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Regions of Personality and Attitudes at the Sub-County Level: An Investigation of Santa Barbara County, California

A dissertation submitted in partial satisfaction

of the requirements for the degree Doctor of Philosophy

in Geography

by

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December 2021

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December 2021

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ABSTRACT

Regions of Personality and Attitudes at the Sub-County Level:

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Previous research has indicated that the personality characteristics of individuals, as measured by the "Big Five" personality traits, are often spatially distributed within a population in non-random fashion. Although this phenomenon has been observed at between-country and sub-country (regional) scales of analysis, I advance this field of inquiry by investigating the presence of "personality regions" at a significantly smaller scale, specifically within the county of Santa Barbara, California. Through analysis of survey data collected from over 500 residents of the county, I determine that the county is regionalized non-randomly in terms of the Big Five trait openness. In addition, I find that the political attitudes individuals express, correlated to some extent with openness, are also distributed within the county in a non-random manner. I make novel use of an "a posteriori" approach in conjunction with regional optimization methods to identify and map meaningful, empirically derived regions across the county. The most notable regional division is between a higher openness/more politically liberal southeast and a lower openness/less politically liberal northwest (often referred to colloquially in the county as a South County/North

County divide). This distinction is valid even when controlling for a range of socio-demographic variables. Living in more heavily urbanized areas is associated with greater neuroticism and political liberalism, but while this explains part of the major regional divide in the county, it does not explain all or even most of it. Using residential history data, I also test to see whether residents are more likely to "fit" regional personality and attitudinal norms with greater length of time spent living in the region, which would be indicative of an acculturation effect. However, I determine that length of time as a regional resident has no bearing on conformity to the norm, suggesting acculturation does not play a role in forming or maintaining a regional average personality. Finally, I find that being a political liberal is associated with a greater sense of identification with and attachment to Santa Barbara County, even when controlling for covariates. This suggests that individuals in the political majority are more likely to feel connected to the places in which they live.

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Introduction

1.1 Project Context

The purpose of this research is to investigate the extent to which populations cluster, or regionalize, along dimensions of personality and political attitudes. For reasons both practical and theoretical, the geographic scope of this particular study is the county of Santa Barbara, California. The implications of this research matter on a broader scale, however. A popular theme in both popular and academic theorizing in the United States—and to a lesser degree in other wealthy, industrialized societies—concerns the perception that society has become increasingly fractured, or polarized, along ideological lines (Abrams & Fiorina, 2012; Campbell, 2016; Mendelsohn & Pollard, 2016; *Political Polarization*, 2014). This perception of polarization has been connected to some topics of long-standing sociological, economic, and political interest, such as income inequality, racial and ethnic antagonisms, and educational disparities, to name merely a few (Campbell, 2016; Cramer, 2016; Iyengar & Westwood, 2015).

However, contemporary theories of the driving forces behind polarization suggest that a new set of factors are at play. On the one hand, technology—particularly the rise of social media—has been identified as segmenting individuals into "echo chambers" in which individuals holding particular ideologies are shielded from divergent beliefs and information. In such instances, it is posited, individuals become increasingly hostile to alternative points of view (Boutyline & Willer, 2017). Turow (1997) describes how, beginning in the 1970s,

the marketing industry used technological advances to exponentially increase their capacity to gather and store data on consumers; businesses could then use this data to discover, prod, and consolidate the flow of information towards customers. Furthermore, an abundance of consumer choice—the hallmark, perhaps, of wealthy, capitalist countries—in conjunction with marketing and advertising segmentation (Turow 1997), serves the same function as social media; when consumer products are tailored to the individual, everything from the clothes one wears, to the vacations one takes, to the banking services one utilizes, will be shared by increasingly smaller sub-sets of a population. In turn, the social necessity of interacting with other individuals across these lines of micro-segmentation is minimal (Drucker, 2012).

Finally, another theory - the one that this research is most aligned with - suggests that the hardening of social divisions is concomitant with a hardening of geographic divisions (Feinberg, Tullett, Mensch, Hart, & Gottlieb, 2017). Importantly, this line of reasoning suggests that geography distinguishes groups of people not only based on sociological or demographic categories, but also based on the internal, ideational, or mental traits they possess. Some common terms used to express these internal qualities include values, ideas, beliefs, attitudes, and personalities, though this is far from an exhaustive list (Hofstede, 2001; LeVine, 2001; Triandis, 1995). From a certain perspective, this geographic theory of social fracturing might seem incompatible with a basic conception of spatial diffusion. In societies without tangible borders or restrictions on movement, people—and the ideas they espouse—should ostensibly disperse randomly across space (much like different liquid components intermixing in a common solution). From another perspective, however, it is reasonable to suggest that in populations with few constraints on movement, people will not situate

themselves randomly across space, but will cluster among those whom they believe share similar ideas, attitudes, manners of thought, and worldviews. Given these possibilities, the most basic purpose of the following research is as a test to determine the nature of psychological trait clustering. The existence of this phenomenon has been confirmed at the sub-country level but has not previously been investigated at the sub-county level. While the results of this study from Santa Barbara County will not necessarily generalize across time and space, they will certainly add to the growing body of literature on this interesting and important topic.

1.2 Themes Explored

The discipline of geography is, conceptually and in practice, integrative, synthesizing, and multi-disciplinary (Golledge, 2002; Hartshorne, 1939; Johnston, 2003; Pattison, 1964). The philosopher Immanuel Kant went so far as to call it, along with history, one of two uniquely integrating sciences (Hartshorne, 1958; Schaefer, 1953). In keeping with this principle, three predominant and integrative themes are addressed in this dissertation. These themes are:

1. The spatial regionalization of personality among a population
2. The relationships between variance of personality and extremity and variance of political attitudes within a population – or in other words, the possible link between personality and political polarization, as reflected in spatial patterns on the landscape
3. The varying roles of personal preference (individuals choosing to move to locations in which they and others share commonalities of personality) and environmental influence (individuals acculturating to personality-based norms of thought and

behavior) as formative explanations for spatial regionalization of personality. In this work, I consider the themes as interrelated and from the viewpoint of human geography. In doing so, and in the review of the literature which follows, I trace the development of several scholarly paradigms to identify where these themes originated and why, in the context of the themes noted above, they relate to each other.

1.3 Research Questions

The following are the specific questions my research attempts to answer:

1. ***Is there evidence of distinct personality "regions" (i.e., statistically significant differences among any of the five personality dimensions of the Big Five model), when personality data from individuals is aggregated in various spatial contexts and/or scales within Santa Barbara County?*** An important element of this assessment is to compare regional distinctions when using "a priori" spatial units—those already established and in common use— versus "a posteriori" spatial units—those resulting from a data-driven clustering analysis.
2. In addition to personality characteristics, I hypothesize that individuals' socio-political attitudes will reveal spatial patterning as well. Because the relevant literature leads me to believe that personality and socio-political attitudes will be correlated, I ask: ***what are the associations between patterns of personality and patterns of socio-political attitudes?***
3. To the extent that I find personality differences among regions within the county, an additional step in the research process will be to consider the amount of personality variation within those units. It logically follows that with less variation, there is

greater evidence to support a true "cluster", or homogenous population in terms of personality. In turn, I investigate: do the average scores on assessments of political beliefs, as well as their level of intra-region homogeneity, vary as a function of homogeneity of intra-region personality? Phrased another way, ***is there a correlation between personality variation and political polarization?***

4. Using migration data acquired from research participants, I evaluate whether an individual is more likely to conform to the personality and political profile of his or her region with increased time spent living in the region. This information would provide direct evidence to address the question: If distinct regions of personality and political attitudes exist, ***do newcomers with similar characteristics to the region selectively migrate there (thereby further reinforcing preexisting characteristics of that region)? Or do newcomers to the region adapt and conform to the region's characteristics over time (thereby becoming more similar to the rest of the residents in that region the longer they reside there)?***

Chapter 2

Review of the Literature

2.1 The Nexus of Mind and Geography

In introducing the edited volume *Geographical Psychology*, Rentfrow (2014b) remarks:

> The places in which we live vary so much in terms of their social, economic, political, cultural, climatic, and physical characteristics that one cannot help but wonder how they contribute to our own behaviour….our understanding of psychological phenomena can be greatly informed by a geographical perspective – one that explores the spatial organization of psychological phenomena and considers how individual characteristics, social entities, and physical features of the environment contribute to their organization. (pp. 3-4)

Scholars – whether they be geographers, anthropologists, psychologists, or practitioners of still other disciplines – have long recognized that places influence people; so too, for that matter, do people influence places. But taking a still broader perspective, it is reasonable to suggest that for as long as humans have explored their surroundings, they have sought to know about the qualitative character of people beyond their immediate realm of experience (Martin & Martin, 2005). Information-gathering of the location and characteristics of populations has been commonplace throughout recorded history, whether for the purpose of exploration, warfare, trade, or mere curiosity. For example, The Greek philosopher-geographer Strabo (63 B.C.E. – 24 C.E) is perhaps the earliest and most prominent

documented example of an individual who systematically delineated and organized his observations of the characteristics of distant peoples, an early forerunner to the practice of ethnography (Roller, 2018). In the first millennium C.E., Arab scholars produced numerous "travel guides" to aid Islamic pilgrims in their undertaking the Hajj to Mecca. In these chronicles they went to great lengths to describe the personal traits of the people travelers could expect to meet along their route of voyage (Rosenberg, 2020). Finally, it was the famous Alexander de Toqueville who so astutely observed the democratic ethos inherent in the attitudes and practices of early 19th century Americans (Damrosch, 2010). Although perhaps not explicitly articulated as conjoining the study of mind and the study of geography, these notable historical examples suggest that this sort of synthesis is hardly a novelty.

2.2 Personality: Theory and Structure

In this project, I attempt to decipher geographic regions based on differences in what a "typical" or average personality of a resident is like in a particular location. Funder (1997) provides a useful definition of personality: it is "an individual's characteristic patterns of thought, emotion, and behavior, together with the psychological mechanisms – hidden or not – behind those patterns" (pp. 1-2). The intellectual tradition that gave way to contemporary theories and models of personality can be traced back at least as far as the ancient Greeks (Dumont, 2010). The subject of personality was one that found interest at various times among writers, philosophers, and early scientists during the European Renaissance, the Enlightenment of the 17th and 18th centuries, and during the Romantic period of the 19th century. Psychology, as a field distinct from philosophy, was only established in the 1880s, but personality has always, in some substantiation, held the interest of prominent

psychologists, including Sigmund Freud, William James, and Carl Jung among others. But more precisely, the modern era in the study of personality began with three eminent figures: Gordon Allport, Raymond Cattell, and Hans Eysenk (Barenbaum & Winter, 2008; Dumont, 2010). The work of these scientists, particularly Cattell, catalyzed a factor-analytic approach to understanding personality. In this paradigm, thousands of lower-order or relatively superficial mental and behavioral traits are correlated with each other. These intercorrelations provide the basis to statistically interpret an underlying structure. Cattell is famous for his 16-factor model of personality (Cattell, 1965; Dumont, 2010). Over time, various arguments for fewer or greater supra-traits have come into fashion, or at least added to the overall debate in the field of personality research.

Nonetheless, over time consensus has shifted towards a convergence on a Five-Factor, or "Big Five" model of personality (Dumont, 2010; John, Naumann, & Soto, 2008; McCrae & Costa, 2008; Rentfrow, 2014b). The Big Five model suggests that personality can be measured along five distinct dimensions: these are labeled as agreeableness, conscientiousness, extraversion, neuroticism, and openness. These dimensions can broadly be conceived in the following terms:

- Agreeableness: relates to empathy, helpfulness, and care for others
- Conscientiousness: relates to dedication, duty, structure, and attention to detail
- Extraversion: relates to sociability, talkativeness, attention-seeking, and spontaneity
- Neuroticism: relates to susceptibility to stress, anxiety, and worry
- Openness: relates to abstract thinking, creativity, novelty-seeking, attunement to aesthetics

Individuals' "scores" on these dimensions have been demonstrated to correlate with a range of attitudes, behaviors, and other mental constructs (for a comprehensive review of these findings, see John et al., 2008). Although the five dimensions are, according to theory, independent of each other, this subject continues to be the source of some debate, as individual studies often show correlations between certain personality traits (Anusic, Schimmack, Pinkus, & Lockwood, 2009; Dumont, 2010; John et al., 2008; McCrae & Costa, Jr., 2008).

While there are some who argue the Big Five model overgeneralizes, others have suggested that the five dimensions could be reduced further still. Much of the data collected in Big Five research is attained through self-reports, usually in the form of questionnaires and employing Likert scales. Spousal, family, or peer ratings have also been utilized in addition to self-report measures. A common criticism is that much Big Five-related research (not to mention much personality and much psychological research broadly speaking) has been conducted using individuals from Western cultural backgrounds (Henrich, Heine, & Norenzayan, 2010). Although true, it should also be noted that research has been conducted on non-traditionally Western subjects, and the findings indicate that the underlying Big Five structure is universal (Dumont, 2010; John et al., 2008; McCrae & Costa, Jr., 1997). Like any healthy area of scientific inquiry, there is some small measure of debate about the nature, structure, cross-cultural validity, predictive capability, and utility of the Big Five model. But it is by far the most prominent and widely accepted framework for conceptualizing personality.

There are several other key points about personality that are largely agreed upon. They are as follows:

1) Personality is influenced jointly by factors of nature (genetics, biological) and factors of nurture (culture, socio-environmental) (Benet-Martinez & Oishi, 2008; McCrae & Costa, 2008; Robins, 2005; Triandis & Suh, 2002).
2) The concept of culture is sometimes erroneously conflated with personality; while culture does influence personality development and expression, personality encompasses dispositional tendencies that are distinctly non-cultural (McCrae & Costa, 2008; Triandis & Suh, 2002)
3) There is almost always an element of interaction between various influencing factors. Therefore, how personality manifests can be and generally is situation-specific (Funder, 2008; Higgins & Scholer, 2008).
4) Bearing the above in mind, theory and empirical findings suggest that personality is relatively stable over time. It can evolve, but only over rather long time-frames, often concurrent with changes in the overall life course (Caspi, 2000).

2.3 Bidirectional Influence Between Culture and Personality

Historically, scholars tended to frame the distinction between culture and personality by emphasizing that culture was "personality writ-large", and personality was "culture writ-small" (Kluckhohn, 1954). In other words, a culture, as a social unit, was conceived of as an aggregation of the individual personalities comprising it. In contemporary terms, this distinction is probably too simplistic; personality and culture are not merely defined in terms of the scale at which one observes them. Dumont (2010) defines culture as "the distinctive belief systems, patterns of behavior, and significant moral, artistic, familial, vocational, and political structures that are valued by a society, members of which usually speak the same

language" (p. 220). There is, to be clear, a good deal of overlap between culture and personality. However, culture researchers are rather less inclined to consider the interactional effects between individual dispositions, or biological factors, and social structures. Furthermore, it is important to bear in mind that influence can and does flow bi-directionally between individuals and the broader cultures they are a part of. As Kroeber and Kluckhohn (1952) suggested, cultures "may, on the one hand, be considered as products of action, on the other, as conditional elements of future action" (p. 181). Cultures incentivize, restrict, or otherwise influence individuals; yet we risk a reification fallacy if we forget that culture is not a "thing" independent of people. Just as people are influenced by cultural frameworks, so too do they play a role in crafting or adjusting those frameworks, or as some have remarked, culture and people "make each other up" (Fu, Plaut, Treadway, & Markus, 2014). As I will describe in more detail later, the essence of cultural study has depended on cross-cultural comparisons. Although not the same as comparisons of population-level personality characteristics, the literature on cultural analysis does offer the personality researcher much of conceptual and methodological significance (Benet-Martinez & Oishi, 2008; Kitayama, 2002; Triandis, 1996).

2.4 Biological Perspectives

Any study involving personality has to consider the way in which biological mechanisms influence the individual's cognition, emotion, and behavior. A number of scholars examine specifically the link between biological factors and personality. Unfortunately, only a few can be mentioned here. First, Cavalli-Sforza, Menozzi, and Piazza (1994) are known for measuring and visually depicting in map form the distribution of genes

across global populations. This exemplified how biological components of individuals can be "mapped" and their patterns deciphered, and this of course can be directly relevant to the mapping of personality patterns. For instance, Camperio Ciani and Capiluppi (2011) documented the migration patterns of residents of several small Italian islands. By looking at the genotypes of those who remained on the islands compared to those who migrated (usually to the Italian mainland), they found differences in gene frequencies that correlated with four of the "Big Five" dimensions of personality e.g., out-migrants were higher in extroversion and openness than those who did not migrate. As a result, they proposed a theory of gene and personality flow relevant to populations located in remote or isolated environments. Abdellaoui et al. (2018) also found evidence of genetic clustering, in this case across different regions of the United Kingdom. They showed that these areas of genetic variation largely correlated with regions known for their distinctive economic characteristics, such as the industrial north of England and the high-tech and high-finance region in the southeast of England. In turn, the genetic groupings correlated with income, educational levels, and social status.

Another tradition deserving mention is known as sociobiology. Sociobiologists are primarily interested in the fitness-enhancing feedback loops between biological and cultural mechanisms. In other words, biological factors may favor adoption of cultural traits which themselves are beneficial for purposes of reproduction and genetic transmission (Cavalli-Sforza & Feldman, 1981; Kenrick, Montello, & MacFarlane, 1985). Wilson (2000), Barkow (1978), and Cosmides and Tooby (1987; Tooby & Cosmides, 1992) are some of the most notable names to be associated with this subject matter. Cosmides and Tooby, specifically, have written at great length about how human psychology is fundamentally contingent on

"evolved mechanisms" that permit cultural learning to occur, evolve, and be transmitted. Lumsden and Wilson (1981), Richerson and Boyd (2005), and Wallace (1970) similarly argued that cultural traits are "selected for" by natural pressures; for this to occur, mental development has to be selected for as well, as cultural capacity is dependent on such an occurrence. Kenrick et al. (1985) cited a variety of traits that, at least at one time, were probably adaptive in particular environments and have a sociobiological basis. These include traits such as likeability, personal adjustment, cheating behaviors, and dominance/submission. One interesting hypothesis is that group-level beliefs, values, and behaviors evolved based on historical pressures from disease and pathogens, with generally "tighter" or more inward-oriented cultures, as well as those placing greater emphasis on physical beauty as a marker of good health, arising in areas with greater threats from disease (Murray & Schaller, 2014). Similarly, Gangestad, Haselton, and Buss (2006) found evidence to support the theory of an "evoked" cultural mechanism that maximizes the chance of reproductive success and in-group biological and cultural transmission. Cavalli-Sforza and Feldmann (1981) provided several examples of cultural-biological interaction, the most important of which may be the acquisition and transmission of language.

2.5 The Study of National Character: 1900-1960

In the beginning of the 20th century, the nascent field of cultural anthropology was met with great interest in intellectual circles. Simultaneously, in the time surrounding both World Wars (as well as a subsequent "Cold War"), Western governments and foreign intelligence apparatuses found just the need for this sort of scholarship. These entities had a strategic interest in understanding what various peoples, allies and foes alike, were

constituted of psychologically. Cultural anthropology and national security thus came together to create what became known as the "National Character" research paradigm. In some cases, this fell under the moniker of "modal personality" (Levine, 2001). The logic involved was rather simple on its face: if the personality traits, values, attitudes, and behaviors of a sample individuals of a particular nation were known – culture writ small - then one could arrive at the aggregate personality, or character, of that nation – culture writ large. The inverse principle was applied as well: if one knew the character of a nation, one could infer certain characteristics on the part of the individuals who lived there.

The citizens of countries such as Germany, Soviet Russia, Japan, China, Romania, and Thailand were analyzed in this fashion by a number of prominent and reputable scholars. Benedict was responsible for popularizing the term "national character", and her book *The Chrysanthemum and the Sword* (2005, original publication 1946), on the psychology of the Japanese, was perhaps the most noteworthy work in this tradition. Other noteworthy examples were the psychologist Lewin's work (1936) detailing the generalized psychological differences between Americans and Germans, and the anthropologist Mead's research on the Soviet Russian citizenry (1951, 1953). Still others who contributed were Kluckhohn (from anthropology), McClelland (from psychology), and Cattell (also from psychology) (for a discussion of the research conducted by these scholars in their own words see Cattell, 1949; Kluckhohn, Murray, & Schneider, 1953; McClelland, 1951). Inkeles and Levinson (1969) and Levine (2001) provide a useful synthesis of the substantial history to this tradition. They describe how the field was justifiably criticized for its essentializing nature; in today's parlance this would largely be considered pseudo-science. For example, a particularly simplistic hypothesis (but one which for a time held support from some of the top scholars in

psychology and anthropology), was the "Russian swaddling" theory put forth by Gorer (Wallace, 1970, pp. 151-152), who claimed that Russians were susceptible to authoritarianism due to the cultural practice of their being "tightly swaddled" as infants. In spite of its shortcomings – glaringly visible in hindsight and with the benefit of scientific advances - Levine (2001) maintains that this era holds an important distinction as the precursor to today's cross-cultural psychology.

2.6 Spatial Variation in Culture Traits

Studies of the spatial variation of personality are related – historically and intellectually - to studies of the spatial variation of culture traits. As with personality, issues or problems of culture are not *ipso facto* geographic issues or problems. However, culture is embodied by people existing in specific places. Places generally have some relative quality of boundedness, and we can meaningfully differentiate between places as well as the people located in them. In other words, to compare places is often to compare people, and vice versa.

The broadest area of cultural-geographic interest has been in identifying and explaining "East-West" distinctions. In many cases this subject has been intertwined with the distinction between collectivist cultures (Asian societies) and individualist cultures (European societies). Triandis (1995; Kim, Triandis, Kâğitçibaşi, Choi, & Yoon, 1994; Triandis & Suh, 2002) as well as Nisbett (2003) provide a number of authoritative works on this topic. In collectivist-oriented cultures, it has been empirically demonstrated that individuals place greater emphasis on group harmony, social roles and expectations, and achieving personal fit within the broader cultural environment. By contrast, individuals in

individualist cultures place greater emphasis on nurturance and cultivation of the self vis-à-vis broader social groups. Explanations for these distinctions range from the very distal – historical and philosophical influences stretching back centuries – to proximal – for instance, ecological influences on the development of collectivist (or individualist) cultures (Berry, 1993; Van de Vliert & Yang, 2014). Ecological influences entail the ways in which particular environmental settings prod societies towards certain survival techniques and modes of production, which in turn incentivize distinct relations between individual and social group (Van de Vliert & Yang, 2014).

Although far from promoting simplistic environmentally deterministic arguments, Cohen (2001) stipulates that any analysis of cultural variation, particularly in the area of collectivist-individualist differences – must take historical-environmental differences as a starting basis. Miyamoto, Nisbett, and Masuda (2006) expounded upon this view; although not offering an ultimate historical explanation, they demonstrated how Eastern and Western cultures provide differing levels of "perceptual affordances" in the culturally constructed physical environment. This in turn promotes differences in broader realms of cognition, with Easterners tending to focus on contextual information, and Westerners tending to focus on more directly salient information. Even within larger culture groups that are often construed as uniformly collectivist or individualist, examples abound of more specified analyses of variation. For example, Conway, Ryder, Tweede, and Hallett (2001) examined sociological and geographical correlates with collectivism-individualism in the United States. They found that regions with greater proportions of minorities, poverty, and slower "pace-of-life" indicators consistent with rural environments scored higher on measures of individual-level collectivism. These findings were confirmed by Kashima et al. (2004), who found that cross-

culturally, residents of metropolitan areas show greater individualist tendencies compared to within-country residents of smaller regional cities and rural areas.

In *Culture's Consequences*, the psychologist Hofstede (2001; originally published 1980) provided one of the largest, most systematic, and most comprehensive exploratory studies pertaining to intercultural differences. In the course of his work, he surveyed approximately 80,000 employees of IBM, located in over 70 countries. Hofstede's explicit subject of inquiry had to do with attitudes towards work, careers, and management. Through the use of factor analysis, he and his colleagues concluded that a four-dimensional structure (later revised to include six dimensions) represented the component parts of cultural belief systems; these dimensions were referred to as Uncertainty Avoidance, Masculinity, Power Distance, and Individualism. Importantly, they found that there are in fact average differences on these dimensions between individuals in different countries. In turn, these distinctions have practical implications for the way in which multinational companies, operating cross-culturally and with stakeholders representative of different values, can and should operate.

The theme of values appears frequently and in varying contexts throughout the literature. Park, Peterson, and Seligman (2006) conducted research asking citizens of 54 countries and all 50 U.S. states to rate the extent to which they held a wide variety of personal values. Although they found some evidence of variation internationally and with the U.S., the main thrust of their findings is that values such as wisdom, courage, humanity, and justice are universally held. The cultural ideal of honor, or in some cases its inverse correlate shame, is a particular value dissected in great detail by scholars such as Nisbett and

Cohen (1996; Cohen, Nisbett, Bowdle, & Schwarz, 1996). An emphasis on honor in individual life is generally associated with higher levels of cultural collectivism.

Although more concerned with behavioral rather than mentalist aspects of culture, Levine is another important scholar of cultural variation. He has written extensively on such topics as "pace of life" (individualistic societies operate "faster"), the links between pace of life and disease prevalence, and differences in "helping behavior" found within major American cities (Levine, Lynch, Miyake, & Lucia, 1989; Levine, Martinez, Brase, & Sorenson, 1994; Levine & Norenzayan, 1999; Levine, Reysen, & Ganz, 2008; Levine, West, & Reis, 1980). The issue of urban or cosmopolitan culture has taken on greater meaning as urbanization increases at a rapid rate globally. The cultural characteristics of cities are often compared with each other, as well as with the rural hinterlands that make up the functional regions of metropolitan areas. In one example, Park and Peterson (2014) measured the traits of individuals in a variety of urban locations and concluded that a broad taxonomy begins with distinguishing between "head cities" and heart cities". In the former, residents who prioritized their intellectual and rational faculties along with individualism perceived a greater psychological fit with their social environment; in the latter, residents who prioritized elements of agreeableness, interpersonal relationships, and a collective outlook perceived a greater fit.

2.7 Spatial Variation in Personality

The increasing rigor and sophistication of personality research in the last third of the 20th century led to renewed interest in assessing personality differences both inter- and intra-nationally. These personality-specific assessments are properly viewed as distinct from

cultural assessment. In what was probably the first major study of its kind, Krug and Kuhlhavy (1973) investigated individual personality differences across regions of the United States. They found support, based on personality assessments of over 5,000 individuals, for a conceptual theory of creative, independent, and isolated regions of the country. Since then, a number of other studies have been conducted within the United States, with similar conceptual objectives to determine the extent to which people in different states or regions of the country, on average, display different personalities. Rentfrow (2010, 2014a; Rentfrow et al., 2013) has published extensively in this area. Using the "Big Five" model as his framework, he coined the term "psychological regions" to describe groupings of US states that are both spatially and psychologically proximate. For example, Northeastern states are higher than average in openness and neuroticism and lower in agreeableness, Midwestern states are higher in agreeableness and extroversion, and Western states are higher in openness and lower in extroversion. These differences in aggregate-level personality have also been correlated with a number of economic, political, and social variables. In other studies, scholars have found high levels of correlation between areas with higher trait openness, lower political conservatism, and their ranking on several creativity indices (McCann, 2011). McCann (2014) provided confirmatory evidence for some of Rentfrow's geographical findings; his state-wide analysis of personality and conservatism showed that the Northeast and the West Coast of the U.S. are higher in neuroticism and openness while also being the areas distinguished by lower measures of political and economic conservatism. As Rogers and Wood (2010) discovered, laypeople in the United States have fairly accurate understandings of these broad regional differences. By comparing laypeople's regional stereotypes with empirical findings, they found that stereotypes show a rather high level of

correspondence with what regional personality differences are empirically like. Regional personality differences have been investigated in the United Kingdom, as well. Overall, a North-South gradient has been found to exist, with Scotland and northern England being more introverted, more agreeable, more neurotic, and less open (Rentfrow, Jokela, & Lamb, 2015).

Crucially, scholars have begun to seek the explanatory mechanisms for why these personality differences exist in the first place. Possible reasons for this, while not exclusive of each other, tend to fall into two categories: either people selectively migrate into particular areas, contributing to the construction of a particular personality profile, or people living in particular areas adapt or are otherwise enculturated in such a way as to reflect the predominant personality in that area. Within the enculturation or adaptiveness category, it is theoretically plausible that either cultural institutions (which include political and economic institutions) and norms or elements of the physical environment itself provide the impetus for the formation of personalities (Rentfrow, Jost, Gosling, and Potter, 2008). Obschonka et al. (2018; Obschonka, Schmitt-Rodermund, Silbereisen, Gosling, & Potter, 2013; Obschonka, Stuetzer, Rentfrow, Potter, & Gosling, 2017) examined several interesting contexts and locations in which they postulate that historical experiences led to the shaping of geographical personality variations. For instance, one of these studies suggested, though did not confirm, that the cities in Germany that experienced the most intense bombing in World War 2 are today marked by higher levels of anxiety and risk-aversion than other German cities. In another study, they show that European areas which historically had higher levels of industrial development are distinct today in terms of various measures of "psychological adversity", including higher neuroticism and lower conscientiousness.

Research into geographic personality variation has examined between-country differences as well (Schmitt, Allik, McCrae, & Benet-Martínez, 2007). Consistent with these findings are analyses grouping countries into higher-level cultural units, suggesting that North American and European nations share certain aggregate personality traits and are higher in openness and extroversion, while being lower in agreeableness, than African and Asian nations (Allik & McCrae, 2004; McCrae & Terracciano, 2005). In both between-country and between-culture framings, there are moderate correlations between aggregate traits such as openness and extroversion and measures of economic development and social egalitarianism. Some objections have been raised about the cross-cultural validity of using theories and tools developed almost exclusively in Western contexts. While this continues to be a debated issue, much care has been taken to develop and validate personality tests cross-culturally. Although this point has not been rendered moot, there is strong reason to believe that the overall structure of personality is valid across cultural settings, and that many current iterations of personality assessments are sufficient if not perfect tools for measuring personality differences across cultures (McCrae, 2001; McCrae & Costa, 1997). This point is addressed in a comparative study of the Nentsy, an ethnic group living in the Arctic north of Russia, and ethnic Russians (Draguns, Krylova, Oryol, Rukavishnikov, & Martin, 2000). In this study, Nentsy individuals were found to be lower in openness and extroversion compared to ethnic Russians.

A more recent trend of inquiry has been into the relationship between topography and personality. In one study in the United States, Gotz et al. (2020) found that there is a correlation between living at higher elevations, higher openness, and lower neuroticism, conscientiousness, agreeableness, and extroversion. They contend that this supports a

"frontier thesis", which is the idea that those living in harsher ecological settings have both self-selected to live there and are simultaneously influenced to develop personality traits structured around isolation and individualism. Similarly, a study from Switzerland identified distinct regions of personality which corresponded to varying levels of altitude and environmental ruggedness; in this case, measures of subjective well-being were taken as well. In keeping with predictions, the individuals whose personality profiles tended to match the profiles of their regional environments had higher levels of well-being (Götz, Ebert, & Rentfrow, 2018).

A common contention for quite some time has been that urbanites are distinguishable personologically from suburban and rural denizens. The urban scholar Richard Florida has probably done as much as anyone recently to advance the idea that residents of cities are made of a different kind of psychological stuff, although the idea is a very old one. Essentially, Florida's thesis is that the global economy is increasingly dominated by a "creative class" of individuals. These persons are marked by greater trait openness, value diversity and varied life experiences, and utilize their intellectual and cognitive skills to a greater degree than others (Florida, 2002; Florida, 2003). Specifically, Florida counters the futurist tendency to believe that place has been rendered unimportant in economic matters; he stresses that creative people and knowledge-based workers want to residentially locate themselves near others who share their worldviews, can provide valued information, and offer further creative potential in the form of new ideas and economic synergies (2002, 2003; Florida and Mellander, 2014).

2.8 Spatial Variation in Political Opinion

A potential implication of spatial or geographic patterning of personality is that it relates substantively to the spatial patterning of political attitudes and behaviors. For that reason, it is important to be cognizant of the political science and political geography literature that remarks solely upon the spatial patterning of political psychology. Some historically valuable works fitting this description have looked at major regional differences in political values within countries, such as with Key and Heard's (1949) work drawing attention to the existence of a Southern "Black Belt" in American politics, or Bagnasco's (1977) analysis of politics in Italy. But of course, works such as these demonstrating a broad level of political clustering, though novel at one time, highlight observations which are well-known today.

Presently we observe a more applied rationale for undertaking research on spatial variation in political attitudes. One question, for instance, asks what the political effect on electoral districts is when there is a geographically uneven distribution of political preferences (Rodden, 2010; Gudgin & Taylor, 1979). Additionally, there is great interest in discovering the more finely grained variations or clusters in opinions across geographies. Due to advances in sampling and statistical techniques, census tract- or neighborhood-level polling, rather than state- or county-level, can be produced (Howe, Mildenberger, Marlon, & Leiserowitz, 2015). Neighborhood effects in particular have become a topic of interest to political researchers (Rodden, 2010). Neighborhood effects refer to the environmental influences at particularly localized scales; these are smaller in spatial extent than county, metropolitan area, or even city or town. In one particularly noteworthy study, Chen and Rodden (2009) used data from the state of Florida to determine that voters could be predicted

to have similar levels of partisan political preference based solely on residing near each other. An additional topic which political geographic studies frequently examine is the distribution of opinion towards climate change and global warming (Howe et al., 2015; Mildenberger et al., 2016). The upshot to conducting studies such as these is that scholars, activists, and governments alike will better be able to target constituencies in their public messaging if they are aware of the ways in which public opinion varies spatially. Matching findings from a variety of other disciplines, differences in political opinions are often magnified the most when comparing urban to rural locales (Mildenberger et al., 2016l Rodden, 2010).

2.9 Regional Contexts in Personality and Cultural Studies

Thus far I have attempted to summarize researching findings that, whether revolving around conceptions of culture or personality, have articulated context-independent patterns. In them, specific regional issues and causal factors – the history or sociology, perhaps, of particular locations – is not taken into account; psychological patterns are viewed in more abstract terms. This partially contrasts with the following set of studies, in which specific regional situations are examined.

A historical example of this form of regional thinking was the common perception among 18th and 19th century European intellectuals, such as the French philosopher Montesquieu, that "Southern" peoples (in fact, those living at lower latitudes) were positively distinct from "Northern" peoples (those living at higher latitudes) along psycho-social dimensions such as interpersonal warmth and emotion (de Secondat, 2018). This, Montesquieu believed, was a common pattern found even within specific nation-states, like

France or Italy, and could be attributed to human responses to differences in climate. In fact, in contemporary times the psychologist Pennebaker et al. (1996) experimentally tested Montesquieu's hypothesis. They found modest evidence among populations in 26 different countries to support the contention that latitude relates to psychological functioning. Southern Italians, for instance, really do seem to be more emotionally expressive than Northern Italians, though Pennebaker is agnostic towards potential issues of causality.

Another example of historical importance is known as the frontier thesis of individualism. The notable historian of early 20th century America, Frederick Jackson Turner, articulated this in his works espousing a belief that American culture was uniquely shaped by the frontier experience, inculcating a sense of "rugged individualism" among many of its pioneer citizens (Turner, 2008). Here again, some interesting and informative work has been conducted in modern times to unravel the psycho-social veracity of such claims. Framing the issue primarily in terms of individualism-collectivism differences, Kitayama (Kitayama et al., 2009; Kitayama, Conway, Pietromonaco, Park, & Plaut, 2010; Kitayama, Ishii, Imada, Takemura, & Ramaswamy, 2006) and others (Conway, Houck, & Gornick, 2014) have suggested that environmental adaptation played a major role in creating "regions of independence" in multiple societies. Kitayama studied these regions in Japan and the United States, which led him to suggest that there is a potentially universal ecological influence linking harsh environments with greater perceptions of self-efficacy and values of individual achievement. To summarize his main points, settlers who historically migrated to these frontier environments were probably more individualistic than average, more driven by pursuit of wealth, and more self-reliant. The scarcity of settled communities on these frontiers, as well as the harshness of environmental conditions, would have reinforced the

individualistic tendencies of the early settler populations. These tendencies in turn became embedded in broader cultural practices and larger institutional and political settings. Even today, individuals in former frontier regions of the U.S. and Japan are more likely to possess an individualistic ethos. Interestingly, for as much as the western United States is perhaps stereotypically held up as the preeminent example of "rugged individualism", the Hokkaido region of northern Japan has been the focus of a significant amount of research within this paradigm, often being analogized as the Japanese equivalent of the American West (Takemura & Arimoto, 2008).

