in the first two models in the same table excluding the black-white wage gap. Models 5 and 6 demonstrate, first, that the black-white wage-gap while not significantly associated with the outcomes does likely explain a portion of the variation in both. Further, the removal of the black-

white wage gap decreased the size and significance of the effect of the Gini Index and the gender wage gap on the percent of the population reporting fair or poor health. The differences between models four and six (Table 4-10) mirror the same patterns seen for the percent of the population reporting fair or poor health, for life expectancy. The significance and magnitude of the gender-wage gap on life expectancy changed to no longer significant at the 5% level. Taken together this evidence implies that the relationship between these measures is mediated by intersecting with the black-white wage gap. While this cannot be statistically tested with the data available it is an explanation supported by what is known about the intersections between stigmatized statuses.

The distribution of the counties by access to economic and cultural capital is shown in Figure 4-10 below. Mirroring the state analysis, in the bottom left quadrant are those counties with the lowest economic and cultural capital, while on the bottom right are counties who have high cultural capital but low economic capital. As with the states, most of the counties fall in the bottom-left quadrant of the figure. On the top left of the figure are counties with high levels of economical capital but lower levels of cultural capital, while those counties in the upper right have the highest levels of both. I have again used the red/blue political dichotomy to color Figure 4 - 10, but once I move to the county level data and must consider ballots cast by registered voters this dichotomy largely falls away. Only a minority of the state's population register to vote and of those that are registered, again only a fraction cast a ballot. By election day West Virginians at large were not engaged with the political process. There are a few registered Democrats and Republicans who voted for another politician (not Trump or Biden), as well as a small group who voted for a candidate from another party. So, while Trump and Biden won greater percentages of the vote than any of the others who had ballots cast in their name, in no county did a numerical majority of residents vote for either Trump or Biden. In the figure below the county abbreviations in red cast more ballots for Trump when considering total votes cast for Trump and Biden only. County abbreviations in blue had a larger percent of votes cast for Biden, again with total votes cast for Trump and Biden as the denominator.

Figure 4-10 Plot of Counties based on Economic and Cultural Capital, with Robert Wood Johnson Foundation County Health Rankings for Top and Bottom 10 States
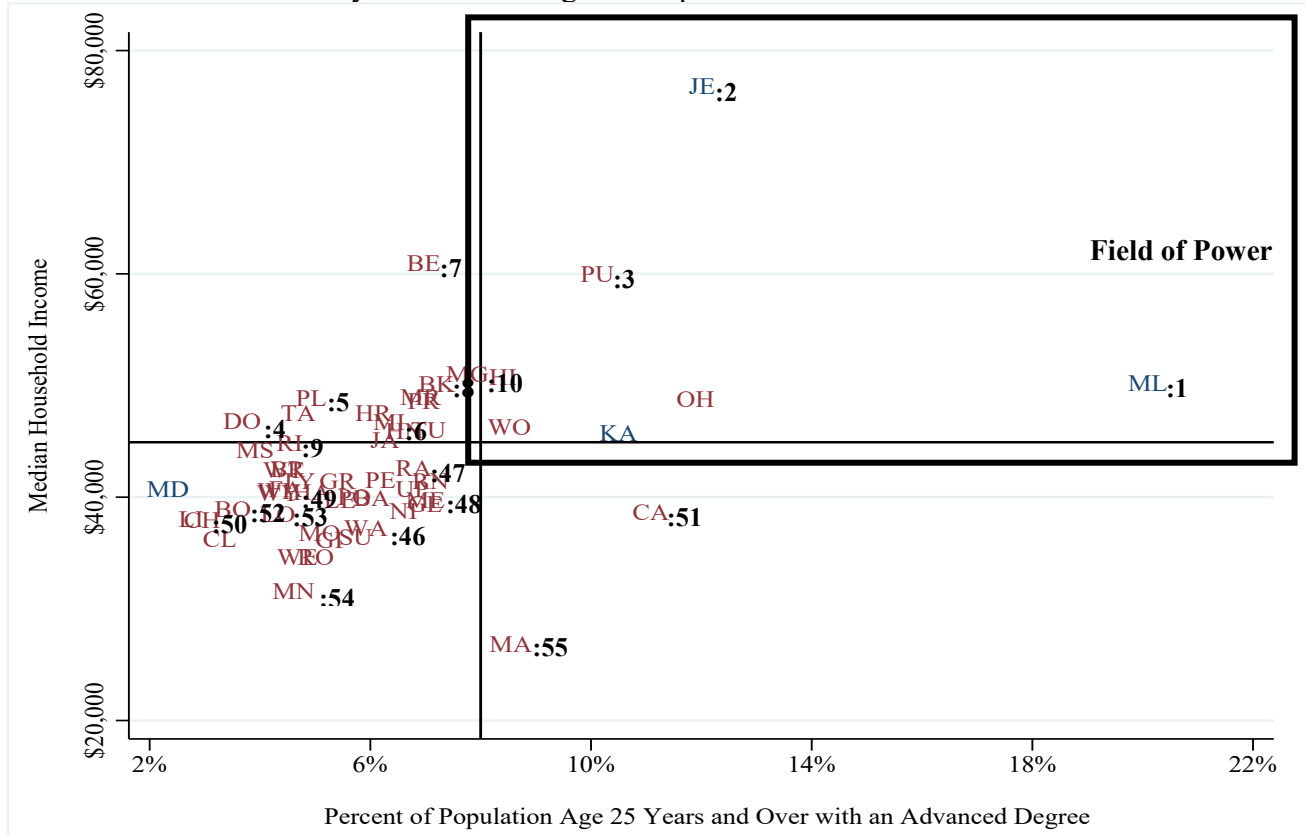
Notes: Counties in red had more registered voters cast a ballot for Trump in the 2020 presidential election and counties in blue had more votes for Biden. Sources: West Virginia Secretary of State's Office election results (https://sos.wv.gov/elections/Pages/HistElecResults.aspx), the U.S. Census Bureau's American Community Survey (ACS) 2018 Five-Year (2014 – 2018) Estimates, and 2019 RWJF County Health Ranking and Roadmap Data.

The position held in the social field based on economic and cultural capital is the first determination of class for Bourdieu, class as measured commonly in social science research by education and income. As demonstrated above, and through a broad range of other scholarly work, these measures of class are related to health and longevity in important ways The other determination of class, for Bourdieu, is crafted from perceptions of what that position in the social field means, or how it is understood and explained, from without and within, which is what Bourdieu argues defines lifestyles. I will consider outcomes and perspectives from within the state of West Virginia, but first I will turn to the outside perceptions of West Virginia and West Virginians, as well as the health of the state, through a quantitative thematic content analysis of US national media.

Chapter 5 The Social Construction of Place and Health: Making West Virginia

The goals of the quantitative thematic content analysis are to understand the national narrative about West Virginia that is presented through national media and whether this narrative relies on historical, placed-based stereotypes. Stereotypes are used to explain or justify the social positions held in the distribution of capital resources and support continued inequalities. Here I am concerned with the stereotypes that might keep West Virginian and Appalachian people—or even rural residents writ large—in, out, and away, or be used to explain or justify their position in the distribution of capital resources as demonstrated through the above findings. While the overall narrative about the state of West Virginia is determined by the most frequently occurring themes and subthemes found across articles, the most frequently occurring words across article provides a useful way to visualize the narrative, overall and comparatively. Figure 5-1 below shows the one hundred most frequently occurring words (with a minimum length of three letters) overall and by publication.

Figure 5-1 Word Clouds of Most Frequent Words in the *Wall Street Journal* (*WSJ*) and *New York Times* (*NYT*)

All Articles Together *WSJ* (92) *NYT* (204)
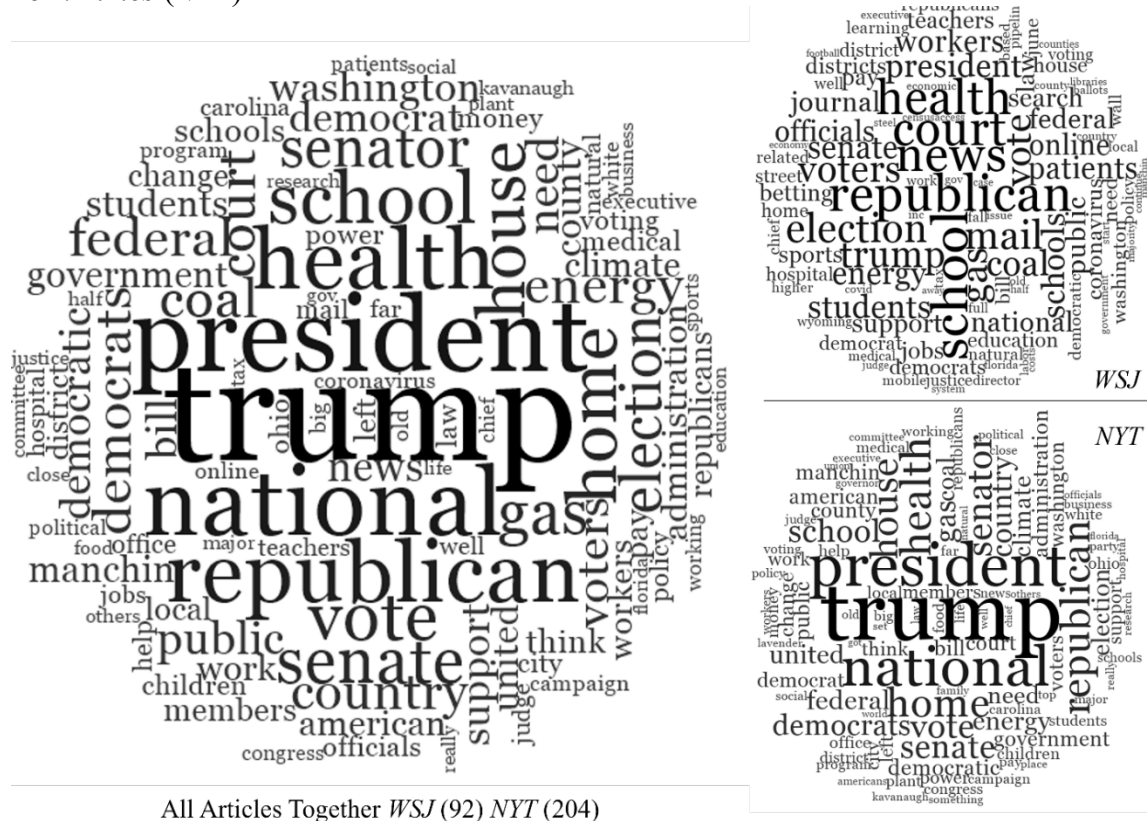
The visual representation above is well aligned with the findings from the thematic analysis presented below, with some interesting additional information. Different states are referenced or associated with the state of West Virginia in the different narratives, for example, but other states were not included in the coding structure. This representation of the data, however, is not weighted and so the overall narrative is driven by the higher number of *NYT* articles. The primary themes and the number of articles coded to them in the *WSJ* and *NYT* articles are listed in Table 5-1 below. The maps of the initial and final coding structures are provided in Appendix E (Figures E-1 through E-3), as is a table listing the top one hundred most frequently occurring words for all articles, and for the *WSJ* and *NYT* separately (Table E-5), and the final codebook (Table E-6), providing definitions for all codes (themes).

Table 5-1 Primary Themes by *Wall Street Journal* and *New York Times*

Primary Themes	*WSJ* (92)	%	*NYT* (204)	%	Total (296)	Total %	*z*	P>|z|
Government and Politics*	55	59.8%	154	75.5%	213	72.0%	-2.74	0.006
Health	42	45.7%	87	42.6%	134	45.3%	0.50	0.619
Place*	17	18.5%	63	30.9%	83	28.0%	-2.22	0.026
Work	22	23.9%	42	20.6%	69	23.3%	0.64	0.523
Environment	18	19.6%	40	19.6%	60	20.3%	0.00	1.000
Education	16	17.4%	27	13.2%	47	15.9%	0.95	0.342
Poverty	8	8.7%	34	16.7%	45	15.2%	-1.82	0.068
Total (unique)	**89**	**96.7%**	**201**	**98.5%**	**290**	**98.0%**		

Notes: The numbers in the column represent the number of articles coded to each theme. Because articles could be coded to more than one theme these do not total to 100. The totals in the last row are the total number of unique articles that were coded to the themes presented in the table, for each of the newspapers (*WSJ* and *NYT*) and together. The percents in the last row are the percent of articles covered by all the themes presented in the table from all articles included in the analysis (N=296) for the *WSJ* (N=92) and *NYT* (N=204). *Difference in proportion significant at p≤.05 based on tests of proportions.

The primary themes included in Table (and Figure) 5-1 below cover 96.7% and 98.5% of the WSJ and NYT articles, respectively. The remaining articles were reviewed but did not fall under any of the themes or subthemes presented below. While the most frequently coded for themes were (1) Government and Politics, (2) Health, (3) Place, (4) Work, (5) Environment, (6) Education, and (7) Poverty there was substantial cross-over in coding, and many articles coded as government and politics cover political or legislative actions related to health, work,

environment, and education, as well as related subthemes. The way the primary themes clustered by frequency and publication are used to structure the presentation of findings below, apart from health, which I will turn to last, before closing the chapter with an analysis of the overall and publication specific sentiment expressed through the narratives presented.

The Government and Politics theme was the most coded of the primary themes for both publications, with the theme appearing in 59.8% of *WSJ* and 75.5% *NYT* articles. A test pf proportions indicates the differences in coverage of this theme is statistically significant (z=-2.74, p=.006). The next most frequently coded primary theme for both news outlets was health, and both had similar coverage: 45.7% of *WSJ* and 42.6% of *NYT* articles that were about West Virginia. Beyond these two broad categories, differences between the two publications and the narrative that grows out of the primary themes begin to diverge. The themes of place, work, and environment, for example, differ in order based on proportions but still hang together. While 30.9% of *NYT* articles included Place themes, this was only true for 18.5% of *WSJ* articles, which was the only other statistically significantly difference (z=-2.22, p=.026) when comparing primary themes. There are significant differences within subthemes that further distinguish the narratives, or the focus of the narratives drawn by publication, which is discussed below. For the Work theme slightly more articles from the *WSJ* (23.9%) coded to the theme, compared to the *NYT* (20.6%). The Environment theme was covered the same (19.6%) for both publications. The final two primary themes, education and poverty, also differed in proportions covered, but not significantly. The education theme was present in 17.4% of *WSJ* articles and 13.2% of *NYT* articles, while poverty was a theme found in 8.7% of *WSJ* and 16.7% *NYT* articles. While this difference is not statistically significantly at p<.05, is substantively important for expressing the variability in the narratives between the publications.

GOVERNMENT AND POLITICS

The most coded primary theme for both the *WSJ* (59.8%) and *NYT* (75.5%) was Government and Politics, with Politics being more often coded for than Government for both publications. I will begin, however, with a brief review of the important differences in how each publication covers the West Virginia Government before moving to politics. The Government and Politics theme and subthemes with proportions of articles covered by publication is provided in Table 5-2 below.

Table 5-2 Government and Politics Themes by *Wall Street Journal* and *New York Times*

Government and Politics Themes and Subthemes	WSJ (92)	%	NYT (204)	%	Total (296)	Total %	Z	P>|z|
Government and Politics	55	59.8%	154	75.5%	209	70.6%	-2.74	0.006
Government	24	26.1%	54	26.5%	78	26.4%	-0.07	0.942
Law	22	23.9%	49	24.0%	71	24.0%	-0.02	0.985
Crime*	12	13.0%	5	2.5%	17	5.7%	3.59	0.000
Legislation*	5	5.4%	30	14.7%	35	11.8%	-2.29	0.020
Politics*	37	40.2%	123	60.3%	160	54.1%	-3.21	0.001
Politicians*	22	23.9%	94	46.1%	116	39.2%	-3.62	0.000
Donald Trump*	13	14.1%	77	37.7%	90	30.4%	-2.98	0.003
Joe Manchin	7	7.6%	28	13.7%	35	11.8%	-1.51	0.132
Jim Justice	3	3.3%	12	5.9%	15	5.1%	-0.94	0.346
Patrick Morrisey	5	5.4%	9	4.4%	14	4.7%	0.38	0.707
God, Guns, and Babies	8	8.7%	23	11.3%	31	10.5%	-0.68	0.499
Religion	4	4.3%	11	5.4%	15	5.1%	-0.40	0.689
Abortion	1	1.1%	10	4.9%	11	3.7%	-1.60	0.110
Firearms	3	3.3%	7	3.4%	10	3.4%	-0.04	0.965
Voting	6	6.5%	12	5.9%	18	6.1%	0.20	0.842
Race and White Supremacy, Antisemitic, and Anti-Muslim	1	1.1%	13	6.4%	14	4.7%	-0.95	0.343
Race*	0	0.0%	9	4.4%	9	3.0%	-2.04	0.041
Black	0	0.0%	1	0.5%	1	0.3%	-0.68	0.497
White*	0	0.0%	9	4.4%	9	3.0%	-2.04	0.041
White Supremacy, Anti-Muslim, and Antisemitic	1	1.1%	6	2.9%	7	2.4%	-0.95	0.343
White Supremacy	1	1.1%	5	2.5%	6	2.0%	-0.78	0.433
Anti-Muslim	0	0.0%	4	2.0%	4	1.4%	-1.37	0.172
Antisemitic	1	1.1%	2	1.0%	3	1.0%	0.08	0.937
Immigration*	0	0.0%	10	4.9%	10	3.4%	-2.16	0.031
Total (unique)	**55**	**59.8%**	**154**	**75.5%**	**209**	**70.6%**		

Notes: *Difference in proportion significant at p≤.05 based on tests of proportions.

As shown in Figure 5-2 below, both publications have similar coding for Government, with the theme covering 26.1% of *WSJ*, and 26.5% of *NYT* articles about West Virginia, and within the Government subtheme of Law, which was in 23.9% of *WSJ* and 24.0% of *NYT* articles. Within the Law subtheme the *NYT* is more often coded to Legislation 14.7% vs. 5.4%, whereas *WSJ* articles are more likely coded to the Crime subtheme (13.0%) compared to the *NYT* (2.5%). Both are statistically significant (*z*=3.59, p=.006 and *z*=-2.29, p=.020, respectively).

Figure 5-2 Differences in Crime and Legislation by the *WSJ* and *NYT*
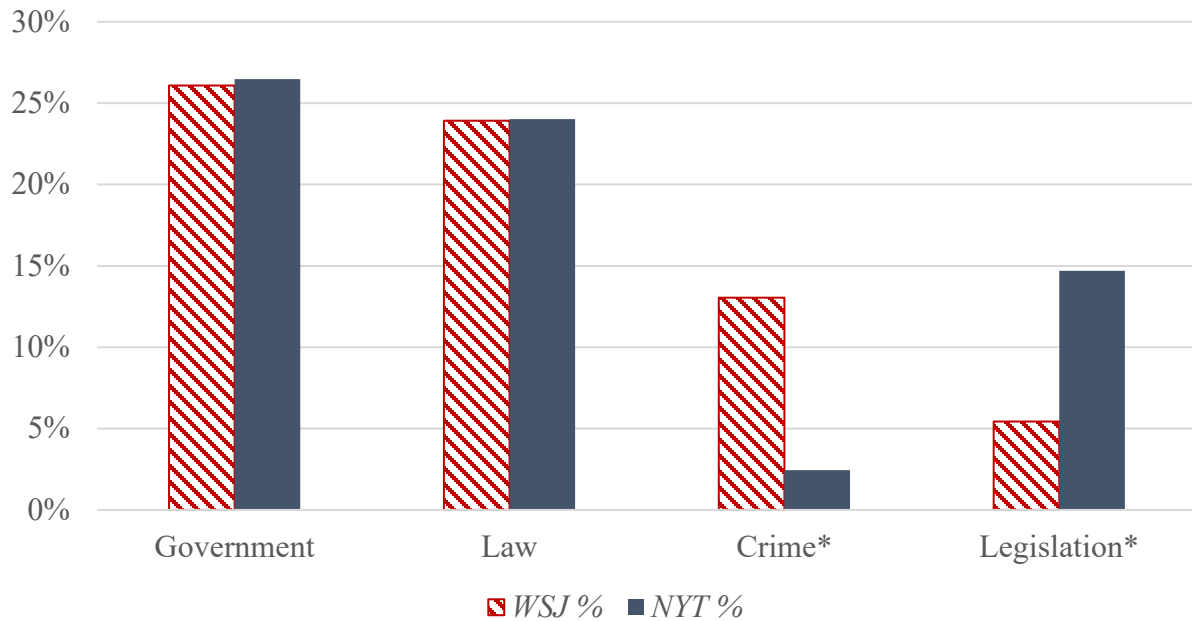
Note: *difference in proportion significant at $p<.05$

Crime and Legislation.

Crimes the *WSJ* focused on included the impeachment of all the justices of West Virginia's highest court for alleged financial abuses (three articles), opioids (five articles, including an opioids sting spanning five states, pill mills, an opioid initiative, how the opioid crises is setting the tone for the midterms, and drug related arrests), an investigation of suspicious patient deaths at a Veterans Affairs hospital in West Virginia, the death of a teen staying with relatives in West Virginia, the need to update inflated West Virginia crime statistics from the Federal Bureau of Investigation (FBI), and finally, an article about weapons that were stolen from a Bureau of Alcohol, Tobacco, Firearms and Explosives (ATF) facility in Martinsburg West Virginia. The *NYT* also covered Crime related to opioids (three articles) and the patient deaths at the VA hospital (one article). The *NYT* additionally covered the story of a former fugitive who purchased a gun online and murdered his girlfriend, business partner, and two others in West Virginia.

The *WSJ* covered stories referencing West Virginia v. Barnett (1943), which determined that school children could not be made to salute the flag or recite the Pledge of Allegiance. Two articles published by the *WSJ* cover this legislation – one related to wedding video producers not wanting to provide services for same-sex marriages and another focused on "The Transgender

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Language War" (Shrier 2018). *WSJ* also covers the impeachment of the justices as a matter of legislation, an education bill that it was suspected would rankle the teacher's unions, and another article that more broadly discussed the budget surplus and funding needs facing the West Virginia legislature. The *NYT* covered legislation related to the environment in eight articles, just as they covered legislation related to abortion in another eight articles. Six articles were related to legislation related to food stamps or the Supplemental Nutrition Assistance Program (SNAP) and work requirements, or free and reduced lunch programs and access to food during the pandemic.

Another four *NYT* articles covered legislation related to addressing or preventing the opioid epidemic. Two more articles covered legislation related to extending jobless benefits established during the pandemic as well as legislation impacting small business recovery. And finally, the *NYT* covered legislation related to sports betting/gambling in the state of West Virginia. Taken together, the *WSJ* focused significantly more on crime, specifically in relation to opioids, while the *NYT* published as many articles about opioids from the criminal perspective (three articles) as it did from the legislative (four articles). Both publications tied the state to firearm-related crimes, and deaths in the VA system. The *NYT*, however, focused on legislation covering a range of social issues, including work, environment, health, and poverty.

Politics

When turning to the theme of Politics more than half (60.3%) of the *NYT* articles were coded to the theme while only 40.2% of *WSJ* articles were coded thusly, which is statistically significant (z=-3.21, p=.001). The most notable differences between publications within the politics theme, are within the subthemes of politicians and race and white supremacy, antisemitic, and anti-Muslim. Most of the articles covering the percentage of West Virginians who are white are tied directly to the narrative marrying the state to former President Trump. Further, while republican and democrat were not included as codes or themes, they do show up in the most frequently occurring words and this is the connection made by the *WSJ* – to republicans and conservative values – whereas the *NYT* focuses more specifically on the state's relationship to Trump, as well as conservative values, and a (presumed) shared belief in white, Christian, and American supremacy.

Politicians.

While former president Donald Trump was a subtheme across 37.7% of *NYT* articles about West Virginia, he would only be the prime focus of 14.1% of *WSJ* articles (z=-2.98, p=.003). A similar distribution was reflected across the Politician subthemes, though no other differences are statistically significant. Joe Manchin, the current West Virginia senator was similarly represented, with 6.3% of *WSJ* articles covering Manchin compared to 12.3% of *NYT* articles. And Caleb Hanna (West Virginia House of Delegates-R) and Shelley Moore Capito (US Senator from West Virginia-R) were only covered by the *NYT*. Carol Miller (US House of Representatives-R) and Richard Ojeda (State Senator from 2016 – 2019-D) were the only two politicians that received more coverage by the *WSJ* as compared to the *New York Times*. Both articles about Mr. Ojeda and Ms. Miller, were about their run for the state's third congressional district. Within the reporting on politics and politicians, as with sports, women were covered less than their male counterparts.

Trump was the U.S. President from 2017 to 2021, and so it would be expected that articles would include references to Trump and the Trump administration. Donald Trump appeared in 143 of the original 300 (47.7%) articles published by both publications. Of those 143 articles only 90 (30.4%) were coded as Trump, with inclusion based on the *person* Donald Trump being referenced in relation to West Virginia or West Virginians. And this was much higher compared to either the former President or Vice President. While both Obama and Biden appeared in articles, they were directly tied to West Virginia, or West Virginians, in only a small fraction. Obama was mentioned in 34 newspaper articles adding to a narrative about West Virginia overall (11.3%), but only seven of those articles, or 2.3%, tied Obama directly to the state or its residents and those articles focused on the over-turning of Obama-era environmental regulations and the Affordable Care Act. And, of the 300 articles adding to the narrative of West Virginia, Joseph Biden was referenced in seventeen (5.7%). Of those 17 articles, however, only one tied Biden directly to the state.

> Nicole McCormick, a West Virginia music teacher who helped organize a statewide walkout that made national headlines in 2018, said she worried that Mr. Biden wasn't "willing to push for the things that we as Americans look at as radical, but the rest of the world looks at and is like, 'We did that 50 years ago.'" She cited expanded access to unions, universal health care and paid parental leave as examples. (Scheiber 2020)

Aside from this single reference Biden was only tied peripherally to West Virginia through other politicians (Trump, US Senator Manchin, and US Senator Shelley Moore Capito) and ballot issues including abortion, voting (mail-in ballots), coal, and immigration. The ubiquitous connection of the state to Donald Trump, especially by the *NYT*, becomes more specific with further exploration of themes and subthemes outlining the narrative about West Virginia.

The Senior United State senator from West Virginia (2010 - present), Joseph Manchin III, was the second most coded for politician overall (11.8% of all articles), though still receiving substantially less coverage than former president Trump. The *WSJ* covered Manchin in 7.6% and the *NYT* in 13.7% of articles. Manchin was also Governor of West Virginia from 2005 to 2010 and served as the West Virginia Secretary of State prior to that (2001 - 2005), and as the ranking Democrat on the Senate Energy and Natural Resources Committee he wields a significant amount of power, and as reported by the *WSJ*, Manchin argues; "I work with President Trump, when he does what's right for West Virginia" (Bykowicz, McGill, and DeBarros 2018).