A similar link to environmental influences is found in multiple investigations of "cultures of honor", most prominently detailed by psychologists Nisbett and Cohen (1996; Cohen et al. 1996). Specifically, these scholars focused on the American South as a region exemplifying an honor-bound culture; much like Pennebaker and Kitayama, they integrated experimental data with historical evidence to support their thesis that individuals from certain parts of the American South are more concerned with defending against perceived slights to personal or familial honor – in short, saving face. In this specific regional and historical context, their argument goes, populations of early European settlers engaged in herding were faced with greater threats of theft and loss of livelihood as compared to populations engaged in sedentary, crop-based agriculture. To protect against theft, individuals had greater chance of success if they responded with strength, even violence, to insults; in effect, the ability of a man to gain and maintain respect in the herding areas of the American South was relatively more important to his chances of survival than in agricultural areas. An important work in this vein is Campbell's essay (1965) "Honour and the Devil", a colorful if idiographic observation of codes of honor among cultural groups bordering the Mediterranean Sea. He

documented numerous examples where, in what might typically be construed as benign or superficial disagreements in other cultural settings, the self-perception of threats to an individuals' honor resulted in violent retaliation. Campbell, too, cited ecological determinants as a primary driving force behind this phenomenon; livelihoods that are subject to personal and property loss from others in the immediate vicinity tend to result in exaggerated senses of personal and familial honor, which often is defended violently.

2.10 Cultural Geography

The field of cultural geography has, by and large, taken an idiographic approach to the study of the mentalistic components of culture and society (an excellent summary of cultural geography's aims and ambitions, particularly in the United States, can be found in Meinig, 1978). Meinig (1978, p. 1204-1205) credited Jones (1954) with connecting *idea* and *area* in cultural geography: "*Ideas* begin in persons and are made effective through *decisions* that, in turn, generate *movements*…that tend to create fields of *activity* that come into focus on specific *areas* in which some impact can be identified."

One of the most prominent cultural geographers of the last 50 years was Zelinsky. His interests lay primarily in delineating cultural regions in the United States and understanding how they evolved, geographically and substantively, over time. As with much of the examples of scholarship already documented, Zelinsky (1992), too, was intrigued by the notion that culture starts in the individual's mind. For example, he documented the differences in types of magazine subscriptions, as well as participation in volunteer organizations, between individuals in the various regions of the United States. Through factor analysis of this data, he determined three distinct qualities that distinguished regions

from each other; he labeled these an urban-migrant factor, a Middle West factor, and a Southern factor (Zelinsky, 1974). Noting the unique characteristics of American society and its amalgamation of individualism, movement, evolution, and transformation, he claimed in one interesting paper that personality differences, specifically in a "culture of self-discovery" like the United States, were leading to a "rearranging of social geography" (Zelinsky, 1975). An upshot of this line of reasoning is that the United States has transitioned over time from a society composed of "traditional regions"—where people live due to birth, family, and custom—to "voluntary regions"—where people live due to personal choice and preference (Rowley, 2018). Rowley describes the quintessential example of this voluntary region as 21st century Las Vegas; in his view, communities such as Las Vegas are paradoxical in the sense that they exemplify an atomistic society, fundamentally altering the meaning of "community", and yet also reveal a sort of structural clustering effect, whereby those sharing similar personal interests, preferences, and attitudes congregate.

The issue of adaptation has been another predominant concern in cultural geography. Historically, the relationship between the culture group and physical environmental conditions was viewed as paramount to explaining the specific form that culture took. An overemphasis on this relationship led to the not infrequent rebuke of cultural geographers for engaging in environmental determinism (Archer, 1993; Denevan,1983; Franck, 1984). Nonetheless, Franck (1984) made clear that while care should be taken to avoid environmental determinism in its bluntest forms, it is only reasonable to suggest environment plays some influential role. Denevan (1983) addressed this issue as well; he chides cultural geography for focusing too much energy on grand narratives of large-scale spatial areas and cultural histories, which reinforces the belief that cultural geography has not been concerned

enough with localized variation and the agency of individual and social group alike. But he also claims that the way forward for cultural geography is to widen the definition of adaptation, to include evolving responses to social and economic conditions, and to address more localized, "micro-locations." Indeed, Archer (1993) argued that while the essence of historical cultural geography was to view regions as, metaphorically, biological organisms – growing, shrinking, and evolving in response to changes in the physical environment and consumption of natural resources - the proper view of modern cultural geography is to view regions as "social organisms", evolving in response to structural changes in society. Industrial and trade policy, in his view, are examples of conditions that influence a region's "genre de vie" (way of life) and force its citizens to spatially adapt.

Another common theme in cultural geography has to do with demarcating and explaining the existence of boundaries and zones of influence. In the scholarly literature, an example of this is Lamme and Meindl's (2002) project to uncover and trace over time the shifting cultural boundaries in the state of Florida. Their thesis built upon Zelinsky (1992), who noted several regional distinctions in the state; one being the southeast coast and the presence of many former U.S. Northeasterners, two being the southwest coast and the presence of U.S. Midwesterners, and three being the northern and inland portions of the state, which retained a distinctly Southern "Dixie" culture. Lamme and Meindl confirmed those findings, but also highlighted the more variable, archipelago-like nature of these cultural communities.

Several books written by journalists have also encapsulated the interest in documenting regions of historical-cultural influence in the United States. These include Garreau's (1981) *Nine Nations of North America* and Fischer's (1989) *Albion's Seed*. In

Fischer's case, he traced the cultural roots of British citizens in four different geographic agricultural regions and their subsequent relocation to separate parts of the United States. He illustrates how the evolution and dispersal of those four groups to colonial America is reflected in the major American cultural regions of the modern era.

2.11 Political Sorting and Polarization

There is a particular context within which I aim to situate this study of a geographical patterning to personality, and that has to do with the twin hypotheses that contemporary American society is increasingly "sorted" and increasingly polarized along social and political divisions. It seems theoretically plausible and empirically testable that the idea that populations arrange themselves along dimensions of personality would bear some relationship to differences in political attitudes and expressions. Of course, there is a great deal of debate as to whether the hypotheses of socio-political sorting and polarization, captivating as they may be, are actual empirical facts.

Some scholars remark upon the perceived loss of *cohesion* in describing a set of interrelated processes that characterize American political and cultural antagonisms. The political scientist Putnam's (2000) book *Bowling Alone* is a frequently cited work addressing what he saw as the decline in community-mindedness in the United States; he attributed this to a variety of factors, from economic inequality to poor governance to technological changes in daily life. Whatever the most fundamental cause of this shift may be, his argument emphatically points to the reality of an un-cohesive country, with serious, but not insurmountable, consequences. While perhaps not characterizing the situation as one of polarization, the term *anomie* certainly seems appropriate, given Putnam's argument. This

line of reasoning, which highlights the individualizing tendencies in American society, partially contrasts with that of historian Schlesinger, who in his 1992 book *The Disuniting of America* described a society that was becoming more focused on intergroup differences, such as ethnicity, at the expense of reflection on intergroup commonalities, with both positive and negative consequences as a result. The distinction in Schlesinger's thinking is that he saw current trends as undergirding group-level antagonism, whereas Putnam observed individual indifference to what occurs amongst a broader community. Drawing some parallel themes, the psychologist Greene (2014) writes about the innate human tendency to view the world in largely tribal terms, with each group sustained by a set of moral codes; as the world effectively "shrinks", different groups with competing moral beliefs come into conflict over shared space. For Campbell (2016), these different tribes – or ideological groups - spring from the cultural upheavals of the 1960s; politics, according to him, follow culture, not the other way around as some others have suggested.

Another argument that has received considerable scrutiny in both academic and mass media circles comes from the journalist Bishop (2008). In *The Big Sort: Why the Clustering of Like-minded America is Tearing Us Apart*, Bishop contends that it is, in fact, the preponderance of choice inherent to American society that allows individuals to self-select where and with whom they wish to live; the upshot of this is a self-segregating tendency based on a multitude of individual variables. On the other hand, the idea that American citizens have equal recourse to an abundance of choices would probably be contested, at least partially, by Cramer (2016), a political scientist who traveled throughout the state of Wisconsin, documenting the perception among rural dwellers that they are increasingly left behind economically and politically by elites, who cater to urban interests. Cramer's

narrative reveals that many in the rural populace do not see themselves as having much agency in deciding what community they are a part of. Their sole recourse is to vote their perceived group interests, which they believe runs counter to the interests of centralized, elitist, bureaucratic decision makers.

There are some, however, who take issue with the sentiment that post-industrialist societies, namely the United States, are marked by *increasing* animosities, tribalist tendencies, polarization, atomization, and the like. Fiorina and Abrams (2008; see also Abrams & Fiorina, 2012) are perhaps the two most prominent academic critics of the "myth" of an actively polarizing America. They argue that grand narratives such as Bishop's are beset by myriad empirical errors and obfuscate the fact that American society has always been, to a degree, divided and polarized. They also point to a variety of analyses to suggest that, contra Bishop, individuals do not sort themselves out, in terms of their place of residence, along partisan lines. Further empirical confirmation in support of this view was found in Mummolo and Nall (2017), who speculated that in spite of political differences, people of all persuasions want essentially the same things in their communities: good schools, jobs, and affordable homes.

That fracturing, division, and the breakdown of community-mindedness could occur as a result of ideological differences does not seem to be in dispute. A range of evidence from psychology, sociology, and political science has observed this, often in controlled and experimental settings, leading to this conclusion. Zajonc's (1968) theory of "mere exposure" – one of the most widely studied phenomena in social psychology – confirmed what we might intuitively believe to be true, which is that people are considerably more likely to approve and accept those things they have been exposed to and are familiar with. This of

course relates back to the idea that most people would prefer to live near and among those who share their lifestyles, values, and outlooks, not to mention ethnic, racial, or cultural characteristics. Additional support for views such as this comes from the research of Tajfel (1974, 1981; Tajfel & Turner, 1979), who has produced numerous experimental results suggesting that social identity and social categorization are integral to fomenting support for in-group members and antagonism towards out-group members. Moreover, Moscovici and Zavalloni (1969) contended that it is the very nature of social interaction which leads groups to take increasingly polarized positions over time, rather than mitigating or "averaging over" extreme positions. Overall, the evidence in this realm argues that the process of socialization itself, or the act of drawing individuals together to form organized groups, is one that is inherently sought out by humans and, importantly, tends towards division and conflict with other groups (Isenberg, 1986; Liu & Latané, 1998; Myers & Lamm, 1976; Vinokur & Bernstein, 1978). This is important because there was a belief at one time that larger or more complex social groups minimized the risk from extreme individual viewpoints, but this would seem not to be the case given the most widely cited studies in this area.

In an interesting variation to the work of the previous scholars and studies cited, Latané investigated how social groups cluster and organize themselves not merely in a semantic or conceptual sense, but physically or spatially. He demonstrated using numerous experimental studies that adherents of opposing attitudes, opinions, and beliefs differentially cluster so as to place themselves near others who share their own positions (Latané & L'Herrou, 1996; Latané & Nowak, 1997; Latané, Nowak, & Liu, 1994). For Latané, space can be understood as a social system, and the tendency in any system is to achieve equilibrium and order.

Of course, a social group can take many forms, and it is not always clear whether there is an overarching, fundamental socio-psychological schema that groups are constructed around, or whether these groups form as an offshoot of "real world" causes or behaviors. In other words, cause and effect become obfuscated. Conover (1984, 1988) took the former position, outlining the way in which social identity gives way to shared perceptions in terms of political cognition. Huddy (2013) appeared to agree somewhat with this position, although she demonstrated that not all forms of social identification are equal for purposes of political cohesion; it is only those that are the most central to the livelihoods of individuals – in other words, the big ideas and principles governing social life – that are capable of propelling groups towards a state of unified political commitment. On the other hand, evidence also suggests that individuals view others as accepted members of an "in-group" merely as a result of knowing basic information about their political stances; this was demonstrated in a clever study of online dating behavior by Huber and Malhotra (2017).

While focusing on social division based upon shared values, ideologies, and attitudes is compelling, we cannot lose sight of the fact that a great deal of scholarship addresses social division in more obvious forms, namely, in terms of racial or ethnic divisions. Conceptually contrasting with commentators like Putnam, Schlesinger, or Bishop, Uslaner (2012) argued that public policy has failed to extinguish the fault lines of race and class in communities. He reasons that policy can create conditions of greater equality, and greater equality will lead to less polarization. Supporting this assertion is Stolle, Soroka, and Johnston (2008), who showed that increased contact between different social groups leads to greater levels of interpersonal trust. As might be expected, however, there are others who are less sanguine on this issue. Enos and Celaya (2018) found that group segregation increases

the propensity for conflict, even when there is contact across lines of segregation. Additionally, Enos (2014) reported that even very small demographic changes within populations are liable to spark increasing fear and feelings of divisiveness. From an economics perspective, Costa and Kahn (2003) wrote that economic well-being is dependent to a large extent on efficient and functioning institutions – schools, hospitals, government, etc. They found significant evidence that good institutions are the result of high levels of "social capital", which correlate with societies that are racially and ethnically homogenous, and where wealth is evenly distributed. While they are hopeful that multicultural countries can overcome these hurdles in developing better institutions, their view is that these societies are at a distinct disadvantage for developing higher levels of social trust.

Returning to the hypothesis that the United States is undergoing a "Big Sort", the evidence is undoubtedly varied, with opponents of the theory, such as Fiorina and Abrams, putting forth a view that polarization is a process caused and felt the most by elite members of society – the wealthy, the educated, the media-savvy, and the politically-involved. Because of this, there is polarization within a slice of society, but not all of society. And yet, while acknowledging there may be some degree of rationale for this argument, a sizable number of scholars report findings that continue to buttress the view of increasing sorting, clustering, and polarization. Bartels (2000) concluded that polarization in the voting booth rose significantly in the second half of the 20th century, noting specifically that "the impact of partisan loyalties on voting behavior…was 80 percent higher in 1996 than in 1972" (p. 35). This view was echoed by Abramowitz and Saunders (2008), who also reported that polarization in elections has increased markedly among all segments of society since the 1970s. Additionally, Sussell (2013) found, in 10 of 12 various measures of political

segregation and at multiple scales of analysis, that segregation between Republicans and Democrats increased in the period 1992-2010. Nall (2015) agreed with the overall contention that polarization has been occurring across both political and geographic dimensions, but he offers the idea that this polarization has been driven by public policy – he focused on the spatial impacts of the Interstate Highway System - rather than by individual choices and locational decision-making. For their part, Marschall and Rahn (2006) directly addressed one of Fiorina's critiques of the polarization hypothesis, which was that analysis needed to be done at finer scales than county-level. They concluded that, indeed, sorting occurred at a more micro-level than between counties, and that this sorting is prevalent across a variety of values-driven variables of personal preference, not simply political variables. Thus, they reasoned that the problem – assuming it should be construed as such – is more pervasive and entrenched than previous theories of political polarization would posit. Lang and Pearson-Merkowitz's findings (2015) supported this view as well, although they report that the size of the effect of migration on political sorting is not a large one, and there is risk that its effect is overemphasized.

2.12 Personality and Political Attitudes

Given that one of the aims of this research is to investigate possible relationships between regional personality variations and political polarization, the extent of research directly linking "Big Five" personality traits and political ideology must be commented upon. Most, though not all, of these associations has been found at the level of the individual. The most conclusive and commonly replicated finding links trait openness to greater liberal or progressive political positions (Carney, Jost, Gosling, and Potter, 2008; Gerber, Huber,

Doherty, Dowling, and Ha, 2010; Gosling, Rentfrow, and Swann, 2003; Mondak and Halperin, 2008; Van Hiel, Kossowska, and Mervielde, 2000). This can be explained at least in part by greater risk-tolerance and less acceptance of the status-quo, both typically observed in individuals higher in openness (Jost et al., 2007; Landau et al., 2004). In addition, there is substantial evidence that higher trait conscientiousness is associated with greater support for conservative ideologies (Carney et al. 2008; Goldberg and Rosolack, 1994; Jost, 2006). In this case, those high in conscientiousness tend to be more concerned with maintaining established norms and minimizing uncertainty, thus making them more "natural" conservatives (Gerber et al., 2010; John and Srivastava, 1999; Jost, 2006).

The results are more ambiguous when examining the other "Big Five" traits of agreeableness, neuroticism, and extroversion. Carney et al. (2008) found a weak correlation between agreeableness and conservatism, but several other studies have reported no such association (Gosling et al., 2003; Mehrabian, 1996; Mondak and Halperin, 2008). Interestingly, two separate studies have investigated this overall relationship by parsing agreeableness into two distinct sub-traits, compassion and politeness. In both cases, results showed that compassion was associated with liberalism, while politeness was associated with conservativism (Gerber et al., 2010; Hirsh, DeYoung, Xu, and Peterson, 2010). In terms of neuroticism, findings have been mixed; some have been inconclusive, while others report a correlation between neuroticism and political liberalism (Carney et al., 2008; Gerber et al., 2010; Gosling et al., 2003). Finally, in regard to trait extroversion, there is little conclusive evidence to support a correlation with either end of the political spectrum. Carney et al. (2008) and Gerber et al. (2010) present very tepid results showing that some of their samples

reveal an extroversion-conservatism bent, but the amount of correlation reported is small, and other studies fail to confirm this finding.

There are several factors which could complicate interpretations of these findings. One is that, as noted previously, the five highest-order traits in the Big Five model can be disaggregated into more specified sub-dimensions, which as the evidence has shown, can tap into different value structures leading towards affiliation with different ideologies. This has been demonstrated with agreeableness, but Hirsh et al. (2010) suggested this may potentially be true of the other dimensions as well. Secondly, there is reason to believe that relationships between personality and ideology are context specific. An example of this is the argument that, due to their willingness to challenge convention, those high in openness will espouse liberalism when among homogenous groups of conservatives and will espouse conservatism when among homogenous groups of liberals (Gerber et al., 2010). Although some have speculated that American blacks and whites might display different personality-ideology relationships as a function of historical factors, no study that I am aware of has been able to reveal systematic racial or ethnic differences in this regard.

Few studies have attempted to draw links between aggregate personality measures and political results; there are several deserving mention, however. Rentfrow et al. (2009) were able to connect state-level personality to state-level results in previous presidential elections, finding that openness and Democratic candidates were associated. Rentfrow (2010) as well as McCann (2014) conducted studies specifically aimed at understanding state-level conservatism. Here too the results showed that states lower in measures of openness and higher in measures of conscientiousness show greater support for conservative issues across the board.

It appears, however, that little research has investigated the relationship between individual personality and political polarization. It is true that some studies have investigated links between personality and authoritarian leadership (see, for example, Adorno, Frenkel-Brunswik, Levinson, and Sanford, 1950), but these sorts of studies are concerned more properly with socialization tendencies and do not address the issue of whether certain personality traits are associated with the adoption of more pronounced ideological positions.

2.13 Migration

When thinking about regions of personality, the issue of causation is a central problem in the analysis which needs to be explored. By causation, what I mean is the mechanism or mechanisms by which an average personality trait in a region comes to exist in the first place, assuming the average is not merely the result of a random process. Two main hypotheses have been proposed in the literature: a) people in a region adapt over time – due to acculturation or environmental pressures – to broadly mirror the aggregate personality profile common to the region, or b) through selective migration, people choose to enter the region already possessing personality traits similar to the average (Rentfrow et al., 2008).

In my research I specifically examine the propensity of in-migrants to conform to the average personality pattern found in the region. This necessitates that I attain some degree of familiarity with the pertinent historical, demographic, sociological, and psychological literature pertaining to migration. As a general rule, internal migration within a country is correlated with economic development, though there may be a few exceptions to this principle (Bell et al., 2015). The United States has often been regarded as emblematic of this association.

However, the data indicate that after peaking in the 1950s, rates of annual internal migration within the U.S. diminished (Li, Huang, Chen, and Chen, 2020; Molloy, Smith, and Wozniak, 2011). That being said, there are a couple of key points that help to contextualize this apparent diminishment in mobility. The first is that by international standards the rate of internal migration is still quite high. About 3 percent of the US population move across state boundaries every year, while over a third of the population resides in a different state than that of their birth (Molloy et al., 2011). Secondly, a variety of historical factors can be used to explain the long-term downward trend in migration, which should warn us against adopting the position that the US is now entering a period of permanent diminished mobility. The large-scale migration of African-Americans from the U.S. South and rural whites from Appalachia to the industrial centers of the U.S. North in the 1950s-1960s was a specific result of increased industrial output and a substantial reduction in barriers to employment (Flippen, 2013; Tolnay, 2003). Government policy and demographic anomalies have been credited as drivers of high rates of mobility among other groups, notably veterans returning from World War 2 and their subsequent offspring, the Baby Boom generation. Additionally, any analysis of migration that fails to take account of housing policy and the housing market ignores a major feature that drives migration into or out of specific locations (Jokela, 2014; Molloy et al., 2011). Taken collectively, these various factors could easily lead us to conclude that what we see now as diminished mobility rates are actually a correction towards the norm – that the 1950s-1970s period was an aberration and the result of distinct and temporally discrete exogenous factors. Furthermore, it is important to note that some of the data suggest the internal migration rate in the U.S. has been rising slightly since about 2010, as the national economy dragged itself out of a deep recession (Li et al., 2020). Taken as a

whole, I believe this evidence suggests that the US remains an extremely mobile society in comparison to other societies. It would be myopic to view the downward trajectory of internal migration rates from 1980-2010 as evidence of a forthcoming "immobile" society.

The most important variables repeatedly correlated with rates of mobility are education, youthfulness, and affluence (which all have a positive relationship), and homeownership (which has a negative relationship) (Faggian & Franklin, 2014; Frey, 1995; Lee, 1966; Molloy et al., 2011; Tolnay, 2003). In other words, in the United States as in other advanced, industrialized societies, a college-educated, relatively prosperous individual who rents a home – and by association, is also more likely to be white than African-American or Hispanic – is likely to be more mobile than those fitting the alternative sociological parameters. It is also quite clear that migration tends to occur across networks, to familiar places where migrants have friends or family (Bell et al., 2002; Frey, 1995; Tolnay, 2003). This tendency to move somewhere where the roots of community are already established was certainly true, for example, in the case of the "Great Migration" of African-Americans to the industrial North in the 20th century or in contemporary times in the flow of immigrant labor into the US from other countries (Flippen, 2013).

Thus, it is entirely appropriate to conclude from these points that migration is rarely the choice of a completely free and atomistic individual. People are inarguably faced with interminably varying ranges of choices and opportunities; these all go into any one individual's mental calculus as it relates to mobility. What is particularly interesting, then, is how much of the migration literature in geography, demography, and population economics makes use of the free-market, individual-as-rational-agent, utility-maximization paradigm

(for example, see the following: Bell et al., 2002; Faggian & Franklin, 2014; Flippen, 2013; Franklin, 2014; Lee, 1966; Li et al., 2020; Molloy et al., 2011).

In these instances, a paradox is inherent to the analysis: individuals apparently have agency, and yet the nearly universal determinant of migration patterns is the location and availability of jobs. I do not see any particular reason to take issue with this focus on the broad economic determinants of migration; it would seem quite difficult for even the most skeptical critic of this approach to deny that an individual's ability to make money and find meaningful work is one of the major driving forces in most people's lives. To underscore, the evidence is very clear that education level (usually defined as equivalent to occupational skill level) and income are strongly positively correlated. We must be a bit careful with this relationship, however. On the one hand, the case has been made that higher skills give one greater overall latitude as to where to locate, or that effectively one can find a job about anywhere (Faggian & Franklin, 2014; Frey, 1995). On the other hand, an alternative argument is that higher skill levels mean that individuals will be presented with very specific locations in which they can make use of these specialized abilities. The upshot is not that every place in the world is equally well-suited to highly-skilled individuals, but that certain places are exceptionally well disposed towards these persons. While it might entail a small series of migrations to specific locations for the highly skilled, it does not entail permanent or endless mobility (Florida, 2003). Furthermore, we would be wise to remember that in reality the term "skills" is not merely code for intelligence or education, but denotes specific, tangible tasks which a person completes in an occupational setting; these in turn often directly reflect and express personality. As Borjas (1992, p. 159) stated: "Persons whose skills are most mismatched with the reward structure offered by their current state of

residence are the persons most likely to leave that state, and these persons tend to relocate in states which offer high rewards for their particular skills."

An abundance of studies examining the personalities of migrants has led many to conclude that there is, in fact, a "migrant personality", or set of personal traits like openness, risk-taking, and aspirationalism, that overall make certain individuals more likely to migrate than others (Boneva & Frieze, 2001; Jokela, 2014). This has been documented across multiple cultures, and in terms of both internal and external migrations (Boneva et al., 1998; Jokela, 2008). The act of migration, in the vast majority of cases, is a risk-taking endeavor. Therefore, migrants are more likely than non-migrants to demonstrate personality traits associated with risk-taking. In terms of the Big Five traits, the connection has been made most prominently between openness and mobility. Studies have shown a more modest positive correlation between extraversion and mobility, and a modestly negative correlation between conscientiousness and mobility (Jokela, 2008, 2014). Interestingly, neuroticism has been linked to greater place dissatisfaction and greater propensity to report the desire to migrate, but not to actually do so (Jokela, 2008). Apart from the Big Five, however, a number of studies have found that migrants are higher in traits ranging from ambition and entrepreneurialism to ability to delay gratification and work ethic (Renkow & Hoover, 2000; Tolnay, 2003). Talhelm and Oishi (2014) found that individuals who move residences frequently have a more individualistic self-concept than those who do not, and that merely living in a "mobile" community – even if the individual is not mobile – has a relationship to individualism. Based on the evidence it seems reasonable to assert that, no matter what social or demographic group one examines, residentially mobile individuals tend to be personologically distinct from the non-mobile.

The relationship of personality to migration tendency has enormous potential implications, then, when we consider that migration itself is not uniformly distributed across space. As Frey (1995) observed, the United States can be categorized as having two types of places, one marked by high rates of overall mobility, both in- and out-migration, and another marked by significantly less overall migration. He noted this phenomenon in his paper discussing the "Balkanization" of the United States, where he described Democratic-voting areas as having high levels of mobility and Republican-voting areas as low levels of mobility (Frey, 1995 see also Mantovani, 2019). Taken in the context of my own work, this would seem to offer a hypothesis that the places that experience migration will be distinct, and have individuals with distinct personalities, as compared to places that do not experience migration. And importantly, in one particular study, Oishi and colleagues (2012) found that greater mobility fostered a need for familiarity, in the sense that mobile individuals increasingly sought out neighborhoods and social environments which they perceived to be similar to those they had previously lived in.

It is important to note, however, that my research is not meant primarily to quantify in an absolute sense the role of personal choice and decision-making when it comes to migration behavior. Nonetheless, the evidence suggests that, in a practical sense, individuals are faced with a wider variety of choices and possibilities for exercising personal preferences than in the past. For example, in 1977, the political scientist Inglehart wrote a book detailing a shift towards what he termed a "post-materialist society" (1981; for discussion see Bishop, 2008). To summarize, Inglehart argued that as more people achieved basic material security, they would increasingly focus on "self-fulfillment". This would entail an adoption of an

autonomous, individualist ethos, and the individual's primary motivations would take the form of self-expression and acts directed by a personal value system.

My observation is that this is similar to what the geographer Zelinsky had in mind when he discussed the "changing personal preference patterns" and "culture of self-discovery" of the United States (1974, 1975). It is debatable whether Zelinsky succeeded in arguing that these preference patterns were the result of individual choice, or whether they were still the result of more over-arching group preferences. At minimum, however, he was successful in arguing that there were more choices available to individuals than in the historical past, and that this would lead to increased fractionalization in the United States. He referred to regions of the country no longer bound by traditional culture and historical ties as "voluntary regions" (1975). Writing as he did in the 1970s, he was mainly interested in the early growth in areas of the American South and West, where he believed individuals settled with other like-minded souls for purposes of retirement, weather, and recreational opportunities. As Rowley (2018) pointed outs, the growth of Las Vegas in the last 50 years is perhaps the penultimate example of this sort of voluntary region. In his analysis, the reason for settlement in these regions is still often economic in the sense that this is where job growth has occurred. It represents, however, the separation of people from long-standing community, ethnic, and familial ties to place. This separation brings together like-minded individuals to invent a place anew. It should be pointed out as well that some of the most eminent researchers of the economic determinants of migration often include various "amenities" in an area as variables in their mathematical models. They generally conclude that these attractions - good weather, access to natural scenery, cultural and recreational

opportunities - entice people to move there, independent of economic considerations (Renkow & Hoover, 2000).

Another interesting line of research has been undertaken by the urban scholar Florida, who has traced the migration propensities of the "creative class" (Florida, 2002, 2003; Florida & Mellander, 2014). What he has found is that the members of this class go to "…places that are inclusive and diverse. What creative people look for, above all else, is the opportunity to validate their identities as creative people" (2003, p. 9). To be clear, his definition of the creative class is based largely on an individual being sufficiently educated and achieving a relatively high degree of social status. While his explicit emphasis on creative types might seem somewhat elitist and narrowly focused, the reality is that, by Florida's measure, 38.3 million American, or 30% of the workforce, is actually a member of this creative class (2003). Stripping away the relationship between creative work and education or status, what Florida really argues is that the share of people who work with ideas rather than material things is increasing, and it is these people who represent the creative class (which seems very similar to Inglehart's description of post-materialism). Again, the important point of distinction here, according to Florida, is that the proportion of people who belong to this category is increasing. We can hardly say this represents a mere fraction or meaningless segment of society, even if we believe there is a class bias inherent in the depiction.

It seems clear from the variety of evidence consulted that individual choice and preference patterns play some influential role in determining where people live, at least in highly developed societies. In a series of studies from Australia, Whitfield and colleagues (2005) determined that genetics are associated with the distance adults live from a major city

center. Conversely, Willemsen, Posthuma, and Boomsma (2005) attempted to replicate the findings in studies in the Netherlands, and they found that it was childhood cultural influences which were more influential in determining adult place of residence. Though one of these studies highlights a genetic influence and the other an environmental influence, the more important information to be extracted is that both research projects found residential location to be a non-random phenomenon and one that is based around some measurable element of preference**.**

Chapter 3

Methods

3.1 Overview

The data for this study were acquired from a survey completed by 508 residents of Santa Barbara County, California, between January 2020 and February 2021. I attempted to use a randomized selection procedure to identify county households for participation in the survey. From January to early March 2020, I visited these households in person, where I solicited the participation of one adult member of the household. Prospective survey respondents had the option of completing a paper survey or completing an online version electronically. The onset of the Covid-19 pandemic in March 2020 necessitated revisions to this method, however. At that time, 38 surveys had been completed. Starting in April 2020, all survey participation was solicited through a letter distributed via the U.S. Postal Service. From this time onwards, the vast majority of survey participants completed the survey electronically. I will discuss details of the selection procedure, solicitation, and the survey itself in later sections. The 508 survey respondents came to represent a geographically diverse cross-section of the county. Although there is reason to believe the participants are not representative across several demographic characteristics, most notably ethnicity, they are generally representative of the geographic distribution of the county population. Residential addresses associated with Vandenberg Air Force Base and the University of California, Santa Barbara, were excluded from this study.

3.2 Study Area

The location for this study was the county of Santa Barbara, California. There are two main reasons for identifying this geographic area as the location for the study. The first is entirely a practical one; it is where I live. The second reason is that there is a longstanding media and public perception of a cultural divide between a "North County" and a "South County". Although there are no administrative regions explicitly demarcating North from South, many county services are housed in two locations, one in Santa Barbara (South) and the other in Santa Maria (North). The county itself is large by national standards, at 2,741 square miles[1], but the county population of about 434,000 is quite clustered[2], with the largest population centers being around the city of Santa Barbara in the southeast and around the city of Santa Maria in the northwest part of the county. A third population center, the city of Lompoc, is located between Santa Barbara and Santa Maria, but is closer geographically and culturally (probably) to Santa Maria. Besides these three, the county has five additional cities as distinguished by the U.S. Census Bureau, for a total of eight, and there are 20 census designated places, or CDPs.

On a few occasions in the last few decades, groups of concerned citizens have attempted to organize around the idea of splitting in two along a north/south cultural fault line. This idea has never gathered wide traction, however. Several factors distinguish the northern and southern areas, broadly speaking. The first is political. Although one can find people of various political persuasions throughout the county, in general North County is more conservative politically than South County. The county leans towards the Democratic

[1] County of Santa Barbara, California. County Statistical Profile, 2014.
[2] Ibid.

party overall, but presidential election results from 2020 reveal a greater degree of county precincts voting Democrat in the south, and more precincts voting Republican in the north.[3] Voter registration numbers from each of the cities of the county further supports this contention of regional political differences.[4]

Another factor is, perhaps, environmental. The southeastern portion of the county near Santa Barbara hugs the coast and is separated from the rest of the county by the east-west axis of the Santa Ynez Mountains. There is less rain north of the Santa Ynez range, and there are differences in vegetation compared with south of the Santa Ynez.[5]

Perhaps influenced in part by these environmental differences, different economic interests predominate in the two regions of Santa Barbara County. While South County takes advantage of its coastal location to support a tourism industry, North County sees greater emphasis on oil, ranching, and agricultural activities, and also has a military presence around Vandenberg Air Force Base. The wealthiest neighborhoods in the county are located around Santa Barbara proper and the neighboring CDP of Montecito, but there are pockets of wealth in both South and North. Socioeconomically, South County has less poverty, better public-school performance, and greater educational attainment among its residents. But again, in these regards it must be noted that there is wide variation in both regions.

Issues such as these lead to the question of whether the respective populations of North County and South County differ fundamentally in terms of culture, lifestyle, or perhaps more fundamentally, in terms of aggregate personality. This is, ultimately, the question that motivated the study, although I broadened the investigation of those possible

[3] https://www.nytimes.com/interactive/2021/upshot/2020-election-map.html.
[4] https://www.sos.ca.gov/elections/report-registration/ror-odd-year-2019.
[5] https://databasin.org/datasets/7f837eed263b42fd9b5150ee456039a1/, http://countyofsb.org/pwd/rainhistory.sbc.

personality distinctions to look for any significant regional grouping or division within the county, not only a division between North and South.

3.3 Survey Instrument

A major consideration in developing the survey instrument was achieving a balance between brevity and depth of questioning. While I sought the amount of information needed to completely answer the research questions, I expected that participation would diminish if the survey took more than 20 minutes or so to complete.

The full paper-version of the instrument can be viewed in Appendix A. The electronic version was compiled using Qualtrix software and was exactly the same as the paper-version. To make navigation to the online survey easier, a shortened URL was created using the "Tiny URL" web application, which automatically linked to the Qualtrix URL. A Spanish-language version of the survey was also made available. It was created in consultation with a fluent Spanish speaker. The following sections provide a brief description of each section.

3.3.1 Cover Letter

First, I provided a one-paragraph introduction to the survey. Next, I provided contact information for those who had questions or concerns. Another short paragraph notified the reader that he or she would have the opportunity receive a written summary of research findings at the conclusion of the project. A final paragraph provided very general instructions to complete the survey honestly and to the best of one's ability.

3.3.2 Demographic Information

The first substantive section to the survey asked for information about eight demographic variables: age, sex, race/ethnicity, language, highest level of education, occupation, annual household income, and political ideology. Regarding this final variable of interest, political ideology, the survey asked respondents to rate themselves on a scale of one to seven, where one equaled "extremely conservative" and seven equaled "extremely liberal". An option of "no opinion/other" was also provided.

3.3.3 Residential History

A paragraph of explanation was provided at the beginning of this section to assure the reader that the residential information sought would not be shared publicly or otherwise misused. The first question asked the respondent for his or her complete current residential address and the length of time – in years and months – that he or she had lived there. Next, the original iteration of the survey asked the subject to list complete addresses and length of time spent for all other residential locations lived in within Santa Barbara County. Due to a low initial response rate, and over concern that this depth of residential history sought was making individuals leery, I decided to amend this question. This change was made after approximately 10% of total responses had been completed. From that point forward, this question did not ask for historical Santa Barbara County addresses; it asked for the total amount of time the subject had lived at his/her current address, the amount of time at his/her current zip code, and finally it asked the subject to list other zip codes he/she had lived at in Santa Barbara and length of time spent there. A final question in this section asked subjects to note their reasons for residing in their current location. A list of possible options was provided, as well as a line for write-in answers.