The third most frequently referenced politician was James Conley Justice II, the Governor of West Virginia (2017 - present) who was included in 3.3% of *WSJ* and 5.9% of *NYT* articles. The three *WSJ* articles covering Justice includes one about Justice as "the billionaire governor of West Virginia" and the owner of U.S. coal-mining company Bluestone Resources, which was involved in risky investments and repayment schemes (Mavin and Steinberg 2020). Another *WSJ* article covered a pitch by Justice "to conservative counties in Virginia to switch states. 'If you're not truly happy where you are, we stand with open arms to take you from Virginia' (Rubin 2020). Justice further "noted that West Virginia had become a state because Virginia's government was 'out of touch' with the values of its people during the Civil War era" (Rubin 2020). Finally, the *WSJ* reported on Justice's support for the firing of 34 jail-guard cadets and three state instructors who all performed the Nazi salute in a graduation photo. The *NYT* covered accusations that Justice was not spending enough time in Charleston (Robertson 2019a), and also address Justice as a billionaire business owner. One article covered Justice's comments on the death of fellow coal billionaire, Chris Cline, "once called the King of Coal" (Stack and Padilla 2019) and another the $375,000 he collected in COVID relief payments on behalf of farms owned by his family (Lafraniere 2020). Several stories covered comments made by Justice in relation to COVID stay at home orders and the resumption of childcare activities in WV.

Notably, the governor's support of Trump was covered in three of the twelve *NYT* articles (25%) with two including how Justice had won the governor's race as a democrat but later at a Trump rally announced he had switched parties, and then reran and won as a republican (Fausset and Epstein 2020; Herndon and Saul 2020).

And finally, Patrick Morrisey, Attorney General for the State of West Virginia, was the fourth most coded for in the Politician subtheme. Most of the coverage from the *WSJ* is for Morrisey's role in lawsuits against Opioid manufacturers and distributors. Morrisey is also tied to Trump, through his own ads, as reported by the *WSJ*: "They're going to try to impeach the president," Republican West Virginia Senate candidate Patrick Morrisey says of "liberals" in his new ad. (Bykowicz et al. 2018) Mr. Morrisey's run for Senator was also covered by the *NYT*, who (along with Manchin) focused on Morrisey's lawsuit to repeal the Affordable Care Act. Several articles focused on lawsuits brought by Morrisey on behalf of the state, including a suit against McKesson over the opioid crises and Johnson and Johnson over the marketing of surgical pelvic mesh that had resulted in complications. And he led a republican lawsuit against the administration over Obama-era rollbacks on limits on coal production. The *NYT* articles include Morrisey's comments on the 3-Day War Over Christmas, to which he "piled on, turning to Twitter to call the mayor's decision 'political correctness run amok'" (Searcey 2019). Many of the *NYT* articles focus on Morrisey's support of Donald Trump and conservative values.

God, Guns, and Babies.

The next subtheme under the Politics theme is Gods, Guns, and Babies. This subtheme overall was represented in 8.7% of WSJ and 11.3% of NYT articles about the state, which is not a statistically significant difference. "God, Guns, and Babies" was the slogan of Caleb Hanna in 2018 who would become one of the youngest state legislators in history. Hanna covered his district with the slogan on signs and other advertisements, and it has also been repeated in some form by West Virginian residents, such as in the quote below.

> "Joe Manchin knows that the people of this state, we are God-fearing, pro-gun, pro-life," said Kevin Dalton, an emergency dispatcher from the former coal town of Madison. "His constituents out here told him basically, 'You vote this guy in or we're going to vote you out.' He figured he better stay in with his people." (Edmondson 2018)

All articles included in the God, Guns, and Babies subtheme were also coded to the Government and Politics theme and are directly related to the subthemes of religion, firearms, and abortion. The subtheme of religion was coded for in 2.1% and 3.9% of *WSJ* and *NYT* articles, respectively. The coverage of firearms was a bit closer, with *WSJ* coverage at 3.1% of all articles about West Virginia and *NYT* covering the theme in 2.5% of articles. And abortion was only a theme of one *WSJ* article, while the *NYT* included the theme in 4.4% of articles about the state. None of these differences in proportions were statistically significant.

In the original coding structure religion was its own theme, but the articles included under the theme of religion crossed over most frequently with the politics theme. For example, in the article "West Virginia, a 3-Day War Over Christmas" (Searcey 2019) published by the *NYT*, politics and religion intersect in a story about the deep feelings about the divisions of church and state, and the inclusion of other religions in city activities. The war over Christmas is the result of a new city mayor attempting to be inclusive by changing the name of the annual Christmas parade to the Winter Parade, which is seen as nothing less than a war on Christians and Christian values, and a step too far. What is more, residents frame the change as "urban", a "big city thing" and a "liberal thing", with the republican State Senate president at the time, Mitch Carmichael, charging:

> "It is clear, these radicals have no interest in our Christmas traditions or in following our United States Constitution," … "We are calling on Mayor Goodwin and her liberal allies to end this madness and allow our citizens to freely and fully exercise their Freedom of Religion with a CHRISTMAS PARADE" (Searcey 2019).

Another *NYT* article tied religion to West Virginia through "Senator Robert C. Byrd, a West Virginia Democrat and the highly regarded conscience of the Senate who had said the Bible and Constitution would be his guide" (Hulse 2019). One *NYT* article covered a conservative Christian activist from West Virginia, Rick Clay, who was trying to set-up a meeting between former president Trump and Russian president Vladimir Putin (Rosenberg et al. 2018). Two of the *NYT* articles included under the religion subtheme were about clusters of COVID cases from churches meeting in West Virginia. Only two *WSJ* articles included religion, and the first reported on West Virginia as the birthplace for Mother's Day, describing the empty pews in the church "as an organist played the opening hymn at the International Mother's Day Shrine in Grafton" during

the COVID pandemic (Associated Press 2020). The other article by the *WSJ*, was reporting on religious exemptions for vaccinations, which West Virginia does not allow.

The *NYT* published four articles with the Firearms theme, including one covering a gun control bill for which Joe Manchin was seeking president Trumps support. Further, the *NYT* article included under religion above about conservative Christian activist Rick Clay tied the Trump-Putin meeting to interests of the National Rifle Association (N.R.A). The *NYT* also covered the story of a West Virginia man who was a felon (so could not legally purchase firearms) but bought a gun on Facebook and used it to kill his wife, business partner, and two others (Oppel and Hassan 2019). Finally, the *NYT* covered another story about a man in West Virginia who had armed himself with a pistol in response to death threats received after "a video he had posted on YouTube …told the story of how, as a liberal college dropout struggling to find his place in the world, he had gotten sucked into a vortex of far-right politics on YouTube" (Roose 2019). The *WSJ* also covered Trump and Manchin's discussions on firearms, but also covered two firearms related incidents. A house fire in West Virginia killed a man and his three children and was thought to be tied to a large amount of ammunition being held in the house. And another *WSJ* article covered weapons that had been stolen from a Bureau of Alcohol, Tobacco, Firearms and Explosives (ATF) facility in Martinsburg West Virginia.

Finally, nested under the theme of Health in the initial coding structure (Figure E-1), the articles coded to the Abortion theme covered the topic in relation to West Virginia politics, much as the articles coded to religion and firearms, and were similarly integrated into the God, Guns, and Babies subtheme. Only one *WSJ* article included abortion, and that was a reference to the state being one of six that only have one abortion clinic each (Calfas 2019). Nine stories from the *NYT* covered abortion. The fact that the state has only one abortion clinic is mentioned in two of the *NYT* articles. Three *NYT* articles cover abortion as a ballot initiative in West Virginia (Goldstein and Johnson 2018) that would remove abortion protections from state constitutions in Alabama and West Virginia" (Goodnough and Hoffman 2018) and "essentially ban abortion" preparing for a constitutional challenge to Roe vs. Wade (Peters et al. 2018; Peters and Dias 2018). Another *NYT* article ties West Virginia, through abortion, back to Kavanaugh, Manchin, and Trump (Edmondson 2018). Then another two stories report similarly that in two states (West Virginia and Mississippi) "Anti-abortion activists have also successfully pushed for bans on a procedure used in the vast majority of second-trimester abortions by labeling it 'dismemberment

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abortion' (Harmon 2019; Tavernise and Robertson 2019). The *NYT* also reported Manchin's vote in favor of the "Pain-Capable Unborn Child Protection Act," sponsored by Senator Lindsey Graham," which "would ban nearly all abortions after 20 weeks of pregnancy, with limited exceptions" (Stolberg 2020).

Race and White Supremacy, Antisemitic, and Anti-Muslim and Immigration.

Race and white supremacy, antisemitic, and anti-Muslim topics were only addressed in one *WSJ* article, while ten *NYT* articles covered the subthemes (4.9%), while this may be a substantive difference it was not a statistically significant. The proportion of articles covering race and immigration, however, did differ significantly. The *WSJ* included no articles that addressed race in West Virginia while 4.4% of *NYT* articles did so (z=-2.04, p=0.041), and most of these articles focused on the fact that the numerical majority of the state is white. Similarly, 4.9% of *NYT* articles included the theme of immigration, specifically articles coded to immigration covered West Virginians' support for a wall at the U.S Mexico border, and no *WSJ* articles covered the theme (z=-2.16, p=0.031).

A *NYT* article covering West Virginia's 19-year-old lawmaker, Caleb Hanna, who had just become "one of the party's [republican] youngest black legislators in the country" (Hassan 2019) is one of several articles included in the analysis in which race is directly discussed. The article reports that "Mr. Hanna said, the Ku Klux Klan [White Supremacist organization] left small plastic bags filled with racist fliers and weighted with birdseed on the lawns of a couple of dozen homes in the district, some of which had signs supporting his bid. 'I don't think it was a coincidence,' said Mr. Hanna, who contacted the sheriff about the bags. 'I was surprised, of course. As a society, I thought we were past all these issues.'" (Hassan 2019). This sentiment is certainly not rare in America, and while to some degree it may be related to Hanna being adopted into a white family during infancy, the manifestations of racism are often symbolic if not invisible to many living in segregated communities in West Virginia. This political story about a young republican taking office also invokes the theme of Coal Country when noting that Hanna's adopted father lost his job as a coal miner. Hanna is tied to Donald Trump through this thread as well because Hanna supports Trump's environmental policy that favors the coal industry. Hanna additionally advocated to use West Virginia state's surplus to help fund a southern border wall (Immigration), for which former president Donald Trump was campaigning (Hassan 2019). In

the ways demonstrated here, the themes of race, white supremacy, anti-Muslim, antisemitism, and immigration are tucked into stories about politics as well as place.

Several articles in the sample covered a poster that had been created and displayed in the state house in West Virginia using an image of elected representative Omar to imply that her position was evidence that 9/11/2001 had been forgotten about by Americans. The subsequent backlash and actions taken at the federal level also received coverage. All the above articles were published by the *NYT*. The only *WSJ* article adding to a narrative of West Virginia that addressed racism, or more specifically, white Christian supremacy, was an article about Governor Jim Justice's approval of the firing of three state instructors and 34 jail-guard cadets who showed the Nazi salute in a photo:

> The firings were recommended by Jeff Sandy, cabinet secretary of the state's Department of Military Affairs and Public Safety, based on an investigation by the Division of Corrections and Rehabilitation. The probe began after the photo was made public by the state this month, drawing widespread criticism. The report found cadets first used the salute as a sign of respect for one of the instructors, who later encouraged its use and orchestrated the photo. Several cadets and other instructors had tried to explain the historical significance and inappropriateness of the gesture, but the instructor and other cadets pushed back, according to a summary of the report released Monday. One black cadet who defended the gesture said it couldn't be racist since he was using it too, the report said. On the day the photo was taken, about 10 cadets refused to make the gesture, until they said they were ordered by the instructor to do so…. (Joe Barrett 2019)

Another reason for including the subthemes above under the umbrella of Politics is because they are often woven together in the same narrative. To return to the example of the article "West Virginia, a 3-Day War Over Christmas" (Searcey 2019) published by the *NYT*. The article is coded under the subthemes God, Guns, and Babies *and* Race; coded to the theme of Race for references to white residents, racism, and racial inequality, as demonstrated in the following excerpt, which likens the name change of the city parade to the practice of N.F.L. players kneeling during the national anthem, both invoking a similar "sense of revulsion":

> People in the overwhelmingly white, Christian city talked about an insult to "the almighty Supreme Being." Some said they had stopped watching N.F.L. games when players protesting police brutality and racial inequality knelt during the national anthem. Now, they felt a similar sense of revulsion about the parade name change. (Searcey 2019)

Within the narrative of the articles covering Politics, is the emergence of a modern West Virginian stereotype rooted in partisan politics – generally a conservative Christian, opposed to abortion, an owner of firearms, who may be a white supremacist or antisemitic, with the *NYT* more specifically crafting the Trump supporter, who is all that is described above and likely a white person opposed to immigration, especially from Mexico.

Voting in West Virginia.

Lastly, in Government and Politics, I turn to the subtheme of Voting, which appeared in similar proportions, with 6.5% of *WSJ* and 5.9% of *NYT* articles covering the theme, a difference that is not statistically significant. Overall, the *WSJ* covered voting by mail (four articles) and through apps (two articles) in six stories. The *NYT* similarly covered absentee, remote, and by phone voting in four articles. The *NYT* additionally covered issues on the ballot in West Virginia in two articles (abortion and immigration), the role of a West Virginia activist in raising awareness of super delegate reform in one article,

The articles covering voting in West Virginia challenge the stereotypes presented above, to a degree, because although the narrative would imply that West Virginians are primarily republican voters or Trump supports, that is not so clearly the case. In 2018, only 41.7% of voting eligible West Virginians showed up to vote (McDonald 2018); therefore, while the majority of those who did show up to the polls voted for Donald Trump, the majority of West Virginians did not. What is more, according to the West Virginia Voter Registration Totals in July 2019 (the chronological half-way point of the current analysis), 40.6% of registered voters were Democrat and 33.2% were registered as Republican (State of West Virginia 2023). Another 22.44% of registered West Virginian voters have no party affiliation, and less than 5% are registered with the Mountain, Libertarian, or an "other" party (State of West Virginia 2023). Whether the Democrats or Republicans have the greatest third of registered voters changes slightly from month to month, and year to year, but as the articles in the current analysis demonstrate, West Virginia is not overwhelmingly Republican, or in support of Donald Trump.

The *NYT* reported that "more than 47 percent of the state's registered voters turned out on Tuesday -- significantly more than in recent midterm years, according to the West Virginia secretary of state" (Tavernise 2018b). In another article, however, the *NYT* reports that "while turnout has been higher in this season's special elections and primaries, experts say that in

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November it is still unlikely to break out of the middling range it has been stuck in for nearly a century" (Tavernise 2018a). This article also reports that West Virginia had some of the highest rates of voting in America until around the 1980s, and quotes a historian Alexander Keyssar from the Kennedy School of Government at Harvard:

> 'There is a class skew that is fundamental and very worrying … Parts of society remain tuned out and don't feel like active citizens. There is this sense of disengagement and powerlessness.' (Tavernise 2018a)

Similarly, in late 2019 the *WSJ* published the article "Coal Country's Woes Intensify --- Job losses take a toll in a West Virginia region, and residents don't expect a political fix" (Maher 2019a), which discusses the swing in Logan County WV from 62% of the vote going to Democrat Al Gore in 2000 to 80% of votes going to Republican Donald Trump in 2016 – a shift that is seen across the state. This article also captures the idea that:

> Not all area residents are pro-Trump. Joe Stanley, a retired miner who lives in Wayne County, said he believes big investments in infrastructure from roads to high-speed internet are needed to help the state. "Coal has had its day," he said. (Maher 2019a)

Beyond the shift in party, this article speaks to an expectation of West Virginians that the government, regardless of political party in power, is not going to help with social or economic challenges faced by residents, who "expect the worst and hope for the best" (Maher 2019a).

PLACE, WORK, AND ENVIRONMENT

Of the primary themes Place, Work, and Environment, there were only statistically significant differences in the proportional coverage of place between the news outlets (see Table 5-3 below). The proportion of coverage of the place theme in the *WSJ* and *NYT* is statistically significantly different, with 18.5% of *WSJ* articles including the theme and nearly a third, or 30.9%, of *NYT* articles doing so (z=-2.22, p=.026). The Place subthemes of Rural, Mountains, and Appalachia, however, did not differ significantly between the two publications.

Table 5-3 Place, Work, and Environment Themes by Wall Street Journal and New York Times

Place, Work, and Environment Themes and Subthemes	*WSJ* (92)	%	*NYT* (204)	%	Total (296)	Total %	z	P>|z|
Place*	17	18.5%	63	30.9%	80	27.0%	-2.22	0.026

Place, Work, and Environment Themes and Subthemes	WSJ (92)	%	NYT (204)	%	Total (296)	Total %	z	P>|z|
Rural	11	12.0%	38	18.6%	49	16.6%	-1.41	0.157
Mountains	2	2.2%	13	6.4%	15	5.1%	-1.52	0.128
Coal Country*	4	4.3%	30	14.7%	34	11.5%	-2.60	0.009
Appalachia	4	4.3%	16	7.8%	20	6.8%	-1.11	0.265
Work	22	23.9%	42	20.6%	64	21.6%	0.64	0.523
Unions	11	12.0%	14	6.9%	25	8.4%	1.46	0.145
Strike	8	8.7%	10	4.9%	18	6.1%	1.27	0.205
Environment	18	19.6%	40	19.6%	58	19.6%	0.00	1.000
Energy	18	19.6%	29	14.2%	47	15.9%	1.18	0.239
Coal	11	12.0%	22	10.8%	33	11.1%	0.30	0.762
Gas	7	7.6%	7	3.4%	14	4.7%	1.58	0.114
Climate Change	3	3.3%	15	7.4%	18	6.1%	-1.36	0.173

Note: *difference in proportion significant at p<.05

A Mountainous, Rural, Appalachian Place

The Rural theme was present in 12.0% of *WSJ* and 18.6% of *NYT* articles. Similarly, mountain imagery was reflected in 2.2% of *WSJ* and 6.4% of *NYT* articles. And finally, Appalachia was referenced in 4.3% of *WSJ* and 7.8% of *NYT* articles. In an exemplary of an article including all the place-based themes, the *NYT* article, "West Virginia's Small-Town Revival" immediately and explicitly turn to Appalachian and rural themes as the author sells the state to urban outdoor enthusiasts in the travel pages:

> The American rural experience, as told by Henry David Thoreau and Aldo Leopold, is all about becoming immersed in largely unpopulated, natural places. For weary urbanites, such places offer a chance to find solitude and reflect. Too often, it seems, the scattered towns that dot these landscapes are ignored, lost in the shadow of their wild surroundings.
>
> So it goes for West Virginia. The mountains -- and the wilderness that blankets them -- are the stuff of American lore: blue forests, trout-filled creeks, pristine backcountry. For many visitors intent on hiking, biking or rock-climbing, the communities of Appalachia, with their rich folk culture and rugged individualism fail to register.
>
> The mountainous belt that stretches down West Virginia's eastern side is one of the few large tracts that have resisted development in the eastern United States. While persistent poverty still weighs down many corners of the region, travelers coming to experience its natural gems have, in recent years,

fueled a modest resurgence in the towns that lie near them. Joining an old
guard of native residents, an influx of outsiders has helped resuscitate
communities that were all but burned out after the near-collapse of the coal
and logging industries in the earlier part of the 20th century. (Montague
2018)

Within the above, the "rich folk culture" is tied to local art, though it fails to register with tourists, as does the state's rugged individualism. The state is weighed down by poverty, and invited visitors seem to be being preemptively valorized for assisting in the resuscitation of American spaces in neglect. Finally, there are multiple references to poverty, which intersects with place themes across articles. The deep significance of the land to the local identity is as unmistakable in Fayetteville as it is in Davis. The same mountains that kept the region isolated and poor for so long would later be the source of prosperity from natural resources like coal, stone, and hardwood. "Today, the mountains are again a place of employment for many locals, but in a different form, as their splendor and sloping trails have become some of their most valuable assets. For visitors and locals alike, the state motto has a common resonance: mountaineers are always free" (Montague 2018). Poverty is blamed on the mountains; it is the mountains that have kept the region poor, while the extraction of natural resources, including coal, stone, and hardwood had been a source of prosperity.

Coal Country

The theme of Coal Country had statistically significantly more representation in the *NYT* with 14.7% of articles referencing Coal Country compared to only 4.3% of *WSJ* articles (z=-2.60, p=.009). The place-based subtheme of Coal Country provided a useful addition in the coding structure, as the initial map included coal only in context of the environment, and while there were a good amount of articles, around 7% of articles for each of the two major newspapers, about coal as it is related to the environment of West Virginia, and in particular energy production, there were many more articles that invoked coal or coal miners in reference to the roots, traditions, or culture of West Virginia or Appalachia that the additional subtheme was created. In the few *WSJ* articles that do reference coal in this way, articles invoke shuttered coal mines and laid off miners (Maher 2018) and describe a sprawling rural district that makes its money on coal (Hughes and Chinni 2018). Yet another article refers to the historical devastation

experienced by coal communities globally (MacDonald, Maher, and Mackrael 2019), but only one *WSJ* article uses the term Coal Country directly (Maher 2019a).

Across articles, though most significantly in the *NYT* articles, the political association with Trump intersects with the identity of West Virginia as Coal Country, with two *NYT* articles replacing the phrase with "Trump Country" (Stolberg 2019), and the president of West Virginia University, Gordon Gee, identifying the state as both "coal country" *and* "Trump country" (Hartocollis 2020). Further, right before the beginning of the pandemic, and stay-at-home orders, an off-Broadway performance of a play by the title *Coal Country* debuted in New York City (Soloski 2020) and is also directly linked to Trump country (Jacobs 2020). The play is focused on the profound impact felt by the survivors of a mine explosion in West Virginia that killed 29 miners. While the showing was cut short by the COVID pandemic, initial reviews of the performance were favorable, and particular attention was paid to the music produced for the piece by Steve Earle, a musician who traces his roots to Tennessee (Horn 2020). The creators of the production are not from West Virginia or Appalachia, or even rural America, but consider the performance the creation of the West Virginians who shared their stories. There is now an audio version of the Coal Country play, through Amazon's Audible – expanding the reach of this perspective of West Virginia to a broader audience.

Coal Country is also exemplified in the article "Estranged in America: Both Sides Feel Lost and Left Out", wherein "West Virginia coal country" is contextually tied to Trump and more explicitly to a "deeply conservative Kentucky district" while being juxtaposed to the "highly educated suburbs of Orange County, California:

> Forty-seven percent of voters who approve of Mr. Trump say they feel like strangers in their own country, while 44 percent of those who disapprove of him say the same. Nearly half of women feel this way. About 60 percent of African Americans and Asian-Americans do. A majority of voters say this in West Virginia coal country and in a deeply conservative Kentucky district. But the feeling is also common in the highly educated suburbs of Orange County, Calif.
>
> The seven districts that we've polled on that question -- talking to 3,555 likely voters in California, Illinois, Kentucky, Minnesota and West Virginia -- are not representative of the entire country. But they contain communities that are pulling ahead in America and those that are falling behind, as well as places that mirror the nation's demographic future and its past. (Badger 2018)

It could also be further assumed that West Virginia is "falling behind" and "mirroring the past", both common perceptions of rural places. The theme of Coal Country intersects with the theme of poverty in way of an explanation for why the state faces hardships of work and the environment, and as demonstrated above, as well as with the theme of poverty.

Work and the Environment

The theme of Work was included in 21.6% of articles and appeared relatively equally in the *WSJ* (23.9%) and the *NYT* (20.6%), as shown in Table 5-3, about 39.1% of all articles about work were also about unions, with a slightly higher proportion of *WSJ* articles covering work also including unions (50.0%) than *NYT* (33.3%). Further, most of the articles about unions across publications (72.0%) are about strikes, and this is similar for the *WSJ* (72.7%) and the *NYT* (71.4%). Many of the articles with the theme of work are about reductions in employment in the coal industry, dangerous employment conditions, limited employment opportunities, opportunities for alternate economic development (i.e., computer coding and tourism), and work requirements for social service benefits, such as food stamps and health care.

Like the work theme, and in Table 5-3 above, most (56.9%) articles including the environment theme are also about coal. Whereas the *NYT* was significantly more likely to have included the Coal Country theme, this was not the case for coal as a subtheme of environment. The *WSJ* and *NYT* also covered gas (especially pipelines coming through or from the state), in 7.6% and 3.4% of all articles, respectively. Similarly, though in the other direction, climate change is also not significantly differently covered by the *WSJ* (3.3%) and the *NYT* (7.4%). Overall, coal, (the lack of) work, and striking teachers are the stories of West Virginia. The downfall of the coal industry is the explanation for poverty, and work and education are tightly woven through the teachers' strikes.

EDUCATION AND POVERTY

Neither the Education or Poverty theme or any Education subthemes statistically significantly differed between the *WSJ* or *NYT* (Table 5-4). Education was covered in 17.4% of *WSJ* and 13.2% of *NYT* articles. Further, 8.7% of *WSJ* and 4.9% of *NYT* articles focused on teachers, and similarly covered teacher strikes (3.3% of *WSJ* and 2.5% *NYT)*. The *WSJ* covered education in a higher proportion of articles (17.4%) compared to the *NYT* (13.2%), whereas the

NYT had a higher proportion of articles including the poverty theme (16.7%) compared to the *WSJ* (8.7%). Again, however, these differences are not statistically significant.

Table 5-4 Education and Poverty Themes by *Wall Street Journal* and *New York Times*

Education and Poverty Themes and Subthemes	WSJ (92)	%	NYT (204)	%	Total (296)	Total %	z	P>|z|
Education	16	17.4%	27	13.2%	43	14.5%	0.95	0.342
Teachers	8	8.7%	10	4.9%	18	6.1%	1.27	0.205
Strikes	3	3.3%	5	2.5%	8	2.7%	0.39	0.697
Higher Education	0	0.0%	8	3.9%	8	2.7%	-1.92	0.055
WVU	0	0.0%	6	2.9%	6	2.0%	-1.65	0.099
Students	0	0.0%	6	2.9%	6	2.0%	-1.65	0.099
Poverty	8	8.7%	34	16.7%	42	14.2%	-1.82	0.068

Note: *difference in proportion significant at p<.05

Education and the West Virginia Teachers' Strikes

The articles about education in West Virginia are also about work in the state, with the overall narrative captured succinctly in the *WSJ* article *How America Works-Left Behind in the Labor Surge*: "West Virginia lacks the educated workforce and thriving metro areas that are key to prospering in today's economy" (Chaney 2019). Another *WSJ* article, "Coal Country's Woes Intensify --- Job losses take a toll in a West Virginia region, and residents don't expect a political fix" (Maher 2019a), which was covered in more detail above during the discussion of Coal Country, evidences a shift from a reliance on coal in local economies to one on government positions, particularly those in the fields of education and medicine. A *NYT* article, "In Coal Country, a Promise of Computer Careers Dissolves in Dust", reports on a program "called Mined Minds, promising to teach West Virginians how to write computer code and then get them good-paying jobs", but which did not deliver (Robertson 2019b). In this article Coal Country is tied to work and education, and to the idea that West Virginians are on their own, always have been, and cannot count on government or outsiders.

> As she recounted her experience with Mined Minds in her living room, her husband, Roger, just off work, sat down and listened. It's always the same here, he finally said. "They're coming here promising stuff that they don't deliver," said Mr. Frame, his hands and face still gray with coal dust. "People do that all the time. They've always done it to Appalachians."

He recalled the pittance his great-grandparents sold their mineral rights for, and what they got from it: the coal company tearing down mountains and building roads wherever it wanted. Timber, coal, oil and gas, "it repeats itself," he said. "It's like a never-ending cycle." (Robertson 2019b)

The most covered education story in West Virginia, however, is related to the teachers' union and strikes carried out in West Virginia in 2018 and 2019, which "spread like wildfire" across the country. While the differences in the proportional coverage of these themes across publications are not statistically significant, the narratives developed can differ in small but important ways that tie articles back to politics subtly. For example, for the *WSJ*, Teachers' Strikes were qualified as "aggressive" (Zinsmeister 2019), while for the *NYT* the strikes and the teachers were "daring" (Goldstein 2018), something to be celebrated. The *WSJ* also focused on reactions to proposed charter schools in the state. The issue of charter schools was central to the teacher strikes in West Virginia, though teacher pay is often the focus of stories.

Higher Education (WVU) and Students.

Only the *NYT* covered higher education (3.9% of articles) or students (2.9% of articles) with the education theme, and most articles were penned by the same author. All but one article about higher education was referencing the state flagship, West Virginia University (WVU). Articles cover a range of issues from affirmative action and admissions for rural students to Harvard (Hartocollis 2018) to "broken" college admissions (Hartocollis 2019) and preventing "College Student Brain Drain" (Hartocollis 2020). Overall, articles speak to access to higher education for those in and from a rural state, and the opportunities that might be realized for students and state. Articles related to non-college students covered access to school lunches (Green and Fadulu 2020), including the fact that 85% of school children in West Virginia are eligible for subsidized meals (Deparle 2020), and the long commutes for rural public school students and teachers in the state (Patrick et al. 2018)

Poor West Virginia

Poverty was a theme in 14.2% of all, and 8.7% and 16.7% of *WSJ* and *NYT*, articles. While these differences were not statistically significantly different, it is substantively important that the *NYT* more often included the theme in their coverage of the state, weaving poverty into the narrative of West Virginia for more of their readers, but most often in the context of what is

wrought by the national landscape The theme of poverty is tied closely to place-based themes attached to West Virginia, including Rural, Appalachia, and Coal Country, as demonstrated above. Poverty relates to class stereotypes globally, "which depict low-income people as less competent than higher income individuals" (Durante and Fiske 2017).

HEALTH

Overall, health was covered in 43.6% of all news articles and quantitatively similar by both publications. In other words, there were no statistically significant differences in the proportion of articles by the theme of Health—or any Health subthemes—between the New York Times (*NYT*) and the Wall Street Journal (*WSJ*) as shown in Table 5-5 below. Health was covered in 45.7% of *WSJ* and 42.6% of *NYT* articles. The COVID pandemic, however, heavily influenced these results. Roughly 15% of all articles were coded to COVID19 and similarly for both the *WSJ* (18.5%) and the *NYT* (14.7%). Articles coded to COVID accounted for 36.4% of all articles coded to health, including 34.5% of *NYT*s articles coded to health and 40.5% of *WSJ* articles coded to health.

Addiction was a theme found in 12.0% of *WSJ* and 13.2% of *NYT* articles, and both publications similarly focused on opioids specifically in 10.9% and 11.8% of *WSJ* and *NYT* articles, respectively. At nearly the same levels, the theme of health care was counted in 10.9% of *WSJ* and 11.8% of *NYT* articles. Articles addressing risk and mortality were also equally represented by both news outlets, and tie back into articles about addiction and opioids through the burden of overdose deaths, which while covered in 2.9% of *NYT* articles, were not covered by any *WSJ* stories. Finally, the theme of Vaccination was present in 4.3% of *WSJ* and 4.4% of *NYT* articles. None of the vaccination related articles were covering COVID. All but one article covering vaccines were addressing Government and Politics, with ten of the thirteen articles covering vaccinations and West Virginia were about the state being one of only a few that do not allow any non-medical exemptions for vaccinations for school attendance. One article also pointed out that West Virginia had the highest rates of coverage in children for the measles, mumps, and rubella (M.M.R) vaccine that year.

Table 5-5 Health Themes by Wall Street Journal and New York Times

Health Themes and Subthemes	Wall Street Journal (92)	WSJ %	New York Times (204)	NYT Percent	Total (296)	Total Percent	z	P>|z|
Health	42	45.7%	87	42.6%	129	43.6%	0.50	0.619
COVID	17	18.5%	30	14.7%	47	15.9%	0.83	0.408
Addiction	11	12.0%	27	13.2%	38	12.8%	-0.29	0.775
Opioids	10	10.9%	25	12.3%	35	11.8%	-0.34	0.730
Health Care	10	10.9%	24	11.8%	34	11.5%	-0.22	0.822
Risk	6	6.5%	20	9.8%	26	8.8%	-0.93	0.353
Demographic Health	5	5.4%	11	5.4%	16	5.4%	0.00	1.000
Related Practices	3	3.3%	8	3.9%	11	3.7%	-0.25	0.801
Chronic Conditions	2	2.2%	3	1.5%	5	1.7%	0.43	0.668
Mortality	3	3.3%	14	6.9%	17	5.7%	-1.23	0.219
Overdose	0	0.0%	6	2.9%	6	2.0%	-1.65	0.099
Vaccinations	4	4.3%	9	4.4%	13	4.4%	-0.04	0.969
Total (unique)	**42**	**45.7%**	**87**	**42.6%**	**129**	**43.6%**		

Note: *difference in proportion significant at p<.05

Addiction and Opioids

Addiction was a theme in 11.6% of news articles and represented in similar proportions by the *NYT* (11.7%) and the *WSJ* (11.5%) The stories covering the opioid epidemic accounted for nearly all articles about addiction, though other drugs were also mentioned. Articles coded to addiction reveals networks of health care providers, prostitutes, pharmacists, and addicts passing unimaginable amounts of opioids – the *NYT* likens it in two articles to enough prescriptions for every man, woman, and child in the state. These stories also report the growing funds that have been distributed to the state. West Virginia has been implicated in using Tobacco settlement funds for non-related expenses, and the use of the opioid settlement funds was questioned in two of the articles covering the settlements.

A Journey into the Heart Of West Virginia's Opioid Crisis is a series written by Campbell Robertson about opioid use in West Virginia narrating through interviews the photographic depiction of drug addiction captured by photographer Mark E. Trent, who has spent time recording the suffering caused by opioid addiction "in his native Greenbrier County in West Virginia" (C. Robertson 2018). The images included in the phot essay include the picture of a

home with a pile of trash sitting in front of a chain-link fence, titled "The house where Allie, Peakay, Jessie and Barbie were living" (C. Robertson 2018) and several showing the girls referenced using opioids, including one titled "Allie shoots Peakay with a prescription opioid"(C. Robertson 2018), which shows an older Allie assisting the younger Peakay in using opioids intravenously.

Health Care

Health care was the next most coded Health subtheme in the news articles, identified in 11.8% of all articles, 12.1% of *NYT* articles and 10.4% of *WSJ* articles. Many health care related articles were about vaccination exemption. Several articles related to health care covered the Medicaid expansion in the state and intersected with poverty and rurality. Similarly, health care through the provision of health insurance, and particularly as it relates to the Affordable Care Act, was the topic of several articles as well, with a focus on the coverage of pre-existing conditions – the overall narrative would have most readers of either publication believe that Senator Joe Manchin retained his position, as far as people from West Virginia control it, in large part because of his advocacy for the retention of the popular pieces of the health care legislation. Along with other rural states, West Virginia is tied to hospital closures and "abandoned" rural patients (Kliff, Silver-Greenberg, and Kulish 2020). Several articles covered access to health care services, including midwifery, dialysis, abortion services, and addiction treatment. Health care is tied into many of the articles about addiction, not only because of needed treatment (and the needed Medicaid benefits to reimburse for those treatments) but also due to the role that health care institutions and providers played in curating the state's opioid crisis in the first place.

Risk and Mortality

Risks to health, including those associated with demographics, chronic conditions, and health related practices were identified in 6.6% of all articles, with most of this theme expressed through the *NYT*, which addressed risks in 8.3% of articles. Compare this to the *WSJ*, which only had three articles coded to risk (3.1% of articles). The *WSJ* included risk in 6.5% and mortality in 3.3% of articles compared to the *NYT*, which covered themes in 9.8% and 6.9%, respectively, of news stories. Ten of the twenty-six (38.5%) articles that addressed health risk were covering the emerging COVID-19 pandemic. Many of the factors that it was hypothesized would put West

Virginians at increased risk from complications with COVID speak directly to lifestyle risk discourse, including a focus on a range of chronic conditions (diabetes, heart disease, chronic lower respiratory disease, hepatitis, HIV, and kidney disease), and health related practices, such as nutritional practices/food insecurity, the use of medical marijuana, smoking, and physical activity. Health related practices were covered in 3.3% of *WSJ* and 3.9% of *NYT* articles related to health. But most articles addressing health risks directly focused on demographic risks, including an aging population facing increasing midlife mortality and vulnerable communities such as the homeless and/or veteran populations. Indirectly, the reader comes away with addiction seeming to be one of the greatest risks for residents of the state, with the story of opioids and dependence eclipsing stories about other lifestyles or risks.

Mortality was only covered in three *WSJ* articles but was the topic of over three times as many of the *NYT* articles (14). And nearly have of those articles are related to overdose deaths in the state. Articles about mortality in the WSJ covered a mining disaster, the suspicious deaths at a VA facility, and the three children and man that died in a house fire caused by unsafely stored firearm ammunition. The *NYT* articles included under the mortality theme covered population decline, increases in midlife mortality in the state, and deaths related to the chemical pollution of water ways. Overwhelmingly, however, many (42.9%) *NYT* articles about mortality were stories about addiction and opioid overdoses in the state, a theme that dominates the narrative about the state of West Virginia. Addiction is also closely tied with the theme of poverty, treated in some articles as an extension of the story of a lack or loss of industry, jobs, and political will as expressed by West Virginians. Beyond the focus on mortality, across publications health and addiction are inextricably linked.

The last news article included in the search time frame that included West Virginia in the title returns the *NYT* reader to Greenbrier county, but instead of photos of opioid use and poverty, the story is about how the World Tennis Team will be conducting its entire season from the Greenbrier Resort located in the same county that two years prior was featured in the *NYT* story for being "the most beautiful ugly place in the world" (C. Robertson 2018) to a woman explaining her experience with addiction. While during initial analysis it was determined the article was focused on the sport of tennis and did not add to a narrative about West Virginia, the photo of Jim Justice's Greenbrier Resort credited to Steve Helber/Associated Press in the article (Stein 2020b) provides a contrast through imagery to the photos of drug use and addiction.

On the one-hand there is great wealth in West Virginia in natural beauty, and in the accounts of a few select families, like Governor Justices'. But the narrative of natural beauty is overshadowed by the loss and suffering related to coal and opioid addiction. The overall sentiment of the news articles is provided by publication in Table 5-6 below. In a slim majority of articles from both the *WSJ* (52.2%) and *NYT* (53.4%) reporting about the state was neutral. In 43.5% and 41.2% of the *WSJ* and *NYT* articles, respectively, the sentiment of the narrative about West Virginia was negative. And, in only 5.1% of all articles was the state represented positively, which was similar for the *WSJ* (4.3%) and the *NYT* (5.4%).

Table 5-6 Sentiment by Publication (*Wall Street Journal* and *New York Times*)

Sentiment	WSJ	%	NYT	%	All	%	z	P>|z|
Negative	40	43.5%	84	41.2%	124	41.9%	0.37	0.711
Neutral	48	52.2%	109	53.4%	157	53.0%	-0.19	0.848
Positive	4	4.3%	11	5.4%	15	5.1%	-0.40	0.689
Total	92		204		296			

Note: *difference in proportion significant at p<.05

While the focus of the narrative produced during the study period was undoubtedly centered around former president Donald Trump, he is essentially a figurehead for both conservative Christian values (by both publications) and ideologies related to race, white supremacy, anti-Muslim, and antisemitic ideologies, which are then tied to the state of West Virginia (specifically by *NYT*). The conservative values bound to West Virginia by both publications include being against abortion and pro guns. The tale is at the same time about a divested population who doesn't vote as much as other states, switches parties, and does not count on politicians to meet their needs – relying instead on the rugged individualism also tied to the state that leaves most bound by the mountains in poverty and without opportunity.

Stories of addiction and crime associated with the surge of opioids into the state are woven into a narrative simultaneously about poverty, a troubled education system, and the loss of employment from the contracting coal industry. Coal appears throughout the narrative, as significant to energy production locally, nationally, and globally (both publications), but also (and more frequently for the *NYT*) as central to the history and culture of the state. In painting this picture both publications rely heavily on rural imagery and stereotypes, with a focus on the natural beauty and resources of the state, a sense of being in another time, or back in time,

connected to a romanticization of the rural that simultaneously places it in a "backwards" position from the dominant society. There is, again, just as with the photos above, a stark contrast created between the natural beauty of the land and abundant natural resources (and the handful of people that own and control that wealth), and the poverty and addiction-stricken people that live on that land, searching for jobs, food, and health care.

Chapter 6 Made in West Virginia: Perceptions of Position, Place, and Health

Most West Virginians are aware of the negative image of their state in the media, and more widely rural people, in the United States. It was the West Virginian students (and teachers) that I worked with who led me to consider spatial stigma as a possible explanation for spatial health disparities. The students made me acutely aware of the importance of understanding the place they lived in order to begin to understand them and their health. From the unexpected question of "Are there hillbillies where you come from?" my first week at the school, to the note the following spring from the theatre director:

> This has been an incredible year…. Our students continue to excel and shatter ceilings that have been set for us simply because we are from a rural area. This year our [students] served notice that we will not be ignored or overlooked simply due to our geographical location. Which just happens to be the most beautiful in the state. (Director's Notes Spring Playbill)

Once I became aware of the theme it was difficult not to notice. The t-shirt in the main street gift store window display with "Hillbilly? That's Appalachian American to You" written across the front – simply the display model of a range of clothing, arts, and crafts using "hillbilly" and coal mining and miners as themes. Similar merchandise can be seen at similar gift shops across the state. While the media content analysis results presented above found little support for the news media connecting West Virginians or the state to the term hillbilly, there was a narrative about a state of poverty, where employment and putting food on the table was a struggle. I will return to these themes again when I ask a group of West Virginia youth about the media image and reputation of their state. But first I will introduce the academic cohort of adolescents who permitted me into their classroom spaces, greeted me with smiles at community events, and filled out long questionnaires during their down time at school, and again when everyone was ordered to stay at home during the pandemic.

The cohort with whom I began included one-hundred and three students, of which 71 participants (68.93%) completed a survey asking about health (SRH), stress, coping strategies and resources, and social support. By the third year of the study students were out of school due to COVID, and only fourteen of the original 71 students who took the first survey responded to follow-up. In addition to the questions from the first-year survey, students were asked to expand on how they rated their health, were asked about who they lived with, how they would rank their

family in America and themselves in school, and finally what they thought the reputation and media image was of the state of West Virginia. Table 6-1 below provides the demographic variables and self-rated health for those students responding to the study surveys at both time points, by sex assigned at birth.

Table 6-1 Demographics of Students Completing Surveys by Year

Demographics	Year 1 (N=71)		Year 3 (N=14)	
	Female (n=32)	Male (n=39)	Female (n=6)	Male (n=8)
Age (average)	14.8	14.7	16.2	16.8
Sexuality		(missing = 7)		(missing = 1)
Straight	22 (68.8%)	31 (96.9%)	4 (66.7%)	6 (75.0%)
Lesbian or Gay	2 (6.3%)	0 (0.0%)	0 (0.0%)	0 (0.0%)
Bisexual	7 (21.9%)	1 (3.1%)	1 (16.7%)	1 (12.5%)
Asexual	1 (3.1%)	0 (0.0%)	1 (16.7%)	0 (0.0%)
Race		(missing = 2)		(missing = 1)
NH White	30 (93.8%)	34 (91.9%)	5 (83.3%)	7 (77.8%)
NH Black or African American	1 (3.1%)	0 (0.0%)	0 (0.0%)	0 (0.0%)
NH Native American	0 (0.0%)	2 (5.4%)	0 (0.0%)	0 (0.0%)
NH Other (Bi-racial, not indicated)	1 (3.1%)	1 (3.1%)	1 (16.7%)	0 (0.0%)
Ethnicity		(missing = 5)		(missing = 1)
Hispanic	1 (3.1%)	2 (5.9%)	0 (0.0%)	0 (0.0%)
Self-Rated Health		(missing = 5)		
Poor or Fair	3 (9.4%)	3 (8.8%)	1 (16.7%)	1 (12.5%)
Good, Very Good, or Excellent	29 (90.7%)	31 (91.2%)	5 (83.3%)	7 (87.5%)

Notes: NH=non-Hispanic

Out of the seventy-one students who completed a survey the first year of the study, 45.1% were female and 54.9% male. Of the initial seventy-one, 68.8% of females identified as straight, 6.3% as lesbian or gay, 21.9% as bisexual, and 3.1% as asexual. For males there was significant missing data (17.9%) on the sexuality variable. For the remaining thirty-two students

96.9% identified as straight and one male identified as bisexual. Of the initial class of 71, 93.8% of females identified as white (and did not identify as Hispanic), 3.1% as black or African American, and 3.1% identified as bi-racial but did not indicate any race. Of the 8 males, data on race was missing for one student and the other 77.8% identified as white (and did not identify as Hispanic). Out of the 39 males during the first year, 91.9% identified as white (and did not identify as Hispanic), 5.4% as Native American, and one student indicating they were bi-racial with no race indicated. Three percent of the female students, and 5.9% of males, on the first survey indicated they were of Hispanic ethnicity. Finally, during that first year, 9.4% of females and 8.8% of males ranked their health as poor or fair (vs. good, very good, or excellent).

During the third year of the study 42.9% of respondents were female and 57.1% were male. This was like the larger sample of seventy-one students participating in the first year, with tests of proportions showing no significant differences. Of the six females following up in year three, 66.7% identified as straight and one each (16.7%) identified as bisexual and asexual. For the males that year, 75% indicated they were straight, and one male identified as bisexual. The proportions of females by sexuality were not significantly different for any category from year one to year three. The proportion of straight males from year one to three was statistically significantly different ($p=.0358$). The proportion of bisexual males was not significantly different. While there was only one male missing data on the sexuality variable during the third year that still equated to 12.5%, which is a statistically significantly similar proportion to the number during the first year (17.9%).

During the second survey 83.3% of females identified as white and 16.7% as bi-racial but with no race indicated. None of the categories of race had significantly different proportions for the females from the first to second surveys. Of the 8 males, data on race was missing for one student and the other 77.8% identified as white (and did not identify as Hispanic). Between the first and second surveys there are not statistically significant differences in the proportions of students by race (or missing one race). No students during the second survey identified with a Hispanic ethnicity. And lastly, during the third year of the study, 16.7% of females and 12.5% of males rated their health as poor or fair (instead of good, very good, or excellent). The slight difference in these proportions between time points is not statistically significant.

Table two below shows SRH and all the stress process model variables by sex. Significant differences by sex are noted. Self-rated health is comparable to what has been found in the literature for adolescents. For example, in a study using Add Health data (from 1995 and 1996) researchers found mean SRH (standard deviation) was 3.87 (.91) and 3.90 (.90) (Boardman 2006). Shifting the means in the current study to a range of 1 - 5 gives a mean SRH (standard deviation) of 3.70 (.89), which based on an independent t-test is not statistically significantly different that that found by Jason Boardman (2006). The same is true when comparing to a study by Burdette and colleagues using the same data set (Burdette et al. 2017). It has also been found, using more recent data from European and North-American adolescents in 2002 to 2010 across 32 countries, that female adolescents rate their health as lower than males (Cavallo et al. 2015). Females in the current study did rate their health lower than males during the first year of the study, but not statistically significantly so (Table 6-2).

Table 6-2 Year One Self-Rated Health, Stress, Coping, and Social Support

	All	Female (N=32)	Male (N=34)	Difference Female v Male	Difference CI
SRH Mean (S.D)	2.70 (0.89)	2.59 (0.80)	2.79 (0.98)	-0.20	-0.85 – 1.43
Stress (range for all)	126.17 (37.70)	136.68 (32.33)	116.37 (40.17)	20.31*	1.04 – 39.58
Home Life (12 – 60)	29.38 (11.93)	31.77 (12.69)	27.34 (11.01)	4.42	-1.45 – 10.30
School Performance (6 – 35)	18.9 (7.82)	21.70 (7.77)	16.36 (7.05)	5.34*	1.60 – 9.07
School Attendance (3 – 15)	8.27 (3.21)	8.67 (3.01)	7.91 (3.39)	0.76	-0.87 – 2.39
Romantic Relationships (5 – 25)	11.28 (5.08)	10.68 (5.50)	11.81 (4.69)	-1.13	-3.77 – 1.50
Peer Pressure (7 – 35)	17.29 (6.96)	19.00 (6.62)	15.72 (6.99)	3.27	-0.16 – 6.71
Future Uncertainty (3 – 15)	9.92 (3.83)	11.47 (3.21)	8.55 (3.85)	2.91*	1.12 – 4.69
School/Leisure Conflict (4 – 25)	13.33 (5.32)	14.83 (4.48)	11.97 (5.71)	2.86*	0.26 – 5.47
Financial Pressure (4 – 20)	10.14 (4.56)	10.70 (4.18)	9.63 (4.90)	1.06	-1.24 – 3.37
Emerging Adult Responsibility (2 – 15)	6.73 (3.24)	7.36 (2.89)	6.13 (3.47)	1.24	-0.39 – 2.87
Coping Strategies					

	All	Female (N=32)	Male (N=34)	Difference Female v Male	Difference CI
(range for all)					
Avoidant	12.09	13.00	11.37	1.63	-0.85 – 4.11
(1 – 23)	(5.12)	(5.27)	(4.95)		
Emotion-Focused	18.43	19.23	17.78	1.45	-1.29 – 4.20
(2 – 32)	(5.60)	(5.96)	(5.29)		
Problem-Focused	16.47	17.50	15.66	1.84	-0.48 – 4.17
(2 – 25)	(4.82)	(4.10)	(5.24)		
Coping Resources (range for all)					
Self-Efficacy					
Pathway	13.96	13.90	14 (3.46)	-0.10	-1.63 – 1.43
(5 – 20)	(3.14)	(2.76)			
Agency	13.99	14.13	13.87	0.26	-1.45 – 1.98
(2 – 20)	(3.53)	(4.17)	(2.97)		
Self-Esteem	30.51	28.71	31.98	-3.26	-7.59 – 1.07
(7 – 47)	(9.05)	(8.43)	(9.38)		
Self-Confidence	23.59	21.61	25.24	-3.63*	-6.01 - -1.25
(12 – 35)	(5.20)	(4.40)	(5.29)		
Social Support (range for all)	44.65	45.94	43.61	2.33	-3.34 – 8.00
(16 – 60)	(11.71)	(11.05)	(11.71)		
Special Person	14.55	14.97	14.21	0.76	-1.74 – 3.25
(0 – 20)	(5.14)	(5.64)	(4.75)		
Family	15.04	14.81	15.24	-0.43	-2.65 – 1.79
(2 – 20)	(4.56)	(4.58)	(4.61)		
Friends	15.06	16.16	14.16	2.00	-0.24 – 4.26
(2 – 20)	(4.74)	(3.91)	(5.20)		

Notes: *Differences between females and males statistically significantly different (p<.05) based on two samples independent t-tests, or where tests of normality failed, the Wilcoxon Rank Sum (Mann-Whitney U) test were used to confirm differences. .SD is standard deviation. CI is the 95% confidence interval.

Self-Rated Health (SRH)

Figure 6-1 below provides the distribution and differences by sex for SRH from the first survey. There were no significant differences in SRH from the first to second timepoint. I also investigate SRH by sexuality, Hispanic ethnicity, and race. Just as with sex, SRH did not differ significantly from the first to the third year by sexuality. Race is also not related to SRH; the five students who identified as other than white had very good or excellent health. Similarly, Hispanic ethnicity is not related to SRH, the three students who identified as Hispanic had very good or excellent health.

Figure 6-1 Self-Rated Health (Year 1) by Female and Male
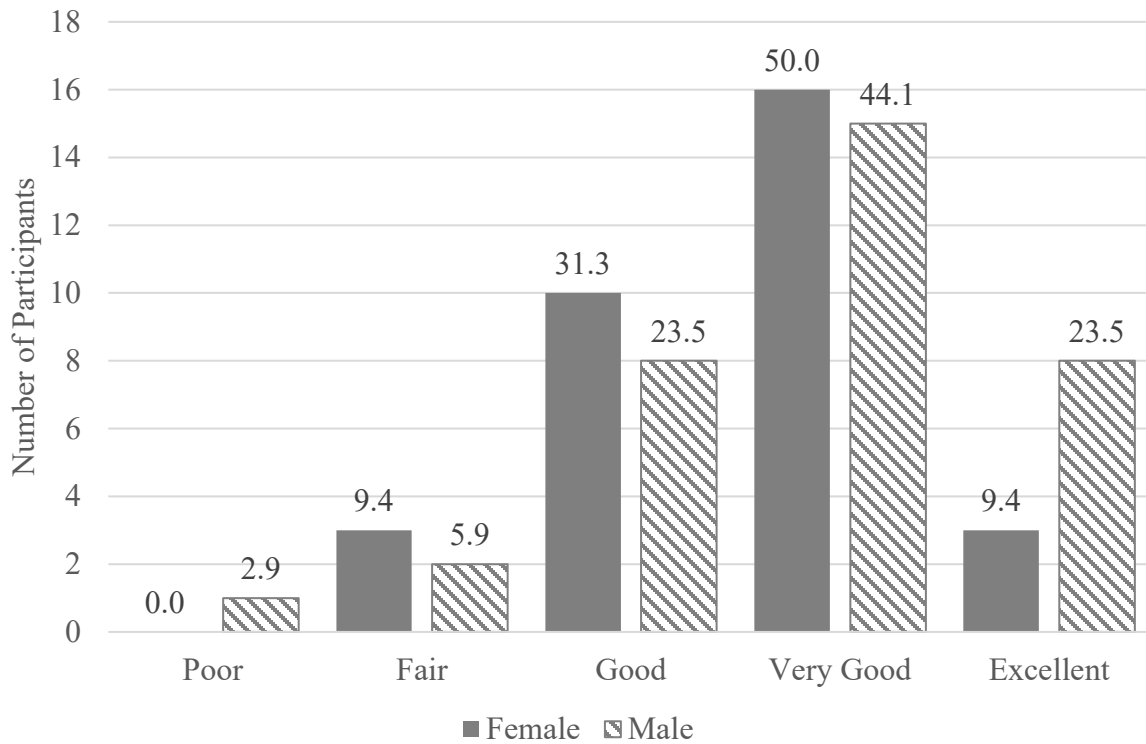
Notes: Numbers above bars are the percentage of participants in that group and category.