3.3.4 Social and Political Opinion Questions

The title to this section on the actual survey read "Issues of Public Opinion". In this case, I wanted to avoid any kind of connotation that using words like "social" or "political" might imply. Brief instructions were provided, and then subjects were instructed to respond to 27 questions using Likert scales. This is a very common method to use in attitudinal surveys (Aldridge, 2001; Schuman & Presser, 1981). Respondents are asked to rate on a numerical scale the extent to which they agree or disagree with a series of statements. In this case the scale ran from one to five, with five meaning "agree strongly". An option was also provided to signify "no opinion". The 27 questions were organized into nine categories of three questions each. The categories were: marijuana, gun control, homelessness, abortion rights, immigration, taxes, transportation infrastructure, energy, and a final category asking about a sense of personal identification with and attachment to the county. Although not a political or social category, this was included due to my ongoing interest in the topic. The categories were decided upon in consultation with my advising committee, as were the specific items within each category. I consulted an online resource provided by the Roper Center at Cornell University[6], which provides thousands of public opinion questions used throughout the last number of years by a wide variety of polling organizations. From this I identified particular questions that seemed to match the level of complexity I was searching for. In many cases, I did not use the questions verbatim, but rather made slight adjustments to wording, particularly as my instrument necessitated turning all questions into statements to use in conjunction with the Likert scale. The items were explicitly grouped and labeled by category. In constructing the questions, I varied the valences, and this meant that I had to

[6] https://ropercenter.cornell.edu/

reverse-score some when analyzing the data. At the conclusion of the questions, I left a wide margin with instructions for respondents to write-in additional opinions or elaborate on anything they felt was important.

3.3.5 Personality Characteristics

In this final substantive section, I utilized the BFI-2-S personality instrument as created by Soto and John (2017). This questionnaire has been adequately assessed for validity and reliability. First, I provided basic instructions for completing the section. The instrument itself, making use of a five-point Likert scale, consists of 30 items, six items for each of the five personality dimensions of agreeableness, extroversion, conscientiousness, neuroticism, and openness. In contrast to the public opinion section of my instrument, these items were not grouped according to category, but instead were randomly arranged. This is the format utilized in Soto and John's version. For this section I did not provide an additional response option of "no opinion". Some of the items required reverse-scoring for analysis purposes.

3.3.6 Closing Comments

Upon completing all the substantive portions of the instrument, I asked respondents to check a box indicating whether wished to receive a future communication explaining the findings via email. If they checked "yes", they were asked to leave their email address. A final statement expressed thanks to them for their time and effort in taking part in the research.

3.4 Sampling

After performing a statistical power analysis (Cohen, 2013; Faul, 2019), and in consultation with my committee members, I began this project with the goal of attaining 500 satisfactorily completed surveys. Using a simple random sampling procedure, I hoped that the sample attained would generally match the county population overall in terms of sociodemographic characteristics including age, sex, primary language, income, and education level. In reality, this procedure almost certainly led to an undersampling of low-income and Hispanic households, respectively. In terms of geographic representativeness, I was aware that a truly random distribution would result in a rather small sample of rural locations, due to the highly clustered pattern of the county population around several urban areas. I also was unsure if the response rate from rural areas would match the response rate from urban areas, which by extension would necessitate some amount of non-random geographic selection.

Bearing these issues in mind, I still began sampling using a geographically randomized process. I purchased a digital copy of the 2020 county "property rolls" from the Santa Barbara County Assessor. The property rolls list, among other things, the owners and addresses for all property within county limits. This information appears in rows on a Microsoft Excel spreadsheet. A series of codes are found in the spreadsheet signifying the use of the property i.e., commercial, residential, etc.; these can be sorted in order to isolate residential from other types of properties. I employed two undergraduate research assistants to help with selecting and recording residential addresses to approach for participation in the survey. We used a random number-generator tool to select approximately 1,000 residential addresses for initial solicitation. A fairly common occurrence was that owners of properties

had mailing addresses that differed from the residential location itself. In these situations, we opted to use the address of the residence itself, not the address of the owner.

I originally intended to solicit participation by visiting residences in person and explaining the project orally. It was thought that this sort of personal outreach would result in a more efficient survey collection process, resulting in a more representative survey sample and fewer financial costs than using other survey methods. In January 2020, I began the project using this strategy. On weekend days when individuals were more likely to be home, I would select approximately 10 addresses that were clustered together, always within the same zip code but sometimes extending across multiple census tracts. In order to reduce travel time between addresses, I would begin at the first address on the daily list. Whether or not a resident answered the door, and whether or not he or she agreed to participate in the study, I would proceed to the next residence located to the right. If there were no residences to the right, then I proceeded to the left. If there were no residences on the same side of the street, I proceeded across the street. In this way, I continued attempting contact with households until three residents of unique households had orally agreed to participate in the study. Once that was achieved, I consulted the daily list of addresses, and I would walk or drive to the next residence on the list. Using this procedure, I hoped to end each working day with 30 households agreeing to take the survey.

This procedure changed in March 2020, when the Covid-19 pandemic made it impossible to approach households in person. From that point onwards, only the addresses selected from the county property rolls were contacted, and this was performed through a letter in the mail.

After the first 1,000 addresses had been contacted – and still in need of additional completed surveys – my team and I decided to continue our sampling efforts. We did this until we had received about 250 surveys, which was roughly halfway to the goal of 500. At this point I assessed the geographic distribution of the responses received. It was clear that given the current random sampling procedure, certain areas of the county would ultimately not have large enough sample sizes to allow much generalization to those specific locations. This was true not only of some rural communities, but also some neighborhoods in the urban areas of Santa Barbara, Santa Maria, and Lompoc. I found this was particularly the case in areas that had lower average household incomes and greater proportions of residents who spoke Spanish as their primary language. With the desire to bolster responses from these underrepresented geographic areas of the county, I changed the sampling process from an entirely random one to a geographically stratified one. The stratification occurred at the level of census tract. It should be noted that census tract information is also found with each record of property on the county property rolls. I set a target of acquiring a minimum of five completed surveys from each census tract (excepting the tracts for Vandenberg AFB and UCSB). The target proved elusive, but for the remainder of the project the random selection procedure was repeated, only this time using census tract as sorting parameter. Sampling and solicitation stopped once 500 completed surveys had been received. In sum, 508 surveys were completed out of a total of 4,274 addresses solicited, for a response rate of 11.9 percent.

3.4.1 Geographic Representation in Sample

I began the process of sampling before concluding whether it was preferable to do so based on the actual spatial population distribution of the county, which is highly uneven, or based on a uniform spatial pattern, akin to laying a grid over the county and choosing an

equal number of respondents from each cell of the grid. On one hand, due to the uneven distribution of the county population, a truly random and representative sample would have minimized the contribution from rural residents to the data set. Additionally, I was concerned that response rates from rural areas would be lower for perceived political reasons. I surmised that rural areas would have more politically conservative respondents, and that they would view me, the issuer of the survey, as a biased "academic liberal". As numerous stories have suggested, particularly in light of the 2020 presidential election, political conservatives might be significantly less inclined to respond to political opinion polling (Panagopoulos, 2021; Brownback & Novotny, 2018). Therefore, I wanted to ensure an adequate number of responses from more rural locales. On the other hand, a geographically uniform sample would have resulted in an undersampling of urban areas. Part-way through the project - and noting the survey response rates from different areas of the county - I set an informal goal of acquiring a minimum of five completed surveys from each of the census tracts in the county. That goal was not met in several census tracts. It did, however, drive the decision on where to sample towards the later stages of the surveying process. I display the eventual geographic break-down of the sample in the ensuing Findings section.

3.4.2 Solicitation: January 2020 – March 2020

As previously stated, I began this project with the intention of soliciting survey responses in person for the entirety of the project. On select weekend days over a 2-month period, I visited select clusters of addresses, garnered from a list of 1,000 randomly chosen addresses. When I visited a home, if no one answered the door, I simply left and moved to the next location. When a person did answer the door, I verified that he or she was an adult member of the household currently residing there. I then briefly explained who I was and

introduced the survey. I offered two methods by which a household member could complete the survey. The first entailed filling out a paper copy at one's leisure and returning it to me using an addressed and stamped return envelope which I provided. The second involved going to a secure web address and completing the survey online. I provided a small flyer with brief instructions to assist the household member with this. In some cases, household members wanted to know more about the project; in these instances, I answered any questions they had. In all interactions, I took some care to limit the initial amount of information I shared concerning the goals of the project. I was never deceitful nor withheld information, but I also wanted to reduce the odds of introducing bias into the procedure. Whether the resident agreed to participate or not, they were thanked for their time.

3.4.3 Solicitation: April 2020 – February 2021

Upon reevaluation of the surveying procedure due to the Covid-19 pandemic, I opted to use a mail survey format. I attempted several different variations of this procedure before identifying the particular one that was most cost effective. All variations employed a form letter sent through the mail, as well as a follow-up letter in cases where no initial response was received. One aspect that was manipulated was the use of a pre-mailing postcard that simply let the household know their address had been randomly chosen for participation, and that they could expect to receive a letter with more instructions in the near future. A second aspect that was manipulated had to do with the inclusion of a paper survey and return mailing envelope in the same out-bound mailing that contained the introduction letter. Because each of these manipulations to the process were performed independently of each other, ultimately I employed four strategies. These were:

a) Postcard, introduction letter (paper survey included), follow-up letter

b) Postcard, introduction letter, follow-up letter

c) No postcard, introduction letter (paper survey included), follow-up letter

d) No postcard, introduction letter, follow-up letter

I believed that the inclusion of the postcard and paper survey would increase the overall response rate, but I found this not to be the case. This also meant that, when comparing the response rate to the overall mailing costs, the most economically efficient version was simply sending an introduction letter, as well as a follow-up letter when no response was received.

The introduction letter itself was one page in length. In it I provided a brief overview of the project and contact information. I described how an adult member of the household could complete the survey either online or by returning a paper copy in the mail. I provided instructions for how the household member could contact me if he or she preferred a paper copy; although this did not occur frequently, when it did, I sent an additional mailing to the household which contained a paper survey and return envelope and postage. In most instances, a household member utilized the online option; for this he or she was directed to a secure website. There they received virtually the same instructions for filling out the survey that were found on the paper version. They were given no time limit for responding. Although I stated in my letter that only one completed survey from the household was permissible, I still created safeguards online to ensure that multiple surveys were not submitted from the same IP address.

I noted the date when introductory letters were sent to the selected address; after approximately three weeks, if I had not received a response from the address, then I sent a follow-up letter. This was essentially a condensed version of the original introductory letter. Both the introductory letter and the follow-up letter can be viewed in Appendix A.

3.5 Analysis

In this section, I describe some general analytical issues pertinent to the aims of this research. In addition, I discuss in some depth several analytical techniques that, due to their importance or complexity, require special mention. The consideration of these issues and techniques were instrumental in allowing me to generate answers to my research questions (see Findings chapter). In most cases, I ultimately used some form of correlational analysis. In a few circumstances, I employ multiple linear regression analysis. The coefficients and tests of significance related to all correlation and regression analyses are shown in the Findings chapter.

3.5.1 Testing for non-random spatial patterning of major variables

To test the primary question of this research—Are personality and political characteristics spatially patterned in a statistically non-random fashion?—I conducted a series of tests of global spatial autocorrelation using the Moran's I statistic.

Spatial autocorrelation is "…the degree (positive or negative) of similarity between two or more observations with respect to attribute characteristics, taking into account spatial proximity" (Murray, 2020, p. 367). In a measure of spatial autocorrelation, if objects located spatially near each other have similar values on a non-spatial variable, then spatial autocorrelation will be positive and approach 1.0. Conversely, if objects located spatially near each other have dissimilar values, then spatial autocorrelation will be negative and approach -1.0. When there is no relationship between spatial proximity and values on a non-spatial variable, spatial autocorrelation will approach 0.0 (Griffith, 1987).

There are several different statistical methods for calculating spatial autocorrelation. Perhaps the most common method is Moran's I, which utilizes the following formula:

$$I = \frac{N}{W} \frac{\sum_i \sum_j w_{ij}(x_i - \mu)(x_j - \mu)}{\sum_i (x_i - \mu)^2}. \quad (1)$$

where N is the number of spatial objects indexed by *i* and *j*, *x* is a variable of interest, $\bar{\mu}$ is the mean of *x*, w_{ij} is a weighting matrix, and W is the sum of all w_{ij}.

Crucial to the computation of the statistic is the determination of a weighting matrix. In some scenarios, all objects within a user-defined "neighborhood" are given a weight of 1; all objects outside the "neighborhood" are given a weight of 0. In other common scenarios, a user might determine to apply a distance decay function, giving greater weight to those objects which are spatially closer than those further away. In all situations, the nature of the phenomenon under investigation should guide the selection of a weights matrix.

It is also important to note that statistical significance can be measured by assessing the value of I against a distribution of randomly selected values which share the same mean and standard deviation. Both the measure of I itself, which has little meaningful value in isolation, and a p-value measuring significance can be calculated with software, in this case using ArcGIS.

Another decision the user has to make is whether to analyze the data in terms of points in space or in terms of polygons. The difference in conceptualization of the data can lead to divergent results. Furthermore, polygon data can be "weighted" in terms of contiguity, while generally point data cannot. Additionally, polygon data require an element of aggregation e.g., averaging out values over zip codes mapped as polygons. In other cases, Thiessen polygons (also called Voronoi polygons) can be created around point data, but these are subject to distortions in spatial extent that do not match spatial reality. For these latter reasons, I decided to perform tests of spatial autocorrelation conceiving of the data as points.

After consideration I decided to calculate Moran's I using two different weighting techniques offered in ArcGIS. These are known as "inverse distance" and "fixed distance band". Inverse distance is a simple distance decay function, where the weighting between two objects is inversely proportional to the straight-line distance between them. The user also has the option to specify a threshold distance beyond which all objects receive a weight of 0. The fixed distance band technique differs in that the user specifies a threshold distance, and all objects within that distance are given a weight of 1. Beyond that distance, just as with the previous technique, objects are given a weight of 0.

The east-west and north-south axes of Santa Barbara County are approximately 110 kilometers and 70 kilometers respectively. I considered this as well as the spatial distribution of cities and towns when deciding upon the threshold distances to use with the Inverse Distance and Fixed Distance Band techniques. I used threshold distances of 10,000; 30,000; 50,000; and 150,000 meters with the Inverse Distance technique. With a threshold of 150,000 meters and using this technique, it practically ensures few if any object relationships are weighted as 0. The same thresholds were applied with the fixed distance band technique, with the exception of 150,000 meters. If that option had been chosen, the effectively all object relationships would have been weighted as 1, rendering the calculation entirely meaningless since there would have been no distinction between "near" and "far" objects.

3.5.2 "A Priori" versus "A Posteriori" regionalization techniques

A conceptual issue at stake in this research has to do with how regions, as spatial objects, are arrived at. Regionalization occurs when various sub-objects of a single spatial object i.e., a country, a city, the world, etc., are grouped together because the sub-objects generally share similar values on some variable(s). In most examples of real-world

regionalization, the sub-objects used in this process are derived from previous or popular use. For example, the 50 states comprising the United States could be regionalized along any one of a nearly infinite number of variables. However, does the use of these spatial sub-objects, pre-defined and potentially unrelated to the actual spatial pattern of the variable(s) being analyzed, lead to the most accurate or meaningful regionalization schemes? If we consider something such as the modifiable areal unit problem, or MAUP, we are aware of the issues posed by using pre-defined areal boundaries in analysis (Wong, 2004). By contrast, an "a posteriori" technique for regionalization is an attempt to "let the data speak for itself". In this situation the spatial boundaries for regions are not the artificial result of combining previously defined spatial sub-objects; they are empirically derived based on the spatial pattern of the variables themselves.

3.5.3 "A priori" technique – zip codes

There are a variety of pre-defined spatial sub-units comprising Santa Barbara County, including supervisory districts, census tracts, and zip codes. I chose zip code units as the basic building blocks for county regions, as these ensured that I would have some level of spatial precision, while simultaneously ensuring that the sample size (survey respondents per zip code) was adequate. As will be shown in the Findings chapter, I calculate variable averages according to zip code, and each zip code can in turn be viewed as a region. It should be noted, however, that zip codes are not formal administrative regions; rather, they are functional regions, having been estimated according to the coverage area of individual post offices.

3.5.4 "A posteriori" technique – the REDCAP method

According to Byfuglien and Nordgård, an important goal of region-building "…is to combine the basic units to form larger, conterminous regions in such a way that the differences between the individual units within each region are minimized, while the inter-regional differences are maximized" (p. 127). A number of methods have been developed to deal with this quantitative problem of regionalization, but in this project, I specifically use the REDCAP (Regionalization with Dynamically Constrained Agglomerative Clustering and Partitioning) method (Guo, 2008; Guo & Wang, 2011).

REDCAP refers to a set of related methods that enforce spatial contiguity among combinatorial units and create a set of regions while optimizing a measure of within-region homogeneity (Guo, 2008; Guo & Wang, 2011). To do so, several distinct steps are taken. First, a hierarchy of spatially contiguous clusters are formed based on similarity across an attribute or attributes. In this way, all basic units are combined until just one cluster, or region, remains. In concordance with this step, a spatially contiguous tree is generated, which represents the hierarchical cluster set. Next, the tree is "cut" or partitioned by removing the branch which optimizes the homogeneity measure across the resulting regions. The partitioning process can be done any number of successive times, each partition resulting in an additional and distinct region (Guo, 2008; Guo & Wang, 2011; Wang & Robert, 2011).

Before undertaking the REDCAP process itself, I transformed the point data I had acquired into lattice, or polygon, data. Although Guo and Wang (2011) suggest that regionalization (ostensibly using REDCAP) can be achieved using point data, their explanation of the process is solely based on the use of polygon data. I completed this step by using ArcGIS software to create Thiessen polygons around each individual data point. A

Thiessen polygon is, by definition, one in which all the points inside the polygon are closer to a defined point (also inside the polygon) than they are to any other defined points outside the polygon (Brassel & Reif, 1979). This process also resulted in the generation of a contiguity matrix.

Next, I and a research assistant wrote a series of algorithms using Python programming language that would carry out each step outlined in the REDCAP process. The first algorithm corresponded to the first step of generating a hierarchical and spatially contiguous set of clusters. Guo and Wang (2011) suggest four possible methods for forming hierarchical clusters. I chose to use Ward's method based on their work demonstrating some slight superiority of this method over the others proposed. Ward's method builds basic units into clusters by comparing each possible combination and ultimately joining units which minimize the SSD (sum of squared differences), which is the total difference between each data object and the object's regional mean. Therefore, this is a measure of within-group heterogeneity and is represented in the following equation:

$$\text{SSD} = \sum_{r=1}^{k} \sum_{i=1}^{n_r} \sum_{j=1}^{d} (x_{ij} - \bar{x}_j)^2. \quad (2)$$

where k is the number of regions, n_r is the number of data objects in region r, d is the number of variables being used, x_{ij} is a variable value, and $\bar{x}_j$ is the regional mean for variable j. The algorithm continues to join units until all are aggregated into one region.

One additional rule was incorporated into the hierarchical clustering algorithm. Due to the fact that the individual data units involved had relatively few unique values, it proved theoretically possible, particularly in the first several iterations of clustering, that multiple combinations of values could result in an equally small gain in SSD. For instance, if a unit with value of 4 is located between a unit with value 3 and a unit with value 5, which one

should it be combined with? We decided then, as a tie-breaking procedure, to write a rule which joined the two units which had the most similar average block-level population densities. In practice, though, this rule rarely needed to be used; with the joining of multiple units, regional mean values became quite distinct from the individual values of each basic unit.

In forming a spatially contiguous tree from hierarchical agglomerative clustering, it is important to distinguish between "first-order" and "full-order" constraining strategies. In a full-order approach, which the Ward method exemplifies, the semantic distance between clusters is based on cluster averages which are continually updated. In contrast, other methods use a first-order strategy, in which semantic distance is assessed solely on the relationship between contiguous basic units, not the mean averages of clusters. In turn, the first-order approach inherently creates a spatially contiguous tree. On the other hand, the full-order approach does not lend itself to this; essentially, a tree cannot be created because there is no way of knowing the exact semantic location where different clusters merge together. Therefore, an extra series of instructions must be written into the algorithm, which stipulates that while full-order constraining is used for the purpose of generating clusters, the tree is constructed using a first-order approach. Guo (2008) states that this does not change the tree structure or the cluster hierarchy. For a more thorough explanation of this highly technical issue, please refer to Guo (2008, pp. 805-806).

To arrive at a final set of regions, the number of which are specified by the user, the spatially contiguous tree (analogous to one region) described above is "cut" to create sub-trees (analogous to multiple regions). A correct "branch" for cutting is selected again using the metric of SSD (sum of squared deviations). An overall heterogeneity measure for a

regionalization set with k regions then is the additive sum of k heterogeneity values, or in equation form:

$$H_k = \sum_{j=1}^{k} H(R_j). \quad (3)$$

With each iteration of the partitioning algorithm, the branch of the tree that is cut is the one that results in the largest reduction in heterogeneity, or in other words, the one that minimizes SSD. In equation form this is represented by:

$$h_g^*(R) = \max\left(H(R) - H(R_a) - H(R_b)\right). \quad (4)$$

where for all possible cuts of tree R into subtrees R_a and R_b, R_a and R_b are the two subtrees from a possible cut of R, and h_g^* is the gain of homogeneity in the overall regionalization set (Guo, 2008, p. 812).

According to Guo and Wang (2011), "The final regions most likely are not the same as the top clusters suggested in the cluster hierarchy. This is why the second step (tree partitioning) is necessary…", and also, "…makes the REDCAP methods different from traditional contiguity constrained hierarchical clustering" (p. 35).

As in any form of cluster analysis, there is, mathematically speaking, no "correct" number of regions to choose when performing a region-building exercise such as this (Salvador & Chan, 2004). Nonetheless, a variety of methods are available to aid in the process. A theoretical rule-of-thumb is to look for a solution that finds a trade-off between reducing the complexity of the data—or grouping into fewer regions—while ensuring that the regions maintain a robust level of homogeneity—or grouping into greater numbers of regions. Various "knee" or "elbow" methods have been proposed in the literature. Essentially these methods involve plotting number of regions against a homogeneity/heterogeneity measure. The inflection point in the graph that results in the

most distinct “knee” or “elbow” (in other words, where within-region homogeneity has its greatest marginal loss) is then chosen as the “ideal” number of regions. Salvador and Chan (2004) provide a variation on this theme, which they refer to as the L-method. They argue the L-method returns similar results to other, more complex methods, but using a more computationally efficient process.

The L-method involves calculating two regression lines for each number of regions in a standard homogeneity trade-off graph, such as those shown later in the paper in Figures 10 and 11. One regression line is drawn from the left (at one region), and the other is drawn from the right (at 10 regions). A comparison of the predicted versus observed heterogeneity (SSD) values leads to the calculation of the RMSE (root mean square of errors). The combined RMSEs from these two regression lines are added together, forming a total RMSE for each number of regions. I will present the results of using the L-method to identity the number of regions in the Findings chapter.

Chapter 4

Findings

A total of 508 individuals completed the research survey. Of this number, 11 completed surveys were rejected upon examination. In most cases, this was due to the respondent failing to complete significant sections. In two cases, however, the respondents reported being under 18 years of age, which resulted in their disqualification. Importantly, 472 respondents both completed the survey satisfactorily and left a complete mailing address, essential for the purpose of spatial analysis. Twenty-two respondents completed the survey satisfactorily and noted their current residential zip code but did not share their street address. Three respondents fully completed the survey but left no street or zip code information. The data retrieved from these latter two categories of surveys were used in analyses that did not require locational specificity but were withheld from other analyses. Additionally, it should be noted that five respondents completed Spanish translations of the survey, while the rest of the sample (including many who reported being primarily Spanish speakers) completed the survey in English.

4.1 Geographic representation and response rates

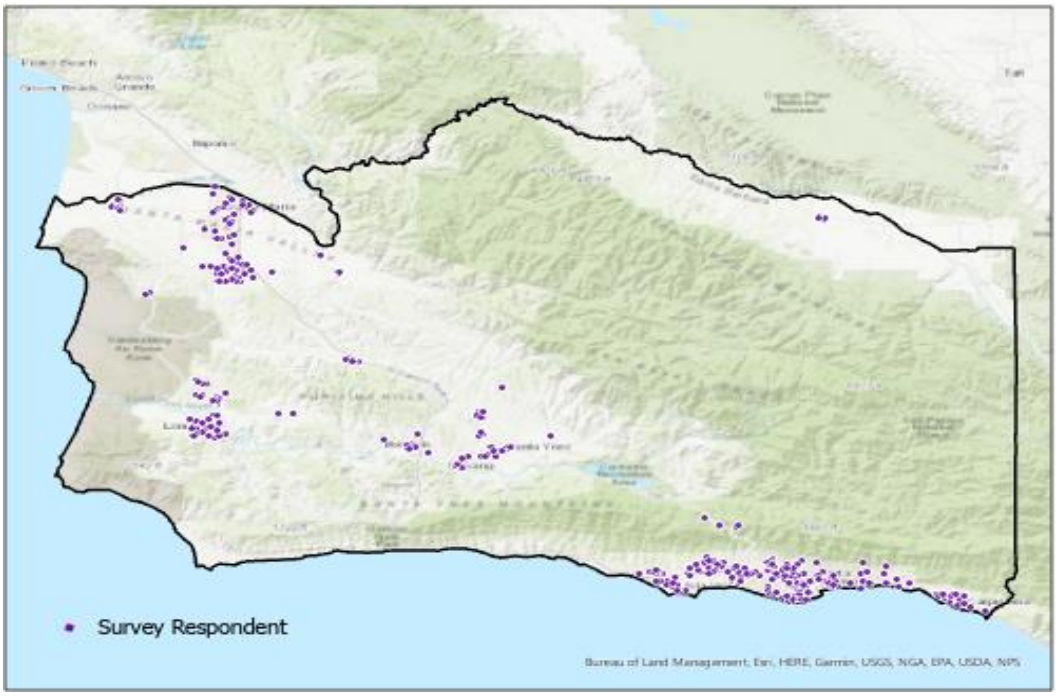

Figure 1. Geographic distribution of survey respondents, Santa Barbara County. N=481. (Note: Total N=508, however only respondents who provided specific street addresses are included on this map).

Table 1. Geographic representativeness by zip code. N=502 (Note: these figures include survey respondents who provided a zip code, even if they did not provide a street address).

Zip	City/Town/CDP	N	Population	Representation
93013	Carpinteria	26	16,652	0.16%
93067	Summerland	5	410	1.21%
93101	Santa Barbara	37	31,371	0.12%
93103	Santa Barbara	25	20,538	0.12%
93105	Santa Barbara	42	28,545	0.15%
93108	Santa Barbara/Montecito	16	10,401	0.15%
93109	Santa Barbara	20	10,771	0.19%
93110	Santa Barbara	24	16,849	0.14%

93111	Santa Barbara	20	17,329	0.12%
93117	Goleta	54	58,546	0.09%
93254	Cuyama/New Cuyama	12	786	1.53%
93427	Buellton	12	6,200	0.19%
93429	Casmalia	3	144	2.08%
93434	Guadalupe	9	7,451	0.12%
93436	Lompoc	52	56,323	0.09%
93440	Los Alamos	12	1,659	0.72%
93441	Los Olivos	10	922	1.08%
93454	Santa Maria/Sisquoc	21	40,432	0.05%
93455	Santa Maria/Orcutt	57	46,175	0.12%
93458	Santa Maria	9	57,256	0.01%
93460	Santa Ynez	17	5,284	0.32%
93463	Solvang/Ballard	19	7,911	0.24%
	TOTAL	**502**	**439,467**	**0.11%**

Note: ACS estimate in 2019 for the total county population is 444,829. This project excluded Vandenberg AFB and the University of California, Santa Barbara campus, each of which have their own zip codes. Additionally, a very small number of county residents use a 93252 zip code (New Cuyama), but the majority of this zip code's geographic extent is in neighboring Ventura and Kern Counties. Representation in the far-right column is defined as the percentage of the zip code's population that returned a fully completed survey, and is thus included in the data set. All population data retrieved from U.S. Census Bureau, https://data.census.gov, 2019 American Community Survey estimates.

As seen in Table 1, smaller communities (zip codes) tended to be overrepresented in the data, with a correlation of r = -.56. Table 2 and Table 3 show response rates sorted by zip code. These are broken down into two categories due to the fact that slightly different selection and solicitation techniques were utilized. This could have resulted in different response rates within the same zip code, depending on the technique.

Table 2. In-person solicitation response rates, January-March 2020. N=38 out of Total N=502.

Zip	City/Town/CDP	Visited	Spoke with	Agreed	Completed	Response Rate
93013	Carpinteria	36	17	14	8	47.0%
93105	Santa Barbara	54	25	14	5	20.0%
93117	Goleta	122	52	38	10	19.2%
93436	Lompoc	112	56	44	15	26.8%
TOTAL		**324**	**150**	**110**	**38**	**25.3%**

Note: Response rate defined as the percentage of individuals the research team actually spoke with who returned completed surveys.

Table 3. Mail solicitation response rates, April 2020-February 2021. N=464 out of Total N=502.

Zip	City/Town/CDP	Mailed	Completed	Response Rate
93013	Carpinteria	169	18	10.7%
93067	Summerland	66	5	7.6%
93101	Santa Barbara	296	37	12.5%
93103	Santa Barbara	180	25	13.9%
93105	Santa Barbara	196	37	18.9%
93108	Santa Barbara/Montecito	98	16	16.3%
93109	Santa Barbara	71	20	28.2%
93110	Santa Barbara	128	24	18.8%
93111	Santa Barbara	135	20	14.8%
93117	Goleta	191	44	23.0%
93252	New Cuyama/Maricopa	8	0	0.0%
93254	New Cuyama	150	12	8.0%
93427	Buellton	99	12	12.1%
93429	Casmalia	25	3	12.0%

93434	Guadalupe	135	9	6.7%
93436	Lompoc	501	37	7.4%
93440	Los Alamos	113	12	10.6%
93441	Los Olivos	81	10	12.3%
93454	Santa Maria/Sisquoc	434	21	4.8%
93455	Santa Maria/Orcutt	388	57	14.7%
93458	Santa Maria	387	9	2.3%
93460	Santa Ynez	145	17	11.7%
93463	Solvang/Ballard	128	19	14.8%
TOTAL		**4,124**	**464**	**11.3%**

Note: Response rate defined as the percentage of individuals receiving a survey invitation in the mail who returned a completed survey.

Focusing on the mail response rates, they ranged from a high of over 28% in zip code 93109 (Santa Barbara) to a low of about 2% in zip code 93458 (Santa Maria). This does not include a rate of 0% for the zip code 93252 because so few county residents utilize this zip code. The overall response rate for the mail portion of the project – which comprised the vast majority of the data acquired – was 11.3%. Further analysis reveals that there was a positive association between socio-economic variables such as average income, average education levels, and proportion of native English speakers and the response rate across zip codes. Analysis of census tract-level response rates goes even further in supporting these associations; particularly in urbanized areas, census tracts do an effective job of distinguishing the socioeconomic characteristics of different neighborhoods. When looking at response rates from census tracts, it is evident there was substantial variation within as well as across zip codes.

4.2 Descriptive statistics

4.2.1 Demographic characteristics of sample[7]

The demographic make-up of the sample suggests that it was not a perfectly representative cross-section of the county population. For example, Table 4 shows that the sample skewed older than the county adult population. Table 5 shows that the sample was composed of a larger share of females than chance would dictate. Table 6 probably indicates that the sample was comprised of more whites and fewer Hispanics/Latinos/Latinas than chance would dictate, although some caution is warranted in this assessment, given that the survey did not provide explicit instructions about distinguishing between race and ethnicity. It is conceivable that some respondents simply chose the one category (white, Hispanic, etc.) they most identified with. On the other hand, the instructions provided did encourage respondents to make use of multiple categories; that only about 5 percent of the sample indicated multiple racial or ethnic membership suggests that, in fact, there really were not many respondents who are, for instance, racially white and ethnically Hispanic. The primary language statistic revealed in Table 7 also suggests that the sample skewed heavily towards English speakers. In Table 8, we see that the average educational level of a respondent was higher than the county average. In keeping with this finding, then, it is not surprising that, as shown in Table 9, the occupations of respondents tended to overrepresent categories requiring greater education. Categories like management, architecture and engineering, and education were overrepresented, whereas categories like construction, farming, and food preparation and serving were underrepresented. Table 10 suggests the typical respondent had

[7] All county data taken from 2019 American Community Survey (ACS), which can be found at https://data.census.gov.

higher household income than what is typically found in the county, although this discrepancy is not extreme. Finally, Table 11 suggests that while the sample skewed slightly toward the liberal end of the political spectrum, this is not out of sync with the political leanings of the county overall.

These findings indicate there was probably some degree of bias and unrepresentativeness within the sample. However, these findings were expected to a certain extent. Given the nature of the project, the effort called for on behalf of the respondent, the method of communication with the respondents, and the survey method itself, it seems reasonable to expect that the typical person taking part would skew in the directions that it did. These issues should be kept in mind when considering the results of the study, although I do not believe they categorically invalidate the findings.

Table 4. Age.

	N	Sample Mean	SD	County Mean	Estimate County Mean, 18 years+ only
Age	496	55.3	17.1	34.1	46.1

Table 5. Sex.

	N	Sample Percentage	County Percentage
Female	289	58.1%	49.9%
Male	207	41.6%	51.1%
Other	0	-	-

Table 6. Racial and/or ethnic identity.

	N	Sample Percentage	County Percentage
American Indian/Alaskan Native	0	0.0%	1.1%

Black/African-American	5	1.0%	2.2%
Chinese/Japanese/East Asian	14	2.8%	5.8%*
Hispanic/Latino/Latina	61	12.3%**	46.0%
Indian/Pakistani/South Asian	1	0.2%	5.8%*
Pacific Islander/Hawaiian	3	0.6%	0.1%
White/Caucasian	378	76.1%**	43.6%
Other	4	0.8%	10.5%
Multiracial	26	5.2%	3.5%

Note: The ACS uses a single category, "Asian", for East Asian* and South Asian* groups. Also, given that the ACS asks separate questions about ethnicity (Hispanic, non-Hispanic) and race (African-American, Caucasian, etc.), and my survey conflates these categories, I think it is a reasonable question whether the sample percentages for Hispanic/Latino/Latina** and White/Caucasian** are distorted.

Table 7. Primary language.

	N	**Sample Percentage**	**County Percentage**
English	459	92.4%	59.5%
Spanish	25	5.0%	33.1%
Mandarin Chinese	2	0.4%	4.3%*
Other	11	2.2%	3.2%*

Note: The ACS uses category "Asian languages", so the percentage in the county speaking Mandarin Chinese* is presumably lower, while the percentage in the Other* category is presumably higher.

Table 8. Highest level of education attained.

	N	**Sample Mean**	**SD**	**County Mean**
Education	496	4.0	0.9	2.9

Note: Scale used to measure educational attainment: 1=have not completed high school, 2=completed high school, 3=some college/university/technical school, 4=bachelor's degree, 5=graduate degree. Also, the county mean was calculated using population 25 years old+ only.

Table 9. Occupation.

Category	N	Sample Percentage	County Percentage
Architecture and Engineering	40	8.0%	2.2%
Arts, Design, Entertainment, and Media	24	4.8%	2.0%
Building and Grounds Cleaning and Maintenance	5	1.0%	5.8%
Business and Financial	27	5.4%	3.7%
Community and Social Services	18	3.6%	1.9%
Computer and Mathematical	12	2.4%	2.8%
Construction and Extraction	6	1.2%	5.3%
Educational and Library	63	12.7%	7.1%
Farming, Fishing, and Forestry	2	0.4%	7.6%
Food Preparation and Serving	5	1.0%	7.4%
Healthcare Practitioners	30	6.0%	4.6%
Healthcare Support	9	1.8%	3.4%
Homemaker*	2	0.4%	-
Installation, Maintenance, and Repair	4	0.8%	2.6%
Legal	16	3.2%	1.1%
Life, Physical, and Social Sciences	29	5.8%	1.4%
Management	70	14.1%	11.1%
Military**	7	1.4%	-
Office and Administrative Support	39	7.8%	8.7%
Personal Care	9	1.8%	2.6%
Production	6	1.2%	3.4%
Protective Services	5	1.0%	1.7%
Retired*	27	5.4%	-
Sales	20	4.0%	7.8%
Student*	9	1.8%	-

Transportation and Materials Moving	4	0.8%	5.9%

Notes: Occupations are categorized using 2018 Federal Bureau of Labor Statistics (FBLS) system. The categories marked * were provided by respondents, but did not conform to the categories provided by the FBLS. Military** occupations are included in the FBLS but were not included in the ACS statistics

Table 10. Household annual income.

	N	Sample Mean	SD	County Mean
Income	396	$142,424.5	$111,709.4	$112,619.0

Table 11. Political ideology.