Stress

Overall stress does not significantly differ by sex or sexuality. Recall that overall stress ranges from 49 – 197, with the higher the number the higher the stress. The mean stress (and SD) for the 10 students identifying as other than straight was 126.6 (38.58). The mean stress for students identifying as straight was 125.67 (39.36). The differences are not statistically significant (t^*=-0.07, p=.386). Overall stress also does not significantly differ by race. The mean stress (and SD) for the four students identifying as other than white was 110.25 (47.25). The mean stress (and SD) for students identifying as white was 127.35 (37.17). The differences are not statistically significant (t^*=-0.87, p=.386). And finally, overall stress did differ significantly by ethnicity. The mean stress for the three students identifying as Hispanic was 78.00 (37.41) and for students identifying as non-Hispanic was 129.25 (13.75). A Wilcoxon Rank Sum (Mann-Whitney U) test confirmed the significant differences by ethnicity (z=2.29, p=.0218). The only other difference in variables between females and males is self-confidence, with males reporting higher level of self-confidence compared to females. Sex differences in stress of school

performance, future uncertainty, and school/leisure conflict have been found in prior research (Byrne 2007). The same study also found sex differences (higher averages for females than males) in stress of home life, romantic relationships, peer pressure, and emerging adult responsibility that were not observed in the current study. All but the stress of romantic relationships, however, followed the same pattern as seen by Byrne and colleagues (2007).

Independent t-tests were used to compare mean stress scores across the nine domains of stress from the adolescent stress questionnaire (ASQ) compared to the work of Byrne et al. (2007). Byrne's study included students averaging 14.79 years for females and 14.82 years for males. In the current study females average 14.78 and males 14.69 years of age. While schools were selected for Byrne's study "to reflect a broad socio-demographic profile" they do not report on the rurality of students participating in their study. Of the nine domains of adolescent stress used in the current study, five, including stress of home life, romantic relationships, peer pressure, financial pressures, and stress related to emerging adult responsibilities, for both females and males, were not statistically significantly different than those reported by Byrne et al. over a decade prior.

Stress of school performance and attendance did differ significantly from Byrne and colleagues for females, and for all students, respectively. Stress of school performance has a mean of 21.7 for female adolescents in the current study, which is significantly higher than that for female adolescents in Byrne's (2007) study at 19.11 (5.61) (t*=-2.42, p=.016). We can be 95% confident that the mean stress of school performance for the females in the current study is at least 0.49 and at most 4.69 larger than the mean of the female adolescents included in Byrne's (2007) research. School attendance related stress is significantly lower for the adolescents in the current study, with a mean (and SD) of 8.67 (3.01) for females and 7.91 (3.39) for males, compared to the 10.22 (3.68) and 10.07 (3.65) for females (t*=-2.42, p=.016) and males (t*=3.23, p=.001), respectively, found by Byrne et al. (2007). We can be 95% confident that the mean stress of school attendance for the female adolescents included in Byrne's (2007) research is at least 0.21 and at most 2.89 larger than the mean of the female adolescents included in the current study. And for males we can be 95% confident that the mean stress of school performance of the female adolescents reported by Byrne and colleagues (2007) is at least 0.85 and at most 3.47 larger than the mean for males in the current research.

The stress of future uncertainty is also lower for the students in the current study, with a mean of 8.55 for males, which is statistically significantly lower than the 11.14 for males ($t*=3.90$, $p=.000$) presented by Byrne et al (2007). We can be 95% confident that the mean stress of future uncertainty for the males in Byrne's (2007) research is at least 1.28 and at most 3.90 larger than the mean of the male adolescents included in the current study. Stress from school/leisure conflict has a mean of 11.97 for males in the current study, which is, again, statistically significantly lower compared to the male adolescents in the Byrne study, with a mean of 14.72 for males ($t*=2.88$, $p=.004$). We can be 95% confident that the mean stress of school performance for the males in Byrne's (2007) research is at least 0.88 and at most 4.63 larger than the mean of the male adolescents in the current study.

Stress of school performance was higher for the females in the current study. But stress of school attendance is lower for both females and males. A flexible attitude about attendance has to some degree been accepted at the high school because of the long commutes, and mountain weather and roads. I also noted during school observations that some students were expected to be missing during the height of hunting season. There were also the male students who showed up in mud covered boots and clothes from their morning chores and/or walk to a bus stop, and talked about other things they would rather be doing. The lower stress from future uncertainty in this study population has no corollary in my notes and observations. This could reflect a shift in the broader populations from the time of the data Byrne and colleagues were using, so that another sample of adolescents from the United States during a time contemporaneous to this study would find similar differences. It could also be that stress from future uncertainty is lower among rural, Appalachian, and/or West Virginian adolescents. The same could be hypothesized about school performance for females as well. These few differences between the cohort of adolescents in the current study and the work by Byrne and colleagues, provides evidence that overall, there are few differences in stress experienced by the adolescents in Byrne's analysis and those in the current study. I also investigated differences in each of the nine domains of stress and coping resources and strategies by sex, sexuality, race, and ethnicity.

DIFFERENCES IN STRESS PROCESS MEASURES BY STIGMATIZED STATUSES

There is a significant difference in stress of peer pressure by race, with students who identify as other than white having significantly lower stress of peer pressure (10.75) compared

to their white counterparts (19.91). A Wilcoxon Rank Sum (Mann-Whitney U) test confirms differences in stress of peer pressure are statistically significant ($z=-2.18$, $p=.029$). Three domains of stress differed significantly for those who identified as having a Hispanic ethnicity. In each case stress was lower for the student identifying with a Hispanic ethnicity. The average stress of peer pressure score differed significantly by ethnicity. Stress of peer pressure had a mean of 17.57 for students not identifying as Hispanic and 9.33 for students that did indicate a Hispanic ethnicity ($z=2.11$, $p=.035$). There is also a significant difference in stress of school-leisure conflict by ethnicity. Based on an independent samples t-test the average stress of school-leisure conflict score was 13.77 for students not identifying as Hispanic and it was 6.67 for students identifying as Hispanic ($t*=2.30$, $p=.025$). Significant difference by ethnicity for stress of emerging adult responsibilities, with those identifying as Hispanic having significantly lower mean stress (3.00) of emerging adult responsibilities compared to the mean (7.00) of those not identifying as Hispanic ($z=2.45$, $p=.014$). The only measure in the stress process (other than stress) that differed by any of the stigmatized statuses was self-esteem. There is a significant difference in self-esteem by sexuality. The mean self-esteem for those who do not identify as straight is 25.09 and for those who do identify as straight it is 31.76 ($t*=-2.20$, $p=.032$).

While the remaining measures related to the stress process, including coping resources and strategies, and social support are also included in Table 2 could not each be situated in the literature to the degree as I did with self-rated health and stress, the relationships between these variables in the stress process can be briefly explored. I begin with the observed bivariate correlations of the stress process variables for the first year of the study (Table 6-3 below).

Table 6-3 Year One Correlation of Self-Rated Health, Stress, Coping, and Social Support

	SRH	Stress	AC	EFC	PFC	SE-P	SE-A	Esteem	SC
Stress	0.07	1							
Avoidant Coping (AC)	0.13	0.42*	1						
Emotion-Focused Coping (EFC)	0.32*	0.24	0.48*	1					
Problem-Focused Coping (PFC)	0.14	0.09	0.28*	0.41*	1				
Self-Efficacy (Pathway) (SE-P)	0.1	-0.11	-0.19	0.00	0.38*	1			
SE (Agency) (SE-A)	0.22	-0.01	-0.1	0.07	0.35*	0.54*	1		
Self-Esteem (Esteem)	0.2	-0.35*	-0.28*	-0.18	0.15	0.33*	0.36*	1	
Self Confidence (SC)	0.25	-0.36*	-0.47*	-0.21	-0.03	0.34*	0.26*	0.41*	1
Social Support	0.03	-0.13	-0.27*	0.02	0.29*	0.50*	0.28*	0.31*	0.25*

Notes: *Statistically significant Pearson correlation at $p<.05$

From the results of bivariate analysis there appears to be no relationship between SRH and stress in this population of adolescents. While Table 3 above shows the correlations of the first-year stress process variables, similar analyses examining the relationship between SRH and each of the nine domains of adolescent stress show similarly few relationships. The only exception would be the stress of financial pressures, which was significantly (p=.042) and positively (r=0.269) associated with SRH. Emotion-focused coping appears to be positively related to SRH. Further, avoidant coping, self-esteem, and self-confidence are all significantly related to stress. Avoidant-coping is positively associated with stress (p=.001). In other words, the greater use of avoidant coping strategies the higher the reported stress, or the higher the stress the greater the use of avoidant coping. Self-esteem and self-confidence are both negatively associated with stress, as self-esteem or self-confidence increases, stress decreases. Each of the types of coping strategies (avoidant, emotion focused, and problem-focused) are significantly related with one another, as would be expected. Self-esteem, self-confidence, and social support are negatively correlated with avoidant coping. Problem focused coping is positively related to both measures of self-efficacy (pathway and agency), and social support. Both measures of self-efficacy are also positively correlated with self-esteem, self-confidence, and social support. Self-esteem, self-confidence, and social support are all positively correlated with themselves. More data would be needed to further explore the relationships between the stress process measure. I turn next to changes in the above measures from the first to third year of the study (Table 6-4 below).

Table 6-4 Year One to Three Changes in Self-Rated Health, Stress, Coping, and Social Support

	First Year			Third Year			Δ
	Female	Male	All	Female	Male	All	All [CI]
SRH Mean (SD)	2.5 (0.55)	2.5 (1.07)	2.5 (0.86)	2.67 (1.03)	2.38 (0.92)	2.5 (0.94)	0 (0.88) [-.51 - .51]
SRH (% Poor or Fair)	0.00	25.00	14.29	16.67	12.50	14.29	0.00
Stress Mean (SD)	138.75 (38.89)	106.5 (34.34)	119.4 (37.9)	129.0 (19.78)	106.5 (31.70)	115.5 (28.70)	3.9 (34.41) [-20.72 - 28.52]
Home Life	23.2 (5.89)	21 (11.07)	22.1 (8.44)	25 (9.27)	22.8 (13.14)	23.9 (10.79)	-1.80 (10.45) [-9.28 – 5.68]
Stress of School Performance	22.83 (5.64)	17.43 (7.46)	19.92 (6.99)	21.00 (4.73)	18.29 (5.41)	19.53 (5.09)	0.38 (8.63) [-4.83 – 5.60]

	First Year			Third Year			Δ
	Female	**Male**	**All**	**Female**	**Male**	**All**	**All [CI]**
School Attendance	9.00 (2.00)	8.43 (3.10)	8.69 (2.56)	8.00 (3.35)	7.43 (3.60)	7.69 (3.35)	1.00 (4.53) [-1.74 – 3.74]
Romantic Relationships	10.00 (8.72)	8.14 (3.63)	8.81 (5.62)	8.50 (3.42)	7.29 (4.03)	7.73 (3.69)	1.09 (5.41) [-2.55 – 4.73]
Peer Pressure	18.33 (5.47)	15.00 (7.44)	16.54 (6.57)	14.67 (5.39)	11.71 (4.31)	13.08 (4.87)	3.46 (6.57) [-0.51 – 7.43]
Future Uncertainty	11.5 (3.27)	10.29 (3.73)	10.85 (3.44)	12.83 (2.40)	9.14 (3.29)	10.85 (3.39)	0.00 (3.58) [-2.16 – 2.16]
School/Leisure Conflict*	15.00 (4.98)	12.71 (6.26)	13.77 (5.60)	10.17 (4.75)	8.57 (3.87)	9.31 (4.19)	4.46 (6.02) [0.82 – 8.10]
Financial Pressure	9.67 (3.44)	7.57 (2.88)	8.54 (3.20)	9.33 (2.94)	6.71 (3.25)	7.92 (3.28)	0.62 (3.78) [-1.67 – 2.90]
Emerging Adult Responsibility*	6.33 (1.51)	4.67 (2.73)	5.5 (2.28)	8.83 (3.76)	7.67 (3.20)	8.25 (3.39)	-2.75 (2.67) [-4.44 - -1.06]
Coping Strategies							
Avoidant	13.67 (5.85)	10.83 (3.19)	12.25 (4.73)	13.67 (3.50)	10.67 (1.21)	12.67 (2.95)	.083 (5.48) [-3.40 – 3.56]
Emotion-Focused	20.17 (3.31)	15.83 (2.99)	18.00 (3.77)	18.83 (1.60)	13.67 (2.34)	16.25 (3.31)	1.75 (3.91) [-0.73 – 4.23)
Problem-Focused	18.17 (4.12)	15.33 (3.27)	16.75 (3.84)	19.50 (3.33)	15.17 (3.31)	17.33 (3.89)	-0.58 (3.78) [-2.98 – 1.82]
Coping Resources							
Self-Efficacy							
Pathway	14.5 (3.78)	13.57 (4.04)	14.00 (3.79)	14.5 (2.51)	12.00 (3.46)	13.15 (3.21)	0.85 (3.65) [-1.36 – 3.05]
Agency	16.17 (2.86)	13.00 (2.87)	14.46 (3.21)	14.5 (4.28)	10.43 (5.26)	12.31 (5.09)	2.15 (4.78) [-0.73 – 5.04]
Self-Esteem*	30.67 (8.98)	31.14 (8.55)	30.92 (8.38)	25.17 (5.04)	27.00 (7.90)	26.15 (6.53)	4.77 (7.58) [0.19 – 9.35]
Self-Confidence*	24.17 (4.83)	23.83 (5.49)	24.00 (4.94)	19.67 (8.76)	21.33 (6.41)	20.5 (7.37)	3.5 (4.81) [0.44 – 6.57]
Social Support	43.00 (11.92)	42.14 (14.09)	42.54 (12.59)	43.33 (13.19)	40.43 (4.32)	41.77 (9.17)	0.77 (11.99) [-6.47 – 8.01]
Special Person	10.83 (9.09)	13.14 (5.61)	12.08 (7.18)	13.00 (5.93)	13.43 (2.70)	13.23 (4.28)	-1.15 (4.71) [-4.00 – 1.69]
Family	15.00 (4.38)	14.14 (5.76)	14.54 (4.98)	15.17 (5.19)	13.71 (4.39)	14.38 (4.63)	0.15 (6.12) [-3.55 – 3.85]
Friends	17.17 (3.19)	14.86 (5.08)	15.92 (4.31)	15.17 (4.02)	13.29 (3.99)	14.15 (3.96)	1.77 (4.92) [-1.20 – 4.74]

Notes: *Differences between first and third year statistically significantly different (p<.05) based on dependent t-tests, or where tests of normality failed, a sign test for the median was used to confirm the statistical significance of differences. SD is standard deviation. CI is the 95% confidence interval.

There were several questions that were asked as a part of the larger batteries of questions that are worth noting as I turn to changes between the years, bridged by the beginning of COVID pandemic. During the first year of the study, 82% of students reported feeling that what happens to them in the future mostly depends on them. Nearly 75% of students believed they held the power to change their lives. And 81% of students believed their families really try to help them. Of all students, 30% reported worrying about their health, and 38% said they feel tired most of the time. During the third year of the study, ten of the fourteen responding students (71.4%) felt that what happens to them in the future mostly depends on them. Only 50% of students who returned questionnaires during the COVID pandemic believed they had the power to change important things in their lives. Sixty-four percent (9/14) believed their families really try to help them. And 71% of respondents reported both worrying about their health and feeling tired most of the time.

When asked how stressful the Coronavirus pandemic had been for them, 14.29% said not at all, 42.86% responded a little, 21.43% moderately stressful, 7.14% quite stressful, and 14.29% reported the pandemic had been very stressful. The majority of students responding (57.14%) during the pandemic felt it had caused them little or no stress. The schools were closed, with most students only meeting two days a week online, and no students, through surveys or journals expressed distress, beyond struggling with poor internet connections. This is reflected in the changes in measures of stress and coping from the first to the third year. On average, self-rated health (SRH) and overall stress stayed the same from the first to the third year of the study. Changes in SRH from the first to third year are shown in Figure 2 below, but there is more shifting among categories than can be seen in the figure. One student moved from fair health to good, and one from good to fair. One participant sifted from good to very good. Another went from very good to good, and two from very good to excellent. And finally, one student went from rating their health as excellent to good just two years later. Self-rated health in the first year is strongly correlated to SRH at year three (r=0.526), though not statistically significantly so (p=.053). The evidence suggests that the COVID pandemic, at least for this small group of students, negatively influenced their self-esteem, self-confidence, and belief in their power to effect change in their lives, even if they cannot all perceive the impact. It may also be, as with stress of emerging adult responsibilities increasing (as discussed below), that these are changes that come with growing into adulthood, pandemic or not.

Figure 6-2 Self-Rated Health (Year 1 to Year 3)
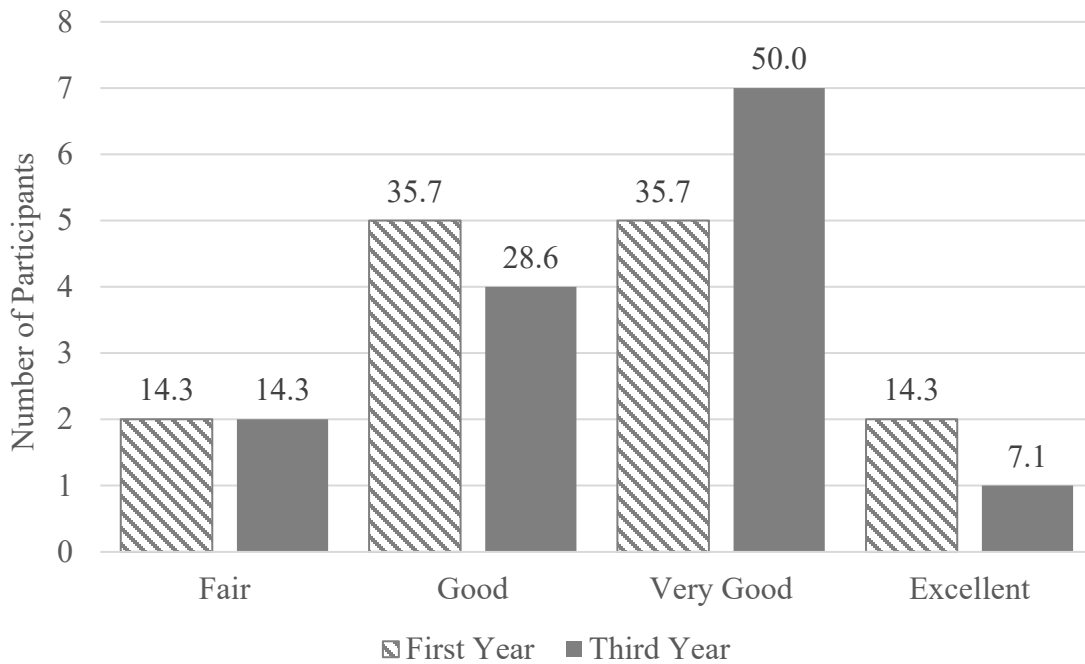
Notes: Numbers above bars are the percentage of participants in that group and category.

Turning to the specific domains of stress, no statistically significant differences were found for stress of home life, school performance, school attendance, romantic relationships, peer pressure, and future uncertainty; none changed significantly from the first to the second survey. Stress of conflicts between school and leisure time, did significantly decrease from the first to the third year of the study. We can be 95% confident that the level of stress caused by school/leisure conflict at the first survey is at least 0.82 and at most 8.10 larger than it was at the second time point (t^*=2.67, p=.020). While the same patterns are evident by sex for stress of school/leisure conflict neither (for males nor females) reached statistical significance. There were no significant differences in the stress of financial pressure from the first to the third year of the study. Stress from emerging adult responsibility did significantly change from the first to the second survey, for all students together, but only for males when investigated by sex. We can be 95% confident that stress of emerging adult responsibilities in the second survey was at least 1.06 and at most 4.44 larger than that found during the first survey (t^*=-3.57, p=.004). Similarly for males, we can be 95% confident that stress of emerging adult responsibilities in the second survey was at least 1.24 and at most 4.76 larger than at the first (t^*=-4.39, p=.007).

Coping strategies from the first to the second survey did not significantly change. There were no significant differences in avoidant, emotion-focused, or problem focused coping for males or females from the first to the third year of the study. Under coping resources, self-efficacy (neither pathway nor agency) did not significantly change from the first to the second survey. Self-esteem, however, did significantly change between the years for all participants together, but only statistically significantly so for boys. There is a statistically significant difference in self-esteem between the first year (30.92) and the third year (26.15) of the study (t^*=2.27, p=.043). The significance of these differences was confirmed by a sign test for a median (p=.023). And for males, there is an average 4.14 difference, and we can be 95% confident that levels of self-esteem are at least 3.15 and at most 5.13 larger at the first time point (t^*=2.27, p=.043). There is a statistically significant decrease in self-confidence between the first (24.00) and third (20.50) year of the study (t^*=2.52, p=.029) for all participants., though not statistically significantly so for either sex separately. Overall, social support did not significantly change from the first to the third study year. Social support from a special person in their lives, from family, or from friends stayed the same from one survey to the next.

I now explore any observed changes in the relationships between stress process measures. A correlation analysis of SRH and the stress process measures (coping strategies and resources, and social support) during the third year of the study is provided in Table 6-5 below.

Table 6-5 Year Three Correlation of Self-Rated Health, Stress, Coping, and Social Support

	SRH	Stress	AC	EFC	PFC	SE-P	SE-A	Self-Esteem	SC
Stress	-0.02	1							
Avoidant Coping (AC)	-0.22	0.51	1						
Emotion-Focused Coping (EFC)	-0.10	0.41	0.24	1					
Problem-Focused Coping (PFC)	0.27	0.20	-0.01	0.61*	1				
Self-Efficacy (Pathway) (SE-P)	0.36	0.09	-0.04	0.28	0.83*	1			
Self-Efficacy (Agency) (SE-A)	0.39	0.03	-0.25	0.49	0.81*	0.75*	1		
Self-Esteem	0.35	-0.26	-0.56*	-0.04	0.24	0.56*	0.54*	1	
Self Confidence (SC)	0.32	-0.34	-0.69*	0.24	0.58*	0.48	0.69*	0.78*	
Social Support	0.07	-0.22	-0.56*	0.41	0.59*	0.34	0.66*	0.48	0.82*

Notes: *correlation significant at p<.05

There are now no variables significantly associated with self-rated health or stress. Avoidant coping is no longer associated with emotion-focused coping, but the relationships with self-esteem, self-confidence, and social support remain in the same direction and with slightly stronger associations. For example, in the first year the correlation between self-esteem and avoidant coping was r=-0.28 (p=.023), compared to r=-0.56 (p=.047) the third year. The relationships between problem focused coping and all variables remain similar, as do those related to self-efficacy, except for social support, which in the third year is significantly correlated with self-efficacy (r=-0.59, p=.0033), though it was not in the first year (r=-0.22, p=.069). The relationship between self-confidence, self-esteem, and social support and coping and self-efficacy may have important implications for the group of adolescents in the current study, who experienced decreases in self-confidence and self-esteem, which may result in changes to coping strategies over time, or could be indications of prior shifts in coping, since only correlation and not causation is known.

The quantitative data available does not allow for more sophisticated analyses of the stress process variables, especially in relation to measures of social position and spatial stigma added the third year of the study. Qualitative data gathered about student perceptions about their health, their position in society, and the image and perceptions of West Virginia, however, can be used to begin unpacking these relationships. First, I place the students in the current study on a grid, much like I used for the state and county, except the social space is defined by students' own perceptions of the position of their families and self in the hierarchy of American society and their high school, respectively (Figure 6-3). I mark each student with their health rating, pseudonym, age, and sex. I pair this with several tables outlined here, beginning with Table 6-6, which includes what students reported considering when rating their health. After a brief discussion of students by this distribution, this same group of students' perceptions about the state will be considered by health rating (fair, good, very good, and excellent), and whether they perceived the media image of West Virginia as positive or negative (Table 6-7). And lastly, I will show how SRH, and the stress process measures compare by the overall perceived reputation of West Virginia (negative or positive), which is provided in Table 6-8 below. Taken together the figure and tables below will build an understanding of how measures of spatial stigma might be related to perceived health, the stress process, and perceived social standing in one group of rural adolescents in West Virginia.

Figure 6-3 Participants by Family Standing in America and Self Standing in School with SRH
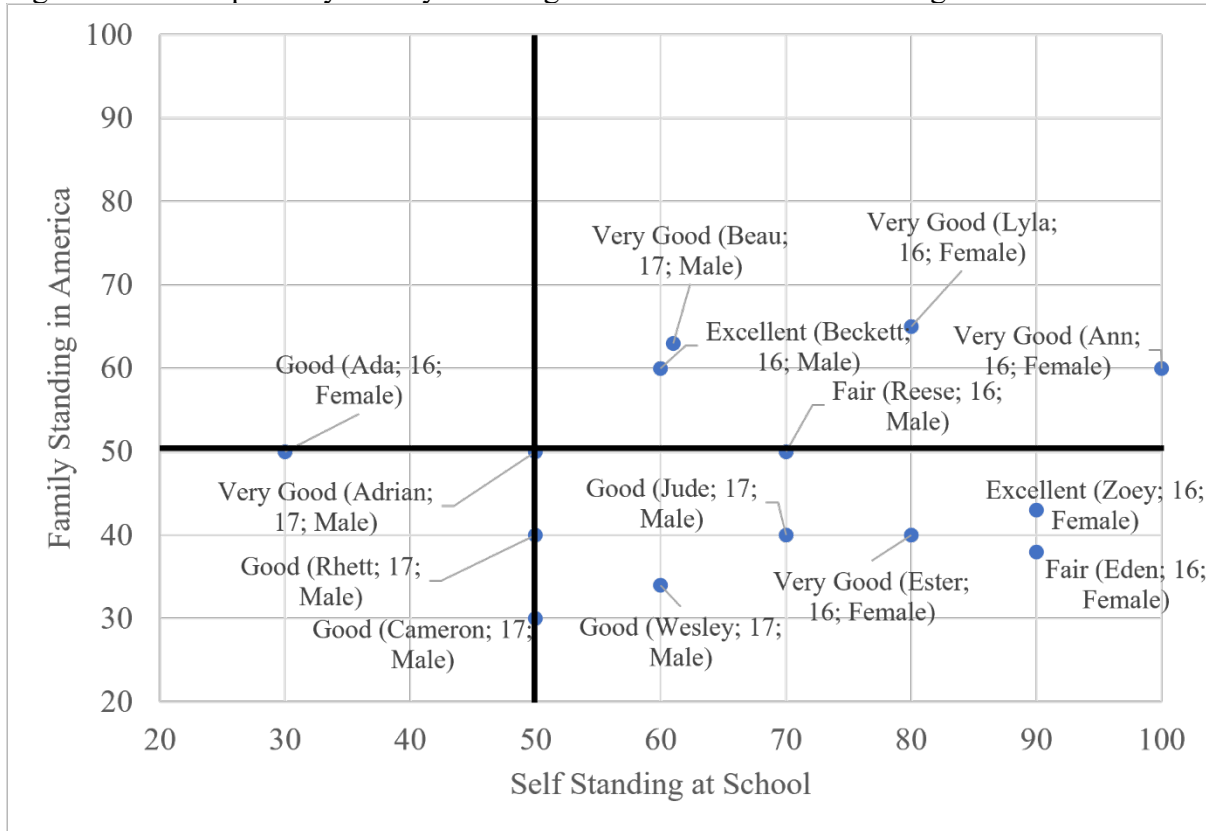
Note: All names are pseudonyms.