	N	Sample Mean	SD	County Presidential Vote Average*
Political ID	476	4.6	1.7	Democrat - 59.6%, Republican – 36.8%, Other – 3.6%

Note: Scale used to measure political ideology: 1=Extremely conservative, 2=conservative, 3=slightly conservative, 4=moderate, 5=slightly liberal, 6=liberal, 7=extremely liberal. Respondents also had option of choosing "no opinion/other". The county presidential vote average* was calculated by averaging percent share of presidential vote over last five elections.

4.2.2 Residential history

As shown in Table 12, the average survey respondent had lived at his or her current residential address for approximately 16 years, in his or her current zip code for 20 years, and had lived in the county for over 26 years.

Table 12. Time spent living in current location.

	N	Time at Current Address (years)	SD	Time in Current Zip Code (years)	SD	All Time in County (years)	SD
93013	23	19.0	12.9	23.2	15.9	31.5	17.5
93067	5	11.5	3.4	11.5	3.4	25.2	13.1
93101	36	12.0	11.0	14.4	12.2	20.0	15.0
93103	22	12.9	12.0	17.7	15.4	24.2	17.6
93105	40	19.6	16.1	21.7	16.9	26.9	17.2

93108	15	18.0	17.1	21.9	17.7	26.8	21.3
93109	20	17.2	13.8	18.2	13.9	24.4	15.4
93110	24	17.0	16.4	20.6	16.4	30.6	19.3
93111	19	15.2	14.8	15.6	14.8	21.6	15.1
93117	53	19.6	15.3	23.1	16.6	28.0	19.2
93254	12	13.7	11.0	19.4	13.5	22.1	11.9
93427	12	16.1	12.4	18.2	11.7	32.4	17.9
93429	3	2.0	1.0	2.0	1.0	18.0	2.9
93434	9	18.3	20.5	24.3	25.6	27.3	24.0
93436	50	16.5	15.6	24.2	16.5	28.1	17.7
93440	12	8.0	6.9	10.3	7.8	14.1	9.9
93441	10	16.3	10.9	19.6	11.2	30.2	18.1
93454	21	21.6	19.1	27.5	20.9	32.1	22.6
93455	54	14.9	11.8	20.0	12.8	26.0	14.6
93458	9	11.6	9.8	15.8	11.0	17.3	12.9
93460	17	16.9	12.0	17.1	10.5	29.0	18.3
93463	19	12.0	10.2	14.4	11.8	28.6	17.6
TOTAL	485	16.1	14.1	19.9	15.4	26.4	17.4

In addition, Table 13 summarizes the reasons respondents gave for living in the location that they do. The weather and/or other features of the natural environment was the most commonly selected category, with over 40 percent of respondents indicating that this was a reason for why they live in the particular place they do. There are several key points which must be noted about the question on the survey, however. The first is that respondents were asked simply to "check off" whether the various close-ended categories applied to their situation; they were not asked to rank or elaborate upon their choices, although room was

provided in the survey for them to write-in their own answers. Approximately 17 percent of the sample entered their own answers or provided additional information, with some providing substantial explanation. Another key point to bear in mind is that the question was phrased in a vague manner, with the definition of "place where you live" left open to interpretation. Presumably, some respondents interpreted this as referring to their current residential address or neighborhood, some interpreted as larger in scale (say their local community or town), and still others could have interpreted this as referring to Santa Barbara County.

Table 13. Reasons for living in current location.

	N	Percentage
Weather/ Natural Environment	201	40.4%
Family	158	31.8%
Job	138	27.8%
Culture	107	21.5%
Born/Grew up here	91	18.3%
Affordability	87	17.5%
Other	86	17.3%
New/Better Housing	79	15.9%
To be near schools/colleges	53	10.7%
Local economic opportunities	28	5.6%

4.2.3 Issues of public opinion

In this section of the survey, respondents were asked to rate on a scale of one to five their level of agreement with 27 statements of public opinion. The 27 statements were organized among nine categories, which are: marijuana use and legalization, gun control,

homelessness, abortion rights, immigration, taxes, transportation infrastructure, energy policy, and personal identification with Santa Barbara County. The scoring for some of the questions was reverse coded in order to create an index for each category, with lower scores indicating more conservative attitudes, and higher scores indicating more liberal or progressive attitudes. Cronbach's Alpha tests for inter-item reliability, shown in Tables 14-22, revealed that the categories of items could be treated as indices, with the possible exception of gun laws and transportation infrastructure. Additionally, almost every single individual item, and importantly, each index, was highly significantly correlated with political ideology. Ultimately, then, this presented a reasonable case for using political ideology as a proxy for social and political attitudes. In general, when the respondents identified as liberals, they provided "liberal" answers to the individual items; when they identified as conservatives, they provided "conservative" answers.

Table 14. Public opinion – marijuana use and legalization.

1. The use of marijuana should be legal.
2. If people were using marijuana around you, that would make you feel uncomfortable. †
3. The legalization of marijuana is good for the economy.

Statement	N	Mean	SD		correlation with liberal identity	
1	493	3.9	1.4		.435**	
2	487	3.1	1.5		.320**	
3	466	3.8	1.2		.387**	
Cronbach's Alpha = .807						
Average	495	3.6	1.2		.449**	

Note: All statements from this section scored using the following: 1=Disagree strongly, 2=Disagree a little, 3=Neutral/Moderate, 4=Agree a little, 5=Agree strongly. Respondents also allowed to mark "No opinion"; these answers were withheld from the calculation of the statistics.
* Statistically significant at .05 level.
** Statistically significant at .01 level.
† Statement was reverse scored

Table 15. Public opinion – gun control.

4. I support stricter gun laws in the United States. 5. I support requiring background checks for all gun buyers. 6. I oppose a nationwide ban on the sale of assault weapons. †						
Statement	**N**	**Mean**	**SD**		**correlation with liberal identity**	
4	492	4.0	1.5		.687**	
5	494	4.8	0.7		.316**	
6	490	3.2	1.8		.149**	
Cronbach's Alpha = .369						
Average	496	4.0	0.9		.527**	

Table 16. Public opinion – homelessness.

7. Law enforcement is too tolerant of the homeless. † 8. Not enough services are available to support the homeless in my community. 9. The homeless should be required to prove they are from the local area before they receive assistance. †						
Statement	**N**	**Mean**	**SD**		**correlation with liberal identity**	
7	463	3.2	1.3		.408**	
8	476	4.0	1.2		.384**	
9	472	3.5	1.4		.489**	
Cronbach's Alpha = .638						
Average	488	3.6	1		.550**	

Table 17. Public opinion – abortion rights.

10. Abortion should be illegal in all cases. † 11. In general, I agree with the 1973 Roe v. Wade Supreme Court decision that established a woman's right to an abortion. 12. Abortion should be legal if the life or health of the mother is at stake.						
Statement	**N**	**Mean**	**SD**		**correlation with liberal identity**	
10	486	4.2	1.3		.310**	
11	488	4.3	1.3		.619**	
12	488	4.7	0.8		.340**	
Cronbach's Alpha = .710						
Average	493	4.4	0.9		.530**	

Table 18. Public opinion – immigration.

13. Overall, I approve of the way immigrants (those coming to live in the United States from another country) are treated by the U.S. government.†
14. The number of immigrants permitted into the country should increase.
15. A national health insurance program for immigrants who are in the U.S. illegally would be a good thing.

Statement	N	Mean	SD		correlation with liberal identity	
13	476	4.0	1.2		.444**	
14	472	3.2	1.4		.617**	
15	476	3.7	1.4		.646**	
Cronbach's Alpha = .727						
Average	492	3.6	1.1		.700**	

Table 19. Public opinion – taxes.

16. Wealthy people don't pay their fair share in taxes.
17. I support reducing taxes across the board.†
18. Lowering taxes for large businesses and corporations would be harmful to the economy.

Statement	N	Mean	SD		correlation with liberal identity	
16	486	3.9	1.4		.673**	
17	482	3.3	1.4		.553**	
18	476	3.1	1.5		.213**	
Cronbach's Alpha = .600						
Average	491	3.4	1.1		.622**	

Table 20. Public opinion – transportation infrastructure.

19. I rate the quality of the transportation infrastructure - like roads, bridges, and public transit - in my local area as good.
20. I support increased spending for roads, bridges, public transit, and other infrastructure projects.
21. The ongoing project to build a high-speed rail line between San Francisco and Los Angeles is wasteful.†

Statement	N	Mean	SD		correlation with liberal identity	
19	485	3.0	1.3		.058	
20	490	4.0	1.0		.390**	
21	463	2.9	1.5		.453**	
Cronbach's Alpha = .206						
Average	495	3.3	0.8		.506**	

Table 21. Public opinion – energy policy.

22. When it comes to energy policy, renewable energy, such as solar and wind power, is more important than non-renewable energy, such as coal, oil, and natural gas. 23. Focusing more on the production of fossil fuels such as oil and gas is likely to lead to more jobs for Americans than focusing on alternative energy such as solar and wind. † 24. I favor proposals to dramatically reduce the use of fossil fuels, such as gas, oil, and coal, in the U.S. within the next 10 to 20 years.						
Statement	**N**	**Mean**	**SD**		**correlation with liberal identity**	
22	490	4.2	1.3		.682**	
23	480	4.0	1.2		.626**	
24	485	4.1	1.3		.699**	
Cronbach's Alpha = .888						
Average	492	4.1	1.2		.741**	

Given the liberal leanings of the county population, I tested to see whether those identifying as liberals identified to a greater extent with the county. As Table 22 shows, there was modest but statistically significant evidence that this was the case.

Table 22. Public opinion – identification with Santa Barbara County.

25. I would rather live somewhere else than in Santa Barbara County. † 26. Living in Santa Barbara County says a lot about who I am as a person. 27. I feel like I fit in with the typical people who live where I do in Santa Barbara County.						
Statement	**N**	**Mean**	**SD**		**correlation with liberal identity**	
25	485	3.9	1.3		.232**	
26	463	3.1	1.2		.135**	
27	477	3.5	1.2		.073	
Cronbach's Alpha = .672						
Average	492	3.5	1.0		.184**	

4.2.4 Personality

To assess personality using the Big Five dimensions of personality, respondents completed the BFI-S-2 30-item personality inventory (Soto & John, 2017). In this inventory six of the individual items correspond to each of the Big Five dimensions of extroversion,

agreeableness, conscientiousness, neuroticism, and openness. Some of the items were reverse-scored in order to create an index for each dimension (shown in Tables 23-27). Cronbach's alpha statistics, measuring inter-item reliability, suggest that the indices generally were reliable. Interestingly, as Table 28 attests, there were modest correlations between all five of the dimensions of personality in this sample; specifically, extraversion, agreeableness, conscientiousness, and openness are positively correlated, and neuroticism is negatively correlated. Since in theory the dimensions of personality are independent from each other, this may seem problematic. Nonetheless, numerous published studies suggest that these modest correlations are quite normal. The most plausible explanation is that participants in personality surveys tend to estimate their own characteristics in systematically biased and self-enhancing ways, thereby inflating scores on socially desirable dimensions, and minimizing scores on the socially undesirable dimensions (Anusic et al., 2009; Pedrogon, Farley, Davis, Wood, & Clark, 2012). Given that the correlations between dimensions were still rather low in this sample, I see no reason to reduce the dimensions into higher-order factors for the purpose of analysis.

Table 23. Personality – extraversion.

1. Tends to be quiet.†			
6. Is dominant, acts as a leader.			
11. Is full of energy.			
16. Is outgoing, sociable.			
21. Prefers to have others take charge.†			
26. Is less active than other people.†			
Statement	**N**	**Mean**	**SD**
1	490	2.9	1.3
6	491	3.5	1.1
11	490	3.6	1.1
16	490	3.8	1.1
21	490	3.4	1.1
26	490	3.6	1.2
Cronbach's Alpha = .707			
Average	491	3.5	0.7

Note: All statements in this section scored using the following: 1=Disagree strongly, 2=Disagree a little, 3=Neutral/Moderate, 4=Agree a little, 5=Agree strongly.
† Statement was reverse scored

Table 24. Personality – agreeableness.

2. Is compassionate, has a soft heart.			
7. Is sometimes rude to others.†			
12. Assumes the best about people.			
17. Can be cold and uncaring.†			
22. Is respectful, treats others with respect.			
27. Tends to finid fault with others.†			
Statement	**N**	**Mean**	**SD**
2	490	4.2	0.8
7	491	3.7	1.2
12	489	3.9	1.0
17	491	4.1	1.0
22	491	4.6	0.6
27	491	3.5	1.1
Cronbach's Alpha = .675			
Average	491	4.0	0.6

Table 25. Personality – conscientiousness.

3. Tends to be disorganized.†
8. Has difficulty getting started on tasks.†
13. Is reliable, can always be counted on.
18. Keeps things neat and tidy.
23. Is persistent, works until the task is finished.
28. Can be somewhat careless.†

Statement	N	Mean	SD
3	491	3.6	1.3
8	491	3.6	1.2
13	489	4.5	0.7
18	490	3.6	1.2
23	491	4.5	0.8
28	491	3.8	1.1
Cronbach's Alpha = .716			
Average	491	3.9	0.7

Table 26. Personality – neuroticism.

4. Worries a lot.
9. Tends to feel depressed, blue.
14. Is emotionally stable, not easily upset.†
19. Is relaxed, handles stress well.†
24. Feels secure, comfortable with self.†
29. Is temperamental, gets emotional easily.

Statement	N	Mean	SD
4	490	3.0	1.3
9	490	2.2	1.3
14	490	1.9	1.0
19	491	2.4	1.1
24	489	1.7	0.9
29	491	2.2	1.2
Cronbach's Alpha = .844			
Average	491	2.2	0.9

Table 27. Personality – openness.

5. Is fascinated by art, music, or literature. 10. Has little interest in abstract ideas.† 15. Is original, comes up with new ideas. 20. Has few artistic interests.† 25. Is complex, a deep thinker. 30. Has little creativity.†			
Statement	**N**	**Mean**	**SD**
5	490	4.0	1.0
10	490	3.9	1.1
15	490	3.9	0.9
20	489	3.6	1.2
25	489	4.1	0.9
30	490	4.1	1.0
Cronbach's Alpha = .686			
Average	491	3.9	0.6

Table 28. Correlations among dimensions of personality.

	Extraversion	Agreeableness	Conscientiousness	Neuroticism
Agreeableness	.212**			
Conscientiousness	.382**	.341**		
Neuroticism	-.366**	-.352**	-.430**	
Openness	.315**	.244**	.124**	-.169**

* Statistically significant at 0.05 level.
** Statistically significant at 0.01 level.

4.3 Demographic predictors of public opinion and personality

A crucial aspect of this research was to disentangle any geographic influence on political attitudes and personality from the influence of other, non-geographic variables. Bearing this in mind, the following tables illustrate statistically significant correlations between sociodemographic variables and public opinion and personality variables. There are

several important points to keep in mind when viewing these tables. The first is that, although the relationships shown were all statistically significant (at least at the .05 level), the correlation coefficients themselves were all quite small. The second point to keep in mind is that, at this point in the analysis, I do not attempt to unravel issues of collinearity – for instance, Spanish speakers probably also tended to be Hispanic, those higher in education probably tended to have higher incomes, etc. More will be done to address this subject later in the research.

Table 29. Statistically significant predictors – age.

	Marijuana	Gun Control	Immigration	County Identity
Age	-.189**	.103*	-.117**	.114*

	Agreeableness	Neuroticism	Openness
Age	.134**	-.185**	.131**

* Statistically significant at .05 level.
** Statistically significant at .01 level.

Table 30. Statistically significant predictors – sex.

	Gun Control	Homelessness	Abortion	Immigration
Sex (Male)	-.222**	-.091*	-.112*	-.148**

	Taxes	Infrastructure	Energy	Political Identity
Sex (Male)	-.090*	-.092*	-.108*	-.149**

	Agreeableness	Conscientiousness	Neuroticism
Sex (Male)	-.215**	-.137**	-.156**

* Statistically significant at .05 level.
** Statistically significant at .01 level.

Table 31. Statistically significant predictors – race (white).

	Taxes	Agreeableness	Conscientiousness	Openness
Race (White)	.090*	.098*	.091*	.137**

* Statistically significant at .05 level.
** Statistically significant at .01 level.

Table 32. Statistically significant predictors – race (Hispanic).

	Immigration
Race (Hispanic)	.096*

* Statistically significant at .05 level.
** Statistically significant at .01 level.

Table 33. Statistically significant predictors – language (English).

	Immigration	Openness
Language (English)	-.101*	.123**

* Statistically significant at .05 level.
** Statistically significant at .01 level.

Table 34. Statistically significant predictors – language (Spanish).

	Immigration	Openness
Language (Spanish)	.097*	-.094*

* Statistically significant at .05 level.
** Statistically significant at .01 level.

Table 35. Statistically significant predictors – education.

	Gun Control	Homelessness	Abortion	Immigration
Education	.112*	.191**	.180**	.133**

	Taxes	Energy	Political Identity
Education	.090*	.141**	.178**

	Extraversion	Neuroticism	Openness
Education	.147**	-.114*	.196**

* Statistically significant at .05 level.
** Statistically significant at .01 level.

Table 36. Statistically significant predictors – income.

	Taxes	Extraversion	Conscientiousness	Neuroticism
Income	-.114*	.236**	.219**	-.261**

* Statistically significant at .05 level.
** Statistically significant at .01 level.

4.4 Relationship between personality and political ideology

As discussed in the review of the relevant literature, there has been a great deal of interest in finding connections between the various dimensions of personality and political attitudes. Table 37 presents the associations that were found in this particular sample. These largely mirror the major findings of others (Jost et al, 2007; Gerber et al., 2010; McCann, 2014). Openness and neuroticism were positively correlated with political liberalism, while conscientiousness was negatively correlated with political liberalism. Extraversion and agreeableness, by contrast, were not correlated in a statistically significant sense with political ideology. Here again, care must be taken to distinguish statistical significance from practical significance; the correlation coefficients were rather small and suggest rather limited predictive utility.

Table 37. Correlations between personality and political ideology.

	Extraversion	Agreeableness	Conscientiousness	Neuroticism	Openness
Political Identity (Liberal)	.001	.074	-.108*	.117*	.156**

* Statistically significant at .05 level.
** Statistically significant at .01 level.

4.5 Population density as predictor of personality and attitudes

Of some interest in this project is the possible distinction in personality and political characteristics between urban and rural environments. One important way to test for those differences is to see if they correlate with population density. Some research indicates a link between urban living and political liberalism (Florida, 2003; Chen & Rodden, 2009). Still other research has reported links between urban or rural living and various aspects of personality, including openness and neuroticism, and other traits not part of the Big Five,

such as individualism and honor-preserving behavior (Cohen et al., 1996; Nisbett & Cohen, 1996; Kitayama et al., 1996; Kitayama et al., 2010). In Table 38 I calculated correlation coefficients between the six primary variables of interest and population density. For population density, I used a measure calculated at four different geographic scales: the census block, block-group, and tract levels, as well as a zip code level. The findings reveal statistically significant associations between political ideology (liberalism) and all four levels of population density, as well as more modest positive correlations between neuroticism and three of the four levels of population density.

Additionally, a conceptual issue inherent to this study's location in Santa Barbara County has to do with whether the "North County" urban areas, namely Santa Maria and Lompoc, are more aligned in personality and attitudes with "South County" urban areas, namely Santa Barbara, or the rest of North County. Generally speaking, the northern part of the county is composed of more rural areas, and so while I expected that North would be different than South, it remained to be seen how the more urbanized areas within North County fit into the overall dichotomy.

Table 38. Correlations between political and personality variables, and population density.

	Political Ideology	**Extraversion**	**Agreeableness**	**Conscientiousness**	**Neuroticism**	**Openness**
Block	**.213****	**-.024**	**-.066**	**-.098***	**.147****	**-.008**
Block Group	**.200****	**-.029**	**-.043**	**-.076**	**.158****	**.022**
Census Tract	**.189****	**.006**	**-.033**	**-.073**	**.105***	**.045**
Zip Code	**.246****	**.082**	**-.036**	**.020**	**-.011**	**.050**

* Statistically significant at .05 level.
** Statistically significant at .01 level.

To help address this question, then, I began by grouping survey responses into a North County (consisting of Santa Maria, Orcutt, Guadalupe, and Lompoc addresses) and a South County (consisting of Santa Barbara, Goleta, Montecito, Summerland, and Carpinteria addresses). The remaining surveys with addresses not mentioned in the lists above did not easily fit into the dichotomy of North/South (they could conceivably be viewed as a third distinct Central County area) and I withheld them from the ensuing analysis. Next, I found approximate median levels of population density at both census tract and block levels. For tract density this was 2,300/square mile and for block density this was 5,000/square mile. I categorized addresses above these figures as urban and below these figures as non-urban. Thus, I was left with a two-by-two design for comparison purposes, with urban and non-urban South County categories, and urban and non-urban North County categories. Then I calculated the averages of political ideology and neuroticism for each of these categories, as these were the variables shown to be correlated with population density. Table 39 shows the averages at census tract-level density only, as block-level results were not markedly different. The results showed that there are differences between urban and non-urban environments (in both regions of the county), and there are also differences between regions (at both urban and non-urban levels). Urban areas are more liberal and are more neurotic than their non-urban counterparts. Additionally, North County areas are more conservative and more neurotic than their South County counterparts. When viewing the magnitude of differences resulting from urban environment versus the magnitude of differences resulting from regional membership, I found that, for political ideology, the magnitude is greater due to regional membership. For neuroticism the magnitude is about the same for each category.

Table 39. Comparison of regional versus urban differences, for variables political ideology and neuroticism.

Variable: Political Identity

	Urban	Non-urban	***Urban/Non-urban***
North County	4.0 (63)	3.9 (72)	**3.9 (135)**
South County	5.2 (183)	4.7 (61)	**5.1 (244)**
North/South	**4.9 (246)**	**4.3 (133)**	

Variable: Neuroticism

	Urban	Non-urban	***Urban/Non-urban***
North County	2.4 (69)	2.3 (73)	**2.3 (142)**
South County	2.3 (185)	2.1 (62)	**2.2 (247)**
North/South	**2.3 (254)**	**2.2 (135)**	

Note: Urban and non-urban categories calculated using population density at the level of census tract. Numbers in parentheses indicate sample size for each category.

4.6 Zip code (A priori) regionalization

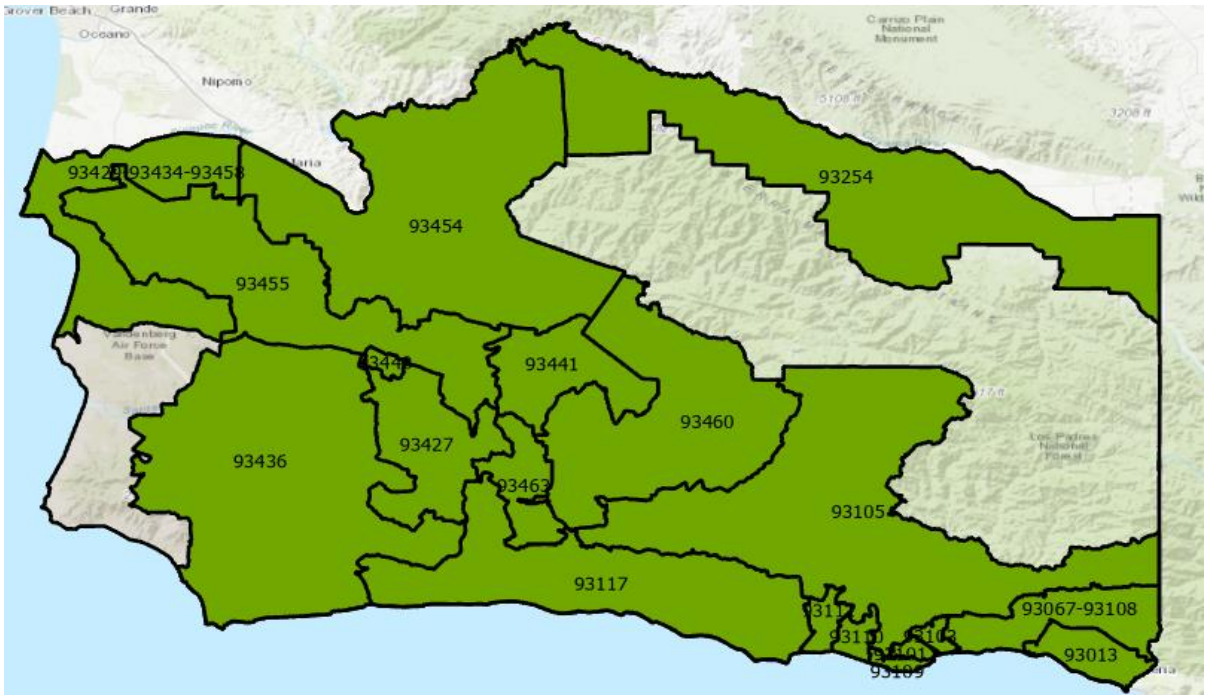

Figure 2. Zip code regions, labeled.

Figure 3. Inset of zip code regions, labeled (centered on city of Santa Barbara).

An "a priori" regionalization scheme suggests that the data is arranged according to previously established spatial units. In this case, I used zip codes as the spatial units for

analysis. I began by calculating mean averages for the six political and personality variables within each zip code unit. Due to the low sample size in several zip codes, those zip codes that had less than 10 respondents were grouped with a neighboring zip code in order to create units with at least 10 respondents. The zip codes 93067, 93429, 93434, and 93458 each had less than 10 respondents. In deciding which of the neighboring zip codes to group these "low N" zip codes with, I chose the one that was most similar in terms of several sociodemographic characteristics, including average income, average education level, and percentage of non-English speakers. These zip code statistics were gleaned from the ACS data, not from the sample itself. Zip code 93067 was grouped with 93108, while 93429, 93434, and 93458 were grouped together.

4.6.1 Political ideology

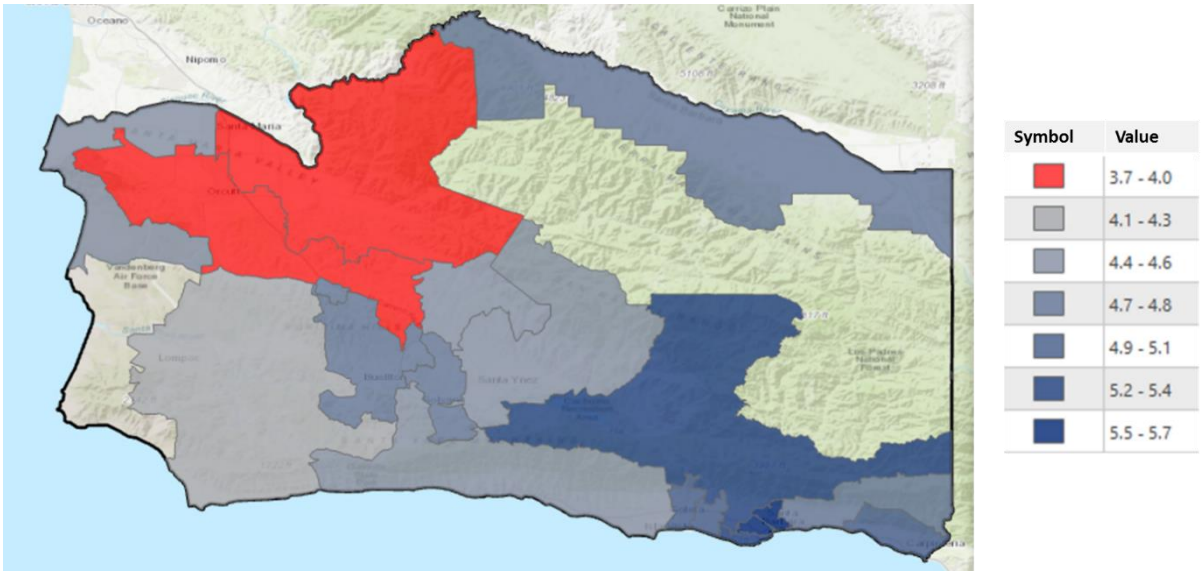

Figure 4. Map of mean political ideology by zip code. Note that the scale runs from 1 (extremely conservative) to 7 (extremely liberal). The county-wide average is 4.6.

Table 40. Mean political ideology by zip code.

Zip	City	N	Mean
93455	Orcutt-Santa Maria	55	3.7
93454	Santa Maria	19	3.8
93436	Lompoc-Vandenberg Village	46	4.1
93429-93434-93458	Casmalia-Guadalupe-Santa Maria	19	4.3
93460	Santa Ynez	17	4.4
93117	Goleta	53	4.5
93441	Los Olivos	10	4.5
93463	Solvang	18	4.6
93067-93108	Summerland-Montecito-Santa Barbara	19	4.6
93254	New Cuyama	10	4.7
93427	Buellton	12	4.7
93440	Los Alamos	10	4.7
93111	Santa Barbara	20	4.9
93013	Carpinteria	26	5.0
93110	Santa Barbara	23	5.1
93105	Santa Barbara	39	5.2
93109	Santa Barbara	19	5.3
93103	Santa Barbara	22	5.6
93101	Santa Barbara	35	5.7
TOTAL		**476**	**4.6**

Note that while political ideology was correlated with response on specific political issues, it was certainly not a perfect correlation. Although I did not analyze regional differences in terms of individual political issues, I provide maps illustrating these distinctions in Appendix B. The reader may find it interesting to consult those maps and compare to the maps of overall political ideology.

4.6.2 Extraversion

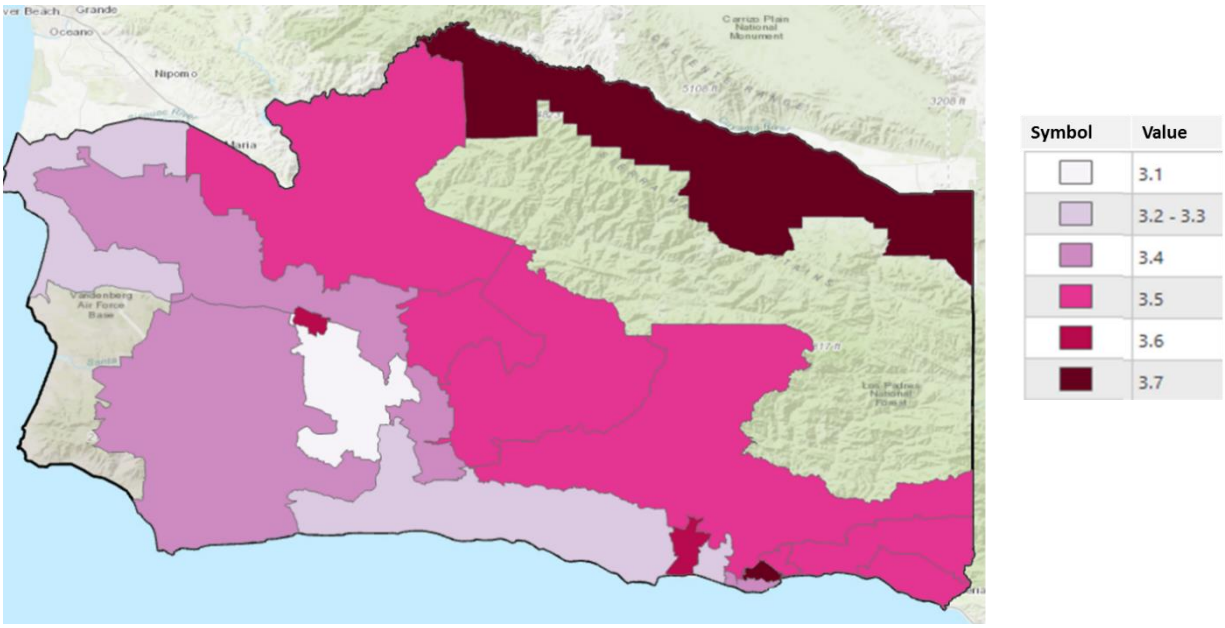

Figure 5. Map of average extraversion score by zip code. The scale runs from 1 (low extraversion) to 5 (high extraversion). The county average is 3.5.

Table 41. Mean extraversion by zip code.

Zip	City	N	Mean
93427	Buellton	12	3.1
93429-93434-93458	Casmalia-Guadalupe-Santa Maria	21	3.3
93117	Goleta	53	3.3
93110	Santa Barbara	24	3.3
93436	Lompoc-Vandenberg Village	51	3.4
93109	Santa Barbara	20	3.4
93455	Orcutt-Santa Maria	54	3.4
93463	Solvang	19	3.4
93460	Santa Ynez	17	3.5
93105	Santa Barbara	39	3.5
93013	Carpinteria	26	3.5
93067-93108	Summerland-Montecito-Santa Barbara	20	3.5
93103	Santa Barbara	22	3.5
93441	Los Olivos	10	3.5
93454	Santa Maria	20	3.5
93440	Los Alamos	12	3.6
93111	Santa Barbara	19	3.6
93254	New Cuyama	12	3.7
93101	Santa Barbara	37	3.7
TOTAL		**491**	**3.5**

4.6.3 Agreeableness

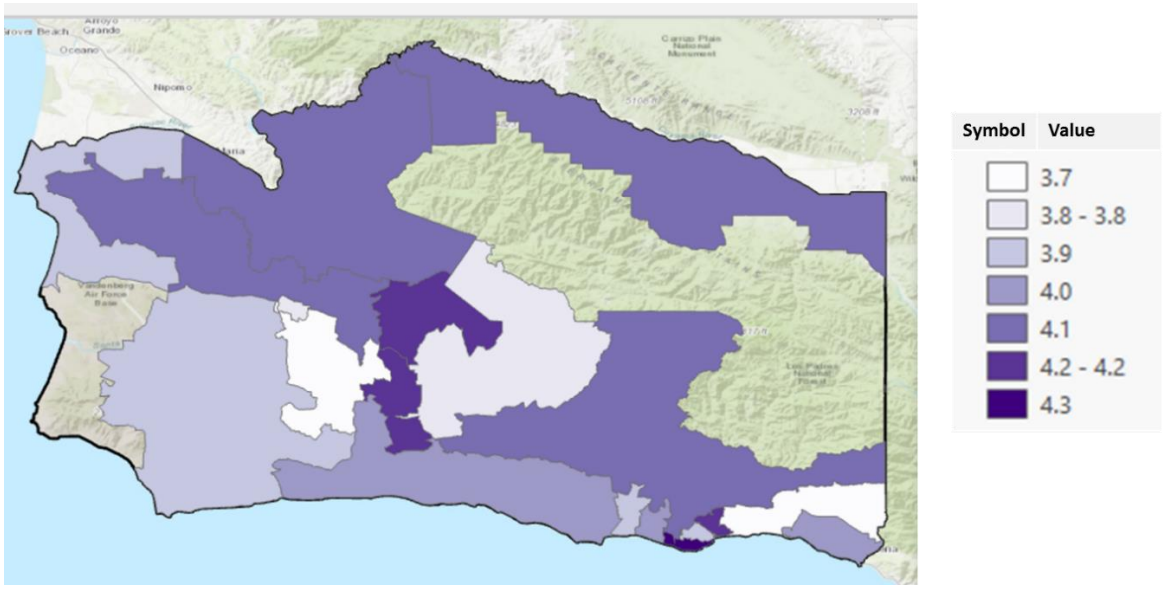

Figure 6. Map of average agreeableness by zip code. The scale ranges from 1 (low agreeableness) to 5 (high agreeableness). The county average is 4.0.

Table 42. Mean agreeableness by zip code.