Self-Rated Health (SRH)

Self-rated health (SRH) is a population level measure, and it must be perceived and treated differently when removed from the population-level analysis. As described in Chapter 2, the SRH variable is thought to stay stable across adolescence, specifically between the ages of 14 and 17 years old and represents a social perception of self, more so than it represents physical health (Boardman 2006). Self-rated health did not significantly change between time points in the current study, though SRH at the first time point was relatively strongly correlated with SRH at the second time point as discussed above, even if not statistically significantly so. For the following analyses, however, I consider the students own definition of how they rate their health. Participants were asked during the third year to rate their health as they had in the first year and then explain that rating. Their answers are provided (grouped by health rating category) in Table 6-7 below. At first blush, by the time that students reached 16 – 17 years old, they did seem to run systems check to rate their health, even using terms like "systems" and vitals" and referring to "check-ups. There seems to be no relationship between social standing and SRH at this point.

I am eager, however, to watch student trajectories unfold. Already, in interviews during the fifth year, the student who ranked their family standing in America lower than anyone else (30 out of a range of 1 – 100) changed their rating to fair because they had been hospitalized and diagnosed with a chronic condition since graduating high school. They indicated that the change in ranking was only due to their diagnosis, and that their health had not interfered with high school because they were diagnosed after high school. He did, however, rank his health as very good during the first year of the study, so by the third year something had already shifted. He also reported barely graduating from high school and not being where he had hoped to be in life.

Further, in addition to counting the number of health conditions and the lack or presence of illness, at least one student in every category turned to weight/overweight, nutrition, and physical activity to rate their health. Two students that rated their health as good and one who rated their health as very good mentioned mental and/or emotional health. Three talked about feeling good, or feeling everything is okay (excellent health). Only one mentioned not participating in unhealthy behaviors (drugs, nicotine, or alcohol), and one other noted good hygiene. These definitions of students' own health can be cross-referenced with tables below to connect perceptions of health and place.

Perceived Social Standing

Recall that students were provided the images of a ladder, with ten rungs and asked to mark where their family was at in the American hierarchy, and similarly their own social standing in school. Each rung was attributed 10 points, with one-third and one-half points given for marks between the rungs. Each student could theoretically end up with a score between 0 one rungs distance under the bottom rung to 100 (top rung or higher). I then plotted the students using both ladders as axes. For family standing in America, the lowest position out of the group was on the third rung (30) as discussed above. Only four students placed their families over 50, another three put their families right at the middle rung, and seven ranked their families below the middle, ranging from 30 to 45 across all seven participants. All but one student put themselves at the midway point or higher in social standing at school, and the one student placed herself on the third rung. Ten students in this group placed themselves on the 6th to the tenth rung in social standing, and all had a range of health ratings. Two students very near each other in the

bottom right corner of Figure 6-3 above, for example, had similar social standings but one ranked their health as excellent and the other as fair.

Table 6-6 Respondent Description of Self-Rated Health Selections

Self-Rated Health			
Fair (n=2)	**Good (n=5)**	**Very Good (n=5)**	**Excellent (n=2)**
"I am slightly overweight, have asthma, and have poor digestive health, but no serious conditions. My four things to talk about when deciding my health are weight, respiratory health, digestive health, and underlying conditions." (Reese; 16; Male)

"I had the flu 2 times in February 2020. I have [a chronic condition] which affects my immune system. I go to a lot of doctors because I have a lot of health conditions. I have a very low immune system." (Eden; 16; Female) | "I eat good, haven't been sick, gotten a well child checkup at the doctor and it was good and got a checkup at the dentist too." (Cameron; 17; Male)

"I have been working on improving my health for the past year. [Talked about losing weight]. Four things I think about when rating my health are social, physical, emotional, and mental health." (Wesley; 17; Male)

"It feels okay to me, But I feel I may have some kind of mental illness." (Ada; 16; Female)

"Young [and] blood pressure high. Strong [and] Cholesterol high (Rhett; 17; Male)

"The shape my body is in, my weight, the things I eat. How physical [I am]. (Jude; 17; Male) | "[I am] healthy, growing tall, good hygiene, [and] eat good." (Beau; 17; Male)

"1. I exercise and do sports 2. I eat moderately healthy 3. I don't do any drugs nicotine or alcohol 4. I probably could work out more." (Lyla; 16; Female)

"I don't get very sick. I feel healthy. I try to work out often. I try to eat somewhat healthy" (Adrian; 17; Male)

"Because I'm happy and healthy 1. How many times I've been sick 2. How I'm feeling now, 3. How I've felt this past year" (Ester; 16; Female)

"I need to work on my mental health but physically I am in decent shape. I drink lots of water, I stretch daily, and sleep 7 – 8 hours a day." (Ann; 16; Female) | " I am not sick often I do not take medication. No medical conditions. Standard vitals." *(Zoey; 16; Female)*

"Am I overweight? No. Do I feel like everything is ok? Yes. Do I eat balanced meals? No. Do I work out? Sometimes." (Beckett; 16; Male) |

Notes: All names are pseudonyms.

The primary difference between those students, so close on the social standing scales but with such differently rated health is that one is rarely sick, has no medical conditions, takes no medications, and has "standard vitals" while the other has chronic conditions, is regularly ill, and has a "very low immune system" – again, invoking that systems check, which very much reflects the messaging from the public school systems discussed in the literature review. Health is the

physical fitness of one's body, the lack of body fat, the absence of disease and illness, practicing healthy behaviors, such as related to nutrition, hydration, hygiene, physical activity, and sleep.

Spatial Stigma

Over a third (35.7%) of respondents in the third year disagreed that WV has a good reputation with people living in surrounding states (64.3% agreed). Most participants (64.3%), however, thought that the image of West Virginia in the media is negative, and the same percentage thought West Virginians were viewed negatively. One person thought the media representation of the state was positive but that the view of West Virginians was negative, and another thought the people in West Virginia were viewed positively, but the state was represented negatively in the media. When asked what they thought the reputation of the state was half said positive and half indicated negative. While I will return to these measures to consider relationships with other study variables, I begin with students' own perceptions. When asked if there was anything else they would say about where they live, most (71.4%) declined to comment. Four participants though spoke of the beauty and peace:

"It has pretty views."

"It's nice, peaceful, and quiet."

Several clarify these comments, however, by contrasting with the people and possibilities in the state, which they rate less favorably.

"It is a beautiful place, but I feel at an immediate disadvantage in education/jobs."

"One of the redeeming qualities of my town is the beauty of the scenery: it makes for a hilarious contrast with the type of lunatics that live here."

And one agreed with only the limited opportunities: "There are zero opportunities around here." This contrast between the natural beauty of the state and poor education, jobs, and opportunities mirrors what was seen in the media content analysis. Further, students' responses to their agreement with the views about the reputation of West Virginia and the best and worst thing about the state (presented in Table 6-6 below by the perceived media image of the state (negative or positive) and level of SRH) touch on other themes – including those that informed the original

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codes for the media analysis from school and community observations and student surveys as well as themes first identified through the media content analysis.

Table 6-7 The Perceived Reputation of West Virginia by Perceived Media Image and SRH

Media Image of WV	Self-Rated Health			
	Fair (n=2)	Good (n=5)	Very Good (n=5)	Excellent (n=2)
Negative (n=9)	"No, I don't agree [with the negative views] everyone thinks we are a bunch of inbred hillbillys." (Reese; 16; Male) "The best thing about West Virginia is its natural beauty." (Reese; 16; Male) "It's the safest" (Eden; 16; Female) *"Opportunity in West Virginia seems poor."* (Reese; 16; Male) *"No jobs"* (Eden; 16; Female)	"I don't disagree with the [negative] views of West Virginia the state's reputation basically mirror how the state actually is." (Wesley; 17; Male) "Wildlife, scenery" (Cameron; 17; Male) "The history and the geography." (Wesley; 17; Male) *"Drugs, lack of Jobs"* (Cameron; 17; Male) *"The poor education and general lack of development, sophistication and modernization in more rural areas."* (Wesley; 17; Male)	"They make us look trashy" (Beau; 17; Male) "Most of the people are on drugs and that's what our bad reputation is for." (Lyla; 16; Female) "I disagree with the [negative views] because it isn't what everyone makes it out to be." (Ester; 16; Female) "Agree [with negative views], WV is close-minded and super conservative." (Ann; 16; Female) "The wild & wonderful outdoors" (Beau; 17; Male) "The few nice people and the scenic views" (Lyla; 16; Female) "The people, the beautiful mountains, [and] WVU football games" (Ester; 16; Female) "Geographic location and natural beauty." (Ann; 16; Female) "*employment*" (Beau; 17; Male) *"Drug rates and the awful education system"* (Lyla; 16; Female)	"Yes and No [agreement with negative views]. The media only looks [down] on those who classify as (hillbilly)." "Its beautiful views." *"The distance"* (Zoey; 16; Female)

Media Image of WV	Self-Rated Health			
	Fair (n=2)	Good (n=5)	Very Good (n=5)	Excellent (n=2)
			"Very few opportunities" (Ester; 16; Female) *"Drugs" (Ann; 16; Female)*	
Positive (n=5)		"...it seems like we are viewed as 'bad', and I don't think we are as 'Bad' as most think." (Ada; 16; Female)	"I agree with the [positive] views, because its correct"	
		<u>"The Nature"</u> <u>(Ada; 16; Female and Jude; 17; Male)</u>	<u>"the great hospitality"</u>	<u>"Pepperoni rolls"</u> (Beckett; 16; Male)
			"the small amount jobs" (Adrian; 17; Male)	
		<u>"None"</u> <u>(Rhett; 17; Male)</u>		
		"Jobs" (Ada; 16; Female, Rhett; 17; Male, and Jude; 17; Male)		

Notes: first quotes in response to prompt "Do you agree or disagree with the views about the reputation of West Virginia?". Underlined quotes are responses to the prompt to name <u>the best thing about WV</u>, and the italicized quotes the *worst thing about WV*.

In the quotes in Table 6-7 above, we again see the themes of lack of jobs/employment and opportunity, as well as education. One student even addresses the "poor education and general lack of development…in…rural areas" more broadly. The theme of drugs come up in at least three student perceptions of West Virginia. And one student comments on how the state is "close-minded and super conservative, introducing politics to their perceptions. The students also return to the "hillbilly" theme. Two students invoked the popular stereotype, but in very different ways. Reese, a sixteen-year-old male, who rated his health as fair, disagreed with perceived negative media images of West Virginia because "everyone thinks we are a bunch of inbred hillbillys". Zoey, who rated her health as excellent said "yes and no" in relation to her agreement with the perceived negative media image of the state, arguing that the media only looks down on those that are classified as a hillbilly. That the media image may be representing the reality of some people in the state but not all was echoed by another student who agreed with the perceived negative media image of West Virginia "because most of the people are on drugs that's what our bad reputation is for" – a phenomena recognized in the spatial stigma research, which suggests that residents will either justify and apply the stigmatized identity to an "other" (e.g., the poor, addicted, unemployed, disabled) or they will internalize the identity (Keene and Padilla 2018). And again, nearly all students tie back to the natural beauty and bounty of the state, contrasted against the lack of jobs and opportunities, and the "drug rates and the awful education system" as reflected in the national media.

The only remaining question then is whether there are any differences in SRH, or the measures of the stress process, based on how adolescents perceived the reputation of the state. I also consider how household size and composition and proportion of stigmatized statuses differ by perceived reputation. Table 6-7 below provides all study variables by the students' perceptions of the reputation of the state of West Virginia (positive or negative). Half of the students thought the reputation of the state was negative and the other half thought it positive.

Table 6-8 Study Variables by the Perceived Reputation of WV (Positive or Negative)

	Reputation of West Virginia		Diff	Diff CI	p-value
	Positive (n=7)	Negative (n=7)			
SRH	2.71	2.29	-0.43	-1.54 - 0.679	0.4158
Overall Stress*	90.86 (29.60)	123.29 (24.08)	32.43	1.00 - 63.85	0.0441

	Reputation of West Virginia		Diff	Diff CI	p-value
	Positive (n=7)	Negative (n=7)			
Home Life	20.29 (10.03)	28.57 (9.59)	8.29	-3.14 – 19.71	0.1401
School Performance	17.43 (4.89)	20.86 (5.08)	3.43	-2.38 – 9.24	0.2227
School Attendance	6.43 (2.57)	9.14 (3.44)	2.71	-0.82 – 6.25	0.1202
Romantic Relationships	7.29 (2.63)	8.00 (4.04)	0.71	-3.26 – 4.68	0.7019
Peer Pressure	11.43 (5.97)	14.00 (3.46)	2.57	-3.11 – 8.25	0.3436
Future Uncertainty*	8.29 (2.29)	13.29 (1.80)	5.00	2.60 – 7.40	0.0007
School/Leisure Conflict	8.29 (3.30)	10.29 (4.68)	2.00	-2.71 – 6.72	0.3738
Financial Pressure*	5.71 (2.06)	9.57 (3.31)	3.86	0.65 – 7.07	0.0225
Emerging Adult Responsibility*	5.71 (3.28)	9.57 (3.31)	3.86	0.38 – 7.34	0.0326
Coping Strategies					
Avoidant	11.43 (3.36)	12.17 (3.19)	0.74	-3.28 – 4.76	0.6939
Emotion-Focused	14.86 (3.29)	17.67 (2.50)	2.81	-0.81 – 6.43	0.1157
Problem-Focused	16.57 (2.88)	18.17 (4.67)	1.60	-3.05 – 6.24	0.4660
Coping Resources					
Self-Efficacy					
Pathway	13.57 (1.90)	12.86 (4.10)	-0.71	-4.43 – 3.01	0.6832
Agency	12.71 (4.23)	12.00 (5.80)	-0.71	-6.63 – 5.20	0.7969
Self-Esteem	28.86 (7.08)	24.14 (5.08)	-4.71	-11.89 – 2.46	0.1779
Self-Confidence	21.43 (8.62)	18.71 (7.32)	-2.71	-12.02 – 6.60	0.5373
Social Support	42.71 (6.47)	41.71 (11.47)	-1.00	-11.85 – 9.85	0.8442
Special Person	13.29 (3.64)	14.00 (5.32)	0.71	-4.60 – 6.02	0.774
Family	15.71 (3.82)	13.43 (5.13)	-2.29	-7.55 – 2.98	0.3628
Friends	13.71 (3.99)	14.29 (3.99)	0.57	-4.07 – 5.22	0.7932
Family Standing	47.57 (11.75)	47.14 (11.67)	-0.43	[-14.06 - 13.21]	0.9465
Self-Standing School*	54.43 (15.19)	80.00 (14.14)	25.57	[8.48 - 42.66]	0.0068
Household Size	4.42 (1.40)	3.43 (0.98)	-1.00	-2.40 – 0.40	0.1465
Years living in current home	15.14 (2.12)	10.86 (3.80)	-4.29	-7.87 - -0.70	0.0230
Single-Parent (Mother) Household	14.29%	57.14%	--	--	--
Sexuality (% Other than Straight)	28.57%	16.67%	--	--	--
Gender (% Female)	28.57%	57.14%	--	--	--

	Reputation of West Virginia		Diff	Diff CI	p-value
	Positive (n=7)	Negative (n=7)			
Race (% Non-white)	100.00%	14.29%	--	--	--

Notes: *Differences between females and males statistically significantly different (p<.05) based on two samples independent t-tests, or where tests of normality failed, the Wilcoxon Rank Sum (Mann-Whitney U) test were used to confirm differences. .SD is standard deviation. CI is the 95% confidence interval.

Overall stress is statistically significantly higher among those that feel West Virginia has a negative reputation. We can be 95% confident that overall stress is at least one and at most 63.85 larger for those that report West Virginia has a negative reputation (t^*=2.25, p=.044). Of the nine specific domains of stress included in the current study, stress of home life, school performance, school attendance, romantic relationships, and peer pressure are not significantly different between those who feel West Virginia has a positive or negative attitude. Stress of future uncertainty, however, is statistically significantly different between the two groups. We can be 95% confident that stress of future uncertainty is at least 2.60 and at most 7.40 larger among those who believe WV has a negative reputation (t^*=4.54, p=.001). Stress of school-leisure conflict is not significantly different between the groups. Stress related to financial pressures was also significantly higher for those who thought WV had a negative reputation. With 95% confidence, the stress of financial pressure is at least 0.65 and at most 7.07 higher for those that indicated WV has a negative reputation (t^*=2.62, p=.023). Stress related to emerging adult responsibilities was similarly significantly higher for those who thought WV has a negative reputation. We can be 95% confident that the stress of emerging adult responsibilities is at least 0.38 and at most 7.34 higher for those that indicated WV has a negative reputation (t^*=2.42, p=.033).

None of the three types of coping strategies (avoidant, emotion-focused, nor problem-focused) differed significantly between the two groups (those who feel the state's reputation is negative and those who view it as positive). The same is true for both types of self-efficacy (pathway and agency), neither of which are statistically significantly different between the groups. None of the coping resources (self-efficacy, self-esteem, self-confidence) were different between those who thought the reputation of WV was negative or positive. Social support, together and each subdomain (special person, friends, and family), were also not significantly different by group.

Where student placed themselves in the "ladder" of standing in American society did not differ between the two groups either, but perceived social standing in school did differ significantly. Students who thought the state had a negative reputation ranked themselves, on average, 25.57 less than those who thought the state had a positive reputation. We can be 95% confident that students' social standing in school for those that aid the state had a negative reputation was at least 8.48 and at most 42.66 larger than the perceived social standing in school of those who thought the state had a positive reputation ($t*$=3.26, p=.007). While household size only differed by an average of one person between the groups (and not statistically significantly so), how long an individual had resided in their home was significantly different by group (p=.023). The longer students had lived in their current home the more likely they thought the state had a positive reputation, with students reporting a positive reputation of the state living in their current home an average of five years longer (or likely, since birth). The proportion of the group that resided in single-parent households also did not differ significantly between the groups. Further, two-sample tests of proportions indicate no significant difference in proportions of adolescents by sexuality, gender, or race based on whether they thought the state of West Virginia had a positive or negative reputation. While, again, I am working with a limited number of observations, there is some evidence that students who believe that the place where they live has a bad reputation may be associated with increased levels of overall stress for adolescents, as well as stress of future uncertainty, financial pressures, and emerging adult responsibilities.

The levels of self-rated health (SRH) and stress in this academic cohort of adolescents in this study is like that found in seminal research of adolescent health and stress, with few exceptions. At the current level of analysis, however, SRH seems to have a relationship with none of the stress process measures, outside of coping strategies among the first-year respondents, nor do there seem to be patterns between how self-rated health is determined and social standing, perceived reputation of West Virginia or membership in a stigmatized group. While data were severely limited regarding variability in sexuality, and especially race and ethnicity, it was difficult to make any comparisons. Students who identified as having a Hispanic ethnicity had significantly lower stress scores across several domains. Those who identified as other than straight did have significantly lower self-esteem as well, which in the stress process is considered a coping resource that mediates the relationship between stressors and a broad range of health outcomes.

Self-esteem, along with one of the other coping resources – self-confidence – were also found to significantly decrease between the first and third year of the study, which included between them the beginning of the COVID pandemic. It is proposed that over time, stress (especially chronic stress) can wear on these resources and even result in the use of maladaptive, or avoidant or purely emotion-focused, coping strategies. Stigmatized statuses may increase stress as well as effect coping resources and strategies and could even influence social support if stigmatized individuals withdraw to cope. Spatial stigma works through the same process, and so it was hypothesized that perceptions of the reputations of the state of West Virginia would be related to one or more of the measures related to the stress process. It turned out that those who perceived their state as having a negative reputation had higher average levels of overall stress and well as higher stress across three domains of stress directly related to moving into the world as independent adults – future uncertainty, financial pressures, and emerging adult responsibilities. While no differences and little variability in SRH was observed at this level of analysis, it is anticipated that as the study participants move into adulthood patterns may emerge that tie life trajectories to SRH, measures of the stress process, and perceived spatial stigma.

Chapter 7 Summary, Conclusions, and Directions for Future Research

Initially, I was primarily interested in observing the parallel trajectories of health and education unfold, which is why I studied adolescents. I began where the current manuscript ends. As I settled into the original inquiry early in my doctoral studies, the theme of place would emerge during the same time that I sought a way to contextualize the social position of a person (or group of people) – in this case a group of adolescents from West Virginia – within the larger social structure to which they belong. I wanted to find a way to add context to the fact that the first year of the study every student in the cohort qualified for free and reduced lunches, or that the median income for the county was just over $40,000 a year. I also wanted to honor what students saw as unique to the place that they lived and the way the outside world perceived and projected the image of the state and its residents. I found the answers in Pierre Bourdieu's field theory and the concept of spatial stigma, bridged through the work of Hatzenbuehler, Phelan and Link and the theory of the fundamental social causes of health inequalities. While Bourdieu provided the social field onto which I was able to place the states and counties within the distribution of capital resources, both Bourdieu and the spatial stigma literature pointed to a need to go beyond measures of class (and access to resources alone) to include perceptions about what those positions mean in society, both from within and without.

In the statistical distribution of states in the US, based on median economic and proportion of cultural capital available, West Virginia lays at the bottom – as far outside the field of power and the dominant culture being negotiated there as nearly any other state in the nation. This position is related to the health of US states, and those lowest on these measures, such as West Virginia, have the lowest ranked health. While there is no clear relationship between measures of unequal access to economic capital by class, sex, race, or ability and the position a state holds in the distribution of capital, these measures are significantly related to the percent of the population with fair or poor health and life expectancy. In every state in the nation, and I would venture every county in nearly every state, there are existing inequalities in pay, positions, promotions, and possibilities based on sex, race, and ability. These are the resources used to prevent and treat illness and disease, and to define and curate health. Moving forward, if the goal is to increase health, or treat and prevent disease beyond the individual level, those inequalities in access to capital are the first thing to address.

Capital resources are unequally distributed in West Virginia just as they are across states, and just as they were at the national level, unequal access to capital resources is related to lower life expectancies. The most persistent relationship at the county level within the state of West Virginia was between income inequality (measured using the GINI Index) and self-rated health (SRH). There were also important relationships between the black-white and gender wage-gaps and life expectancy across counties, but the data available by race limited the analysis. Aiming efforts at decreasing income inequality in the state or decreasing gaps in pay based on sex, race, or ability, therefore, would likely improve measures of health for a broad swath of the state's population. But conversations and representations about health in West Virginia focus not on income inequality, but on addiction, an aging population, illnesses related to environmental pollution, and limited access to health care services. But above all, addiction.

On my first day at the county high school, I was told that the class I would be joining was the "worst" in school history and lines were immediately drawn by teachers to the height of the opioid epidemic of the early 2020s. And indeed, the class was loud, my observations nearly every day noting the process by which the teachers gain moments of calm and learning, in what I would refer to as chaos, a cacophony of unrelated questions, and near constant challenges to the teachers' path forward each day. Yet some teachers viewed many in the class as particularly smart, and in the end, I would see most make it through to graduation. The students in this study also recognized the challenges related to drugs and addiction in their communities and attached that to the media portrayal of the state. Many families in the county, including faculty at the high school, have felt the loss of overdose and the subject was not broached lightly or regularly but it was always there. Stigma related to addiction intersects with other stigmatized statuses exponentiating the effects on outcomes such as stress, coping, and health. And while the state of West Virginia does have higher proportions of people who are white, there is still diversity to be celebrated in the state, and again, known inequalities in access to economic capital at the root of all outcomes.

And just as with the other themes captured in the content media analysis, adolescents recognized that the lack of jobs and opportunity were important negatives about the state, and this could also influence the esteem and confidence with which they were able to move out of the pandemic and into adulthood. Overall, the students were correct about my needing to understand something specific about the place where they were from to know something about their health

and lives. While the students' visions of being portrayed as the hillbilly did not materialize in the media content, the stereotype of the hillbilly is certainly not dead in popular culture. Two students echoed the conservative (and closed-minded) theme, as well as that of drug addiction when talking about the negative media image of the state – though it is difficult to tell if "most of the people...on drugs" are outside or of her own family. Finally, few connections were made to coal, especially in relation to jobs in the county. The county has been reliant on coal tax abatements in the past, and in its history prospered from the extraction of coal and timber but today these industries offer fewer jobs each year. The influence is there, and you cannot drive far across the state before encountering Friends of Coal advertising – and they sponsor events and scholarships across the state – advocating for the industry while solidifying the image of Coal Country in the minds of West Virginians and all Americans. Plays like *Coal Country* build further on tales of suffering that again contrast the natural beauty with the anguish felt by those calling WV home.

The greatest limitation of the current study, at every level of analysis, was the relatively small number of cases, whether those be states, counties, or adolescents. For the state and county analyses there were likely many methods that could have been used to define and operationalize the social field and equal access to economic capital. Similarly, measures of access to educational capital could have been considered in addition to economic capital, or in lieu of, but overall, and as a heuristic device it accomplished the task of situating West Virginia in the structure of the United States. Likewise, in the media content analysis, other choices could have been made. Based on ratings by the online media outlet AllSides.com, while the New York Times does have a left-leaning bias the Wall Street Journal is central rated (AllSides 2023). This would mean that the narrative presented through the media content analysis above is left leaning politically. There were likely better news outlets or other media sources to select that would have captured a wider readership. I also see the benefit of local media analyses to understand how districts, towns, regions, or neighborhoods might be represented in state media. And finally, my work with the group of adolescents was broken and limited by the incursion of the COVID pandemic and while it is my hope for my own future research that there is something to be learned from COVID related data I collected from the adolescents in this study, I was limited in what I could observe over time. I would have liked to have gone more in depth with the students and their families to reach a better understanding of the formation of practices and lifestyles. Or, I would have preferred to reach more students at both time points with questions related to

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spatial stigma. The analyses presented however, provide a theoretically based approach for understanding how places and socioeconomic position define the structural determinants that shape the social determinants so often focused on by health equalities research. And directions for future research would be to consider more sophisticated modeling of the social field. And to investigate the measures and relationships proposed in the stress process with a larger population that would allow for rural-urban and other comparisons across the model constructs.