Zip	City	N	Mean
93427	Buellton	12	3.7
93067-93108	Summerland-Montecito-Santa Barbara	20	3.7
93440	Los Alamos	12	3.8
93460	Santa Ynez	17	3.8
93111	Santa Barbara	19	3.9
93101	Santa Barbara	37	3.9
93429-93434-93458	Casmalia-Guadalupe-Santa Maria	21	3.9
93436	Lompoc-Vandenberg Village	51	3.9
93117	Goleta	53	4.0
93013	Carpinteria	26	4.0
93110	Santa Barbara	24	4.0
93454	Santa Maria	20	4.1

93455	Orcutt-Santa Maria	54	4.1
93254	New Cuyama	12	4.1
93105	Santa Barbara	39	4.1
93103	Santa Barbara	22	4.2
93463	Solvang	19	4.2
93441	Los Olivos	10	4.2
93109	Santa Barbara	20	4.3
TOTAL		**491**	**4.0**

4.6.4 Conscientiousness

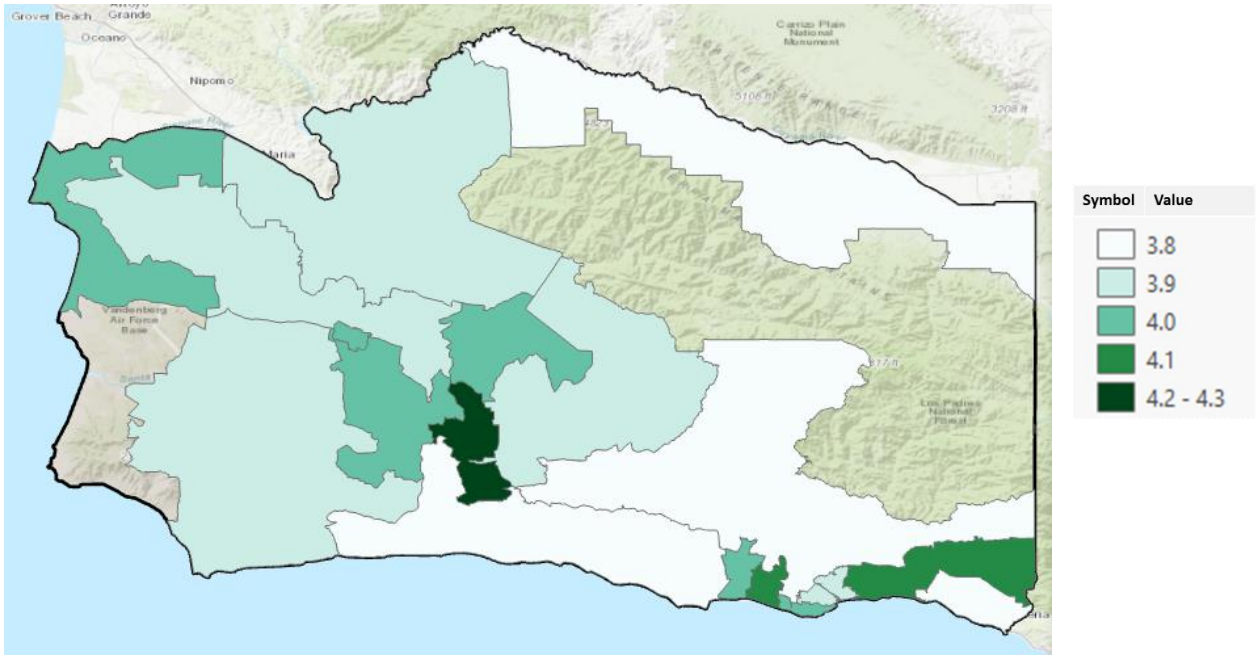

Figure 7. Mean conscientiousness by zip code. The scale ranges from 1 (low conscientiousness) to 5 (high conscientiousness). The county average is 3.9.

Table 43. Mean conscientiousness by zip code.

Zip	City	N	Mean
93013	Carpinteria	26	3.8
93105	Santa Barbara	39	3.8
93117	Goleta	53	3.8

93254	New Cuyama	12	3.8
93101	Santa Barbara	37	3.9
93103	Santa Barbara	22	3.9
93436	Lompoc-Vandenberg Village	51	3.9
93454	Santa Maria	20	3.9
93455	Orcutt-Santa Maria	54	3.9
93460	Santa Ynez	17	3.9
93427	Buellton	12	4.0
93429-93434-93458	Casmalia-Guadalupe-Santa Maria	21	4.0
93440	Los Alamos	12	4.0
93441	Los Olivos	10	4.0
93109	Santa Barbara	20	4.0
93111	Santa Barbara	19	4.0
93067-93108	Summerland-Montecito-Santa Barbara	20	4.1
93110	Santa Barbara	24	4.1
93463	Solvang	19	4.3
TOTAL		**491**	**3.9**

4.6.5 Neuroticism

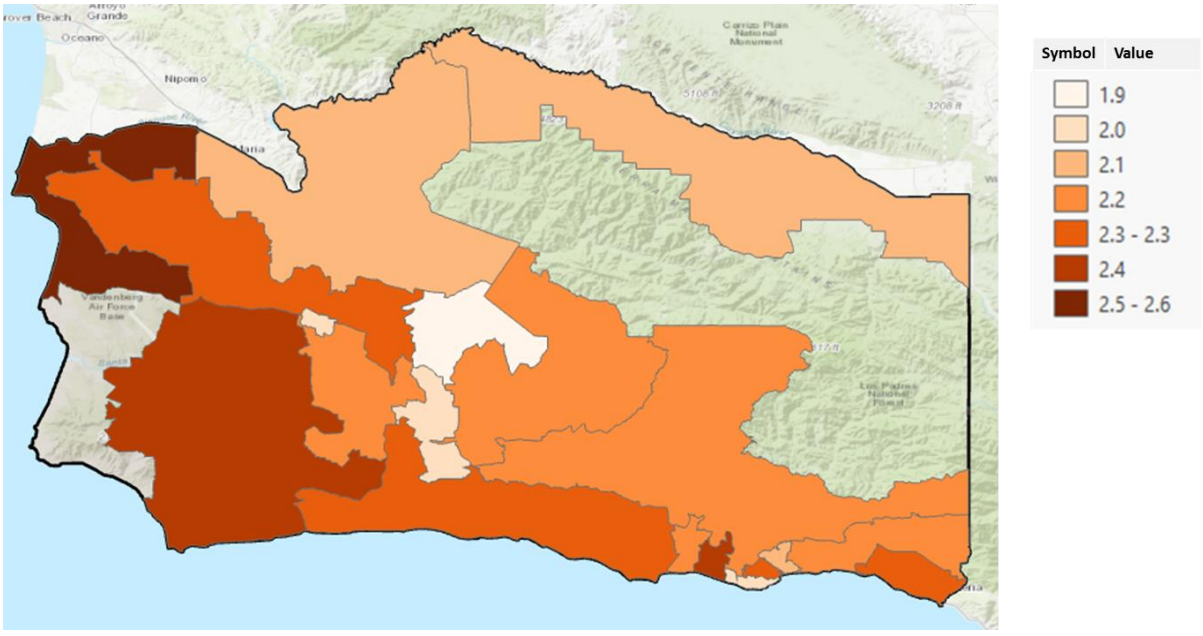

Figure 8. Mean neuroticism by zip code. The scale ranges from 1 (low neuroticism) to 5 (high neuroticism). The county average is 2.2.

Table 44. Mean neuroticism by zip code.

Zip	City	N	Mean
93441	Los Olivos	10	1.9
93463	Solvang	19	2.0
93440	Los Alamos	12	2.0
93109	Santa Barbara	20	2.0
93103	Santa Barbara	22	2.1
93454	Santa Maria	20	2.1
93254	New Cuyama	12	2.1
93105	Santa Barbara	39	2.2
93067-93108	Summerland-Montecito-Santa Barbara	20	2.2
93111	Santa Barbara	19	2.2
93427	Buellton	12	2.2
93460	Santa Ynez	17	2.2
93013	Carpinteria	26	2.3
93117	Goleta	53	2.3
93101	Santa Barbara	37	2.3
93455	Orcutt-Santa Maria	54	2.3
93436	Lompoc-Vandenberg Village	51	2.4
93110	Santa Barbara	24	2.4
93429-93434-93458	Casmalia-Guadalupe-Santa Maria	21	2.6
TOTAL		**491**	**2.2**

4.6.6 Openness

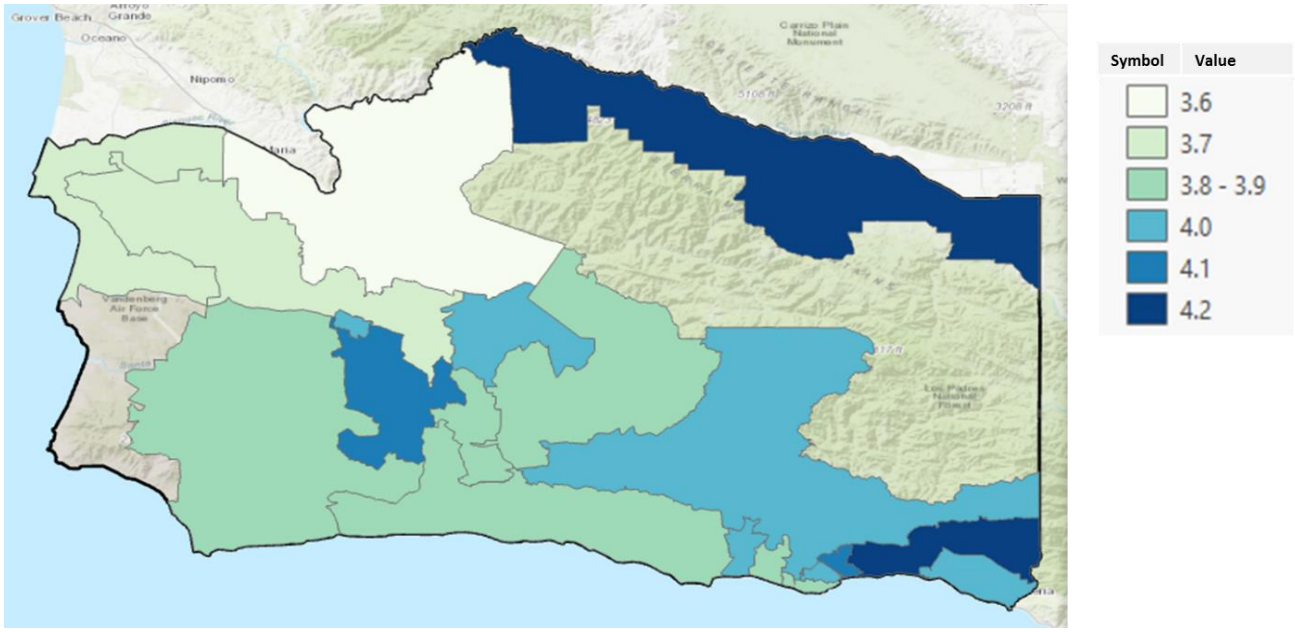

Figure 9. Mean openness by zip code. The scale ranges from 1 (low openness) to 5 (high openness). The county average is 3.9.

Table 45. Mean openness by zip code.

Zip	City	N	Mean
93454	Santa Maria	20	3.6
93455	Orcutt-Santa Maria	54	3.7
93429-93434-93458	Casmalia-Guadalupe-Santa Maria	21	3.7
93460	Santa Ynez	17	3.9
93117	Goleta	53	3.9
93436	Lompoc-Vandenberg Village	51	3.9
93110	Santa Barbara	24	3.9
93109	Santa Barbara	20	3.9
93463	Solvang	19	3.9
93111	Santa Barbara	19	4.0
93101	Santa Barbara	37	4.0
93441	Los Olivos	10	4.0
93013	Carpinteria	26	4.0
93105	Santa Barbara	39	4.0
93440	Los Alamos	12	4.0
93103	Santa Barbara	22	4.1
93427	Buellton	12	4.1
93067-93108	Summerland-Montecito-Santa Barbara	20	4.2
93254	New Cuyama	12	4.2
TOTAL		**491**	**3.9**

4.7 Tests of non-random spatial patterning: Moran's I

In Table 46 below, I provide all Moran's I statistics calculated. Those resulting in statistical significance with p-values less than 0.05 are highlighted.

Table 46. Moran's I statistics by variable

Political Ideology			
Technique	**Distance Threshhold (m)**	**Index**	**p-value**
Inverse Distance	10,000	0.120	< 0.001
	30,000	0.117	< 0.001
	50,000	0.115	< 0.001
	150,000	0.103	< 0.001
Fixed Distance Band	10,000	0.099	< 0.001
	30,000	0.084	< 0.001
	50,000	0.065	< 0.001

Extraversion			
Technique	**Distance Threshhold (m)**	**Index**	**p-value**
Inverse Distance	10,000	-0.003	0.943
	30,000	-0.004	0.913
	50,000	-0.003	0.955
	150,000	-0.004	0.920
Fixed Distance Band	10,000	-0.010	0.381
	30,000	-0.004	0.673
	50,000	0.000	0.567

Agreeableness			
Technique	**Distance Threshhold (m)**	**Index**	**p-value**
Inverse Distance	10,000	0.003	0.788
	30,000	0.004	0.685
	50,000	0.004	0.669
	150,000	0.004	0.648
Fixed Distance Band	10,000	-0.010	0.350
	30,000	-0.005	0.624
	50,000	-0.003	0.818

Conscientiousness			
Technique	**Distance Threshhold (m)**	**Index**	**p-value**
Inverse Distance	10,000	0.001	0.858
	30,000	0.005	0.658
	50,000	0.004	0.701
	150,000	0.003	0.700
Fixed Distance Band	10,000	-0.006	0.633
	30,000	-0.006	0.458
	50,000	-0.004	0.526

Neuroticism			
Technique	**Distance Threshhold (m)**	**Index**	**p-value**
Inverse Distance	10,000	0.020	0.223
	30,000	0.017	0.215
	50,000	0.016	0.219
	150,000	0.014	0.250
Fixed Distance Band	10,000	0.000	0.777
	30,000	-0.001	0.857
	50,000	-0.003	0.888

Openness			
Technique	**Distance Threshhold (m)**	**Index**	**p-value**
Inverse Distance	10,000	0.007	0.615
	30,000	0.008	0.501
	50,000	0.009	0.463
	150,000	0.006	0.555
Fixed Distance Band	10,000	0.017	0.033
	30,000	0.018	< 0.001
	50,000	0.013	< 0.001

The tests for spatial autocorrelation revealed that political ideology is highly statistically significant and comports to the definition of a spatially non-random pattern, according to both weighting techniques and all distance thresholds used.

For openness, the tests run using the inverse distance weighting technique are insignificant. However, the tests run using the fixed distance band revealed significance.

For the other variables of interest—extraversion, agreeableness, conscientiousness, and neuroticism—the tests for spatial autocorrelation did not reveal any evidence of statistical significance.

Bearing these results in mind, much of the rest of this chapter focuses on the variables political ideology and openness, since the evidence suggested there was a meaningful non-random pattern to these variables.

4.8 Adjusted means by zip code

As reported earlier in the findings, modest correlations existed between several sociodemographic variables and political ideology and personality variables. Therefore, I performed analyses of covariance (ANCOVA) to control for the fact that there were slight sociodemographic differences between samples in different zip codes. The output of ANCOVA result in adjusted means, which are reported in Table 47 and Table 48 along with the original un-adjusted means. Note as well: at this point in the research, variables for political ideology and openness were the only two being analyzed, as the other personality variables were not found to be spatially patterned.

It is important not to "overfit" predictive models, which includes ANCOVAs, as this leads to issues of multicollinearity (for more complete discussion, see Agresti & Finley,

1997). Therefore, to enter the appropriate covariates into the ANCOVA models, I first examined the correlations among the sociodemographic variables themselves. Instances of strong correlation between the sociodemographic variables is evidence of potential multicollinearity. Next, I ran a series of stepwise regression models, which use statistical procedures to add or remove covariates depending on their contributions to model fit.

The findings from these ANCOVAs led me to conclude that, for the variable of political ideology, education and sex predictors needed to be controlled for. For the variable openness, education and age were deemed the appropriate predictors to control for. However, controlling for these variables resulted in little to no change to the means.

Table 47. Adjusted means – political ideology by zip code.

Zip	City	N	Mean	Adj. Mean
93455	Orcutt-Santa Maria	55	3.7	3.8
93454	Santa Maria	19	3.8	3.9
93436	Lompoc-Vandenberg Village	46	4.1	4.2
93429-93434-93458	Casmalia-Guadalupe-Santa Maria	19	4.3	4.3
93460	Santa Ynez	17	4.4	4.3
93117	Goleta	53	4.5	4.5
93441	Los Olivos	10	4.5	4.6
93463	Solvang	18	4.6	4.4
93067-93108	Summerland-Montecito-Santa Barbara	19	4.6	4.5
93254	New Cuyama	10	4.7	4.7
93427	Buellton	12	4.7	4.8
93440	Los Alamos	10	4.7	4.7
93111	Santa Barbara	20	4.9	4.9
93013	Carpinteria	26	5.0	5.1
93110	Santa Barbara	23	5.1	5.0
93105	Santa Barbara	39	5.2	5.1
93109	Santa Barbara	19	5.3	5.2
93103	Santa Barbara	22	5.6	5.5
93101	Santa Barbara	35	5.7	5.6
TOTAL		**476**	**4.6**	**4.6**

Note: Education and sex are covariates in the ANCOVA model.

Table 48. Adjusted means – openness by zip code.

Zip	City	N	Mean	Adj. Mean
93454	Santa Maria	20	3.6	3.7
93455	Orcutt-Santa Maria	54	3.7	3.7
93429-93434-93458	Casmalia-Guadalupe-Santa Maria	21	3.7	3.9
93460	Santa Ynez	17	3.9	3.8
93117	Goleta	53	3.9	3.9
93436	Lompoc-Vandenberg Village	51	3.9	4.0
93110	Santa Barbara	24	3.9	3.8
93109	Santa Barbara	20	3.9	3.9
93463	Solvang	19	3.9	3.9
93111	Santa Barbara	19	4.0	4.0
93101	Santa Barbara	37	4.0	4.0
93441	Los Olivos	10	4.0	4.0
93013	Carpinteria	26	4.0	4.1
93105	Santa Barbara	39	4.0	4.0
93440	Los Alamos	12	4.0	4.0
93103	Santa Barbara	22	4.1	4.0

93427	Buellton	12	4.1	4.0
93067-93108	Summerland-Montecito-Santa Barbara	20	4.2	4.1
93254	New Cuyama	12	4.2	4.2
TOTAL		**491**	**3.9**	**3.9**

Note: Education and age are covariates in the ANCOVA model

4.9 REDCAP (A posteriori) regionalization

4.9.1 Region building process

I completed the REDCAP regionalization process for all six variables of interest independently, as well as all six together. Given that solely the variables for political ideology and openness were statistically significant, however, I only present here the findings for those two independently.

Of course, before calculating means and standard deviations by region, the regions themselves had to be created through a computational process described in the Methods chapter. First, I show in Table 49 the reduction in heterogeneity (SSD) of political ideology that REDCAP provided by increasing the number of regions in the overall optimization. Although in theory a user can specify any number of regions desired, I only report findings for sets containing 1-10 regions. This is also shown in graphical format in Figure 10. I then show the same findings related to openness in Table 50 and Figure 11.

Table 49. Reduction in heterogeneity (SSD) – political ideology.

Regions	SSD	Pct Total SSD
1	1239.3	100.0%
2	1064.2	85.9%
3	937.3	75.6%
4	856.5	69.1%
5	794.4	64.1%
6	737.1	59.5%
7	682.3	55.1%
8	638.5	51.5%
9	608.0	49.1%
10	582.3	47.0%

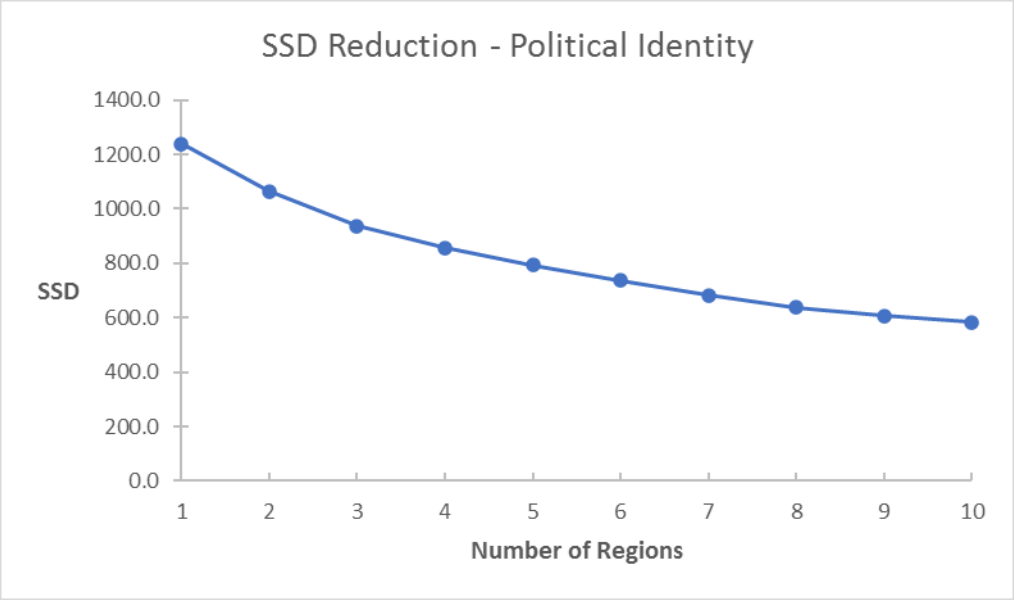

Figure 10. Reduction in heterogeneity (SSD) in graphical format – political ideology.

Table 50. Reduction in heterogeneity (SSD) – openness.

Regions	SSD	Pct Total SSD
1	197.8	100.0%
2	186.5	94.3%
3	168.4	85.1%
4	158.2	80.0%
5	150.6	76.1%
6	142.3	71.9%
7	135.0	68.2%
8	128.9	65.2%
9	124.8	63.1%
10	121.7	61.5%

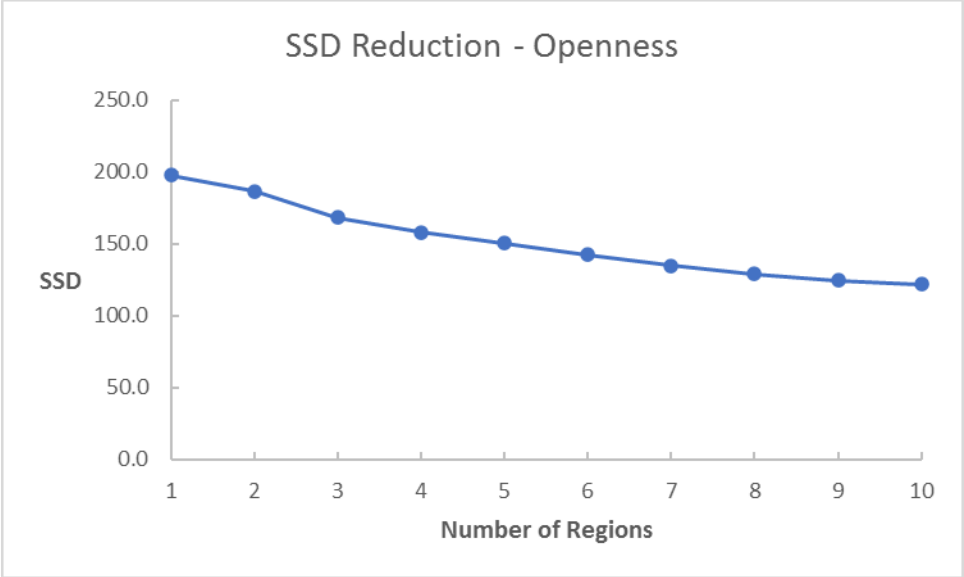

Figure 11. Reduction in heterogeneity (SSD) in graphical format – openness.

Second, I show the results of the L-method that informed the selection of an optimal number of regions. This is shown for political ideology in Table 51 and for openness in Table 52. In the case of both variables, political ideology and openness, four regions was determined to be the optimum solution and is highlighted.

Table 51. L-method to identify number of regions – political ideology.

# of Regions	Combined RMSE
1	56.80
2	29.82
3	17.60
4	17.25
5	20.94
6	25.42
7	30.12
8	37.33
9	36.69
10	56.80

Table 52. L-method to identify number of regions – openness.

# of Regions	Combined RMSE
1	5.44
2	4.06
3	2.28
4	1.87
5	2.08
6	2.22
7	2.52
8	3.08
9	4.10
10	5.44

Third, in the same manner in which I earlier presented average values and choropleth maps by zip code, I next present average values and choropleth maps using the regions constructed using REDCAP. In addition to presenting findings on four regions, I also present findings using two regions. The goal in doing this is to 1) help illustrate the process of region-building, and 2) shed additional light on regional differences in the county. In the case of these choropleth maps, the region boundaries were graphically constructed in ArcGIS

by fusing together the original Thiessen polygons which share regional membership. In addition, I include adjusted means in the following tables.

4.9.2 Political ideology – REDCAP regions

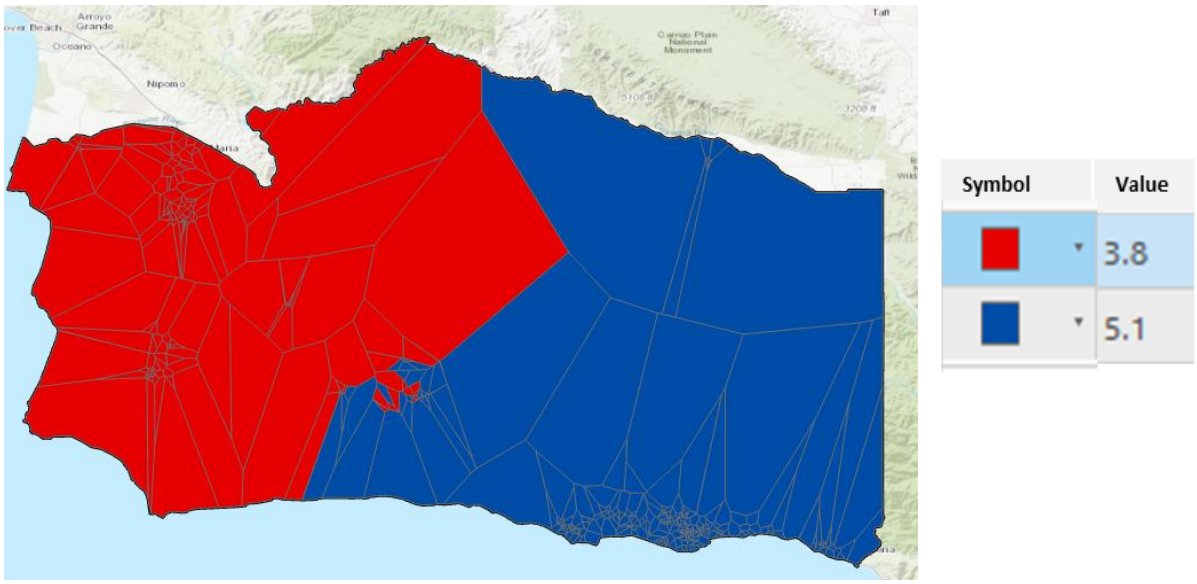

Figure 12. Map of non-adjusted means of political ideology, by REDCAP region (2 regions).

Table 53. Means and adjusted means of political ideology, by REDCAP region (2 regions).

Region #	N	Mean	Adjusted Mean
1	191	3.8	3.9
2	262	5.1	5.1

Note: Education and sex are covariates in ANCOVAs.

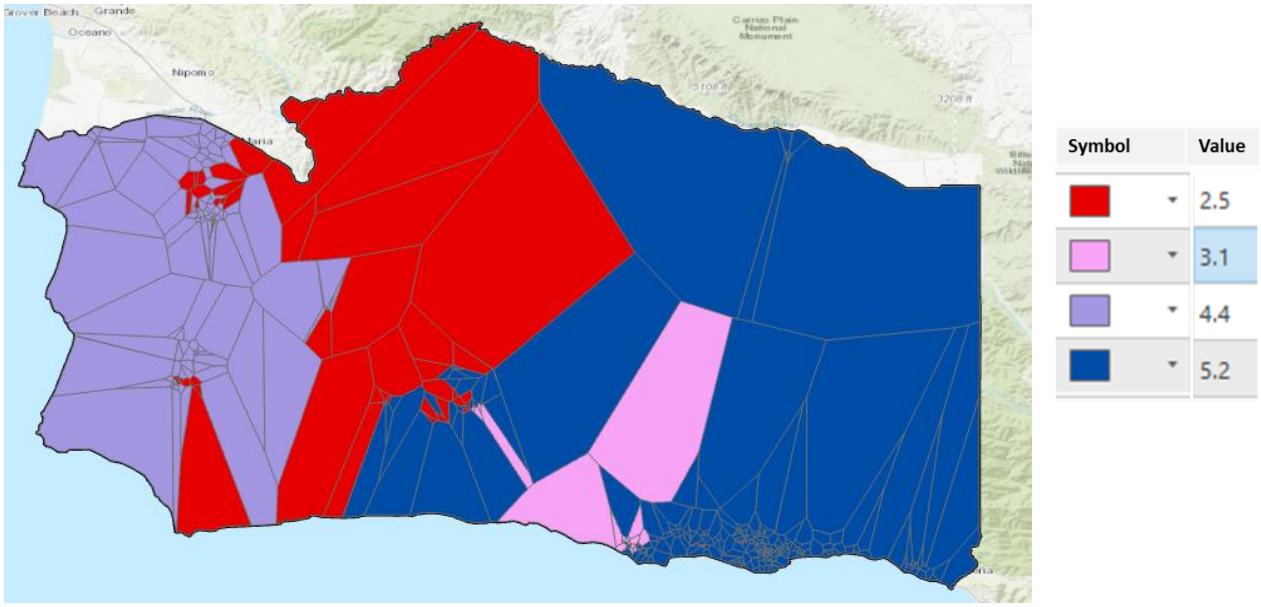

Figure 13. Map of non-adjusted means of political ideology, by REDCAP region (4 regions).

Table 54. Means and adjusted means of political ideology, by REDCAP region (4 regions).

Region #	N	Mean	Adjusted Mean
1	47	2.5	2.5
2	18	3.1	3.1
3	118	4.4	4.4
4	270	5.2	5.2

Note: Education and sex are covariates in ANCOVAs.

4.9.3 Openness – REDCAP regions

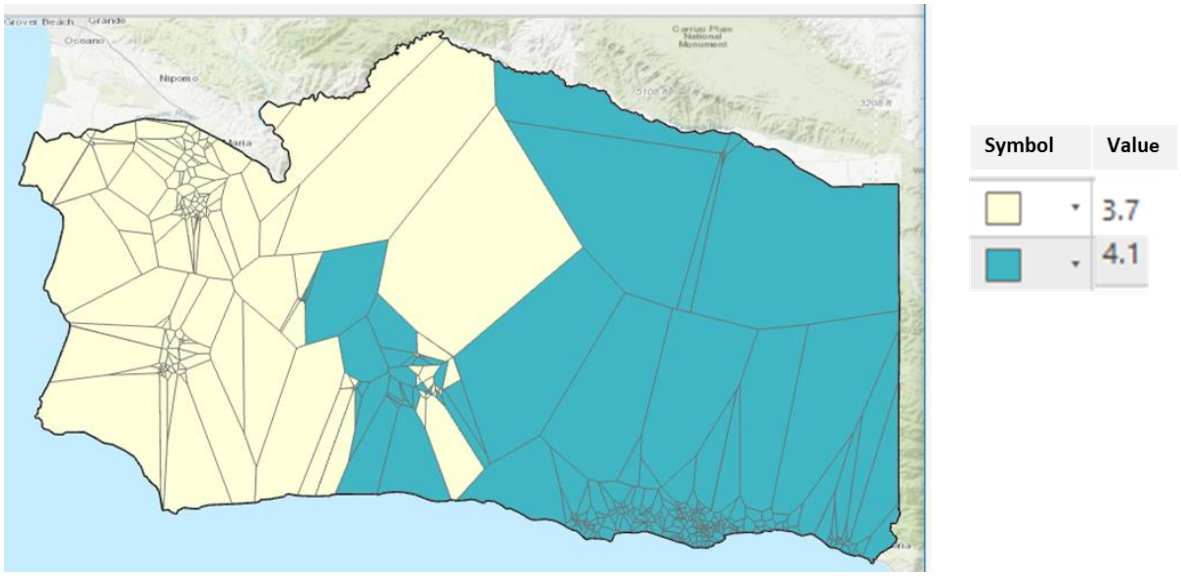

Figure 14. Map of non-adjusted means of openness, by REDCAP region (2 regions).

Table 55. Means and adjusted means of openness, by REDCAP region (2 regions).

Region #	N	Mean	Adjusted Mean
1	174	3.7	3.7
2	295	4.1	4.0

Note: Education and age are covariates for adjusted means.

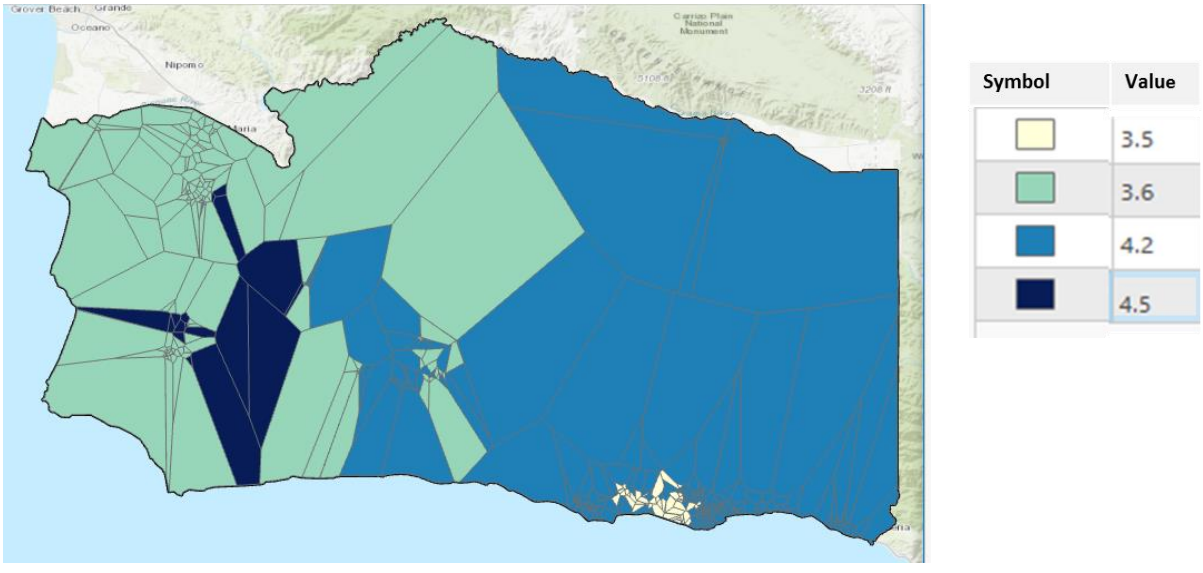

Figure 15. Map of non-adjusted means of openness, by REDCAP region (4 regions).

Table 56. Means and adjusted means of openness, by REDCAP region (4 regions).

Region #	N	Mean	Adjusted Mean
1	44	3.5	3.5
2	157	3.6	3.7
3	251	4.2	4.1
4	17	4.5	4.4

Notes:
1. Education and Age are covariates for adjusted means

4.10 Personality and Political Polarization

Having established with reasonable likelihood that there are, in fact, regions of distinct personality and political temperament in the county, I then turned to an additional question this research addresses: did we find evidence that clusters of like-minded individuals were associated with more extreme, polarizing political positions?

To answer this question, I used the standard deviations of openness and political ideology, respectively, measured within each region. This was a way of operationalizing the concept of homogeneity, or like-mindedness. In other words, smaller standard deviations were equated with greater homogeneity. I correlated these with the means of political issue responses for each region. Theoretically, if smaller standard deviations were associated with greater departures from the political issue means, then it supported the hypothesis that clusters of like-minded individuals take more extreme or polarizing positions. There are several important caveats to this mode of reasoning, and these will be fully articulated in the Discussion section of the paper. Most importantly, it must be recognized that as a mean value falls closer to either end of a numeric scale, the standard deviation of that mean will inherently tend to be smaller than if the mean were in the middle of the scale. For this

reason, even an entirely "null" finding was, in retrospect, biased towards showing the association between lower standard deviations and greater means.

4.10.1 Relationship between homogeneity and polarization using zip code regions

In Table 57 I provide correlation coefficients and p-values for three separate categories of measurement. Starting with the left column and moving to the right, I first measured the association between the standard deviations of the variable of interest and the raw value of political ideology means. The standard deviation of political ideology was negatively associated with political ideology means, $r = -.591$, $p < .01$. This implies that greater homogeneity of political ideology entails more liberal beliefs.

Next, I correlated the standard deviations with the absolute difference from the overall county mean of political ideology, which is 4.6. Here, a higher absolute difference from the county mean indicated greater polarization, whether in the direction of liberalism or conservatism. Neither result was statistically significant.

In the final column, rather than using the difference from the county mean, I made an assumption that a more global sample would produce a mean of 4.0 on the variable of political ideology. Thus, I correlated the standard deviations with the absolute difference from this theoretical global mean. The standard deviation of political ideology was negatively correlated with this measure of polarization, $r = -.620$, $p < .01$.

Note as well that I provide histograms of the overall county distribution in response to all political issues in Appendix C.

Table 57. Correlation coefficients associating openness and political ideology SDs with zip code political ideology means.

	Zip Code Means – Political Ideology	Difference from County Mean – Political Ideology	Difference from Theoretical Mean (4.0) - Political Ideology
Openness SD	-.041	.078	-.015
Political SD	-.591**	-.287	-.620**

*Statistically significant at 0.05 level.
**Statistically significance at 0.01 level.

4.10.2 Relationship between homogeneity and polarization using REDCAP regions

Ideally, I would have been able to calculate the correlation between standard deviations and political ideology as those variables were sorted by REDCAP regions. These figures could then have been compared to the figures produced by zip code regions. Unfortunately, given that this approach only afforded a maximum sample size of four REDCAP spatial units, a simple correlation analysis was not feasible. Nonetheless, I believe it is still useful to list the respective units and their means and standard deviations of the relevant variables, to at least gauge the plausibility of the hypothesis.

Note that in the following tables, I was solely interested in the relationship between standard deviations of the specific variable of interest in that region and political ideology means. In each table, I withheld the standard deviation for the variable that was not the one being analyzed.

For the two-region scheme of openness in Table 58, the regions had the same measure of homogeneity (SD = 0.6), so no relationship between homogeneity and political ideology means exists. For the four-region scheme of openness, region #4 with highest mean openness had a markedly lower standard deviation than the other regions, but two factors

make it difficult, perhaps impossible, to derive any true meaning from this observation. The first is that, as mentioned earlier, the lower standard deviation was very likely to be a statistical artifact; a variable with a means skewed toward the end of the scale will naturally tend to have a smaller standard deviation. The second reason is that there was no overall pattern between the regions' openness standard deviations and their political ideology means.

In the case of both sets of political ideology regionalizations in Table 58, the two-region and the four-region, there did seem to be a pattern: lower SDs were associated with scores that deviated more from the center of the political ideology scale. We find ourselves in the same situation, however, in that this finding loses practically all relevance due to the inherent extreme mean/low standard deviation phenomenon.

Table 58. Means and standard deviations of major variables, by REDCAP region.

Regionalization Scheme	Region #	Mean – Openness	SD – Openness	Mean – Political ideology	SD – Political ideology
Openness – 2 Regions	1	3.7	0.6	4.1	-
	2	4.1	0.6	5.0	-
Openness – 4 Regions	1	3.5	0.6	5.2	-
	2	3.6	0.6	4.1	-
	3	4.2	0.6	4.9	-
	4	4.5	0.3	4.3	-
Political ideology – 2 Regions	1	-	-	3.8	1.7
	2	-	-	5.1	1.5
Political ideology – 4 Regions	1	-	-	2.5	0.9
	2	-	-	3.1	1.2
	3	-	-	4.4	1.6
	4			5.2	1.4

Refer again to Appendix C to see how responses on individual political issues mapped across the county when using REDCAP regions.

4.11 Length of residency and conformity to regional means

The final substantive theme to this research addresses the question of how well individuals tend to "fit" the psychological and/or ideological profile of a region when they first migrate there. Conversely, there is the possibility that the longer an individual lives in a

region, the more likely he or she will be to adopt the psychological and/or ideological norms that are present in a region. Again, I made use of correlation analysis to provide some clue as to whether either of these theories is accurate in the case of Santa Barbara County residents.

As with the previous topic of political polarization, I used openness and political ideology as the two indicators of personality and ideology, respectively. Given that there is no inherent geographic scale to which we can attach the concept of one's "place of residence" I calculated from the survey data the length of time individuals had lived at their current residential address, the length of time they had lived in their current zip code, and the total length of time they had lived in the county overall. These figures were highly intercorrelated, $\alpha = .917$. Using the time spent at each of these three scales independently of each other, I correlated them with four other variables: 1) individual scores on openness and political ideology, 2) individual deviation from the zip code means of openness and political ideology, 3) individual deviation from REDCAP region means, and 4) individual deviation from the county means. Importantly, I controlled for the age of respondents, as this affects the possible amount of time someone could live in any location (i.e., a 60-year-old could potentially live somewhere for a maximum of 60 years, whereas a 30-year-old could only live somewhere for a maximum of 30 years).

First, I examined the association between the amount of time individuals lived in their area of residence and their raw scores on openness and political ideology. In this case, I was not concerned with individual deviation from any sort of regional mean. Controlling for age, I found that the partial correlations of both openness and political ideology with time at all three spatial were statistically significant and in the negative direction, although the magnitude of the relationships was not large, ranging from $r = -.092$ to $r = -.159$ (Table 59).

In summary, then, it appears that those who reported living longer in a particular place—whether that means a specific address, a zip code, or the county overall—were more likely to be lower on openness and political ideology than those who had not lived in a place for as long.

Table 59. Partial correlations (controlling for age) – length of time as a resident with openness and political ideology – all county residents.

	Length of time at address	**Length of time in zip**	**Length of time in county**
Openness	-.125**	-.119**	-.092*
Political ideology	-.131**	-.159**	-.124**

** Statistically significant at 0.01 level.
* Statistically significant at 0.05 level.

Next, I addressed the question of whether length of residency was correlated to *deviation* from zip code means of openness and political ideology. I recorded deviation from the means as an absolute value. Then, I performed a partial correlation of this figure with the time the individual had spent at each of the three geographic scales, controlling for age. Table 60 reveals that none of the correlations were statistically significant.

Table 60. Partial correlations (controlling for age) – length of time as a resident with deviation from zip code mean openness and political ideology.

	Length of time at address	**Length of time in zip**	**Length of time in county**
Deviation from Zip Code Mean – Openness	-.014	-.008	.002
Deviation from Zip Code Mean - Political ideology	.070	.070	.065

** Statistically significant at 0.01 level.
* Statistically significant at 0.05 level.

Next, I used the same computational process as the one outlined above in the following procedure, with the difference being that individual deviation from regional mean was based on REDCAP region rather than zip code.

Table 61. Partial correlations (controlling for age) – length of time as a resident with deviation from REDCAP mean openness and political ideology.

Regionalization Scheme	**Variable**	**Length of time at address**	**Length of time in zip**	**Length of time in county**
Openness – 2 Regions	Openness	.015	.010	.019
Openness – 4 Regions	Openness	-.046	-.042	-.056
Political ideology – 2 Regions	Political ideology	.053	.088	.033
Political ideology – 4 Regions	Political ideology	.081	.140**	.050

** Statistically significant at 0.01 level.
* Statistically significant at 0.05 level.

Although most of the correlations reported in Table 61 were not statistically significant, we see that, using the political ideology four-region scheme, a statistically significant finding was the association between political ideology and deviation from zip code mean, $r = .140$, $p < .05$. In other words, the longer an individual had lived in his or her zip code, the more likely the individual was to deviate, either positively or negatively, from the mean value of political ideology within the individual's REDCAP region. It should be pointed out that while zip code itself is not equivalent to a REDCAP region, there is undeniably a good deal of overlap i.e., most of the residents of a zip code are also likely to be in the same REDCAP region.

Finally, I correlated length of time as a resident with individual deviation from the Santa Barbara County means on openness and political ideology (Table 62). None of these correlations were statistically significant.

Table 62. Partial correlations (controlling for age) – length of time as a resident with deviation from Santa Barbara County mean openness and political ideology.

	Length of time at address	**Length of time in zip**	**Length of time in county**
Deviation from County Mean – Openness	.006	.010	.008
Deviation from County Mean - Political ideology	.052	.068	.024

** Statistically significant at 0.01 level.
* Statistically significant at 0.05 level.

4.12 Predictors of place identity with Santa Barbara County

An ancillary question of this research has to do with the issue of self-identity and place. It should be noted that, at least in the context of this work, I view place identity as synonymous with the concept of place attachment. This terminology refers to notions of personal meaning or significance tied to specific places and their effect on an individual's self-concept. In this particular analysis I tested whether political liberals in Santa Barbara County have a greater sense of self-identity and attachment with the county. I speculated that this would be the case at least in part due to the fact that the county is populated, overall, by a greater share of liberals than conservatives. Furthermore, a number of individuals expressed an opinion in the Comments component of the survey that the county is culturally more aligned with the interests of liberals than conservatives (for summary of survey-taker comments see Appendix D). Place identity was assessed on the survey by using a three-item

index composed of Likert-style statements. Scores range from one (low place identity) to five (high place identity).

Table 63. Mean place identity by zip code.

Zip	City	N	Mean
93254	New Cuyama	12	2.9
93440	Los Alamos	12	3.2
93436	Lompoc-Vandenberg Village	50	3.3
93455	Orcutt-Santa Maria	55	3.3
93067-93108	Summerland-Montecito-Santa Barbara	20	3.3
93463	Solvang	19	3.4
93454	Santa Maria	21	3.4
93429-93434-93458	Casmalia-Guadalupe-Santa Maria	20	3.4
93101	Santa Barbara	36	3.5
93117	Goleta	52	3.5
93441	Los Olivos	10	3.6
93460	Santa Ynez	17	3.6
93105	Santa Barbara	40	3.6
93427	Buellton	12	3.6
93111	Santa Barbara	20	3.7
93110	Santa Barbara	23	3.8
93103	Santa Barbara	22	4.0
93109	Santa Barbara	20	4.0
93013	Carpinteria	26	4.1
TOTAL		**487**	**3.5**

As shown in Table 63, the more liberal zip codes located in the southeastern part of the county tended to be higher in place identity. These results are depicted in map form in Appendix C.

I show in Table 64 that the same tendency applied to REDCAP political regions. In other words, regions higher in liberalism were also higher in place identity. These results are also depicted in map form in Appendix C.

Table 64. Mean place identity by REDCAP regions (political).

Regionalization Scheme	Region #	Mean – Political ideology	Mean – Place Identity
Political ideology – 2 Regions	1	3.8	3.3
	2	5.1	3.7
Political ideology – 4 Regions	1	2.5	3.2
	2	3.1	3.4
	3	4.4	3.4
	4	5.2	3.7

At the level of the individual, I first found all predictor variables that were significantly correlated with place identity. These are shown in Table 65. Crucially, liberalism was demonstrated to be significantly correlated with place identity. The goal, however, was to control for all other relevant variables that could mediate the relationship between liberalism and place identity.

Table 65. Predictor variables significantly correlated with place identity.

	Political ideology	Age	Time at Address	Time in Zip	Time in County	Agreeable	Neurotic	Open
Place Identity	**.184****	**.114***	**.095***	**.099***	**.125****	**.121****	**-.105***	**.113***

* Statistically significant at .05 level.
** Statistically significant at .01 level.

I next examined partial correlations to determine which if these predictors were correlated with each other, as this warranted limiting their inclusion as independent predictors in a regression model. Additionally, I ran a series of stepwise regressions which

had the benefit of adding or eliminating variables depending on their relative contribution to the fit of the overall model. I concluded that political ideology (liberalism), agreeableness, and the length of time one had lived in the county (but not age), were independent predictors of place identity. I entered these variables into a multiple regression model predicting place identity, and I show these results in Table 66. Controlling for other independent predictors, the model shows that an increase of one standard deviation in liberalism resulted in 1/5 a standard deviation increase in place identity.

Table 66. Results of multiple regression predicting place identity.

Variable	Model		
	B	β	SE
Constant	2.193**		.310
Liberalism	.108**	.187	.027
Agreeableness	.161*	.103	.072
Time in County	.001**	.126	.000
R Square	.062		

* Statistically significant at .05 level.
** Statistically significant at .01 level.

Chapter 5

Discussion

5.1 Interpretation of Findings

5.1.1 Existence of psychological regions

The findings generally support the notion that psychological regions exist in Santa Barbara County. Specifically, I find evidence of non-random spatial patterning among individuals based on the traits of openness and political ideology. In the case of traits extraversion, agreeableness, conscientiousness, and neuroticism, there is no evidence to support a non-random spatial patterning. The effect sizes of regional differences in political ideology and openness appear modest, but their practical implication is subject to debate. I elucidate upon the question of practical significance at a later point in the discussion. Clearly, however, the finding of non-randomness on trait openness is important in establishing that "Big Five" personality traits are spatially patterned at a much more localized geographic scale than has previously been reported in the literature. In addition, the results I find are novel in that I use spatial autocorrelation to determine their non-random nature at an individual level, rather than an aggregate level using spatial units. Finally, I create empirically derived regions, using REDCAP, in order to fit the spatial pattern of the data. This marks a notable departure from previous attempts at personality regionalization.

There is, of course, a history of personality research that has revealed personality differences between various geographic entities, most often countries. Krug and Kulhavy (1973) are often cited for their originally in finding personality differences at a regional level,

in their case within the United States. But they, just as their predecessors, used what I defined as an "a priori" approach. This is where the geographic units under analysis are pre-determined. Although these studies likely provide useful information, it is not clear that a priori units provide the most meaningful means of organizing and representing data. Furthermore, differences between geographic units, however defined, can be found without definitive evidence of non-random spatial patterning. In other words, statistically significant average differences can be found due to chance or otherwise random processes; moreover, these average differences are not necessarily a function of spatial distance.

Rentfrow et al. (2013) were innovative in several respects. First, they effectively used an "a posteriori" approach to represent regions as a post-fact outcome of the similarity in personality among states of the USA. Second, is that they determined that the differences between states were spatially non-random, using a measure of autocorrelation. Third, in terms of theory, Rentfrow et al. (2008) proposed a series of testable hypotheses for why differences in personality arise and persist over time. Much of the impetus for my research comes from the Rentfrow et al. studies.

Thus, this dissertation builds upon the prior work of Rentfrow et al, Kulhavy and Krug, and numerous others. Its originality stems from 1) the scale at which it proves regional personality exists (the sub-county level), 2) its determination of spatial non-randomness at the level of the individual rather than at an aggregated level, and 3) its *a posteriori* approach to identifying regional groupings.

5.1.2. Explanation of regional groupings

When comparing the openness and political ideology maps based on zip codes to the two-region REDCAP maps, we see considerable spatial overlap. This suggests that the most

robust distinction in the county, whether in terms of openness or political ideology, is roughly between west and east. On the other hand, the small sample size and spatial isolation of the New Cuyama area, in the extreme northeast part of the county, means that we should be cautious in interpreting the west-east division literally. I think it is more meaningful and accurate to describe the county's situation as split between a Northwest and a Southeast (note: at the risk of complicating matters still further, it seems important to point out that, in popular lore, these regions would map onto "North County" and "South County"). The Northwest is lower in openness and lower in political ideology i.e., more conservative; the Southeast is higher in openness and higher in political ideology i.e., more liberal. The major population centers of Santa Maria and Lompoc appear to fit squarely in the Northwest region, whereas the population centers of Santa Barbara, Goleta, and Carpinteria fit squarely into the Southeast region. Although much smaller in population, the geographically remote community of New Cuyama fits, according to the data collected, in the Southeast region as well. This is a counter-intuitive finding. I presumed that in terms of attitudes New Cuyama would cluster with the northern and western communities. It should be noted, however, that the sample size from New Cuyama is quite small. Only 12 survey respondents represent the community (although as a percentage of the community population, this marks greater representation than in other communities). There is reason, then, to question the robustness of this finding. The communities of the centrally located Santa Ynez Valley—Santa Ynez, Solvang, Buellton, Los Olivos, and Los Alamos—represent a border region, with some of their residents getting assigned to the Northwest region and others to the Southeast. Again, this is broadly applicable whether we are discussing openness or political ideology.

A comparison of zip codes to the 4-region REDCAP scheme is rather perplexing, however. When considering openness, we see that the zip codes highest in this trait correspond to the areas of Montecito and Summerland, as well as New Cuyama; the zip codes lowest in openness correspond to the eastern neighborhoods of Santa Maria and extending into more rural areas such as the small community of Sisquoc. By contrast, with four REDCAP regions the region highest in openness is situated east of Lompoc and extending into the Mission Hills CDP and Vandenberg Village. The zip codes in this area are moderate-to-low in openness. The REDCAP region lowest in openness is situated along the transition area between Santa Barbara and Goleta, in the area of "upper" State Street and Hope Ranch, and then running parallel along Modoc Road and Hollister Road into the eastern part of Goleta. The zip codes in this area are moderate-to-high in openness.

In terms of political ideology, the most conservative zip codes align again with eastern Santa Maria but also incorporate Santa Maria's southern neighborhoods, as well as the community of Orcutt. Alternatively, the most liberal zip codes are in the most centralized, urban areas of Santa Barbara. With REDCAP, a modestly more liberal region in the very western part of the county is created, situated in Guadalupe, much of Santa Maria, and the northern parts of Lompoc. This leaves a considerably "redder" region making up the eastern areas of Santa Maria and extending southward into Central County. Additionally, a conservative region in the western part of Goleta is created as well, thereby leaving the rest of the eastern half of the county "bluer".

It is difficult to make sense of this when we consider that the zip codes do nothing to indicate the presence of such regions, nor do I have an intuitive view of why these locations are, apparently, distinct. On the other hand, this may very well be an indication that "a

posteriori" regionalization processes such as REDCAP do a better job of regionalizing the county than does the use the of zip codes (note that it would be possible to run REDCAP algorithms while still using zip codes as spatial sub-units). Of course, it is difficult to definitively compare the aggregate homogeneity of zip codes versus REDCAP regions simply because I use 19 zip code regions and a maximum of four REDCAP regions.

It is quite conceivable that both methods of viewing regional distinctions, zip codes and REDCAP regions, are distorted and not the objectively "best fit" of the data. For example, zip codes are not representative of any explicit community boundaries; single zip codes could be an amalgamation of quite distinct neighborhoods or towns. Also, some of the zip codes have small sample sizes. This is particularly true in the case of the zip code for New Cuyama, meaning we should be hesitant to accept the findings showing it to have the highest levels of openness in the county. Additionally, zip codes represent vastly different sized areas with markedly different densities. Much as a state or county electoral map of the United States indicates to the undiscerning eye that the majority of the country is politically "red", a product of spatially vast but lightly populated areas being more conservative, so too might a map of Santa Barbara County by zip codes give undue weight to less populated areas.

It also is conceivable that our REDCAP regions are subject to distortion in favor of more rural locations. The hierarchical nature of the clustering process is evident, cutting the large western and eastern halves along axes that separate their most distinguishable elements. This helps to explain, for example, why the "less open" Northwest then contains sub-regions of low openness and very high openness (rather than simply two different regions of varying degrees of low openness). In other words, when the elements of high openness, smaller in

number, are extracted and placed in their own grouping, you have an additional effect of making the remaining sub-region even less open than it was previously. Mathematically this is valid, though I remain ambivalent as to whether this succeeds in finding the most conceptually meaningful regions. Would adding a parameter to enforce a larger minimum region size (composed of more basic units), result in substantial differences? Only additional testing can provide an answer to this.

Supporting the notion that the major fault line in the county distinguishes Southeast from Northwest are the results comparing urban-rural differences in political ideology and neuroticism. These two variables were shown to be statistically significantly correlated with population density; in other words, neuroticism and political liberalism are associated with more dense environments (specifically dense census tracts). I confirm that there are urban-rural differences within both regions of the county, but importantly, there are greater differences, particularly in terms of ideology, between Southeast and Northwest than there are between urban and rural locales. The Southeast locations are higher in liberalism and lower in neuroticism than their Northwestern counterparts at both levels of analysis. This suggests that the more distinguishing feature is geographic region within the county, rather than degree of urbanization. To underscore, this is an important point because some might argue that Santa Barbara County differences represent an urban-rural divide. There is certainly evidence of an urban-rural divide, but that is not the only nor is it the most impactful factor in explaining county divisions.

5.1.3 What explains the existence of the regions?

Why is it that spatial patterns are found only for openness and political ideology, and not for the other factors making up the Big Five? Posed another way, why do regions in Santa Barbara County appear to be distinguished along a single personality axis, openness?

Psychologists tend to agree that differing amounts or degrees of personality traits all provide adaptive benefits in some cultural or situational contexts. Therefore, one idea to consider is that, of the Big Five factors, openness is the trait that varies the most across Santa Barbara County in its adaptability function. Theoretically, whereas the environment of one population may place higher value on creativity and abstract thought, or high openness, the environment of another may place more value on practicality and tradition, or low openness. The issue of how these environmental differences arise is likely to be complex. Historically, differing qualities of the physical environment may play a part in creating divergent cultural milieus, and the norms of thought and behavior may then be passed down to future generations in the form of cultural transmission. A more proximal explanation could be, however, that different forms of economic production or occupational roles promote and reinforce the existence of varying degrees of openness. We are likely to find that individuals in more highly skilled, highly technical occupations, what Florida (2002) calls the Creative Class, are higher in openness. As Inglehart (1981) surmised, post-industrialism and resulting changes in economic structure is synonymous with aspects of individualism that map nicely onto openness. Where people in similar occupational roles cluster, then, we are likely to find varying degrees of average openness. This, I suspect, is in some non-trivial way related to the differences that have been found repeatedly, in the literature broadly and in this research, between urban and rural residents as they relate to personality and political attitudes. Of

course, there is a strong possibility that occupation is a confounding variable for other variables that affect both openness and occupation, such as education or general socioeconomic status. More research is merited on this question of what creates "open" or "less open" populations.

In connecting regional personality to political differences, it must be noted that this paper takes the perspective that the relationship between the two is static and unchanging. In other words, while I assume that regions higher in openness have and will always lead to higher regional levels of liberalism or pro-government sentiment, it is possible that the relationship changes depending on exogenous factors. For example, it is quite realistic to presume that high openness maps onto a broader desire for change and action against the status quo, whereas low openness relates to the preservation of whatever system exists at the moment. From this perspective, individuals high in openness could very well rebel against an entrenched collectivist form of governments, whereas conservatives may seek to maintain it. In short, what is true of the association between personality and political preference today may not have been the case at times in the past, nor is it certain it will remain so in the future. While it is not explored in this particular work, this temporal dimension of this relationship is clearly deserving of historical and empirical evaluation.

5.1.4 The role of migration contra assimilation in regional formation

The literature on this topic suggests several theories of regional personality and attitudinal formation. These are, namely, that similar persons migrate to a region, giving it its average character (people influencing place), or that regional character leads to people assimilating and adopting a common set of traits (place influencing people).

I find that, in the case of Santa Barbara County, length of time spent living in the county (while controlling for age) is not correlated with conformity to regional average levels of political ideology or openness. In other words, no matter whether someone has just moved to the county or spent a long lifetime in the area, he or she is equally as likely to "fit" the typical personality and political characteristics of a region. Although it might be tempting to view this as supporting a null result, as we cannot assert that recent migrants share a common set of traits, there is one very important element of this finding that warrants explanation. The lack of correlation persuasively argues *against* one of the proposed theories of regional personality formation, which is that a regional culture influences individuals to approximate its norms over time. Due to the lack of positive correlation between length of time as a resident and conformity to regional average, we can infer that influential regional personality norms do not exist in the county. Of course, this finding cannot generalize to other locations, but it does help explain the situation in Santa Barbara County specifically. This is to say, the character, or average personality and attitudes, of regions in the county is due to the influence of the individuals who move to or are born there.

The one exception to this rule of no correlation between length of residence and assimilation, in fact, confirms that individuals are not being shaped or molded over time. Specifically, when looking at the political ideology variable and using four REDCAP regions as the units of analysis, I find that there is a statistically significant relationship between the length of time individuals have lived in their zip code and their conformity to the regional means, $r = .140$, $p < .01$. In other words, the longer someone has lived in a particular zip code (an imperfect but still useful proxy for REDCAP region), the more likely he or she is to deviate, positively or negatively, from the regional average.

Another key finding having to do with length of residency and assimilation is that individuals are universally more conservative and less open the longer they have lived in a place. This is true whether we define place as an address, zip code, or the county generally. Although I note this in the Findings chapter, it is worth reiterating that by using partial correlations, I control for age differences in newcomers vs. long-term residents. Since the county population has grown over the medium term (20-30 years), the implication of this relationship is that the county has become more liberal and more open overall. In the last decade, however, there has been minimal net growth. Interestingly, most recent growth has occurred in more conservative, less open places, Santa Maria being the prime example.

Scholars of migration, such as Jokela (2009, 2014) and Boneva and Frieze (2001), have alluded to the existence of a "migrant personality". This personality type is marked broadly by, in non-Big Five terms, greater individualism, industriousness, entrepreneurialism, and a higher for risk-taking. My data appear to provide some support those arguments due to the negative correlation I find between the length of time individuals live somewhere and openness, and that includes controlling for the confounding variable of age. As with many of the previous analyses, I cannot speak directly towards the issue of causality. In this case, those who have lived somewhere for shorter periods of time also tend to be more highly educated, and so there is likely to be a rather complex set of variables working together that link openness and residing in places for shorter periods of time. It should also come as no surprise then, given the link between migration and openness, that we also find a correlation between living somewhere for longer and greater conservatism. Several sources have pointed to the greater need among conservatives to maintain order,

routine, or psychological organization, and it seems likely that reducing the number of moves one undergoes would help in these regards.

5.1.5 "Regions of Like-Mindedness" and polarization

As for the question of whether more homogenous regions, or those in which people tend to "think alike", also tend to take more extreme and polarizing political positions, the evidence is inconclusive. Primarily this can be attributed to an inadequate research design. Although I do find that more homogenous regional units—defined by smaller standard deviations on the variables of openness and political ideology—generally take more polarizing positions, this relationship can potentially be invalidated as a statistical artifact. A mean average that tends toward either high or low end of an interval scale will also inherently tend toward having a smaller standard deviation. Furthermore, in using regional units as the unit of analysis for this question, the sample size was insufficiently large to draw much inference.

5.1.6 Additional Findings

I also made a series of findings that, though not intended as primary topics of interest in this research, are worthy of description and interpretation. On the relationship between population density and personality and attitudes, I find that the variable for political ideology is significantly correlated with population density. This was true using all four spatial scales examined—census block, block-group, tract, and zip code—, and these correlations range from r =.189 to r = .246. In other words, people living in more densely populated environments e.g., cities, tend to be more politically liberal than those living in less densely populated environments e.g., rural areas. Additionally, I find that neuroticism is positively correlated with density using three of four spatial scales. These correlations range from r

=.105 to r= .158. The correlation at the scale of zip code is statistically insignificant, however. In sum, this suggests that those living in more densely populated environments tend also to be more neurotic. For the variable of conscientiousness, a statistically significant negative relationship was found with block density, $r = -.098$, $p < .05$. This result is tempered by the fact that statistically insignificant relationships were found at the other three spatial scales.

In all likelihood, the causal relationships between the variables of political ideology and neuroticism with density run in both directions between the individual and the environment. By this I mean that, for example, liberal individuals likely seek out urban environments, while urban environments also likely influence individuals to adopt more liberal attitudes. Urban environments, it has long been held, lead to psychological adaptations on the part of individuals (Amato, 1983; Florida, 2003; Milgram, 1970). In turn, there is reason to believe that the same set of psychological traits promoted in urban environments find a greater cognitive fit in the ideological realm of political liberalism (Rodden, 2019). Daily life in urban areas may be, in some important respects, less rigid, less routinized, and less subject to social norms. Though in many circumstances these qualities may result in an objectively better quality of life, not to mention the development of liberal ideologies, these qualities have also been shone to relate to promote negative attitudes and behaviors such as anxiety, stress, depression, and even suicide (Berry & Okulicz-Kozaryn, 2009; Lederbogen et al., 2011; Torrey & Bowler, 1990). Thus, it is not particularly surprising to find some evidence that urbanism is linked to liberalism and neuroticism in the data at hand.

As discussed earlier in the review of the relevant literature, the question of whether personality and political ideology are related has long held the interest of psychologists and political scientists alike. I find that neuroticism is positively correlated with political ideology (i.e., liberalism), $r = .117$, $p < .05$, openness is positively correlated with political ideology, $r = .156$, $p < .01$, and conscientiousness is negatively correlated with political ideology, $r = -.108$, $p < .05$.

While the consensus view is that personality, and perhaps ideology, is the result of both biological and cultural influences, there remains a great deal of debate surrounding the relative degree of influence each of these make. My research is not aimed at providing answers on this highly complex, but very important, question, nor is it something that I am able to adequately address given my research design. That being said, I think it is appropriate to point out that, while I do find correlations between sociological and demographic variables and personality, these correlations are quite small, typically in the range of $r = .1$ to $r = .2$—which means these social and demographic factors explain only between 1 and 4 percent of the variance in Big Five personality traits. This illustrates the fact that, though culture and biology indeed play a role in shaping personality, they are anything but deterministic. It would seem quite helpful to keep this in mind when considering questions of nature and nurture in personality and ideological development.

Finally, I found that political liberals feel a greater sense of identification with the county as measured by the place identity index, $r = .184$, $p < .01$. Several other variables were also found to positively correlate with greater county identity: these include age, the length of time of residence in the county overall, and agreeableness. When I ran a multiple regression equation using the three independent predictors to predict place identity, those higher in

political ideology (higher in liberalism) were shown to have greater identification with the county, $b = .11$, $(SE = 0.03)$, $\beta = 0.19$, $t(476) = 4.25$, $p < .001$.

It is possible that political liberals tend to have a set of personal traits, not captured in my survey instrument, which makes them more disposed towards feelings of place attachment and place identity. Although my results show that one of the Big Five, agreeableness, is associated with greater place identity, I do not find that political liberals are more agreeable than political conservatives. However, there perhaps is reason to ask if openness, which my data show liberals are higher in, is more compatible with expressed sentiments of place identity in general. The concept of place identity or place attachment is somewhat abstract and intangible, and we know from a range of evidence that those higher in openness are more comfortable dealing with abstract concepts. In spite of this logical inference, my results show that the small correlation between openness and place identity is actually captured by the intercorrelation with agreeableness.

These questions aside, it appears equally if not more plausible that liberals living in a more liberal place would tend to feel a greater sense of "being at home". A range of literature, which I have touched on at various times in the course of this paper, supports the idea that an individual's politics is often rooted in social identity, and that being around politically like-minded others engenders feelings of community and social support.
Let us not forget, too, that the survey's place identity index specifically names Santa Barbara County as the geographic scale of analysis, not a neighborhood or a city. A more conservative resident of Santa Maria might feel very at home and identity with his or her local neighborhood or community, but not with the county overall. Some of the comments left by survey respondents hinted at this. Individuals may enjoy living "where they do", but

yet find broader political, social, or economic forces present in the county to be incompatible with their broader attitudes and sense of selves. For instance, several respondents stated a view, derisively, that the county's power base lies with such entities as the tourism industry, corporate wine producers and marijuana growers, the University of California-Santa Barbara, and/or a wealthier club of elites residing in one localized area. Future analysis could look to see if those with connections to these perceived powerful interests have a greater sense of identification with the county.

5.1.7 The question of practical significance

When we look at the differences in personality and political attitudes across the county, it is arguable how practically significant these are. For context, the difference in openness across all zip codes is equivalent to about one standard deviation. With the variable political ideology, the difference across zip codes is equivalent to slightly more than one standard deviation. Do we have any way of understanding how these differences might lead to practical differences in socially, economically, or politically important behaviors and outcomes?

What would be helpful to answer these questions is secondary data that captures social, economic, and political behaviors across the regions within the county. Researchers such as Rentfrow (2010, 2014a), Florida (2003) and Obschonka et al. (2013) have provided substantial explanations linking personality to differences in behaviors across a range of domains, including health, crime, education, and entrepreneurship to name only a few. Rentfrow, writing specifically about average personality differences across regions of the United States, argues that small differences can still lead to meaningfully divergent outcomes across various domains. In this regard, it is important to keep the Pareto principle in mind.

When applied to personality and behavior, the Pareto principle implies that the individuals lying at the tail ends of a personality distribution curve are responsible for much of the observable differences in personality-induced behavior. In turn, even small differences in mean averages result in larger differences at the tail ends of personality distributions. A cautionary note to this line of reasoning, however, is that in an example like Rentfrow's personality regions of the United States, the populations comprising those regions still number in the tens of millions. In my research regional populations are often in the tens of thousands or even smaller. It seems more plausible that smaller average personality differences, when aggregated over larger populations such as countries or major regions of countries, will have greater observable impact than differences across sub-units of a single county.

Still, we run substantial risk of underestimating the implication of regional differences in the county. For instance, the historical pattern of candidates elected to the Santa Barbara County Board of Supervisors demonstrates that those representing the districts mapping onto the Northwest are generally more conservative; those representing the districts mapping onto the Southeast are more liberal. My data would, of course, predict this effect. Furthermore, there are demonstrated regional differences in average educational attainment. The findings from my research data related to personality trait openness would largely predict this as well, as openness is linked to greater interest in and pursuit of educational opportunities. Some other topics related to openness in which we might observe regional differences are rates of entrepreneurialism or artistic activities. My data would suggest that the Southeast witnesses more individual and community-level support for and participation

in these pursuits, although there are very likely to be confounding variables that are also influential.

5.1.8 Santa Barbara County as test case

A substantial motivation in conducting this research is to observe if wider national or sub-national processes, like personality regionalization and political polarization, can be measured at the county level. But just how appropriate or representative a test is Santa Barbara County?

While the county is larger than most in terms of population and land area, its distinct quality lies in its varied physical geography. Coastal mountains, valleys, agricultural plains, and semi-desert landscapes all make up portions of the county. This has resulted, I believe, in the development of population centers spread out from each other and rather distinct in terms of their historic trajectory and modern-day economic situations. Thus, the county's physical and population variation should probably be viewed as abnormal, certainly compared to most rural counties in the United States. On the one hand, this argues against the view that personality or political regionalization, as a principle, occurs in other contexts. On the other hand, an argument could be made that, because the county incorporates such breadth of experience and lifestyle across its population, it is unique in its representativeness of the larger American population.

While I speculate that political polarization may, in some respects, not be strong enough within Santa Barbara County to serve as an adequate dependent variable in the research design, the county does probably have about as broad of political differences as any US county, with the possible exception of rural counties also containing a major college or

university town. The question becomes, then, if not in Santa Barbara County, where else could we hope to find such spatially distinct political differences?

Returning to an issue mentioned in the introduction to this paper, the most pressing question in many respects, particularly given the exploratory nature of the phenomena under investigation at this scale of analysis, is whether it is possible to detect these phenomena in any county context at all. It is possible that Santa Barbara County is an outlier in the context of personality and political expression, but we simply cannot know until more empirical investigation is undertaken. Clearly, the significance of generalizability to other counties is an important part of the broader research themes and should be addressed in future studies.

5.2 Threats to validity

5.2.1 Survey design and methodology

The creation and implementation of any survey inevitably requires a series of judgments on behalf of the researcher who utilizes it. In this particular survey project, several issues stand out as potentially leading to a bias in results. I consciously sought to find a balance between a higher response rate and gaining an essential degree of depth in the survey data. I determined that a typical response time of approximately 20-25 minutes was ideal for this purpose; a shorter survey may have increased response uptake but would have required a reduction in the number of questions posed; a longer survey would have permitted, perhaps, a more refined and detailed data set, but almost surely would have eroded the participation rate.

Although I left open the possibility for respondents to provide open-ended answers at several points in the survey, and although a variety of factors necessitated a largely

quantitative, Likert-style format, I believe that the close-ended nature of the survey likely prevented the collection of a richer, more nuanced, more variable data set. A fair number of survey respondents advised me in the comments section that they found it difficult to respond in simple "black-and-white" terms to what they perceived to be complex issues. Many noted that while they may have stated in simple terms what they believed, they felt that articulating the reason for their beliefs was a potentially important element that was lost in the survey format. Similarly, they often felt like they were siloed into choosing categorical answers, which did not fit their actual viewpoints. Certainly, with more time, resources, and perhaps better planning, it could have proven helpful to add such tools as interviews or focus groups, along with quantitative surveying, in the data collection process.

It is equally possible that the data collection techniques themselves introduce bias into the survey. For instance, as noted previously in the Methods chapter, the response rate for in-person solicitation was considerably higher than mail solicitation. The vast majority of survey participants opted to complete the survey online. It is conceivable that different results may ensue from a different format of data collection i.e., paper surveys or individual interviews.

5.2.2 Representativeness of sample

In terms of demographic representativeness, the data sample is skewed in terms of several factors. None of these, in my opinion, are dramatic enough to categorically invalidate the results, but we certainly need to understand how they insert bias into the findings. Perhaps the most troublesome issue of sample skew has to with the dearth of participation among native Spanish speakers, and more broadly, self-identified Hispanics. This was not without lack of effort to encourage participation among these segments of the

population. All survey materials were provided in Spanish as well as English, and I over-solicited from census tracts known to have high Spanish-speaking and Hispanic populations. Whereas some census tracts in predominantly white and English-speaking neighborhoods of Goleta and Santa Barbara had as much as 30 to 40 percent response rates, others in predominantly Hispanic neighborhoods, particularly in Santa Maria and environs, had essentially 0 percent response rates.