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APPENDIX

Appendix A: Classroom Observation Forms (Year 1)

DESCRIPTION OF ACTIVITY:
WHO, WHAT, WHEN, WHERE, HOW

Day and Date: _____

REFLECTIONS:
OWN POSITIONALITY, MEANING

EMERGING QUESTIONS/ANALYSIS:
POTENTIAL LINES OF INQUIRY, THEORIES, COMMON
NARRATIVES

FUTURE ACTION:
INCLUDING FURTHER CONTACTS, INCLUDE TIMESCALES

BOARD

Day and Date: _____

160

DESK
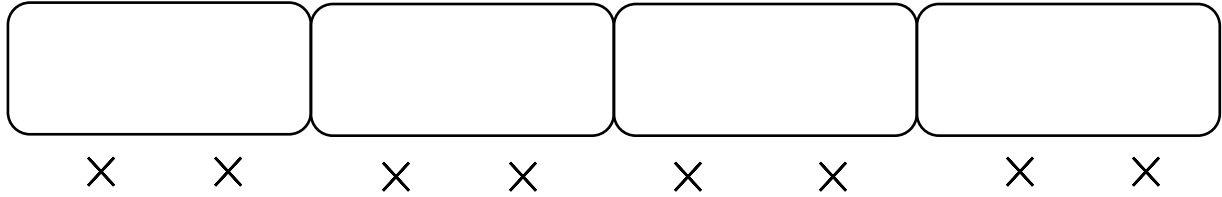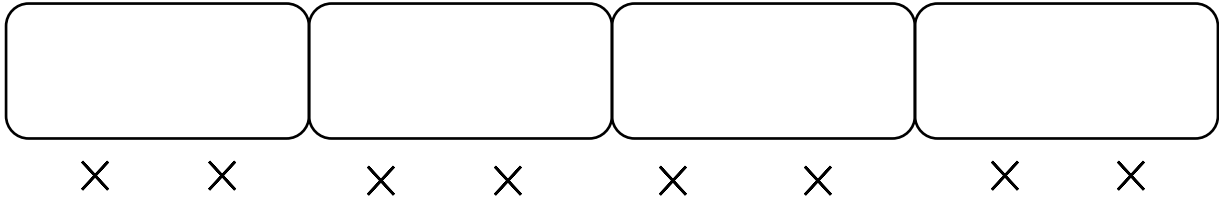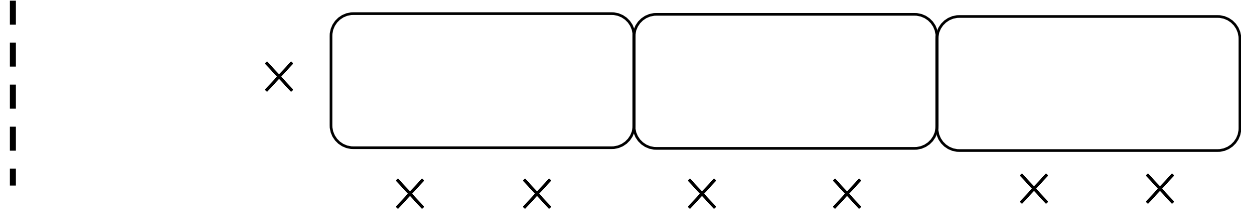
Period:
Present:

Teacher
English
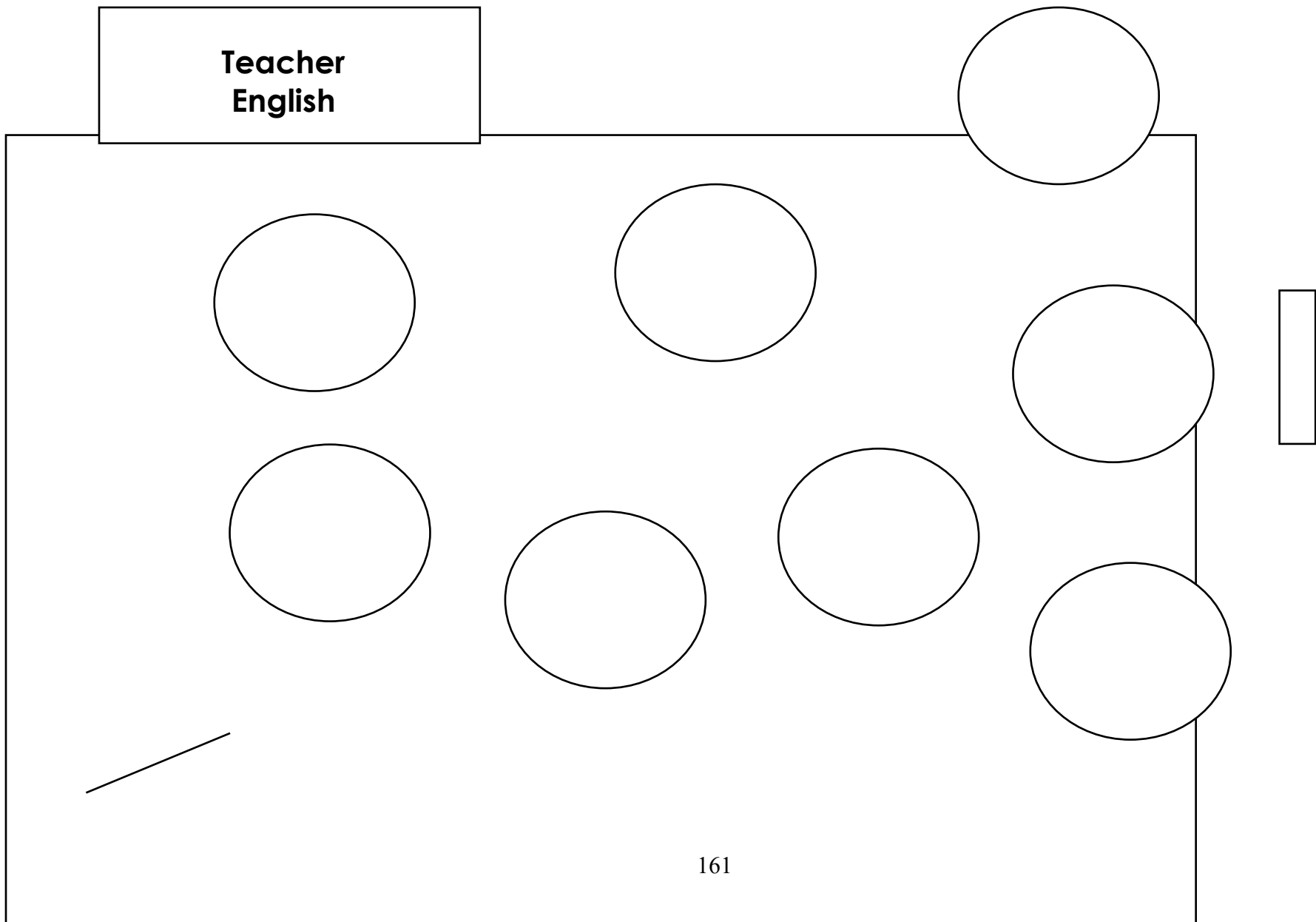
APPENDIX B*: Student Questionnaire (Year 1)*

Age: _____

How many years have you been a student at this school? (Check one)
☐ This is my first year ☐ This is my second year ☐ This is my third year
☐ This is my fourth year ☐ This is my fifth year ☐ This is my sixth year

What elementary school did you attend? (Check one)
☐ Hacker Valley ☐ Webster Springs ☐ Glade
☐ Other (specify): _____

What town do you live in, or closest to? _____

Are you of Hispanic or Spanish origin? (Check one) ☐ Yes ☐ No

Which one category best describes your racial background? (Check one)
☐ White ☐ Black or African American ☐ American Indian or Native American
☐ Asian or Pacific Islander ☐ Other: _____

What sex were you assigned at birth, meaning on your original birth certificate? (Check one)
☐ Female ☐ Male

A person's appearance, style, or dress may affect the way people think of them. On average, how do you think people would describe your appearance style, or dress? (Check one)
☐ Very feminine ☐ Mostly feminine ☐ Somewhat feminine
☐ Equally feminine and masculine
☐ Somewhat masculine ☐ Mostly masculine ☐Very masculine

A person's mannerisms (such as the way they walk or talk) may affect the way people think of them. On average, how do you think people would describe your mannerisms? (Check one)
☐ Very feminine ☐ Mostly feminine ☐ Somewhat feminine
☐ Equally feminine and masculine
☐ Somewhat masculine ☐ Mostly masculine ☐ Very masculine

Do you think of yourself as: (Check one) ☐ Straight ☐ Bisexual ☐ Lesbian or Gay

Indicate your grades in each of the following subjects during the current school year.

	A	B	C	D	F
English/Language Arts	☐	☐	☐	☐	☐
Mathematics	☐	☐	☐	☐	☐
Science	☐	☐	☐	☐	☐
Social Studies	☐	☐	☐	☐	☐

In general, how is your health? Would you say... (Check one)
☐ Excellent ☐ Very Good ☐ Good ☐ Fair ☐ Poor

Please indicate how much you DISAGREE or AGREE with the following statements	Disagree Strongly 0	Disagree Moderately 1	Disagree Slightly 2	Agree Slightly 3	Agree Moderately 4	Agree Strongly 5
There is really no way I can solve some of the problems I have.	☐	☐	☐	☐	☐	☐
Sometimes I feel that I'm being pushed around in life.	☐	☐	☐	☐	☐	☐

Statement						
I have little control over the things that happen to me.	☐	☐	☐	☐	☐	☐
I can do just about *anything* I really set my mind to.	☐	☐	☐	☐	☐	☐
I often feel helpless in dealing with the problems of life.	☐	☐	☐	☐	☐	☐
What happens to me in the future mostly depends on me.	☐	☐	☐	☐	☐	☐
There is little I can do to change many of the important things in my life.	☐	☐	☐	☐	☐	☐
There is a special person who is around when I am in need.	☐	☐	☐	☐	☐	☐
There is a special person with whom I can share my joys and sorrows.	☐	☐	☐	☐	☐	☐
My family really tries to help me.	☐	☐	☐	☐	☐	☐
I get the emotional help and support I need from my family.	☐	☐	☐	☐	☐	☐
I have a special person who is a real source of comfort to me.	☐	☐	☐	☐	☐	☐
My friends really try to help me.	☐	☐	☐	☐	☐	☐
I can count on my friends when things go wrong.	☐	☐	☐	☐	☐	☐
I can talk about my problems with my family.	☐	☐	☐	☐	☐	☐
I have friends with whom I can share my joys and sorrows.	☐	☐	☐	☐	☐	☐
There is a special person in my life who cares about my feelings.	☐	☐	☐	☐	☐	☐
My family is willing to help me make decisions.	☐	☐	☐	☐	☐	☐
I can talk about my problems with my friends.	☐	☐	☐	☐	☐	☐
On the whole, I am satisfied with myself.	☐	☐	☐	☐	☐	☐
At times, I think I am no good at all.	☐	☐	☐	☐	☐	☐
I feel that I have a number of good qualities.	☐	☐	☐	☐	☐	☐
I am able to do things as well as most other people.	☐	☐	☐	☐	☐	☐
I feel I do not have much to be proud of.	☐	☐	☐	☐	☐	☐
I certainly feel useless at times.	☐	☐	☐	☐	☐	☐
I feel that I'm a person of worth, at least on an equal plane with others.	☐	☐	☐	☐	☐	☐
I wish I could have more respect for myself.	☐	☐	☐	☐	☐	☐
All in all, I am inclined to feel that I am a failure.	☐	☐	☐	☐	☐	☐
I take a positive attitude toward myself.	☐	☐	☐	☐	☐	☐

Please indicate how FALSE or TRUE the following statements are *for you*.	**Completely False** **0**	**Mostly False** **1**	**Slightly False** **2**	**Slightly True** **3**	**Mostly True** **4**	**Completely True** **5**
I can think of many ways to get out of a jam.	☐	☐	☐	☐	☐	☐
I energetically pursue my goals.	☐	☐	☐	☐	☐	☐
I feel tired most of the time.	☐	☐	☐	☐	☐	☐
There are lots of ways around any problem.	☐	☐	☐	☐	☐	☐
I am easily downed in an argument.	☐	☐	☐	☐	☐	☐

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I can think of many ways to get the things in life that are most important to me.	☐	☐	☐	☐	☐	☐
I worry about my health.	☐	☐	☐	☐	☐	☐
Even when others get discouraged, I know I can find a way to solve the problem.	☐	☐	☐	☐	☐	☐
My past experiences have prepared me well for my future.	☐	☐	☐	☐	☐	☐
I've been pretty successful in life.	☐	☐	☐	☐	☐	☐
I usually find myself worrying about something.	☐	☐	☐	☐	☐	☐
I meet the goals that I set for myself.	☐	☐	☐	☐	☐	☐

When I'm stressed or anxious, I do the following…	Never 0	Very Rarely 1	Rarely 2	Occasionally 3	Frequently 4	Very Frequently 5
I turn to school, work, or other activities to take my mind off things.	☐	☐	☐	☐	☐	☐
I concentrate my efforts on doing something about the situation I'm in.	☐	☐	☐	☐	☐	☐
I say to myself, "this isn't real."	☐	☐	☐	☐	☐	☐
I use alcohol or other drugs to make myself feel better.	☐	☐	☐	☐	☐	☐
I get emotional support from others.	☐	☐	☐	☐	☐	☐
I give up on trying to deal with it.	☐	☐	☐	☐	☐	☐
I take action to try to make the situation better.	☐	☐	☐	☐	☐	☐
I refuse to believe that it has happened.	☐	☐	☐	☐	☐	☐
I say things to let my unpleasant feelings escape.	☐	☐	☐	☐	☐	☐
I get help and advice from other people.	☐	☐	☐	☐	☐	☐
I try to see my problems in a different light, to make them seem more positive.	☐	☐	☐	☐	☐	☐
I criticize myself.	☐	☐	☐	☐	☐	☐
I try to come up with a plan or strategy about what to do.	☐	☐	☐	☐	☐	☐
I do something to think about it less, such as going to movies, watching TV, reading, daydreaming, sleeping, or shopping.	☐	☐	☐	☐	☐	☐
I try to find comfort in my religion or spiritual beliefs.	☐	☐	☐	☐	☐	☐
I think hard about what steps to take.	☐	☐	☐	☐	☐	☐
I make fun of the situation.	☐	☐	☐	☐	☐	☐

Rate how STRESSFUL the following items are for you…	Not at All 0	A Little 1	Moderately 2	Quite 3	Very 4
Concern about your future	☐	☐	☐	☐	☐
Having to make decisions about future work or education	☐	☐	☐	☐	☐
Putting pressure on yourself to meet your future goals	☐	☐	☐	☐	☐
Not getting enough time for leisure	☐	☐	☐	☐	☐
Not enough time for activities outside of school hours	☐	☐	☐	☐	☐

Not having enough time for fun	☐	☐	☐	☐	☐
Having too much homework	☐	☐	☐	☐	☐
Lack of freedom	☐	☐	☐	☐	☐
Stress of home life	☐	☐	☐	☐	☐
Arguments at home	☐	☐	☐	☐	☐
Disagreements between your parents	☐	☐	☐	☐	☐
Disagreements between you and your mother	☐	☐	☐	☐	☐
Disagreements between you and your father	☐	☐	☐	☐	☐
Lack of understanding by your parents	☐	☐	☐	☐	☐
Abiding by petty rules at home	☐	☐	☐	☐	☐
Living at home	☐	☐	☐	☐	☐
Not being taken seriously by your parents	☐	☐	☐	☐	☐
Little or no control over your life	☐	☐	☐	☐	☐
Lack of trust from adults	☐	☐	☐	☐	☐
Parents expecting too much from you	☐	☐	☐	☐	☐
Parents hassling you about the way you look	☐	☐	☐	☐	☐
Having to study things you do not understand	☐	☐	☐	☐	☐
Teachers expecting too much from you	☐	☐	☐	☐	☐
Difficulty with some subjects	☐	☐	☐	☐	☐
Keeping up with schoolwork	☐	☐	☐	☐	☐
Having to study things you are not interested in	☐	☐	☐	☐	☐
Having to concentrate too long during school hours	☐	☐	☐	☐	☐
Pressure of study	☐	☐	☐	☐	☐
Getting up early in the morning to go to school	☐	☐	☐	☐	☐
Compulsory school attendance	☐	☐	☐	☐	☐
Going to school	☐	☐	☐	☐	☐
Getting along with your boy/girlfriend	☐	☐	☐	☐	☐
Breaking up with your boy/girlfriend	☐	☐	☐	☐	☐
Making the relationship with your boy/girlfriend work	☐	☐	☐	☐	☐
Not having enough time for your boy/girlfriend	☐	☐	☐	☐	☐
Being ignored or rejected by person you want to date	☐	☐	☐	☐	☐
Pressure to fit in with peers	☐	☐	☐	☐	☐
Being hassled for not fitting in	☐	☐	☐	☐	☐
Peers hassling you about the way you look	☐	☐	☐	☐	☐
Being judged by your friends	☐	☐	☐	☐	☐
Disagreements between you and your peers	☐	☐	☐	☐	☐
Satisfaction with how you look	☐	☐	☐	☐	☐
Changes in your physical appearance with growing up	☐	☐	☐	☐	☐
Taking on new family responsibilities with growing older	☐	☐	☐	☐	☐
Employers expecting too much of you	☐	☐	☐	☐	☐
Work interfering with school and social activities	☐	☐	☐	☐	☐
Not enough money to buy the things you need	☐	☐	☐	☐	☐
Not enough money to buy the things you want	☐	☐	☐	☐	☐
Pressure to make more money	☐	☐	☐	☐	☐
Taking on new financial responsibilities with growing older	☐	☐	☐	☐	☐

APPENDIX C*: Student Questionnaire (Year 3)*

Student Study Number: _____   **Age**: _____
What grade are you currently in? □ 9th   □10th   □11th   □12th
Now, I am going to ask you about the place you live.
How many years have you lived in the house you currently live at? _____ years
How many people live in your house? _____ people
Do you have your own bedroom? (Check ONE) □ Yes   □ No
Who do you live with? (Check ALL that apply): □ Birth Mother □ Stepmother □ Birth Father   □ Stepfather □ Adoptive/Foster Mother □ Adoptive/Foster Father □ Grandmother □ Grandfather
□ Sister(s) – **How many?** _____   □ Brother(s) – **How many?** _____
□ Other Relative(s) **Who?**

_____

What town do you live in, or closest to? _____
Indicate how much you agree with the following statements:
Generally, the town you listed above has a good reputation with people living in the surrounding area (Check ONE)
□ Disagree Strongly   □ Disagree Moderately □ Disagree Slightly
□Agree Slightly   □ Agree Moderately   □ Agree Strongly
Generally, Webster County has a good reputation with people living in surrounding counties (Check ONE)
□ Disagree Strongly   □ Disagree Moderately □ Disagree Slightly
□Agree Slightly   □ Agree Moderately   □ Agree Strongly
Generally, West Virginia has a good reputation with people living in surrounding states (Check ONE)
□ Disagree Strongly   □ Disagree Moderately □ Disagree Slightly
□Agree Slightly   □ Agree Moderately   □ Agree Strongly
What is the reputation of West Virginia? (Check ONE)
□ Strongly Negative   □ Moderately Negative □ Slightly Negative
□ Slightly Positive   □ Moderately Positive   □ Strongly Positive
What is the image of West Virginia in the media? (Check ONE)
□ Strongly Negative   □ Moderately Negative □ Slightly Negative
□ Slightly Positive   □ Moderately Positive   □ Strongly Positive
How are people who live in West Virginia seen? (Check ONE)
□ Strongly Negative   □ Moderately Negative □ Slightly Negative
□ Slightly Positive   □ Moderately Positive   □ Strongly Positive
Is there a*nything* else you would say about where you live? Do you agree or disagree with the views about the reputation of West Virginia above?
Why? Name what you think is the best thing about West Virginia. Name what you think is the worst thing about West Virginia.

Please indicate how much you DISAGREE or AGREE with the following statements	Disagree Strongly 0	Disagree Moderately 1	Disagree Slightly 2	Agree Slightly 3	Agree Moderately 4	Agree Strongly 5
There is really no way I can solve some of the problems I have.	□	□	□	□	□	□

Statement						
Sometimes I feel that I'm being pushed around in life.	☐	☐	☐	☐	☐	☐
I have little control over the things that happen to me.	☐	☐	☐	☐	☐	☐
I can do just about anything I really set my mind to.	☐	☐	☐	☐	☐	☐
I often feel helpless in dealing with the problems of life.	☐	☐	☐	☐	☐	☐
What happens to me in the future mostly depends on me.	☐	☐	☐	☐	☐	☐
There is little I can do to change many of the important things in my life.	☐	☐	☐	☐	☐	☐
There is a special person who is around when I am in need.	☐	☐	☐	☐	☐	☐
There is a special person with whom I can share my joys and sorrows.	☐	☐	☐	☐	☐	☐
My family really tries to help me.	☐	☐	☐	☐	☐	☐
I get the emotional help and support I need from my family.	☐	☐	☐	☐	☐	☐
I have a special person who is a real source of comfort to me.	☐	☐	☐	☐	☐	☐
My friends really try to help me.	☐	☐	☐	☐	☐	☐
I can count on my friends when things go wrong.	☐	☐	☐	☐	☐	☐
I can talk about my problems with my family.	☐	☐	☐	☐	☐	☐
I have friends with whom I can share my joys and sorrows.	☐	☐	☐	☐	☐	☐
There is a special person in my life who cares about my feelings.	☐	☐	☐	☐	☐	☐
My family is willing to help me make decisions.	☐	☐	☐	☐	☐	☐
I can talk about my problems with my friends.	☐	☐	☐	☐	☐	☐
On the whole, I am satisfied with myself.	☐	☐	☐	☐	☐	☐
At times, I think I am no good at all.	☐	☐	☐	☐	☐	☐
I feel that I have a number of good qualities.	☐	☐	☐	☐	☐	☐
I am able to do things as well as most other people.	☐	☐	☐	☐	☐	☐
I feel I do not have much to be proud of.	☐	☐	☐	☐	☐	☐
I certainly feel useless at times.	☐	☐	☐	☐	☐	☐
I feel that I'm a person of worth, at least on an equal plane with others.	☐	☐	☐	☐	☐	☐
I wish I could have more respect for myself.	☐	☐	☐	☐	☐	☐
All in all, I am inclined to feel that I am a failure.	☐	☐	☐	☐	☐	☐
I take a positive attitude toward myself.	☐	☐	☐	☐	☐	☐

Please indicate how FALSE or TRUE the following statements are *for you*.	Completely False 0	Mostly False 1	Slightly False 2	Slightly True 3	Mostly True 4	Completely True 5
I can think of many ways to get out of a jam.	☐	☐	☐	☐	☐	☐
I energetically pursue my goals.	☐	☐	☐	☐	☐	☐

I feel tired most of the time.	☐	☐	☐	☐	☐	☐
There are lots of ways around any problem.	☐	☐	☐	☐	☐	☐
I am easily downed in an argument.	☐	☐	☐	☐	☐	☐
I can think of many ways to get the things in life that are most important to me.	☐	☐	☐	☐	☐	☐
I worry about my health.	☐	☐	☐	☐	☐	☐
Even when others get discouraged, I know I can find a way to solve the problem.	☐	☐	☐	☐	☐	☐
My past experiences have prepared me well for my future.	☐	☐	☐	☐	☐	☐
I've been pretty successful in life.	☐	☐	☐	☐	☐	☐
I usually find myself worrying about something.	☐	☐	☐	☐	☐	☐
I meet the goals that I set for myself.	☐	☐	☐	☐	☐	☐

When I'm stressed or anxious, I do the following…	Never 0	Very Rarely 1	Rarely 2	Occasionally 3	Frequently 4	Very Frequently 5
I turn to school, work, or other activities to take my mind off things.	☐	☐	☐	☐	☐	☐
I concentrate my efforts on doing something about the situation I'm in.	☐	☐	☐	☐	☐	☐
I say to myself, "this isn't real."	☐	☐	☐	☐	☐	☐
I use alcohol or other drugs to make myself feel better.	☐	☐	☐	☐	☐	☐
I get emotional support from others.	☐	☐	☐	☐	☐	☐
I give up on trying to deal with it.	☐	☐	☐	☐	☐	☐
I take action to try to make the situation better.	☐	☐	☐	☐	☐	☐
I refuse to believe that it has happened.	☐	☐	☐	☐	☐	☐
I say things to let my unpleasant feelings escape.	☐	☐	☐	☐	☐	☐
I get help and advice from other people.	☐	☐	☐	☐	☐	☐
I try to see my problems in a different light, to make them seem more positive.	☐	☐	☐	☐	☐	☐
I criticize myself.	☐	☐	☐	☐	☐	☐
I try to come up with a plan or strategy about what to do.	☐	☐	☐	☐	☐	☐
I do something to think about it less, such as going to movies, watching TV, reading, daydreaming, sleeping, or shopping.	☐	☐	☐	☐	☐	☐
I try to find comfort in my religion or spiritual beliefs.	☐	☐	☐	☐	☐	☐
I think hard about what steps to take.	☐	☐	☐	☐	☐	☐
I make fun of the situation.	☐	☐	☐	☐	☐	☐

Rate how STRESSFUL the following items are for you…	Not at All 0	A Little 1	Moderately 2	Quite 3	Very 4
Concern about your future	☐	☐	☐	☐	☐
Having to make decisions about future work or education	☐	☐	☐	☐	☐
Putting pressure on yourself to meet your future goals	☐	☐	☐	☐	☐

	Not at All 0	A Little 1	Moderately 2	Quite 3	Very 4
Not getting enough time for leisure	☐	☐	☐	☐	☐
Not enough time for activities outside of school hours	☐	☐	☐	☐	☐
Not having enough time for fun	☐	☐	☐	☐	☐
Having too much homework	☐	☐	☐	☐	☐
Lack of freedom	☐	☐	☐	☐	☐
Stress of home life	☐	☐	☐	☐	☐
Arguments at home	☐	☐	☐	☐	☐
Disagreements between your parents	☐	☐	☐	☐	☐
Disagreements between you and your mother	☐	☐	☐	☐	☐
Disagreements between you and your father	☐	☐	☐	☐	☐
Lack of understanding by your parents	☐	☐	☐	☐	☐
Abiding by petty rules at home	☐	☐	☐	☐	☐
Living at home	☐	☐	☐	☐	☐
Not being taken seriously by your parents	☐	☐	☐	☐	☐
Little or no control over your life	☐	☐	☐	☐	☐
Lack of trust from adults	☐	☐	☐	☐	☐
Parents expecting too much from you	☐	☐	☐	☐	☐
Parents hassling you about the way you look	☐	☐	☐	☐	☐
Having to study things you do not understand	☐	☐	☐	☐	☐
Teachers expecting too much from you	☐	☐	☐	☐	☐
Difficulty with some subjects	☐	☐	☐	☐	☐
Keeping up with schoolwork	☐	☐	☐	☐	☐
Having to study things you are not interested in	☐	☐	☐	☐	☐
Having to concentrate too long during school hours	☐	☐	☐	☐	☐
Pressure of study	☐	☐	☐	☐	☐
Getting up early in the morning to go to school	☐	☐	☐	☐	☐
Compulsory school attendance	☐	☐	☐	☐	☐
Going to school	☐	☐	☐	☐	☐
Getting along with your boy/girlfriend	☐	☐	☐	☐	☐
Breaking up with your boy/girlfriend	☐	☐	☐	☐	☐
Making the relationship with your boy/girlfriend work	☐	☐	☐	☐	☐
Not having enough time for your boy/girlfriend	☐	☐	☐	☐	☐
Being ignored or rejected by person you want to date	☐	☐	☐	☐	☐
Pressure to fit in with peers	☐	☐	☐	☐	☐
Being hassled for not fitting in	☐	☐	☐	☐	☐
Peers hassling you about the way you look	☐	☐	☐	☐	☐
Being judged by your friends	☐	☐	☐	☐	☐
Disagreements between you and your peers	☐	☐	☐	☐	☐
Satisfaction with how you look	☐	☐	☐	☐	☐
Changes in your physical appearance with growing up	☐	☐	☐	☐	☐
Taking on new family responsibilities with growing older	☐	☐	☐	☐	☐
Employers expecting too much of you	☐	☐	☐	☐	☐
Work interfering with school and social activities	☐	☐	☐	☐	☐
Not enough money to buy the things you need	☐	☐	☐	☐	☐
Not enough money to buy the things you want	☐	☐	☐	☐	☐
Pressure to make more money	☐	☐	☐	☐	☐
Taking on new financial responsibilities with growing older	☐	☐	☐	☐	☐
How stressful has the coronavirus pandemic been for you?	☐	☐	☐	☐	☐

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Explain your answer to the last question. Why has the coronavirus pandemic been stressful, or NOT been stressful to you?