In addition, the sample skewed older and wealthier than average, and a disproportionate number of females took part. None of these disparities seem exceptional, however. The sample also skewed towards those with more education (on a scale of 0-5.0, the sample had a mean of 4.0 compared to a county mean of 2.9). This skew is similarly reflected in the occupational data. For instance, those in architecture, engineering, education, business, and management are overrepresented; those in food preparation, construction, farming, and sales are underrepresented.

From the outset of the project, I was concerned about the level of participation I would receive from political conservatives and rural-dwellers (refer back to the Findings chapter for the correlation coefficients between population density and political ideology). This issue has come to national attention in the last several election cycles. Much speculation has swirled, with a fair amount of empirical data to support it, that conservatives are much less likely to take part in political surveys than liberals (Panagopoulos, 2021; Brownback & Novotny, 2018). Looking at my own data, the mean average on the variable of political ideology does not seem suspect; it matches the general liberal tilt of the county. More “extreme liberals” participated than “extreme conservatives”, but even among extreme liberals we do not see markedly high levels of participation. Whether either of these groups

at the political fringes exist in the county in strong numbers is one question; whether they were less likely to take part in the survey is another question.

In terms of geographic representativeness, it appears that, in fact, I ultimately over-sampled rural areas. A larger percentage of residents of towns and zip codes in the central part of the county, such as Los Alamos, Buellton, Santa Ynez, and Los Olivos, took part. This makes sense when we consider that the specific neighborhoods that had very little participation were, unlike the former, lower in income and educational levels and had substantially far more members of minority groups and non-English speakers; these areas are largely based in parts of Santa Maria and Santa Barbara. A note of caution in interpreting this as evidence of a rural bias, however, is that, while there was greater representativeness generally from "Central County", many of its residents are actually not living in very rural settings. As the lack of farmers and ranchers in the occupational category suggests, I successfully reached those living in the Central County, but not those truly living a rural lifestyle.

Aside from the issue of sociological or demographic representativeness, one has to wonder if there is a certain personality type that increased the likelihood of an individual's participation in the survey. After all, I found that all five personality factors were moderately correlated with one another. This means that, at a certain level, all respondents could be classified along one overarching dimension, although extending the logic further, it would not indicate just one "type" or position on the dimension. Intuitively, one could speculate that those who are some combination of more extraverted, conscientious, agreeable, open, and less neurotic, are more likely to take part in participative research such as this. I have no empirical proof to support this theory, however.

5.2.3 Personality factor intercorrelations

My research findings reveal evidence of a common phenomenon observed in research using self-ratings, known as the "Halo" model (Anusic et al., 2009). What this represents is a response bias in which individuals err towards over- or underestimating themselves along a dimension of social desirability. In the case of Big Five personality research in a Western cultural context, this typically means that those with high social self-evaluation rate themselves positively on extraversion, conscientiousness, agreeableness, and openness, and negatively on neuroticism. Those with low social self-evaluation will do just the opposite on each dimension. To be clear, this effect relates solely to the self-evaluation of personality, not to correlations in personality factors as they exist in reality, and so psychologists argue for maintaining five distinct factors even when using self-assessments (Schimmack, Schupp, and Wagner, 2008). I did not attempt to control for a response style, which is suggested by Schimmack et al., but this could be worth pursuing in future analysis of the data set.

5.2.4 Failure to substantively answer question concerning polarization

Ultimately, the methodology used to address issues of political polarization proved inadequate. There are three main empirical reasons why the research design was not capable of providing meaningful answers to the question of polarization. The first is that, simply put, there does not seem to be much that the county population is polarized about. Perhaps if I had posed a question such as, "What is your attitude towards each of the major 2020 presidential candidates?", the responses would have fit a bi-modal pattern, or at least would have resulted in a good deal of variation. Instead, what I found is that on the issue of general political ideology and on most of the topical issues, distributions were liberal-leaning but moderate, and virtually all fit a unimodal distribution. This could be blamed on the

inadequacy of the survey items, a response or sample bias, or it could simply mean that the county is not polarized. On this point, I do not have data from other counties that the Santa Barbara County data could be compared to, which would provide some sort of baseline to assess the issue of polarization within the county.

Even more problematic, however, is the mathematical dilemma that when a mean average of a sampled unit is found at either end of a numeric scale, the variance in that unit will tend to be less than the variance found in units with mean averages in the middle of the scale. In other words, using my data it is quite predictable that regional units with higher mean openness had lower variance of openness (greater homogeneity) and, bearing in mind that openness correlates with political liberalism, more extremely liberal political ideology. Without a way to control for the expected relationship between standard deviation and means, it is very difficult, perhaps impossible, to draw meaning from the analysis.

Chapter 6

Conclusion

At its core, this study asks—like others before it in the realm of personality, culture, and place—what is the relationship between individuals and their environments and broader society? To what extent do individuals shape the character of the places they live in? And to what mutual extent are individuals molded by those same places?

These are profound, enduring, and enigmatic questions which, having been posed in one form or another for centuries, clearly lack simple explanation. To be sure, this study serves as an exceptionally small grain of empirical evidence within a much grander and multi-dimensional debate. Nonetheless, I establish several important precedents.

I find that, among the "Big Five" personality dimensions, openness is non-randomly distributed around Santa Barbara County. This is important because it shows how personality can systematically be found in varying levels across populations at local scales. Additionally, I find support for prior evidence that openness is related to political beliefs, and in the case of Santa Barbara County, political beliefs are also non-randomly distributed.

This builds upon the work of, perhaps most notably, Krug and Kulhavy (1973) and Rentfrow et al. (2013). Their works are noteworthy for establishing the sub-national scale of personality regions, though neither they nor others that I am aware of have tested for the existence of personality regions at still smaller scales. Another important distinction in my study is that I determine the spatial non-randomness of personality and political attitudes at the level of the individual, using autocorrelations between individuals. This too has not been

done before, at least to my knowledge. It is possible to find personality differences between geographic entities that are spatially random or otherwise not resulting as a function of distance. Yet, my findings suggest that individuals located closer to each other in space are systematically more likely to resemble each other in openness and in political attitudes.

Furthermore, I employ a set of spatial optimization methods (REDCAP) that enable the county data to be regionalized using what I call an *a posteriori* approach. In this approach, I effectively group together individual data points as a function of both nearness and personality/attitudinal similarity without regard for previously established or assumed spatial boundaries. For instance, a county regionalization that grouped together zip code units (or census tract, school district, or any other administrative unit) would be reliant on an amount of, potentially, arbitrary aggregation. In many circumstances, a post-hoc, *a posteriori* approach to regionalization is likely to lead to more meaningful and more accurate regional depictions.

All this being said, the findings, and the methods I use to arrive at them, still leave us with a great number of questions which future research efforts should address. For instance, why is openness in Santa Barbara County distributed non-randomly, and not the other Big Five dimensions? What are the ultimate causes that led to this spatial distinction in openness? And what are the practical ramifications of this distinction? If we accept the premise, supported by considerable evidence, that an individual's personality influences the development of the individual's political belief system, then the finding of regional political differences is, potentially, a concrete example of the broader implications of personality differences.

Another set of questions ask, what are the roles of migration and assimilation in driving the processes of regional personality development in general? Do individuals tend to align with regional personality norms when they first begin to reside in a region? For those who do not comport with regional norms, is there an assimilating force that leads them closer to "average" over time? My analysis reveals some interesting findings. Generally, the analysis shows that there is no relationship between the length of time someone has lived in Santa Barbara County and their likelihood of conforming to the regional average. This argues against the notion that regional personalities lead to assimilation, or personality change, on the part of non-conforming individuals. I do find one exception to the rule of no correlation: under one regional configuration I use, those living in their region for longer were *more likely* to deviate, positively or negatively, from their regional average. A case like this synthesizes well with the findings I make in a separate analysis, which is that the longer someone lives somewhere, the more conservative and less open that person is, controlling for age. A problem posed for this portion of the study is that I have no benchmark or historical record showing what personalities in the county were like in the past or how they fluctuate. Although individual personalities are relatively stable over time, it is more appropriate to view regional personality averages as constantly in flux. To truly unpack the questions posed at the beginning of this paragraph, historical data showing changes in regional personality over time would be invaluable. It would be very revealing, in fact, to repeat this same study of Santa Barbara County at regular intervals and compare results over time. It is not unreasonable, in fact, to suggest that the strongest, most explicit conclusions I arrive at in this area have little to do with Santa Barbara County itself, but rather support the notion that there is such a thing as a *migrant personality*. This concept implies that there is a constellation of

personality traits and beliefs distinguishing those who, broadly speaking, migrate, compared to those who do not. The evidence I have collected supports this contention, at least on the specific traits of openness and political attitudes.

I also find that political liberals are more inclined to identify with, or feel attachment to, the county. It is difficult, using the data from this study, to say if liberals are more inclined towards sentiments of place identity and attachment in general. It does seem quite likely, however, based on the literature to date, that individuals will more readily feel psychologically and socially supported if they also feel that the place they live in embodies their deeply held values. In that case, what are the implications for those who live in areas where their values are not widely held? Do they face distinct challenges, and does this take a psychological toll on them? How do their behaviors differ from those who do feel in sync with their broader communities?

Presumably individuals want to feel like their belief systems are aligned with their fellow citizens, and there is reason to think there is much practical benefit from this, both to the individual and to the community. However, do we find evidence of places acting as echo chambers, cutting off individuals from alternative viewpoints or sources of information? Even if living among one's psychological or political kin is more individually satisfying (and surely many would emphatically argue, no), is it conducive to the functioning of populations at other scales, such as nations, or even the "global community"?

To answer these interrelated questions fully and properly will depend on a multitude of studies, involving a variety of methods and warranting a multi-disciplinary effort. There is a long history of scholarship concerned with the relationship between the individual's psychological nature and broader society. As this research would indicate, I argue that a

tandem and continuing line of inquiry should involve the spatial parameters, influences, and consequences of the perpetual interaction between the individual and society.

Appendix A

Materials

A.1. Solicitation Letters (English and Spanish)

See next pages.

UC SANTA BARBARA

Department of Geography

1832 Ellison Hall, University of California
Santa Barbara CA 93106-4060
geog.ucsb.edu

Dear Resident of ,

I am a PhD student in the department of geography at the University of California, Santa Barbara (UCSB). I am writing to ask for your help and participation in a survey I am conducting as part of my dissertation research. I, along with a small research team at UCSB, seek to better understand some important characteristics of residents throughout the county of Santa Barbara. We hope to use this information to identify what typical residents are like in the different communities in our county, as well as to compare our local residents to people in other parts of the United States and world.

The easiest way to complete the survey is to go online to one of the following secure webpages, where you can fill it out using a computer or phone. Alternatively, you can email me directly, to request a paper copy of the survey form. The survey takes about 15 minutes to complete, on average. Any one adult member of your household can complete it. Your responses are completely confidential. They will never be shared with any other individuals or organizations.

In English:

https://tinyurl.com/sb-population-survey

scan here for English

For your knowledge, your address was chosen using a random selection process. Your household is one of approximately 2,500 households throughout Santa Barbara County to be contacted for participation in this study. More information concerning privacy, confidentiality, and contact information should you have questions or concerns, can be found at the weblink noted above. I very much appreciate your time and consideration in taking this survey. Your opinions are valuable and will be very informative as we try to learn more about the people who live in our county.

Sincerely,

Jeff Kirkby

Jeff Kirkby
PhD Candidate
Department of Geography, UCSB
jkirkby@ucsb.edu

UC SANTA BARBARA

Department of Geography

1832 Ellison Hall, University of California
Santa Barbara CA 93106-4060
geog.ucsb.edu

Estimado residente de ,

Soy estudiante de doctorado en el departamento de geografía de la Universidad de California, Santa Bárbara (UCSB). Le escribo para solicitar su ayuda y participación en una encuesta que estoy realizando como parte de la investigación de mi tesis. Yo, junto con un pequeño equipo de investigación de UCSB, busco comprender mejor algunas características importantes de los residentes en todo el condado de Santa Bárbara. Esperamos utilizar esta información para identificar cómo son los residentes típicos en las diferentes comunidades de nuestro condado, así como para comparar a nuestros residentes locales con personas de otras partes de los Estados Unidos y del mundo.

La forma más fácil de completar la encuesta es ir en línea a una de las siguientes páginas web seguras, donde puede completarla usando una computadora o teléfono. Alternativamente, puede enviarme un correo electrónico directamente para solicitar una copia impresa del formulario de la encuesta. La encuesta tarda unos 15 minutos en completarse, en promedio. Cualquier miembro adulto de su hogar puede completarlo. Sus respuestas son completamente confidenciales. Nunca se compartirán con otras personas u organizaciones.

En Español:

https://tinyurl.com/sbsurvey-esp

escanea aquí para español

Para su conocimiento, su dirección fue elegida mediante un proceso de selección aleatorio. Su hogar es uno de aproximadamente 2,500 hogares en todo el condado de Santa Bárbara para ser contactado para participar en este estudio. Puede encontrar más información sobre privacidad, confidencialidad e información de contacto en caso de que tenga preguntas o inquietudes en el enlace web mencionado anteriormente. Agradezco mucho su tiempo y consideración al realizar esta encuesta. Sus opiniones son valiosas y serán muy informativas mientras tratamos de aprender más sobre las personas que viven en nuestro condado.

Atentamente,

Jeff Kirkby

Jeff Kirkby
PhD Candidate
Department of Geography, UCSB
jkirkby@ucsb.edu

UC SANTA BARBARA
Department of Geography

1832 Ellison Hall, University of California
Santa Barbara CA 93106-4060
geog.ucsb.edu

Dear Resident of ,

Several weeks ago you received an invitation to complete a short survey, asking you to answer some questions about yourself, your household, and your opinions towards a range of issues. The purpose of the survey is to learn more about some important characteristics of people living throughout Santa Barbara County, as part of an ongoing research project at UCSB. Although we have not heard back from you, we hope that you will still consider taking part in the study.

For your convenience, you may complete the survey online at the following secure web address:

In English:

https://tinyurl.com/sb-population-survey

scan here for English

For your knowledge, your address was chosen using a random selection process. Your household is one of approximately 2,500 households throughout Santa Barbara County to be contacted for participation in this study. More information concerning privacy, confidentiality, and contact information should you have questions or concerns, can also be found at the weblink listed above. I very much appreciate your time and consideration in taking this survey. Your opinions are valuable and will be informative as we try to learn more about the people who live in our county.

Sincerely,

Jeff Kirkby

Jeff Kirkby
PhD Candidate
Department of Geography, UCSB
jkirkby@ucsb.edu

UC SANTA BARBARA

Department of Geography

1832 Ellison Hall, University of California
Santa Barbara CA 93106-4060
geog.ucsb.edu

Estimado Residente de ,

Hace varias semanas, recibió una invitación para completar una breve encuesta en la que se le pedía que respondiera algunas preguntas sobre usted, su hogar y sus opiniones sobre una variedad de temas. El propósito de la encuesta es aprender más sobre algunas características importantes de las personas que viven en todo el condado de Santa Bárbara, como parte de un proyecto de investigación en curso en UCSB. Aunque no hemos recibido respuesta suya, esperamos que aún considere participar en el estudio.

Para su comodidad, puede completar la encuesta en línea en la siguiente dirección web segura:

En Español:

https://tinyurl.com/sbsurvey-esp

escanea aquí para español

Para su conocimiento, su dirección fue elegida mediante un proceso de selección aleatorio. Su hogar es uno de aproximadamente 2,500 hogares en todo el condado de Santa Bárbara para ser contactado para participar en este estudio. También puede encontrar más información sobre la privacidad, la confidencialidad y la información de contacto en caso de que tenga preguntas o inquietudes en el enlace web mencionado anteriormente. Agradezco mucho su tiempo y consideración al realizar esta encuesta. Sus opiniones son valiosas y serán informativas mientras tratamos de aprender más sobre las personas que viven en nuestro condado.

Atentamente,

Jeff Kirkby

Jeff Kirkby
PhD Candidate
Department of Geography, UCSB
jkirkby@ucsb.edu

A.2. Paper Surveys (English and Spanish)

See next pages.

UC SANTA BARBARA
Department of Geography
1832 Ellison Hall, University of California
Santa Barbara CA 93106-4060
geog.ucsb.edu

Population Survey
Residents of Santa Barbara County

Thank you for agreeing to participate in this study. The purpose of this study is to gain an understanding for how residents who live in different areas of Santa Barbara County feel about a set of important political and social issues.

Please DO NOT write your name on this form. This questionnaire is completely confidential and will not be shared with anyone, except in aggregate form with identifying information removed. By this, we mean that the responses you provide will only be communicated to others as they are averaged along with those provided by hundreds of other Santa Barbara residents. In particular, we will keep residential information separate from all other identifying information. We will not share, communicate, or post residential information anywhere or in any format.

If you have any questions or concerns, you may contact any of the following at UCSB:

Jeff Kirkby
Study Director
Department of Geography
1832 Ellison Hall
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(805) 893-3663
jkirkby@geog. ucsb.edu

Dr. Daniel Montello
Supervising Faculty
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1832 Ellison Hall
UC Santa Barbara
Santa Barbara, CA 93106-4060
(805) 893-8536
montello@geog.ucsb.edu

UC Santa Barbara Office of Research
3227 Cheadle Hall
Santa Barbara, CA 93106-2050
(805) 893-3807
hsc@research.ucsb.edu

If you would like to receive a summary of the research findings (expected in 2021), you will have the opportunity at the end of the survey to leave your email address. Should you choose to provide this, we will send you one email communication. This is the only communication you will receive. You will never be contacted after the completion of this study.

We ask that you answer each question truthfully and to the best of your ability. If you are confused by a question, or would prefer not to answer a particular question, it is okay to leave it blank. However, please try your best to respond to each item.

Part 1: Demographic Information

Instructions: Please fill in the blank or mark the appropriate answer.

1. *What is your current age?*

_____ years old

2. *What is your sex?*

Female _____
Male _____
Other/Prefer not to say _____

3. *What is your racial and/or ethnic identity? (can choose more than one if applicable)*

American Indian / Alaskan Native _____
Black / African America _____
White / Caucasian (not Hispanic) _____
Indian / Pakistani / South Asian _____
Pacific Islander / Hawaiian _____
Hispanic/Latino/a _____
Chinese / Japanese / East Asian _____
Other _____ (please write in)

4. *What is the primary language you speak at home?*

English _____
Spanish _____
Mandarin Chinese _____
Other _____ (please write in)

5. *What is the highest level of education you have completed?*

Have not completed high school _____
High school _____
Some college/university/technical school _____
Bachelor's degree (BA, BS, BFA, etc.) _____
Graduate degree (MA/MS, PhD, MD, JD, MBA, etc.) _____

6. *What is your occupation?*

_____

7. *What is your household's approximate yearly income?*

$_____ per year

8. *How do you rate yourself on the following political identification scale?*

Extremely Liberal _____
Liberal _____
Slightly Liberal _____
Moderate _____
Slightly Conservative _____
Conservative _____
Extremely Conservative _____

No Opinion / Other _____

Part 2: Residential History in Santa Barbara County

Instructions: An important part of this study is to understand what factors, if any, lead residents of Santa Barbara County to live where they do. With this in mind, please think about the different places where you have lived since coming to Santa Barbara County. It may be the case that you were born in and have always lived in Santa Barbara County, whereas it is also possible that you arrived in the county only recently. We ask that, first of all, you provide your **current residential address**. We seek this information in order to identify the characteristics of the particular neighborhood you reside in. Then, we ask that you list all zip codes within the county where you have lived at any point in time, and the length of time you lived there. This residential information will be kept secure and confidential at all times, and no one other than the researchers involved in the study will ever see this information.

Current Address:

_____ _____
Number and Street — Length of time at this address? (years and months)

_____ _____
City/Town — Zip Code

Have you lived at **other residences within this same zip code listed above?**

Yes _____
No _____

If you answered yes, please write in the **total length of time** you have resided in this zip code in your lifetime:

_____
(years and months)

Have you lived in **other zip codes within the county of Santa Barbara** during your lifetime?

Yes _____
No _____

If you answered yes, please **write in these zip codes and the total length of time you have resided in them:**

Other Zip Code: _____ Length of time: _____
(years and months)

Other Zip Code: _____ Length of time: _____
(years and months)

Other Zip Code: _____ Length of time: _____
(years and months)

Other Zip Code: _____ Length of time: _____
(years and months)

Other Zip Code: _____ Length of time: _____
(years and months)

Other Zip Code: _____ Length of time: _____
(years and months)

What is the primary reason(s) why you live where you CURRENTLY live? (you may mark more than one)

Born or grew up here _____
New job or job transfer _____
To be near family or friends _____
Weather/natural environment _____
Local culture and community _____
Affordability _____
New or better housing _____
To be near or attend schools/universities _____
The local economy/business opportunities _____
Other (please write in blank space below) _____

Part 3: Issues of Public Opinion

Instructions: Here are a number of statements regarding some important political and social issues. For example, do you agree that *abortion should be illegal in all cases?* Please write in a number next to each statement to indicate the extent to which you agree or disagree with each statement.

1	2	3	4	5	99
Disagree strongly	Disagree a little	Neutral/Moderate	Agree a little	Agree strongly	No opinion

Marijuana (Cannabis)

1. _____ The use of marijuana should be legal.
2. _____ If people were using marijuana around you, that would make you feel uncomfortable.
3. _____ The legalization of marijuana is good for the economy.

Gun Control

4. _____ I support stricter gun laws in the United States.
5. _____ I support requiring background checks for all gun buyers.
6. _____ I oppose a nationwide ban on the sale of assault weapons.

Homelessness

7. _____ Law enforcement is too tolerant of the homeless.
8. _____ Not enough services are available to support the homeless in my community.
9. _____ The homeless should be required to prove they are from the local area before they receive assistance.

Abortion Rights

10. _____ Abortion should be illegal in all cases.
11. _____ In general, I agree with the 1973 Roe v. Wade Supreme Court decision that established a woman's right to an abortion.
12. _____ Abortion should be legal if the life or health of the mother is at stake.

Immigration

13. _____ Overall, I approve of the way immigrants (those coming to live in the United States from another country) are treated by the U.S. government.
14. _____ The number of immigrants permitted into the country should increase.
15. _____ A national health insurance program for immigrants who are in the U.S. illegally would be a good thing.

Taxes

16. _____ Wealthy people don't pay their fair share in taxes.
17. _____ I support reducing taxes across the board.
18. _____ Lowering taxes for large businesses and corporations would be harmful to the economy.

Transportation Infrastructure

19. _____ I rate the quality of the transportation infrastructure – like roads, bridges, and public transit – in my local area as good.
20. _____ I support increased spending for roads, bridges, public transit, and other infrastructure projects.
21. _____ The ongoing project to build a high-speed rail line between San Francisco and Los Angeles is wasteful.

Energy

22. _____ When it comes to energy policy, renewable energy, such as solar and wind power, is more important than non-renewable energy, such as coal, oil, and natural gas.
23. _____ Focusing more on the production of fossil fuels such as oil and gas is likely to lead to more jobs for Americans than focusing on alternative energy such as solar and wind.
24. _____ I favor proposals to dramatically reduce the use of fossil fuels, such as gas, oil, and coal, in the U.S. within the next 10 to 20 years.

How much do you identify with Santa Barbara County?

25. _____ I would rather live somewhere else than in Santa Barbara County.
26. _____ Living in Santa Barbara County says a lot about who I am as a person.
27. _____ I feel like I fit in with the typical people who live where I do in Santa Barbara County.

If you have any additional comments about the topics mentioned above, please write them in the space below:

Part 4: Personal Characteristics

Directions: Here are a number of characteristics that may or may not apply to you. For example, do you agree that you are someone who *likes to spend time with others*? Please write in a number next to each statement to indicate the extent to which you agree or disagree with that statement.

1	2	3	4	5
Disagree strongly	Disagree a little	Neutral; no opinion	Agree a little	Agree strongly

I am someone who...

1. _____ Tends to be quiet.
2. _____ Is compassionate, has a soft heart.
3. _____ Tends to be disorganized.
4. _____ Worries a lot.
5. _____ Is fascinated by art, music, or literature.
6. _____ Is dominant, acts as a leader.
7. _____ Is sometimes rude to others.
8. _____ Has difficulty getting started on tasks.
9. _____ Tends to feel depressed, blue.
10. _____ Has little interest in abstract ideas.
11. _____ Is full of energy.
12. _____ Assumes the best about people.
13. _____ Is reliable, can always be counted on.
14. _____ Is emotionally stable, not easily upset.
15. _____ Is original, comes up with new ideas.
16. _____ Is outgoing, sociable.
17. _____ Can be cold and uncaring.
18. _____ Keeps things neat and tidy.
19. _____ Is relaxed, handles stress well.
20. _____ Has few artistic interests.
21. _____ Prefers to have others take charge.
22. _____ Is respectful, treats others with respect.
23. _____ Is persistent, works until the task is finished.
24. _____ Feels secure, comfortable with self.
25. _____ Is complex, a deep thinker.
26. _____ Is less active than other people.
27. _____ Tends to find fault with others.
28. _____ Can be somewhat careless.
29. _____ Is temperamental, gets emotional easily.
30. _____ Has little creativity.

Please check: Did you write a number in front of each statement?

If you would like to receive a follow-up email explaining the findings of this study, please leave your email address on the line provided.

Respondent's Email: _____

This is the end of the survey. Thank you for your time and effort. Your responses will help us understand the issues impacting the people of Santa Barbara County.

Encuesta de Población
Residentes del Condado de Santa Bárbara

Le agradecemos por aceptar participar en este estudio de investigación. El propósito de este estudio es conocer las características de la personalidad y cómo se relacionan con las actitudes políticas y sociales. Estamos interesados en comparar los resultados que encontramos entre las personas del condado de Santa Bárbara con las personas que viven en otras partes del país.

Por favor, NO ESCRIBA su nombra en el cuestionario. Este cuestionario es completamente confidencial y no se compartirá con nadie, excepto en forma agregada con información de identificación eliminada. Con esto, queremos decir que las respuestas que proporcione solo es comunicarán a los demás, ya que se promedian junto con las proporcionadas por cientos de otros residentes de Santa Bárbara. En particular, mantendremos la información residencial separada de toda otra información de identificación. No compartiremos, comunicaremos ni publicaremos información residencial en ningún lugar ni en ningún formato.

Si tiene cualquier pregunta o inquietud, puede ponerse directamente en contacto a cualquier de los siguientes en UCSB:

Jeff Kirkby
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Departamento de Geografía
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Si desea recibir un resumen de los resultados de la investigación (esperado para 2021), tendrá la oportunidad al final de la encuesta de dejar su dirección de correo electrónico. Si elige proporcionar esto, le enviaremos una comunicación por correo electrónico. Esta es la única comunicación que recibirá. Nunca será contactado después de completar este estudio.

Le pedimos que conteste a cada pregunta con la mayor veracidad posible. Si una pregunta le parece confusa, o si prefiere no responder a una pregunta en particular, puede dejarla en blanco. Sin embargo, por favor, haga todo lo posible para contestar a cada parte.

Parte 1: Composición de la población

Instrucciones: Complete el espacio en blanco o apunte la respuesta apropiada donde se corresponde.

1. *¿Cuál es su edad actual?*

_____ años

2. *¿Cuál es su sexo?*

Femenino _____
Masculino _____
Otro/Prefiero no decir _____

3. *¿Cuál es su identidad racial y / o étnica? (puede elegir más de uno si corresponde)*

Indio Americano / Nativo de Alaska _____
Negro / Afroamericano _____
Blanco / Caucásico (no hispano) _____
Indio / Paquistaní / del sur de Asia _____
Isleño del Pacífico / Hawaiano _____
Hispano / Latino / a _____
Chino / Japonés / Asiático _____
Otro _____ (por favor dé más detalles)

4. *¿Cuál es el idioma principal que hablas en casa?*

Inglés _____
Español _____
Chino mandarín _____
Otro _____ (por favor dé más detalles)

5. *¿Cuál es el nivel de educación más alto que ha terminado?*

No completó la escuela secundaria _____
Escuela secundaria _____
Algún colegio / universidad / escuela técnica _____
Licenciatura (BA, BS, BFA, etc.)
Postgrado (MA / MS, PhD, MD, JD, MBA, etc.)

6. *¿Cuál es su actividad profesional?*

_____

7. *¿Cuál es el ingreso anual aproximado de su hogar?*

$_____ por año

8. *¿Cómo se califica usted en las siguientes categorías de identificación política?*

Extremadamente Liberal _____
Liberal _____
Ligeramente Liberal _____
Moderado _____
Ligeramente Conservador _____
Conservador _____
Extremadamente Conservador _____

Sin Opinión / Otro _____

Parte 2: Historia residencial en el condado de Santa Bárbara

Instrucciones: Una parte importante de este estudio es comprender qué factores, si los hay, llevan a los residentes del condado de Santa Bárbara a vivir donde viven. Con esto en mente, piense en los diferentes lugares donde ha vivido desde que llegó al condado de Santa Bárbara. Puede darse el caso de que haya nacido y haya vivido siempre en el condado de Santa Bárbara, mientras que también es posible que haya llegado al condado recientemente. Le pedimos que, en primer lugar, proporcione su dirección residencial actual. Luego, le pedimos que enumere todos los códigos postales dentro del condado donde ha vivido en cualquier momento y el tiempo que vivió allí. Esta información residencial se mantendrá segura y confidencial en todo momento, y nadie más que los investigadores involucrados en el estudio verán esta información.

Dirección Actual:

_____ _____
Número y calle — Cantidad de tiempo en esta dirección? (años y meses)

_____ _____
Ciudad / pueblo — Código postal

¿Ha vivido en otras residencias dentro **de este mismo código postal** mencionado anteriormente?

Si _____
No _____

Si respondió que sí, escriba **el tiempo total que ha residido en este código postal** en su vida:

_____
(años y meses)

¿Ha vivido en **otros códigos postales dentro del condado de Santa Bárbara** durante su vida?

Si _____
No _____

Si respondió que sí, **escriba estos códigos postales y el tiempo total que ha residido en ellos:**

Otro código postal: _____ Período de tiempo: _____
(años y meses)

Otro código postal: _____ Período de tiempo: _____
(años y meses)

Otro código postal: _____ Período de tiempo: _____
(años y meses)

Otro código postal: _____ Período de tiempo: _____
(años y meses)

Otro código postal: _____ Período de tiempo: _____
(años y meses)

Otro código postal: _____ Período de tiempo: _____
(años y meses)

¿Cuál es la razón(es) principal(es) por las que vives donde vives ACTUALMENTE? (puede apuntar más de uno)

Nacido o crecido aquí _____
Nuevo trabajo o transferencia de trabajo _____
Estar cerca de familiares o amigos _____
Clima / entorno natural _____
Cultura local y comunidad _____

Asequibilidad _____
Vivienda nueva o mejor _____
Estar cerca o asistir a escuelas / universidades _____
La economía local / oportunidades comerciales _____
Otro (por favor escriba) _____
_____
_____
_____

Parte 3: Asuntos de Opinión Pública

Instrucciones: Aquí hay una serie de declaraciones sobre algunos temas políticos y sociales importantes. Por ejemplo, Por ejemplo, ¿está de acuerdo en que el aborto debería ser ilegal en todos los casos? Escriba un número al lado de cada declaración para indicar hasta qué punto está de acuerdo o en desacuerdo con cada declaración.

1	2	3	4	5	99
Muy en desacuerdo	Ligeramente en desacuerdo	Neutral/Moderado	Ligeramente de acuerdo	Muy de acuerdo	Sin opinión

Marihuana (Cannabis)

1. _____ El uso de marihuana debe ser legal.
2. _____ Si la gente usara marihuana cerca de usted, eso le haría sentir incómodo.
3. _____ La legalización de la marihuana es buena para la economía.

Control de Armas

4. _____ Apoyo leyes más estrictas sobre armas en los Estados Unidos.
5. _____ Estoy a favor de exigir verificaciones de antecedentes para todos los compradores de armas.
6. _____ Me opongo a una prohibición nacional de la venta de armas de asalto.

Las Personas Sin Hogar

7. _____ La aplicación de la ley es demasiado tolerante con las personas sin hogar.
8. _____ No hay suficientes servicios disponibles para apoyar a las personas sin hogar en mi comunidad.
9. _____ Se debe exigir a las personas sin hogar que demuestren que son del área local antes de recibir asistencia.

Derecho al Aborto

10. _____ El aborto debe ser ilegal en todos los casos.
11. _____ En general, estoy de acuerdo con la decisión de 1973 de la Corta Suprema de Roe v. Wade que estableció el derecho de la mujer al aborto.
12. _____ El aborto debe ser legal si la vida o la salud de la madre están en juego.

Inmigración

13. _____ En general, apruebo la manera con la cual el gobierno de los Estados Unidos trata a los inmigrantes (los que llegan para vivir en los Estados Unidos desde otro país).
14. _____ El número de inmigrantes permitidos en el país debería aumentar.

15. _____ Un programa nacional de seguro de salud para inmigrantes que llegan ilegalmente en los Estados Unidos sería algo bueno.

Impuestos

16. _____ Personas ricas no pagan su parte justa en impuestos.
17. _____ Apoyo la reducción de impuestos en todos los ámbitos.
18. _____ La reducción de impuestos para grandes empresas y corporaciones sería perjudicial para la economía.

Infraestructura de Transporte

19. _____ Califico como buena la calidad de la infraestructura de transporte, como carreteras, puentes y transporte público, en mi área local.
20. _____ Apoyo un mayor gasto en carreteras, puentes, transporte público y otros proyectos de infraestructura.
21. _____ El proyecto en curso para construir una línea de ferrocarril de alta velocidad entre San Francisco y Los Ángeles es un desperdicio.

Energía

22. _____ Cuando se trata de la política energética, la energía renovable, como la energía solar y eólica, es más importante que la energía no renovable, como el carbón, el petróleo y el gas natural.
23. _____ Centrarse más en la producción de combustibles fósiles como el petróleo y el gas es probable que genere más empleos para los estadounidenses que centrarse en energías alternativas como la solar y la eólica.
24. _____ Estoy a favor de las propuestas para reducir drásticamente el uso de combustibles fósiles, como el gas, el petróleo y el carbón, en los Estados Unidos en los próximos 10 a 20 años.

¿Hasta qué punto se identifica con el condado de Santa Bárbara?

25. _____ Prefiero vivir en otro lugar que en el condado de Santa Bárbara.
26. _____ Vivir en el condado de Santa Bárbara dice mucho sobre quién soy como persona.
27. _____ Siento que me relaciono con las personas típicas que viven en el condado de Santa Bárbara.

Si tiene algún comentario adicional sobre los temas mencionados anteriormente, escríbalos en el espacio a continuación:

Parte 4: Características personales

Instrucciones: Aquí hay una serie de características que se pueden o no aplicar a su proprio caso. Por ejemplo, ¿está de acuerdo con que *es alguien a* quien *le gusta pasar tiempo con los demás*? Escriba un número al lado de cada declaración para indicar hasta qué punto está de acuerdo o en desacuerdo con cada declaración.

1	2	3	4	5
Muy en desacuerdo	Ligeramente en desacuerdo	Neutral/Moderado	Ligeramente de acuerdo	Muy de acuerdo

Soy alguien que...

1. _____ Tiende a estar callado.
2. _____ Es compasivo, con corazón blando.
3. _____ Tiende a ser desorganizado.
4. _____ Se preocupa mucho.
5. _____ Está fascinado por el arte, la música o la literatura.
6. _____ Es dominante, actúa como líder.
7. _____ A veces es grosero con los demás.
8. _____ Tiene dificultades para empezar tareas.
9. _____ Tiende a sentirse deprimido, triste.
10. _____ Tiene poco interés en ideas abstractas.
11. _____ Está lleno de energía.
12. _____ Asume lo mejor de las personas.
13. _____ Es confiable, siempre se puede contar con él.
14. _____ Es emocionalmente estable, no se molesta fácilmente.
15. _____ Es original, se le ocurren nuevas ideas.
16. _____ Es extrovertido, sociable.
17. _____ Puede ser distante e indiferente.
18. _____ Mantiene las cosas limpias y ordenadas.
19. _____ Es relajado, maneja bien el estrés.
20. _____ Tiene pocos intereses artísticos.
21. _____ Prefiere que otros se hagan cargo.
22. _____ Es respetuoso, trata a los demás con respeto.
23. _____ Es persistente, funciona hasta que finalice la tarea.
24. _____ Se siente seguro, cómodo consigo mismo.
25. _____ Es complejo, un pensador profundo.
26. _____ Es menos activo que otras personas.
27. _____ Tiende a encontrar fallas en los demás.
28. _____ Puede ser un poco descuidado.
29. _____ Es temperamental, se pone emocional fácilmente.
30. _____ Tiene poca creatividad.