Has the coronavirus pandemic made you worry about the health of anyone in your family? Who and why?

Can you name at least one benefit of the coronavirus pandemic?

How has the coronavirus pandemic effected your daily life? Provide three examples.

In general, how is your health? Would you say... (Check ONE)
☐ Poor   ☐ Fair   ☐ Good   ☐ Very Good   ☐ Excellent

Why do you rate your health this way? Name at least four things that you think about when deciding how to rate your health.

Give an example of someone you know (or know of) other than yourself who you think has excellent health. Describe this person.

Why do you think this person has excellent health? Name at least four things that make you think this person's health is excellent.

A person's appearance, style, or dress may affect the way people think of them. On average, how do you think people would describe your appearance style, or dress? (Check one)
☐ Very feminine ☐ Mostly feminine ☐ Somewhat feminine ☐ Equally feminine and
    masculine
☐ Somewhat masculine   ☐ Mostly masculine ☐Very masculine

A person's mannerisms (such as the way they walk or talk) may affect the way people think of them. On average, how do you think people would describe your mannerisms? (Check one)
☐ Very feminine ☐ Mostly feminine ☐ Somewhat feminine ☐ Equally feminine and
    masculine
☐ Somewhat masculine   ☐ Mostly masculine ☐ Very masculine

Do you think of yourself as: (Check one) ☐ Straight   ☐ Bisexual   ☐ Lesbian or Gay

Indicate your grades in each of the following subjects during the current school year.

	A	B	C	D	F
English/Language Arts	☐	☐	☐	☐	☐
Mathematics	☐	☐	☐	☐	☐
Science	☐	☐	☐	☐	☐
Social Studies	☐	☐	☐	☐	☐

How did the coronavirus pandemic change school for you this year? Did it do anything to your grades? Share about your experience with school closing.

1. Family Standing in the United States

Imagine that this ladder pictures how American society is set up.

At the top of the ladder are the people who are the best off — those who have the most money, the highest amount of schooling, and the jobs that bring the most respect. At the bottom are people who are the worst off — those who have the least money, little or no education, no job, or jobs that no one wants or respects.

Now think about your family.

Please tell us where you think your family would be on this ladder. Mark the rung that best represents where your family would be on this ladder.

2. Standing in School

Assume that the ladder is a way of picturing your school.

At the top of the ladder are the people in your school with the most respect, the highest grades, and the highest standing. At the bottom are the people whom no one respects, whom no one wants to hang around, and who have the worst grades.

Where would you place yourself on this ladder? Mark the rung that best represents where you would be on this ladder.

APPENDIX D*: Student Diary Insert and Interview Guide*

Thank you for participating in this study. I want to understand what your daily schedule is like and how it has changed because of the coronavirus pandemic. You will be keeping a chronological record in your research journal of what you do every day for seven straight days. **You will need to write for about 2 hours each day (4 pages front and back). Use the questions below as a guide for what to record. Keep track of what time you do things.**

- Date the top of the pages.

- What time did you wake up? How did you sleep?

- **What's to Eat?** Every time you eat, answer the following questions.

  o When did you eat?

  o Where did you eat?

  o What exactly did you eat?

  o How did you get your food?

  o Who did you eat with?

- **What's Next? Record what you do each hour or so.** Use the questions below as a guide

  o Did you do have a class, work on homework, chores/work, play a sport, exercise, work on a project, read, watch t.v. or a movie, or play a video game?

    ▪ When did you do it?

    ▪ Where did you do it?

    ▪ What exactly did you do?

    ▪ How did you do it?

    ▪ Who did you do it with?

- At the end of the day write about how your day (or your family's life) is different because of the coronavirus pandemic. Or reflect on your day in any way you would like if you have space left.

Incentives

To show you how much your effort is appreciated you will receive a $140 incentive for a completed journal. When you have recorded seven days in a row of your schedule send your notebook back to me in the envelope it came in—it is stamped, addressed, and ready to go-and I will send you back a thank you note and your incentive. **Remember you must also return a consent form your parent has signed (blue document) and your own assent form (yellow document).**

If you or your parents have any questions, please text or call Misty Harris at (681)256 – 0308 or email her at miharris1@mix.wvu.edu.

Thank you!

Misty Harris

If you would like you can complete your daily journal online. You still, however, must return your signed parental consent forms, and your own assent forms, to participate. After receiving your forms, I will email you a link to the online journal.

Research Study – Illness and Education in Rural Appalachia: The Influence of Health, Medicine, and Education on the Social Mobility of Adolescents – IRB Protocol #180201330

Interview Guide

My name is Misty and I am working on my PhD in Sociology at WVU and I am studying health and education, so those are the topics we are going to talk about. Some of that stuff can be kind of sensitive so I want you to know that you don't have to answer any questions you are uncomfortable with and you can leave at any time. Okay, first I want to get your permission to audio record our conversation. I only do this so I make sure I get everything right and as soon as it is typed up into text, I'll destroy the recording. I really do appreciate you interviewing with me, before we start, do you have any questions for me?

1) Catch me up on you. Please tell me about how the last couple of years of high school went, and where you find yourself now. _____

2) Are you where you planned/hoped to be after high school? Your answer from the 2020/2021 survey (if you answered): [Student Survey_2020][what_do_you_want_to_fo_aft] _____

3) What (or who) has been your biggest barrier to getting to where you want to go, or where you are today? _____

4) What (or who) has been your biggest support or drive for getting you to where you wanted to go, or where you are today? _____

5) Can you think of a specific time when your health effected your education? How about with COVID? _____

6) Can you think of a specific time when the health of someone close to you effected your education? How about with COVID? _____

7) How would you describe your health?
   - ○ Poor
   - ○ Fair
   - ○ Good
   - ○ Very Good
   - ○ Excellent

8) Tell me about why you rate your health as [srh]? _____

9) How about the health of your family? Can you talk a little about how your family is doing? _____

10) Of all the people in your life who do you think influences your health the most, and how do they do so? _____

11) Of all the people in your life who do you think influences, or influenced, your education the most, and how do, or did, they do so? _____

12) What was the best thing about high school?

_____

13) What was the worst thing about high school?

_____

14) And what is currently the best thing about your life?

_____

15) Finally, in the context of what we have already talked about, tell me your opinion about the state of West Virginia. What has stayed the same and what has changed for you in this regard since you filled out the last survey? Your answer on the last survey (if you answered): [Student Survey_2020][do_you_agree_or_disagree_w]

_____

APPENDIX E*: Auxiliary Tables and Figures*

Figure E-1 Initial Coding Structure for Content Analysis of WSJ and NYT

Figure E-2 Final Coding Structure (Left Side)
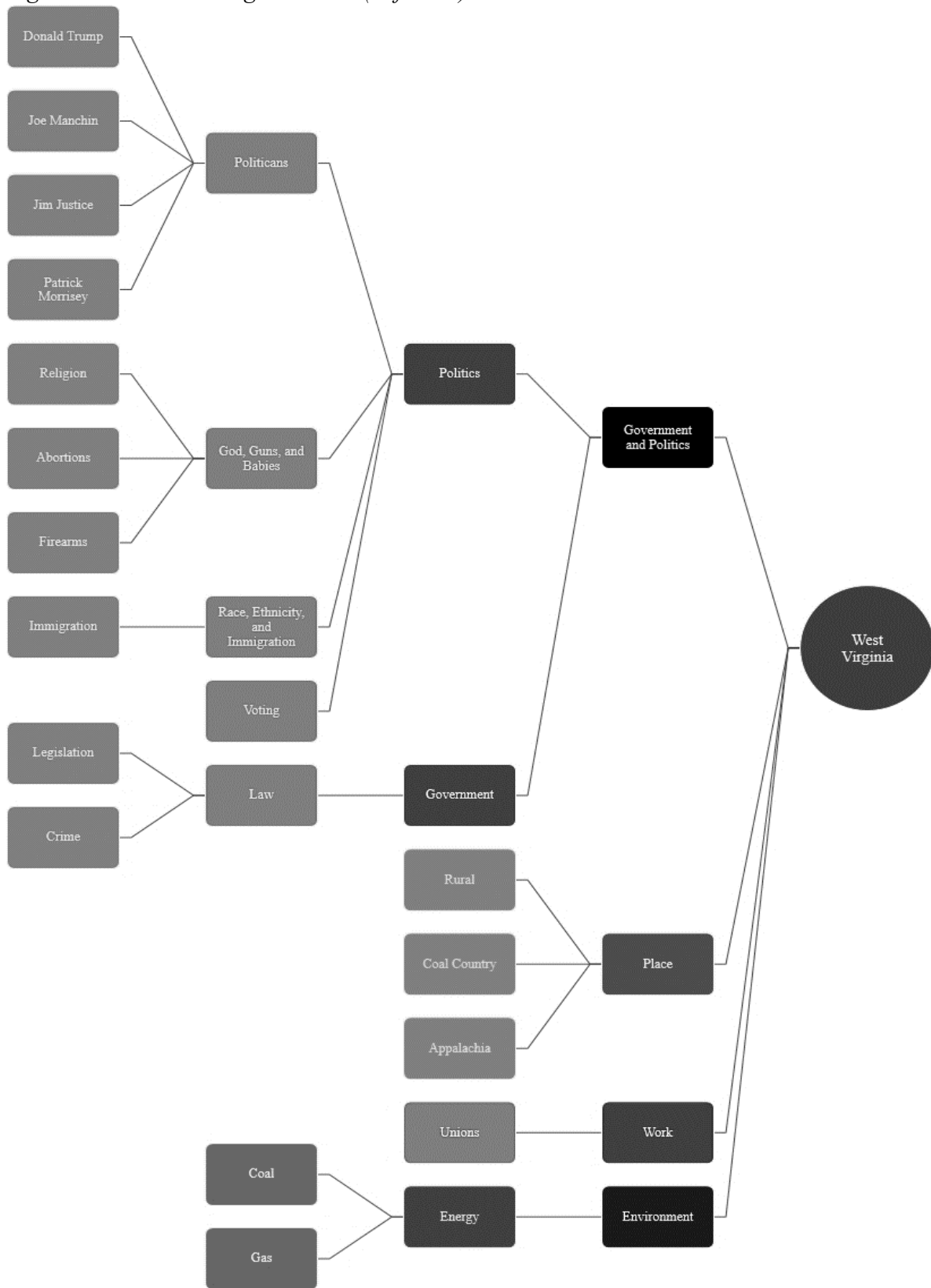
Figure E-3 Final Coding Structure (Right Side)
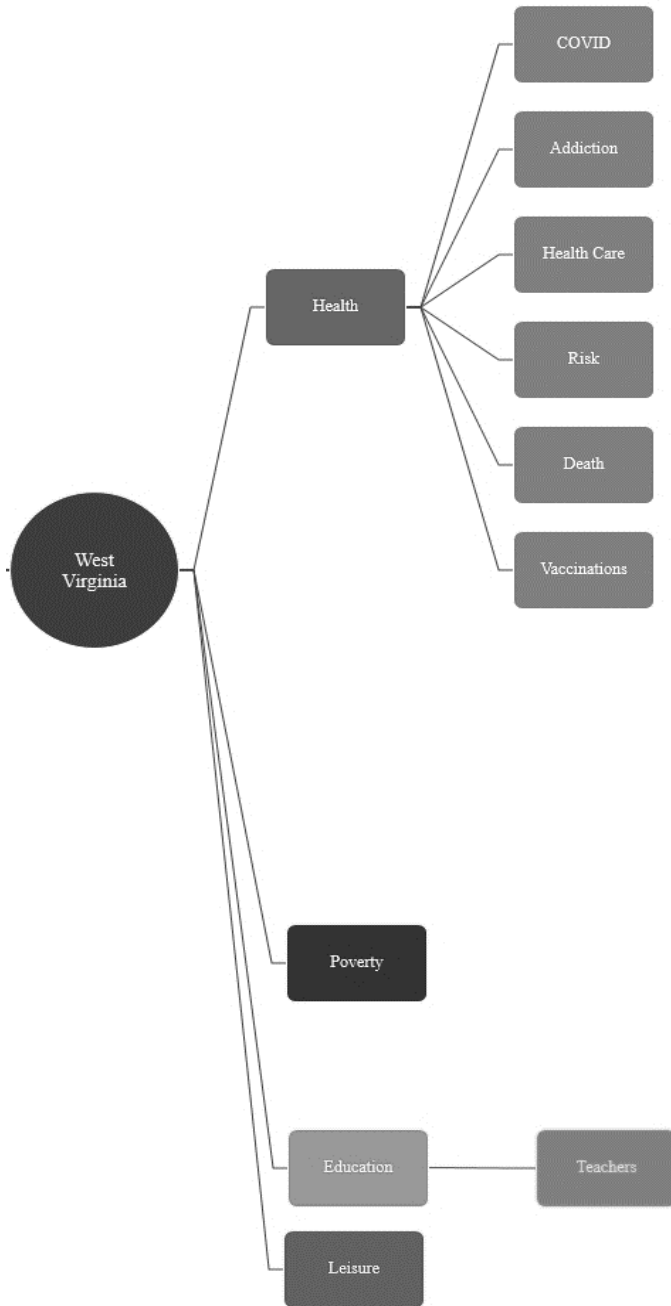
Table E-1 Access to Economic and Cultural Capital by State

State	Median Household Income (rank)	% 25+ with an Advanced Degree (rank)	Gini Index (Rank)	Gender Wage Gap (rank)	Black-White Wage Gap (rank)	Disability Wage Gap (rank)
Alaska	76715 (5)	10.8 (28)	0.42 (1)	0.71 (26)	0.67 (43)	0.81 (2)
Alabama	48486 (44)	9.31 (40)	0.48 (39)	0.67 (39)	0.72 (32)	0.71 (14)
Arkansas	45726 (48)	8.15 (48)	0.48 (34)	0.74 (11)	0.77 (16)	0.71 (12)
Arizona	56213 (30)	10.85 (27)	0.47 (29)	0.77 (4)	0.86 (4)	0.70 (18)
California	71228 (9)	12.48 (14)	0.49 (47)	0.75 (10)	0.87 (2)	0.70 (15)
Colorado	68811 (11)	14.95 (8)	0.46 (19)	0.73 (16)	0.80 (11)	0.68 (24)
Connecticut	76106 (6)	17.2 (3)	0.50 (49)	0.69 (32)	0.67 (44)	0.62 (42)
Delaware	65627 (14)	13.1 (13)	0.45 (16)	0.76 (7)	0.76 (22)	0.67 (32)
Florida	53267 (37)	10.63 (29)	0.49 (46)	0.79 (2)	0.80 (9)	0.72 (9)
Georgia	55679 (31)	11.75 (20)	0.48 (44)	0.73 (17)	0.76 (19)	0.74 (5)
Hawaii	78084 (3)	11.02 (24)	0.44 (5)	0.78 (3)	0.87 (3)	0.81 (3)
Iowa	58580 (26)	9.19 (41)	0.44 (6)	0.66 (42)	0.64 (46)	0.60 (45)
Idaho	53089 (38)	8.69 (42)	0.45 (11)	0.62 (48)	0.70 (36)	0.68 (25)
Illinois	63575 (16)	13.31 (11)	0.48 (43)	0.70 (29)	0.71 (33)	0.64 (39)
Indiana	54325 (35)	9.38 (39)	0.45 (12)	0.65 (46)	0.77 (17)	0.67 (28)
Kansas	57422 (28)	12.07 (18)	0.46 (21)	0.67 (40)	0.76 (23)	0.67 (31)
Kentucky	48392 (45)	9.78 (37)	0.48 (36)	0.71 (22)	0.75 (27)	0.67 (30)
Louisiana	47942 (47)	8.19 (47)	0.49 (48)	0.62 (47)	0.60 (49)	0.71 (13)
Massachusetts	77378 (4)	19.14 (1)	0.48 (45)	0.70 (27)	0.70 (38)	0.59 (48)
Maryland	81868 (1)	18.3 (2)	0.45 (14)	0.75 (9)	0.80 (10)	0.70 (19)
Maine	55425 (32)	11.27 (22)	0.45 (15)	0.73 (14)	0.54 (50)	0.59 (47)
Michigan	54938 (33)	11.18 (23)	0.47 (27)	0.66 (45)	0.72 (31)	0.64 (40)
Minnesota	68411 (12)	12.1 (17)	0.45 (13)	0.72 (19)	0.61 (48)	0.55 (50)
Missouri	53560 (36)	10.95 (26)	0.46 (24)	0.72 (20)	0.79 (12)	0.66 (33)
Mississippi	43567 (50)	8.28 (46)	0.48 (37)	0.71 (25)	0.68 (42)	0.72 (8)
Montana	52559 (39)	10.39 (32)	0.46 (22)	0.72 (21)	0.78 (13)	0.66 (34)
North Carolina	52413 (40)	10.95 (25)	0.48 (35)	0.75 (8)	0.76 (24)	0.69 (23)
North Dakota	63473 (17)	7.92 (50)	0.46 (20)	0.67 (41)	0.69 (39)	0.69 (20)
Nebraska	59116 (25)	10.54 (30)	0.44 (7)	0.68 (37)	0.75 (26)	0.70 (16)
New Hampshire	74057 (7)	14.09 (9)	0.44 (4)	0.69 (33)	0.69 (41)	0.59 (46)
New Jersey	79363 (2)	15.11 (7)	0.48 (42)	0.68 (35)	0.71 (34)	0.65 (36)
New Mexico	48059 (46)	11.84 (19)	0.48 (38)	0.74 (12)	0.77 (15)	0.69 (22)
Nevada	57598 (27)	8.39 (45)	0.46 (17. 5)	0.80 (1)	0.81 (8)	0.82 (1)
New York	65323 (15)	15.72 (5)	0.51 (50)	0.76 (5)	0.77 (18)	0.64 (37)
Ohio	54533 (34)	10.52 (31)	0.47 (26)	0.67 (38)	0.69 (40)	0.63 (41)
Oklahoma	51424 (41)	8.52 (44)	0.47 (28)	0.68 (34)	0.76 (20)	0.77 (4)
Oregon	59393 (23)	12.44 (15)	0.46 (23)	0.71 (23)	0.78 (14)	0.66 (35)
Pennsylvania	59445 (22)	12.15 (16)	0.47 (31)	0.69 (30)	0.74 (28)	0.62 (43)
Rhode Island	63296 (18)	13.42 (10)	0.47 (33)	0.73 (13)	0.76 (21)	0.68 (26)
South Carolina	51015 (42)	10.01 (35)	0.47 (32)	0.73 (18)	0.70 (37)	0.72 (10)
South Dakota	56499 (29)	8.65 (43)	0.45 (8)	0.71 (24)	0.73 (29)	0.64 (38)
Tennessee	50972 (43)	9.79 (36)	0.48 (40)	0.73 (15)	0.82 (7)	0.72 (11)
Texas	59570 (21)	10.16 (33)	0.48 (41)	0.69 (31)	0.89 (1)	0.74 (6)
Utah	68374 (13)	11.30 (21)	0.43 (2)	0.55 (50)	0.83 (6)	0.70 (17)

State	Median Household Income (rank)	% 25+ with an Advanced Degree (rank)	Gini Index (Rank)	Gender Wage Gap (rank)	Black-White Wage Gap (rank)	Disability Wage Gap (rank)
Virginia	71564 (8)	16.45 (4)	0.47 (30)	0.70 (28)	0.73 (30)	0.67 (29)
Vermont	60076 (20)	15.25 (6)	0.45 (10)	0.76 (6)	0.65 (45)	0.62 (44)
Washington	70116 (10)	13.17 (12)	0.46 (17.5)	0.66 (44)	0.75 (25)	0.68 (27)
Wisconsin	59209 (24)	10.13 (34)	0.45 (9)	0.68 (36)	0.63 (47)	0.59 (49)
West Virginia	44921 (49)	8.03 (49)	0.46 (25)	0.66 (43)	0.70 (35)	0.69 (21)
Wyoming	62268 (19)	9.5 (38)	0.43 (3)	0.60 (49)	0.85 (5)	0.73 (7)

Notes: Source: 2018 US Census Bureau's American Community Survey (ACS) 5-year (2014-2018) estimates.

Table E-2 Health Outcomes and Rankings by State

State	Percent Reporting Fair or Poor Self-Rated Health (rank)	Life Expectancy at Birth (rank)	United Health Foundation's America's Health Ranking
Alaska	18 (26)	78.80 (26)	29
Alabama	23 (46)	75.50 (46)	47
Arkansas	24 (47)	76 (42.5)	48
Arizona	19 (36)	79.90 (13.5)	31
California	18 (24. 5)	81.30 (2)	17
Colorado	14 (6.5)	80.50 (7. 5)	7
Connecticut	14 (6.5)	80.90 (5)	5
Delaware	19 (32)	78.70 (28)	30
Florida	19 (38)	80.10 (10. 5)	32
Georgia	19 (30)	77.70 (36)	41
Hawaii	15 (8)	82 (1)	2
Iowa	15 (14)	79.60 (18. 5)	15
Idaho	15 (10)	79.40 (22)	14
Illinois	18 (27)	79.30 (24)	27
Indiana	21 (40)	77.40 (39)	38
Kansas	17 (20)	78.60 (30)	25
Kentucky	25 (49)	75.90 (44)	42
Louisiana	23 (45)	76 (42.5)	49
Massachusetts	15 (11)	80.70 (6)	1
Maryland	15 (14)	79.60 (18.5)	16
Maine	16 (18)	--	23
Michigan	18 (28.5)	78.20 (34)	35
Minnesota	13 (1)	81 (3.5)	6
Missouri	19 (34)	77.60 (37.5)	40
Mississippi	25 (48)	74.90 (48)	50
Montana	16 (16.5)	78.60 (30)	22
North Carolina	19 (35)	78.10 (35)	33
North Dakota	15 (12)	79.70 (16)	18
Nebraska	15 (9)	79.60 (18.5)	13
New Hampshire	14 (3)	80.10 (10.5)	8
New Jersey	18 (28.5)	80.50 (7.5)	12
New Mexico	21 (43)	78.40 (32.5)	36
Nevada	20 (39)	78.40 (32.5)	37
New York	17 (23)	81 (3.5)	10
Ohio	19 (33)	77.60 (37.5)	39
Oklahoma	22 (44)	75.80 (45)	43
Oregon	18 (24.5)	79.60 (18.5)	20
Pennsylvania	19 (31)	78.60 (30)	28
Rhode Island	17 (22)	79.90 (13.5)	11
South Carolina	19 (37)	77 (40)	44
South Dakota	14 (5)	79.40 (22)	24
Tennessee	21 (42)	76.30 (41)	45
Texas	21 (41)	78.80 (26)	34
Utah	14 (2)	79.80 (15)	4
Virginia	16 (19)	79.40 (22)	19
Vermont	14 (4)	80 (12)	3

State	Percent Reporting Fair or Poor Self-Rated Health (rank)	Life Expectancy at Birth (rank)	United Health Foundation's America's Health Ranking
Washington	16 (16.5)	80.30 (9)	9
Wisconsin	17 (21)	--	21
West Virginia	26 (50)	75.30 (47)	46
Wyoming	15 (14)	78.80 (26)	26

Table E-3 Access to Economic and Cultural Capital by County

County (abbreviation)	Median Household Income (rank)	Percent of Population with an Advanced Degree (rank)	Gini Index (rank)	Gender Wage Gap (rank)	Black-White Wage Gap (rank)	Percent of Population Identifying as Black	Disability Wage Gap (rank)
Barbour (BA)	39,580 (37)	6.03 (27)	0.48 (49)	0.60 (41)	--	1.24	0.54 (51)
Berkeley (BE)	60,615 (2)	6.97 (16)	0.39 (2)	0.64 (32)	0.65 (17)	7.68	0.60 (45)
Boone (BO)	38,642 (41)	3.51 (51)	0.46 (38)	0.56 (47)	0.61 (22)	0.92	1.02 (4)
Braxton (BR)	42,213 (24)	4.50 (43)	0.43 (15)	0.53 (51)	--	0.39	0.66 (39)
Brooke (BK)	49,772 (7)	7.21 (11)	0.39 (1)	0.61 (37)	0.35 (29)	1.75	0.68 (35)
Cabell (CA)	38,321 (43)	11.09 (4)	0.51 (54)	0.70 (16)	0.50 (25)	5.04	0.58 (49)
Calhoun (CH)	37,610 (46)	2.96 (53)	0.44 (26.5)	0.49 (53)	--	0.03	1.12 (1)
Clay (CL)	35,875 (50)	3.27 (52)	0.43 (18)	0.71 (14)	--	0.01	0.75 (23)
Doddridge (DO)	46,449 (14)	3.68 (50)	0.42 (7)	0.71 (13)	--	1.35	0.72 (28)
Fayette (FA)	40,379 (31)	4.45 (44)	0.43 (19)	0.74 (11)	0.91 (9)	5.06	0.83 (13)
Gilmer (GI)	35,810 (51)	5.26 (33)	0.44 (21)	1.00 (1)	0.31 (31)	10.97	0.69 (32)
Grant (GR)	41,071 (29)	5.41 (32)	0.43 (10)	0.72 (12)	--	1.64	0.80 (19)
Greenbrier (GE)	39,038 (40)	6.99 (15)	0.47 (42)	0.75 (9)	0.95 (6)	2.44	0.76 (22)
Hampshire (HA)	40,099 (34)	4.94 (36)	0.43 (13)	0.68 (22)	0.29 (32)	1.47	0.67 (36)
Hancock (HN)	45,580 (18)	6.62 (21)	0.43 (11)	0.64 (31)	0.92 (8)	1.88	0.72 (26)
Hardy (HR)	47,186 (13)	6.06 (26)	0.43 (16)	0.77 (5)	1.20 (3)	5.5	0.99 (5)
Harrison (HI)	50,433 (5)	8.41 (9)	0.45 (32)	0.63 (34)	1.05 (4)	1.69	0.76 (21)
Jackson (JA)	44,783 (20)	6.27 (24)	0.46 (36)	0.66 (27)	--	0.08	0.70 (31)
Jefferson (JE)	76,503 (1)	12.02 (2)	0.41 (5)	0.59 (44)	0.79 (14)	6.36	0.59 (48)
Kanawha (KA)	45,426 (19)	10.5 (5)	0.48 (50)	0.76 (7)	0.72 (16)	7.25	0.68 (34)
Lewis (LE)	39,423 (38)	5.45 (31)	0.45 (33)	0.61 (38)	--	0.26	0.80 (17)
Lincoln (LI)	37,679 (45)	2.75 (54)	0.44 (26.5)	0.60 (40)	--	0.4	0.93 (8)
Logan (LO)	38,123 (44)	4.33 (47)	0.48 (48)	0.54 (48)	--	1.71	0.67 (38)
Marion (MA)	26,547 (55)	8.55 (7)	0.44 (28)	0.62 (36)	0.51 (23)	3.63	0.71 (29)
Marshall (MR)	48,605 (8)	6.92 (18)	0.45 (31)	0.61 (39)	0.38 (28)	0.98	0.86 (11)
Mason (MS)	43,918 (22)	3.91 (49)	0.43 (17)	0.52 (52)	1.25 (2)	0.41	0.80 (18)
McDowell (MD)	40,347 (32)	2.33 (55)	0.46 (39)	0.76 (6)	0.92 (7)	8.41	0.74 (25)
Mercer (ME)	39,372 (39)	7 (14)	0.44 (25)	0.69 (19)	0.62 (20)	6.25	0.65 (41)
Mineral (MI)	46,354 (15)	6.34 (23)	0.41 (6)	0.65 (30)	0.43 (27)	3.5	0.87 (9)
Mingo (MN)	31,305 (54)	4.61 (41)	0.47 (45)	0.59 (43)	0.80 (13)	2.65	0.83 (14)
Monongalia (ML)	49,926 (6)	20.1 (1)	0.53 (55)	0.74 (10)	0.80 (12)	3.61	0.60 (46)
Monroe (MO)	36,493 (48)	5.08 (34)	0.44 (22)	0.75 (8)	1.29 (1)	0.91	0.74 (24)
Morgan (MG)	50,661 (4)	7.76 (10)	0.42 (8)	0.68 (21)	--	0.71	0.98 (7)
Nicholas (NI)	38,468 (42)	6.60 (22)	0.45 (30)	0.59 (42)	--	0.79	1.02 (3)
Ohio (OH)	48,418 (10)	11.90 (3)	0.49 (51)	0.67 (25)	0.62 (19)	4.01	0.61 (44)

County (abbreviation)	Median Household Income (rank)	Percent of Population with an Advanced Degree (rank)	Gini Index (rank)	Gender Wage Gap (rank)	Black-White Wage Gap (rank)	Percent of Population Identifying as Black	Disability Wage Gap (rank)
Pendleton (PE)	41,210 (26)	6.19(25)	0.46 (40)	0.68 (23)	0.96 (5)	3.39	1.08 (2)
Pleasants (PL)	48,563 (9)	4.93 (37)	0.47 (46)	0.54 (49)	--	0.21	0.62 (43)
Pocahontas (PO)	39,702 (36)	5.71 (30)	0.46 (35)	0.77 (4)	--	0.43	0.87 (10)
Preston (PR)	48,317 (11)	6.96 (17)	0.42 (9)	0.64 (33)	0.32 (30)	4.73	0.86 (12)
Putnam (PU)	59,626 (3)	10.12 (6)	0.44 (20)	0.65 (29)	0.86 (11)	1.2	0.67 (37)
Raleigh (RA)	42,296 (23)	6.79 (19)	0.46 (37)	0.65 (28)	0.91 (10)	7.63	0.82 (15)
Randolph (RN)	41,094 (28)	7.09 (12)	0.50 (53)	0.66 (26)	0.61 (21)	1.95	0.66 (40)
Ritchie (RI)	44,472 (21)	4.54 (42)	0.45 (34)	0.63 (35)	--	0.07	--
Roane (RO)	34,300 (53)	5.01 (35)	0.47 (44)	0.69 (20)	--	0.08	0.41 (54)
Summers (SU)	36,049 (49)	5.74 (29)	0.43 (12)	0.86 (2)	0.62 (18)	4.33	0.77 (20)
Taylor (TA)	47,205 (12)	4.68 (40)	0.43 (14)	0.84 (3)	--	0.97	0.49 (53)
Tucker (TU)	45,655 (17)	7.06 (13)	0.40 (4)	0.70 (18)	--	0.47	0.82 (16)
Tyler (TY)	41,108 (27)	4.69 (38)	0.47 (43)	0.57 (46)	--	0.34	0.72 (27)
Upshur (UP)	40,401 (30)	6.76 (20)	0.45 (29)	0.70 (17)	0.75 (15)	1.84	0.58 (50)
Wayne (WA)	36,875 (47)	5.90 (28)	0.49 (52)	0.70 (15)	0.48 (26)	0.55	0.68 (33)
Webster (WE)	34,312 (52)	4.68 (39)	0.47 (47)	0.53 (50)	--	0.04	0.98 (6)
Wetzel (WT)	42,125 (25)	4.43 (45)	0.44 (23)	0.58 (45)	--	1.01	0.71 (30)
Wirt (WI)	40,189 (33)	4.25 (48)	0.40 (3)	0.43 (55)	--	1.43	0.60 (47)
Wood (WO)	45,958 (16)	8.52 (8)	0.46 (41)	0.68 (24)	0.51 (24)	1.34	0.63 (42)
Wyoming (WY)	40,045 (35)	4.34 (46)	0.44 (24)	0.46 (54)	--	0.97	0.53 (52)

Notes: Source: 2018 US Census Bureau's American Community Survey (ACS) 5-year (2014-2018) estimates.   -- missing data: Income by race and disability status was suppressed by the US Census Bureau due to small populations of West Virginians who were black and/or disabled.

Table E-4 Health Outcomes and Rankings by County

County (abbreviations)	Percent of Population Reporting Fair or Poor Health (rank)	Life Expectancy at Birth (rank)	RWJF County Health Ranking
Barbour (BA)	24 (36)	76.2 (23)	29
Berkeley (BE)	20 (8.5)	75.4 (30.5)	7
Boone (BO)	27 (52.5)	71.8 (51)	52
Braxton (BR)	23 (29)	75.4 (30.5)	35
Brooke (BK)	20 (8.5)	76.5 (20)	8
Cabell (CA)	23 (29)	71.4 (52)	51
Calhoun (CH)	26 (48.5)	76.7 (17.5)	36
Clay (CL)	25 (42)	73.6 (42)	39
Doddridge (DO)	19 (3)	79.1 (1)	4
Fayette (FA)	24 (36)	72.9 (45)	42
Gilmer (GI)	27 (52.5)	77.4 (6)	21
Grant (GR)	23 (29)	79 (2.5)	23
Greenbrier (GE)	22 (20.5)	75.9 (27.5)	15
Hampshire (HA)	22 (20.5)	76.2 (23)	32
Hancock (HN)	21 (14.5)	74.9 (35.5)	28
Hardy (HR)	22 (20.5)	76.9 (12)	19
Harrison (HI)	21 (14.5)	75.3 (32)	30
Jackson (JA)	23 (29)	75.9 (27.5)	25
Jefferson (JE)	18 (1)	77.6 (4)	2
Kanawha (KA)	22 (20.5)	73.4 (43)	38
Lewis (LE)	23 (29)	72.3 (47)	44
Lincoln (LI)	25 (42)	71.9 (50)	50
Logan (LO)	26 (48.5)	70.1 (54)	53
Marion (MA)	20 (8.5)	68.6 (55)	55
Marshall (MR)	23 (29)	76.1 (25.5)	11
Mason (MS)	25 (42)	77.3 (8.5)	12
McDowell (MD)	32 (55)	73.9 (41)	43
Mercer (ME)	25 (42)	72.7 (46)	48
Mineral (MI)	20 (8.5)	76.4 (21)	6
Mingo (MN)	28 (54)	71 (53)	54
Monongalia (ML)	19 (3)	79 (2.5)	1
Monroe (MO)	23 (29)	77.1 (10.5)	10
Morgan (MG)	21 (14.5)	74.6 (37.5)	33
Nicholas (NI)	26 (48.5)	75 (33.5)	37
Ohio (OH)	20 (8.5)	75.8 (29)	18
Pendleton (PE)	23 (29)	77.4 (6)	26
Pleasants (PL)	22 (20.5)	76.2 (23)	5
Pocahontas (PO)	23 (29)	77.1 (10. 5)	24
Preston (PR)	20 (8.5)	76.8 (14)	16
Putnam (PU)	19 (3)	76.7 (17. 5)	3
Raleigh (RA)	25 (42)	73.1 (44)	47
Randolph (RN)	22 (20.5)	76.8 (14)	17
Ritchie (RI)	22 (20.5)	76.7 (17. 5)	9
Roane (RO)	25 (42)	72.2 (48)	45
Summers (SU)	25 (42)	74.6 (37.5)	40
Taylor (TA)	20 (8.5)	76.8 (14)	22

County (abbreviations)	Percent of Population Reporting Fair or Poor Health (rank)	Life Expectancy at Birth (rank)	RWJF County Health Ranking
Tucker (TU)	21 (14.5)	77.3 (8.5)	20
Tyler (TY)	20 (8.5)	76.1 (25.5)	27
Upshur (UP)	24 (36)	76.7 (17.5)	14
Wayne (WA)	26 (48.5)	74.1 (40)	46
Webster (WE)	26 (48.5)	74.2 (39)	41
Wetzel (WT)	24 (36)	74.9 (35. 5)	34
Wirt (WI)	24 (36)	77.4 (6)	13
Wood (WO)	22 (20.5)	75 (33.5)	31
Wyoming (WY)	26 (48.5)	72.1 (49)	49

Notes: Source: 2019 Robert Wood Johnson Foundation (RWJF) County Health Rankings and Roadmap Data.

Table E-5. Top 100 Most Frequently Occurring Words

Rank	All	WSJ	NYT
1	trump	republican	trump
2	president	school	president
3	national	news	national
4	health	court	health
5	republican	health	republican
6	school	election	home
7	home	mail	house
8	vote	gas	senator
9	house	trump	vote
10	senate	vote	senate
11	gas	voters	school
12	election	coal	country
13	senator	president	democrats
14	coal	students	gas
15	court	energy	federal
16	democrats	schools	energy
17	energy	senate	united
18	federal	patients	climate
19	country	workers	coal
20	voters	officials	election
21	need	online	need
22	public	federal	democratic
23	news	journal	administration
24	bill	national	bill
25	democratic	public	county
26	democrat	search	government
27	support	support	public
28	washington	law	american
29	county	betting	court
30	government	jobs	manchin
31	students	pay	democrat
32	manchin	sports	change
33	united	teachers	voters
34	administration	coronavirus	washington
35	american	districts	think
36	climate	democrats	left
37	work	education	work
38	schools	house	members
39	think	need	support

Rank	All	*WSJ*	*NYT*
40	workers	bill	city
41	change	democrat	power
42	local	washington	children
43	republicans	district	local
44	pay	home	money
45	members	hospital	office
46	district	june	help
47	left	republicans	ohio
48	law	street	republicans
49	medical	democratic	white
50	money	learning	congress
51	officials	natural	food
52	children	policy	medical
53	ohio	related	students
54	city	wall	district
55	power	chief	plant
56	voting	justice	campaign
57	help	voting	working
58	mail	well	big
59	office	based	carolina
60	policy	fall	far
61	hospital	higher	pay
62	far	local	program
63	well	mobile	voting
64	carolina	tax	life
65	jobs	director	news
66	judge	full	schools
67	natural	medical	judge
68	teachers	pipeline	workers
69	old	work	close
70	online	wyoming	party
71	big	ballots	social
72	campaign	country	business
73	coronavirus	county	major
74	program	covid	old
75	executive	economic	policy
76	white	executive	political
77	patients	florida	top
78	chief	gov	family
79	congress	inc	kavanaugh

Rank	All	*WSJ*	*NYT*
80	sports	issue	lavender
81	political	labor	law
82	tax	old	really
83	working	access	research
84	close	case	well
85	education	census	committee
86	florida	costs	executive
87	life	counties	hospital
88	plant	government	place
89	food	half	set
90	major	judge	something
91	research	start	americans
92	business	steel	governor
93	committee	system	natural
94	gov	away	officials
95	justice	continue	others
96	kavanaugh	economy	florida
97	social	football	got
98	half	libraries	union
99	others	majority	world
100	really	manchin	chief

Table E-6 Content Media Analysis Codebook

Code Name	Hierarchical Name	Description of Code
Government and Politics	Codes\\Government and Politics	This broad category captures the themes of government and politics, wherein politics are "the methods and tactics to influence government policy, policy-related attitudes, and activities, and government is "the formal organized agency that exercises power and control, especially through the creation and enforcement of laws" (Ferris and Stein 2018).
Government	Codes\\Government and Politics\Government	References government as a "formal organized agency that exercises power and control, especially through the creation and enforcement of laws" (Ferris and Stein 2018), and here is focused mainly on laws (legislation - or the making of the laws - and crime - or the breaking of laws) but also includes state-based administrative work by any government agency.
Law	Codes\\Government and Politics\Government\Law	References laws, or "types of norms that are formally codified to provide an explicit statement about what is permissible or forbidden; legal or illegal" (Ferris and Stein 2018).
Legislation	Codes\\Government and Politics\Government\Law \Legislation	References the making or challenging of laws in West Virginia or by West Virginians.
Crime	Codes\\Government and Politics\Government\Law \Crime	References actions or activities constituting an offense that can be punished by law.
Politics	Codes\\Government and Politics\Politics	References politicians and "the methods and tactics used to influence government policy, policy-related attitudes, and activities" (Ferris and Stein 2018) in relation to West Virginia or West Virginians.
Politicians	Codes\\Government and Politics\Politics\Politician s	References politicians in the United States.
Donald Trump	Codes\\Government and Politics\Politics\Politician s\Donald Trump	References politicians, specifically Donald J. Trump, U.S. president from 2017 to 2021 in relation to West Virginia, West Virginians, or political representatives of the state.
Joe Manchin	Codes\\Government and Politics\Politics\Politician s\Joe Manchin	References politicians, specifically Joseph Manchin III Senior United State senator from West Virginia (2010 - present). Governor of West Virginia (2005 - 2010). West Virginia Secretary of State (2001 - 2005).

Code Name	Hierarchical Name	Description of Code
Jim Justice	Codes\\Government and Politics\Politics\Politicians\Jim Justice	References politicians, specifically James Conley Justice II the Governor of West Virginia (2017 - present). Justice won the governor's race as a democrat but later announced he had switched to the republican party. Currently (2023) Justice is running for the senate seat from Joe Manchin. Jim Justice is also the owner/operator of some 50 companies, including his family's agricultural businesses and a golf resort in West Virginia, and most notably coal mines across West Virginia and in four other states.
Patrick Morrisey	Codes\\Government and Politics\Politics\Politicians\Patrick Morrisey	References politicians, specifically Patrick Morrisey who has been the Attorney General for the state of West Virginia since 2012 and is currently (2023) running for governor of West Virginia. Morrisey is a registered republican.
Shelley Moore Capito	Codes\\Government and Politics\Politics\Politicians\Shelley Moore Capito	References politicians, specifically Shelley Moore Capito is a United States Senator representing West Virginia since 2015, and the first female to do so. Prior to serving as a senator, she was a congressional district representative from 2001 – 2015. Moore Capito is a registered republican.
Caleb Hanna	Codes\\Government and Politics\Politics\Politicians\Caleb Hanna	References politicians, specifically Caleb Hanna who is a member of the West Virginia house of Delegates (since 2018). Hannah is a registered republican and identifies as a man who is black.
Carol Miller	Codes\\Government and Politics\Politics\Politicians\Carol Miller	References politicians, specifically Carol Miller, who is a congresswoman in West Virginia (since 2019). She also served in the WV House of Delegates from 2013 to 2019 and is a member of the republican party.
Richard Ojeda	Codes\\Government and Politics\Politics\Politicians\Richard Ojeda	References politicians, specifically Richard Ojeda is a retired US major in the Army who served in the West Virginia Senate from 2016 – 2019 and is a member of the democratic party.
God, Guns, and Babies	Codes\\Government and Politics\Politics\God, Guns, and Babies	References government and politics, specifically related to religion, firearms, and abortion in relation to West Virginia or West Virginians.

Code Name	Hierarchical Name	Description of Code
Religion	Codes\\Government and Politics\Politics\God, Guns, and Babies\Religion	References government and politics, specifically related to religion, or "any system of shared beliefs and rituals that identify a relationship between the sacred and the profane" (Ferris and Stein 2018), in West Virginia or of West Virginians.
Firearms	Codes\\Government and Politics\Politics\God, Guns, and Babies\Firearms	References government and politics, specifically related to firearms, handgun(s), gun(s), pistol(s), sidearm(s), or rifles in West Virginia or used by West Virginians.
Abortion	Codes\\Government and Politics\Politics\God, Guns, and Babies\Abortion	References government and politics, specifically related to abortion in relation to West Virginia or West Virginians.
Voting	Codes\\Government and Politics\Politics\Voting	References voting in the state of West Virginia or by West Virginians.
Race and White Supremacy, Antisemitic, and Anti-Muslim	Codes\\Government and Politics\Politics\Race and White Supremacy, Antisemitic, and Anti-Muslim	References race, which "is a socially constructed human classification system used to distinguish between groups of people who share phenotypical characteristics. Since race is socially constructed, dominant groups in society have shaped and informed racial categories in order to maintain systems of power—thereby also producing racial inequality" (Rey and DeLoatch 2018), or ethnicity, which is "a socially defined category based on a common language, religion, nationality, history, or some other cultural factor" (Ferris and Stein: 22) in relation to West Virginia or West Virginians.
Race	Codes\\Government and Politics\Politics\Race and White Supremacy, Antisemitic, and Anti-Muslim\Race	References race, which "is a socially constructed human classification system used to distinguish between groups of people who share phenotypical characteristics. Since race is socially constructed, dominant groups in society have shaped and informed racial categories in order to maintain systems of power—thereby also producing racial inequality" (Rey and DeLoatch 2018), or ethnicity, which is "a socially defined category based on a common language, religion, nationality, history, or some other cultural factor" (Ferris and Stein: 22) in relation to West Virginia or West Virginians.

Code Name	Hierarchical Name	Description of Code
Black	Codes\\Government and Politics\Politics\Race and White Supremacy, Antisemitic, and Anti-Muslim\Race\Black	References race, specifically in relation to West Virginians who are black.
White	Codes\\Government and Politics\Politics\Race and White Supremacy, Antisemitic, and Anti-Muslim\Race\White	References race, specifically in relation to West Virginians who are white.
White Supremacy, Antisemitic, and Anti-Muslim	Codes\\Government and Politics\Politics\Race and White Supremacy, Antisemitic, and Anti-Muslim\White Supremacy, Antisemitic, and Anti-Muslim	References race, specifically in relation to ideologies related to white supremacy, antisemitism, or anti-Muslim attitudes or actions in or by West Virginia or West Virginians.
Anti-Muslim	Codes\\Government and Politics\Politics\Race and White Supremacy, Antisemitic, and Anti-Muslim\White Supremacy, Antisemitic, and Anti-Muslim\Anti-Muslim	References race, specifically in relation to anti-Muslim attitudes or actions in or by West Virginia or West Virginians.
Antisemitic	Codes\\Government and Politics\Politics\Race and White Supremacy, Antisemitic, and Anti-Muslim\White Supremacy, Antisemitic, and Anti-Muslim\Antisemitic	References race, specifically in relation to ideologies related to antisemitism, or Nazism in or by West Virginia or West Virginians.
White Supremacy	Codes\\Government and Politics\Politics\Race and White Supremacy, Antisemitic, and Anti-Muslim\White Supremacy, Antisemitic, and Anti-Muslim\White Supremacy	References race, specifically in relation to ideologies related to white supremacy in or by West Virginia or West Virginians.

Code Name	Hierarchical Name	Description of Code
Immigration	Codes\\Government and Politics\Politics\Immigration	References attitudes and beliefs related to immigration held in West Virginia or West Virginians.
Place	Codes\\Place	References a location-based description of West Virginia, in relation to and contextualized within the rest of the United States.
Rural	Codes\\Place\Rural	References place, specifically rural, rurality, country, or countryside, or "related to sparsely settled areas in the United States" (Feris and Stein 2018) in relation to the state of West Virginia or West Virginians.
Coal Country	Codes\\Place\Coal Country	References the place or state of West Virginia and/or West Virginians as the coal producing part of the United States of America. In three references the phrase is equated to "Trump Country".
Appalachia	Codes\\Place\Appalachia	Referencing place, specifically Appalachia (and stem words) in relation to the state of West Virginia or West Virginians.
Mountains	Codes\\Place\Rural\Mountains	References place with the word mountain(s) to describe the rurality of West Virginia or the place from where West Virginians reside.
Work	Codes\\Work	References work broadly, including jobs, employment, or unemployment in West Virginia or of West Virginians.
Unions	Codes\\Work\Unions	References jobs, employment, or unemployment in West Virginia or of West Virginians, with a focus on unions.
Strike	Codes\\Work\Unions\Strike	References jobs, employment, or unemployment in West Virginia or of West Virginians, with a focus on unions, and specifically union strikes.
Education	Codes\\Education	References the public education system in West Virginia, including higher education, and K-12 teachers and students.

Code Name	Hierarchical Name	Description of Code
Higher Education	Codes\\Education\Higher Education\	References the higher education system in West Virginia or in relation to West Virginians.
WVU	Codes\\Education\Higher Education\WVU	References higher education in West Virginia, specifically West Virginia University.
Students	Codes\\Education\Students	References education, specifically K-12 or college students in West Virginia.
Teachers	Codes\\Education\Teachers	References education, specifically K-12 public school teachers in West Virginia.
Strikes	Codes\\Education\Teachers\Strikes	References education, teacher strikes in the state of West Virginia.
Environment	Codes\\Environment	References the environment in West Virginia.
Climate Change	Codes\\Environment\Climate Change	References the environment in West Virginia, specifically in relation to climate change.
Energy	Codes\\Environment\Energy	References the environment in West Virginia, specifically in relation to energy production and consumption.
Coal	Codes\\Environment\Energy\Coal	References the environment in West Virginia, specifically in relation to energy production and consumption related to coal/coal industry.
Gas	Codes\\Environment\Energy\Gas	References the environment in West Virginia, specifically in relation to energy production and consumption related to natural gas/natural gas industry.

Code Name	Hierarchical Name	Description of Code
Poverty	Codes\\Poverty	References the key terms poverty or poor or low income or destitute or scarcity or hardship or impoverishment or pennilessness and relates to the status of the state of West Virginia or the state's residents.
Health	Codes\\Health	References the health of West Virginia or West Virginians.
Addiction	Codes\\Health\Addiction	References the health of West Virginia or West Virginians, specifically in relation to drug addiction.
Opioids	Codes\\Health\Addiction\Opioids	References the health of West Virginia or West Virginians, specifically in relation to drug or alcohol addiction with a focus on opioids.
COVID	Codes\\Health\COVID	References the health of West Virginia or West Virginians, specifically in relation to COVID19 and the COVID19 pandemic.
Health Care	Codes\\Health\Health Care	References the health of West Virginia or West Virginians, specifically in relation to health care, including medical, mental and behavioral, and dental care services access/insurance and provision.
Mortality	Codes\\Health\Mortality	References the health of West Virginia or West Virginians, specifically in relation to mortality, or death.
Overdose	Codes\\Health\Mortality\Overdose	References the health of West Virginia or West Virginians, specifically in relation to mortality, or death caused by drug overdose.
Risk	Codes\\Health\Risk	References the health of West Virginia or West Virginians, specifically in relation to risks.
Chronic Conditions	Codes\\Health\Risk\Chronic Conditions	References the health of West Virginia or West Virginians, specifically in relation to risks associated with chronic conditions.

Code Name	Hierarchical Name	Description of Code
Demographic	Codes\\Health\Risk\Demographic	References the health of West Virginia or West Virginians, specifically in relation to risks associated with demographic distributions or changes.
Age	Codes\\Health\Risk\Demographic\Age	References the health of West Virginia or West Virginians, specifically in relation to risks associated with demographic distributions, such as an aging society.
Elderly	Codes\\Health\Risk\Demographic\Age\Elderly	References the health of West Virginia or West Virginians, specifically in relation to risks associated specifically with the elderly population.
Health Related Practices	Codes\\Health\Risk\Health Related Practices	References the health of West Virginia or West Virginians, specifically in relation to risks associated with health-related practices, most notably those related to nutrition, exercise, and/or sleep.
Vaccinations	Codes\\Health\Vaccinations	References the health of West Virginia or West Virginians, specifically in relation to vaccinations.
Sentiment	Codes\\Sentiment	The overall sentiment of the article in relation to the state of West Virginia or West Virginians.
Negative	Codes\\Sentiment\Negative	References the state of West Virginia or West Virginians, in a story that overall adds to a negative portrayal of the state.
Neutral	Codes\\Sentiment\Neutral	References the state of West Virginia or West Virginians, in a story that overall adds to a neutral portrayal of the state.
Positive	Codes\\Sentiment\Positive	References the state of West Virginia or West Virginians, in a story that overall adds to a positive portrayal of the state.