Por favor verifique: ¿Ha escrito un número delante de cada afirmación?

¿Le gustaría recibir un correo electrónico de seguimiento explicando los hallazgos de este estudio? Esta será la única comunicación adicional que reciba de nosotros. Encierre en un círculo si o no.

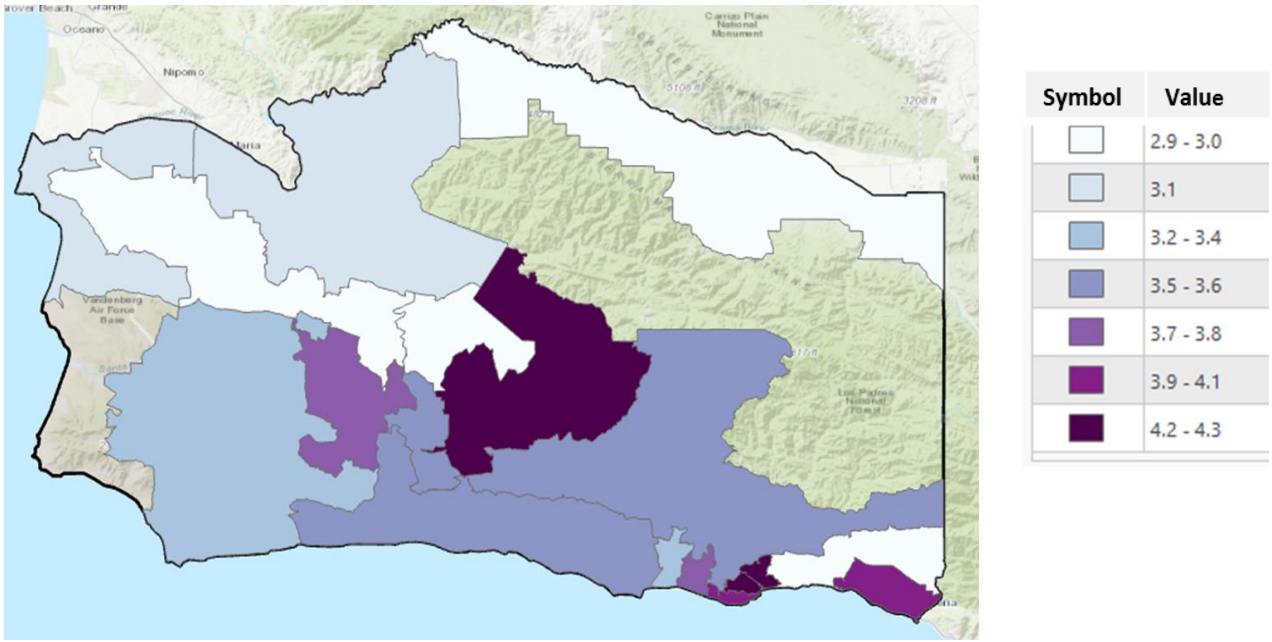
Correo electrónico del encuestado: _____

Este es el final de la encuesta. Gracias por su tiempo y por su participación.

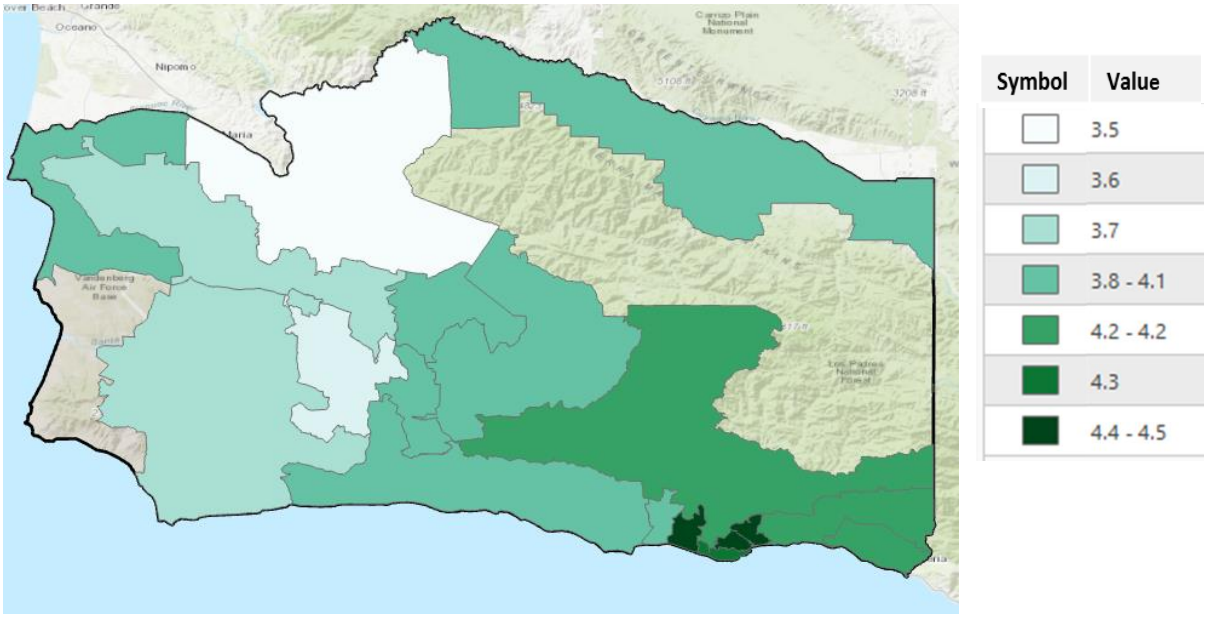
Appendix B

Political Issue Maps

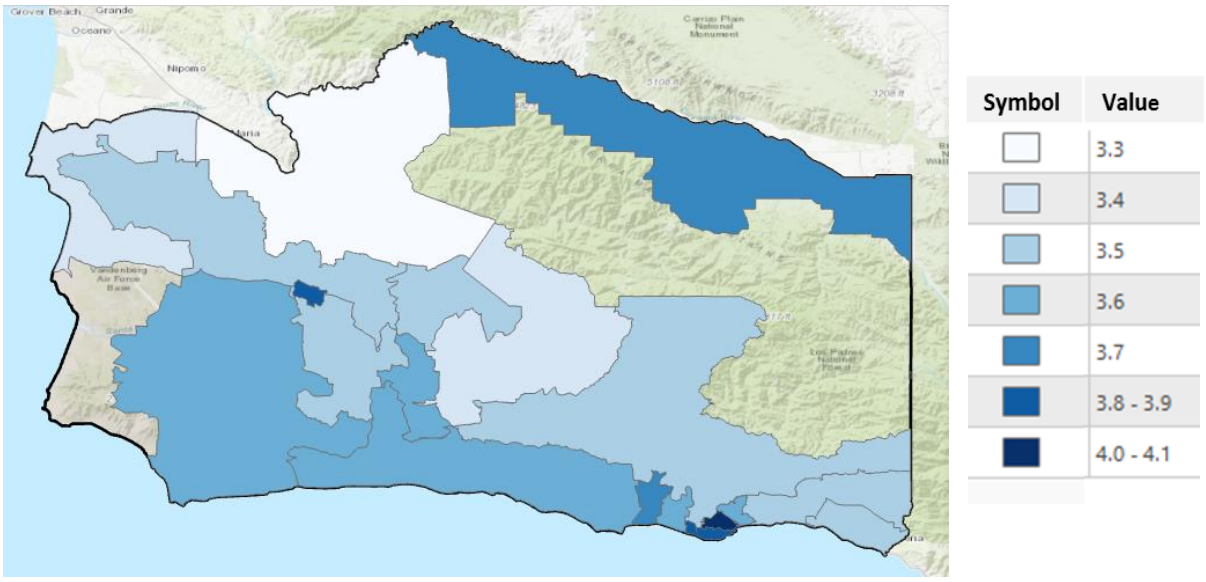
The following series of maps show regional averages (zip codes and REDCAP regions) of responses towards the nine public opinion and political topics covered in the survey. A map showing regional averages towards the generalized notion of political ideology is shown in the Findings chapter.



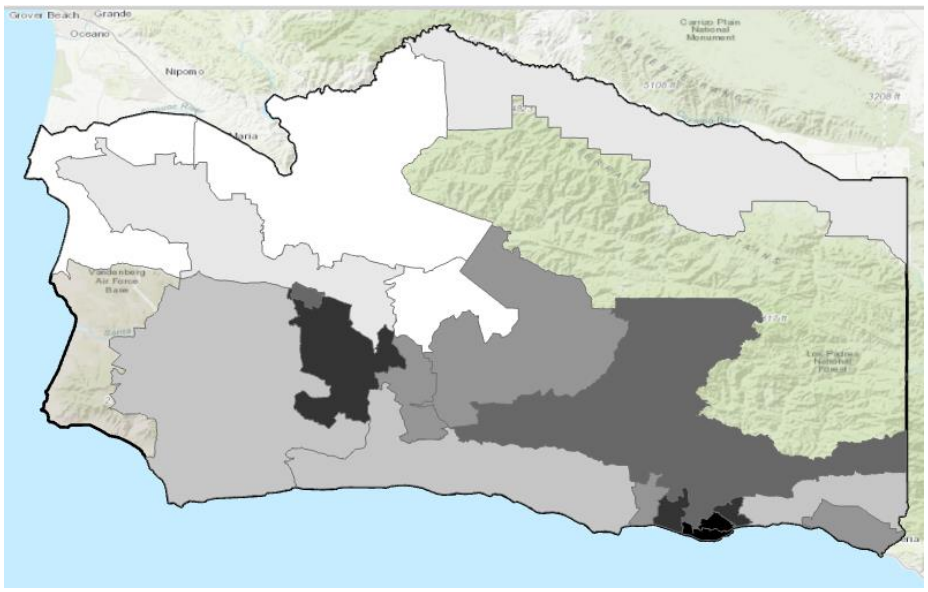
Appendix B-1. Zip codes. Mean attitude towards marijuana use and legalization. Note that the scale runs from 1 (extremely conservative) to 5 (extremely liberal). The county-wide average is 3.6.



Appendix B-2. Zip codes. Mean attitude towards gun control. Note that the scale runs from 1 (extremely conservative) to 5 (extremely liberal). The county-wide average is 4.0.

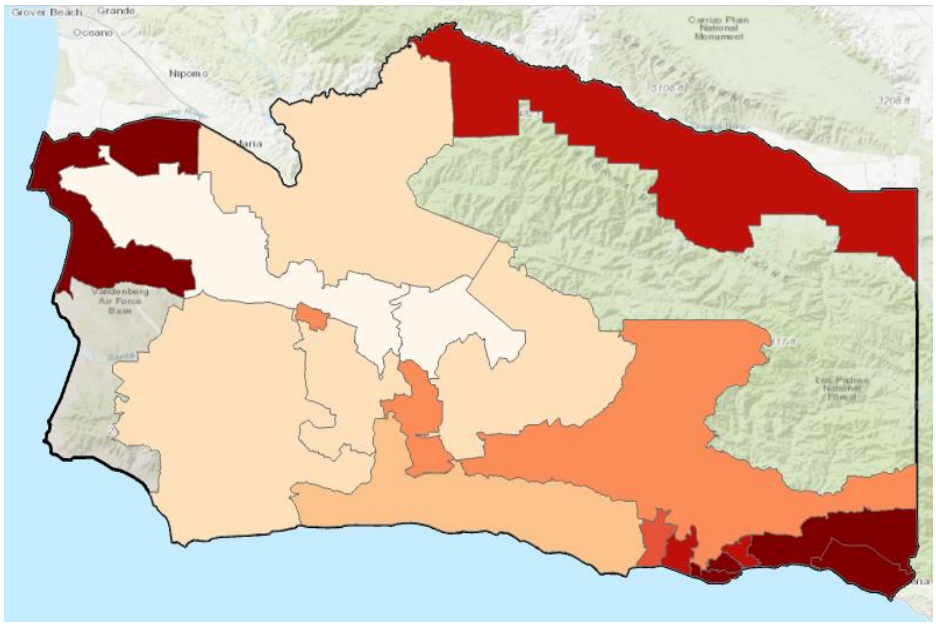


Appendix B-3. Zip codes. Mean attitude towards the issue of homelessness. Note that the scale runs from 1 (extremely conservative) to 5 (extremely liberal). The county-wide average is 3.6.



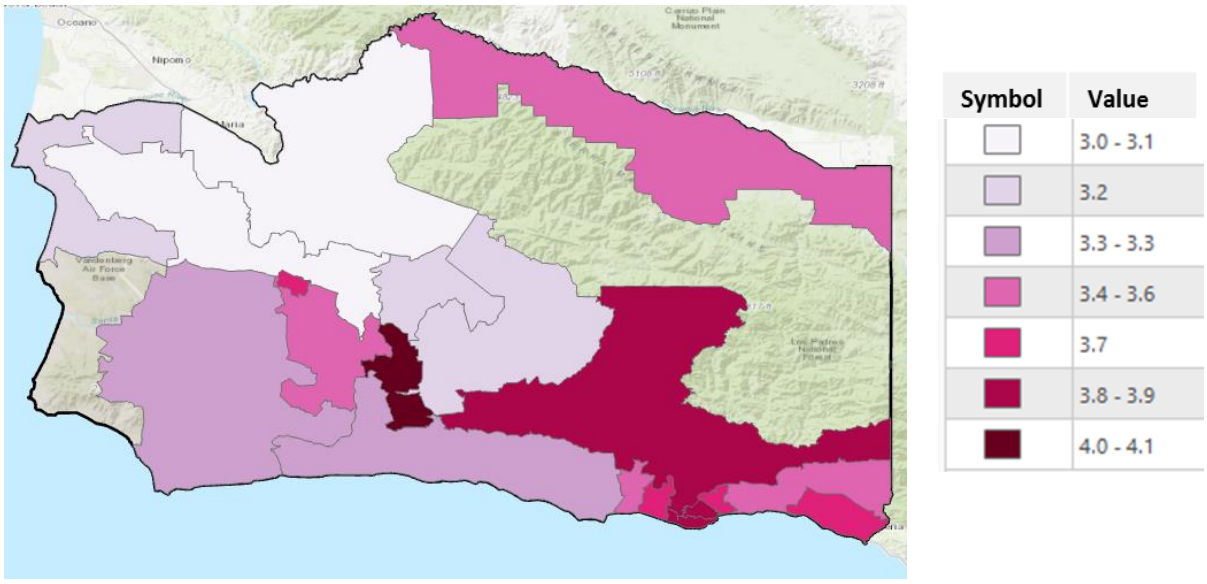
Symbol	Value
	3.9 - 4.0
	4.1
	4.2 - 4.3
	4.4 - 4.5
	4.6
	4.7 - 4.8
	4.9 - 4.9

Appendix B-4. Zip codes. Mean attitude towards abortion rights. Note that the scale runs from 1 (extremely conservative) to 5 (extremely liberal). The county-wide average is 4.4.

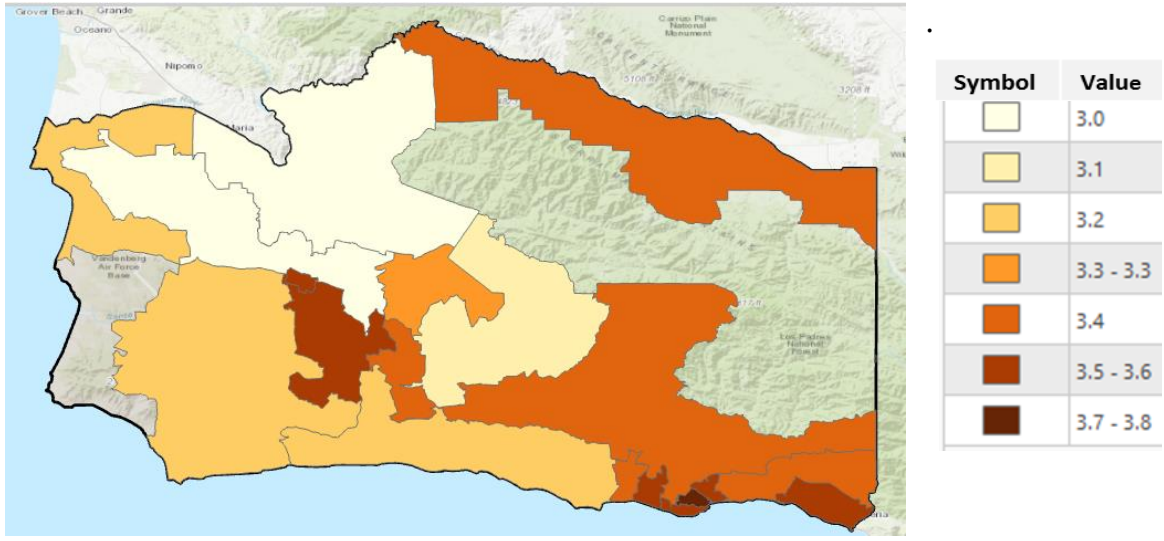


Symbol	Value
	3.2
	3.3 - 3.3
	3.4 - 3.5
	3.6
	3.7 - 3.8
	3.9
	4.0 - 4.1

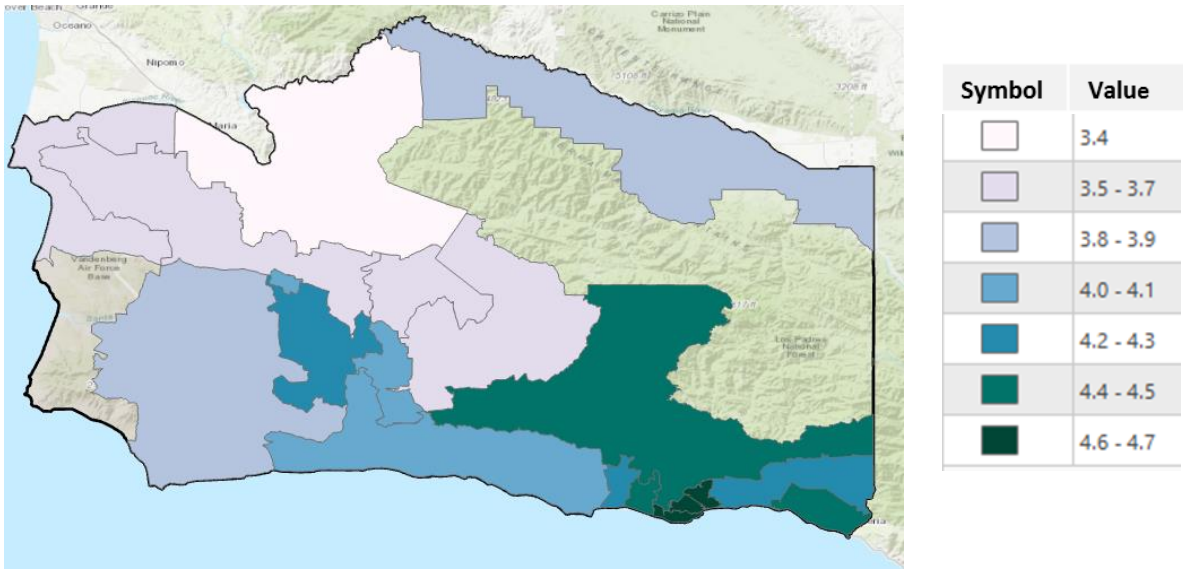
Appendix B-5. Zip codes. Mean attitude towards immigration. Note that the scale runs from 1 (extremely conservative) to 5 (extremely liberal). The county-wide average is 3.6.



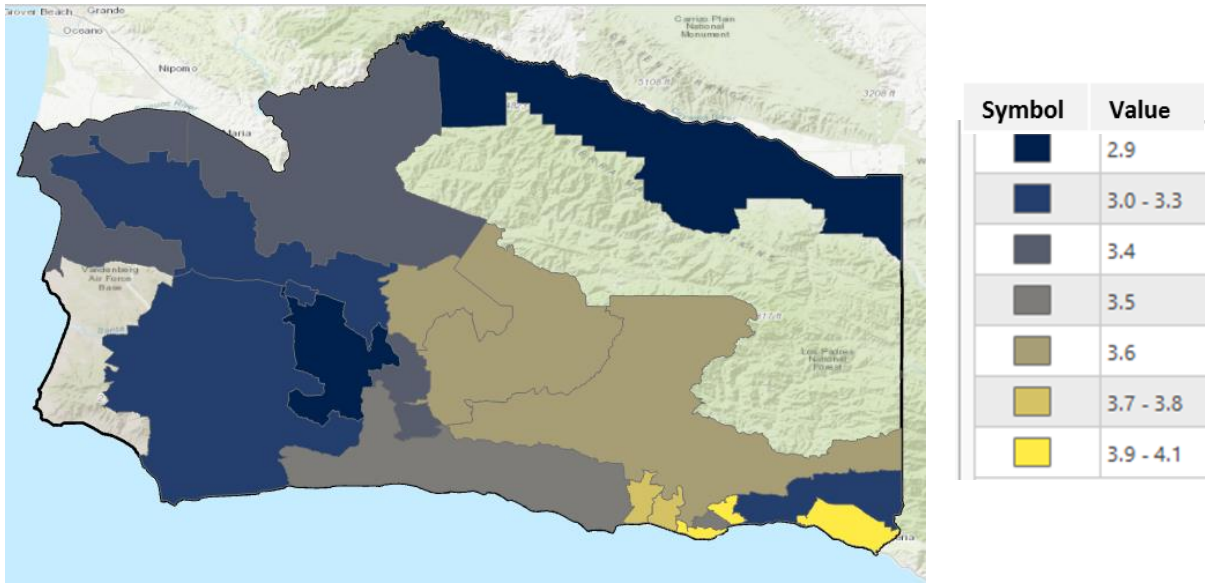
Appendix B-6. Zip codes. Mean attitude towards taxes. Note that the scale runs from 1 (extremely conservative) to 5 (extremely liberal). The county-wide average is 3.4.



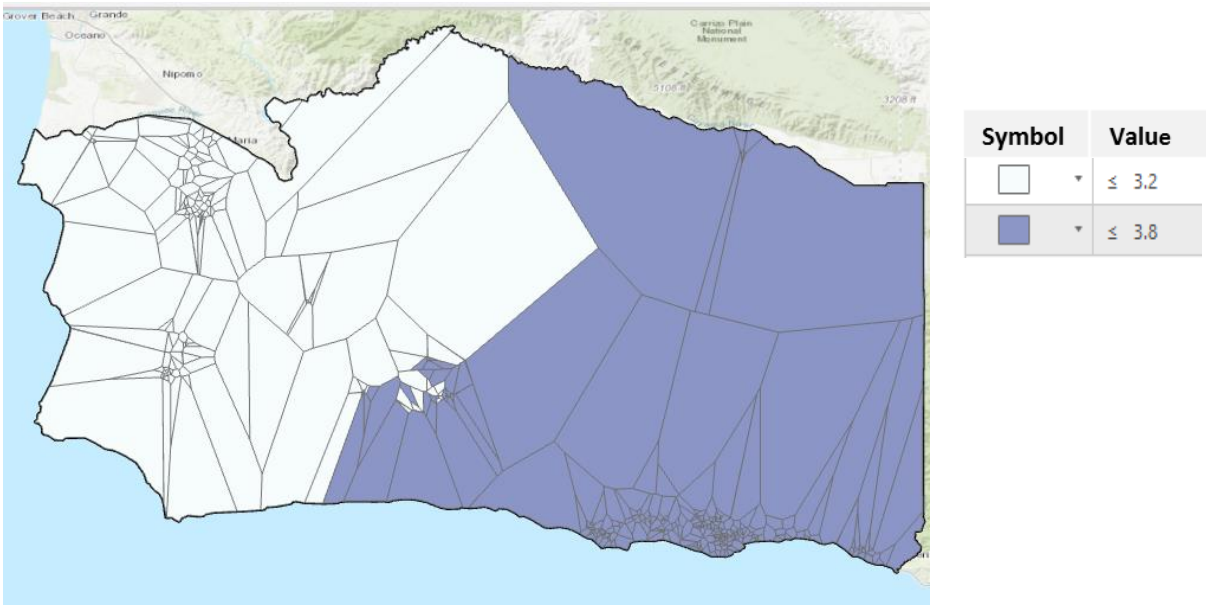
Appendix B-7. Zip codes. Mean attitude towards transportation infrastructure. Note that the scale runs from 1 (extremely conservative) to 5 (extremely liberal). The county-wide average is 3.3.



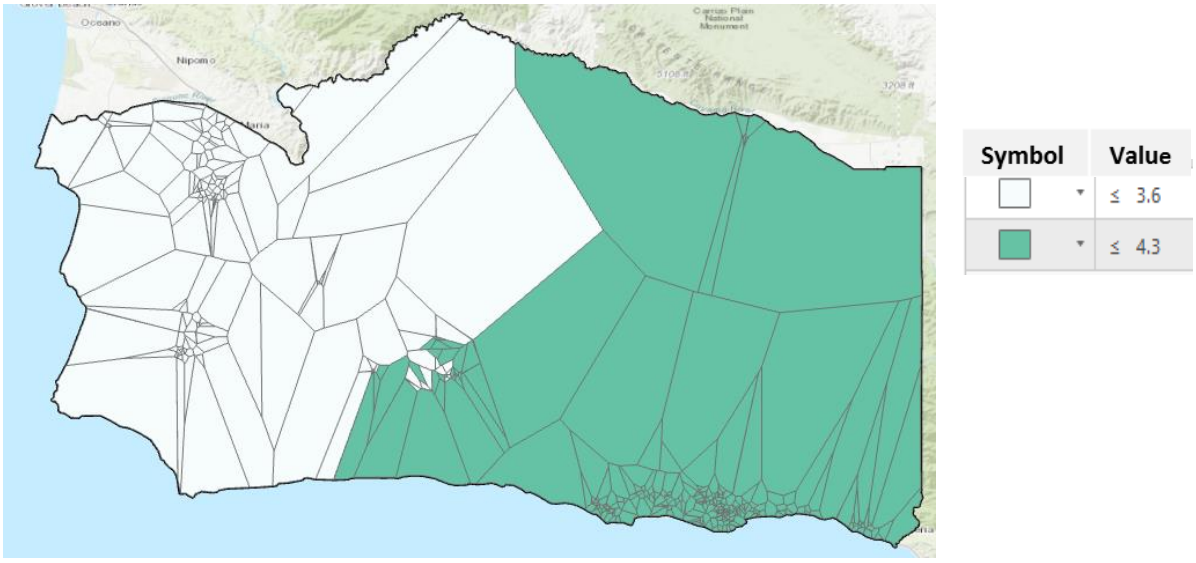
Appendix B-8. Zip codes. Mean attitude towards energy policy. Note that the scale runs from 1 (extremely conservative) to 5 (extremely liberal). The county-wide average is 4.1.



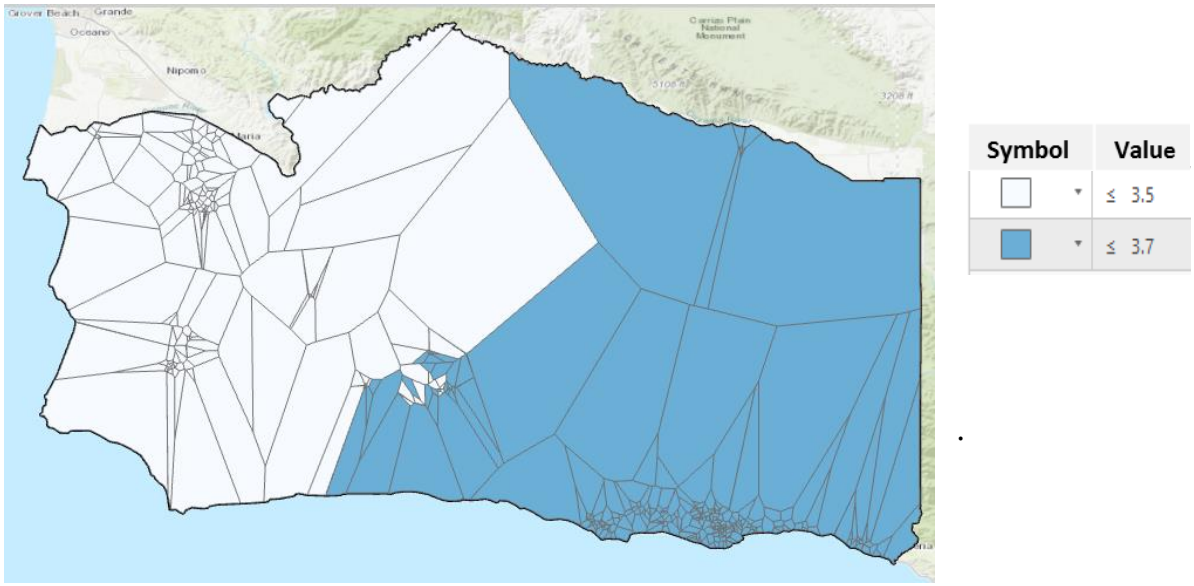
Appendix B-9. Zip codes. Mean attitude towards sense of place identity with Santa Barbara County. Note that the scale runs from 1 (extremely conservative) to 5 (extremely liberal). The county-wide average is 3.5.



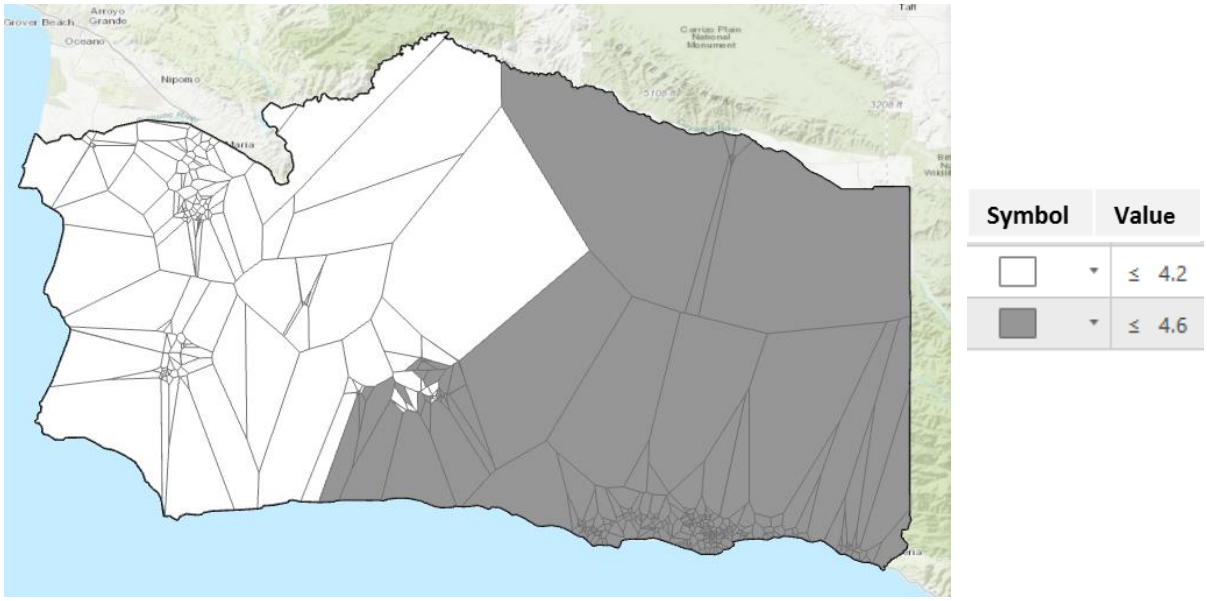
Appendix B-10. REDCAP, two political ideology regions. Mean attitude towards marijuana use and legalization. Note that the scale runs from 1 (extremely conservative) to 5 (extremely liberal). The county-wide average is 3.6.



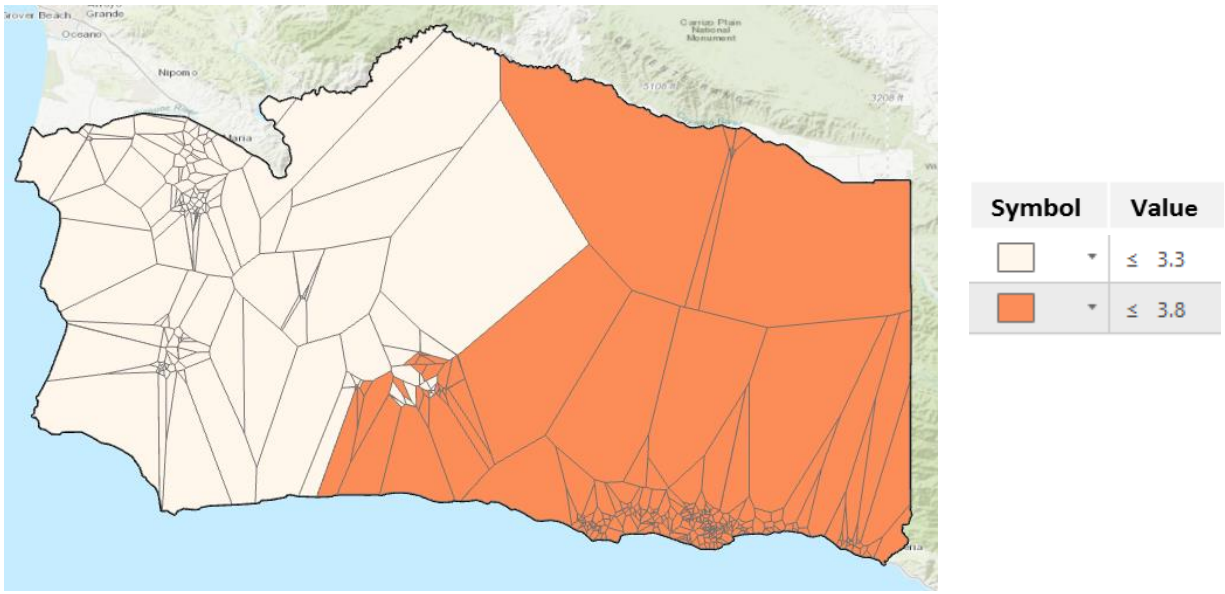
Appendix B-11. REDCAP, two political ideology regions. Mean attitude towards gun control. Note that the scale runs from 1 (extremely conservative) to 5 (extremely liberal). The county-wide average is 4.0.



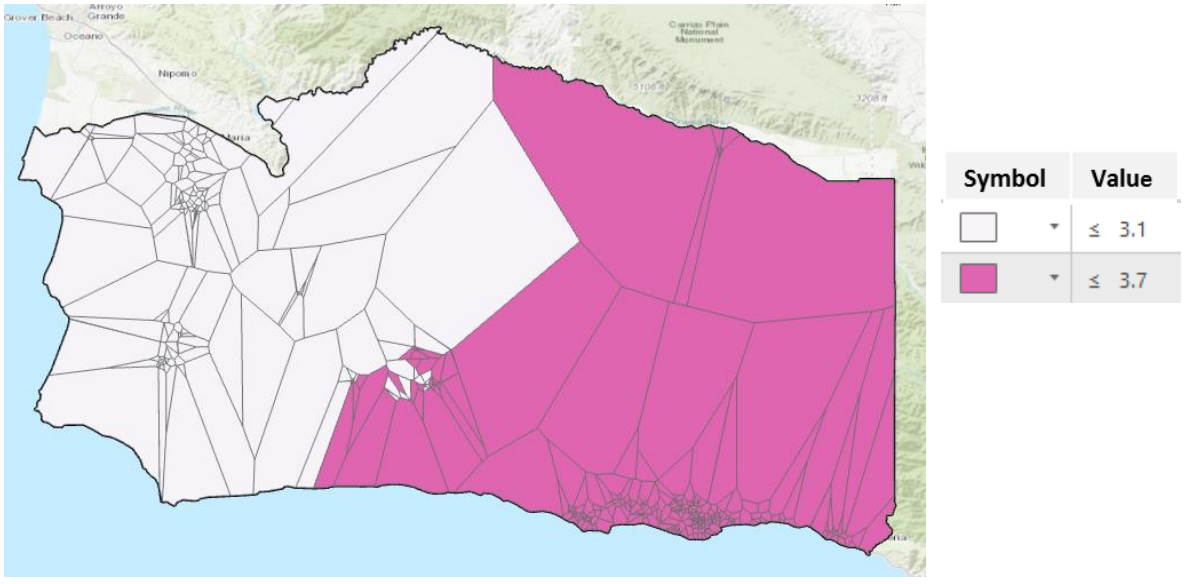
Appendix B-12. REDCAP, two political ideology regions. Mean attitude towards the issue of homelessness. Note that the scale runs from 1 (extremely conservative) to 5 (extremely liberal). The county-wide average is 3.6.



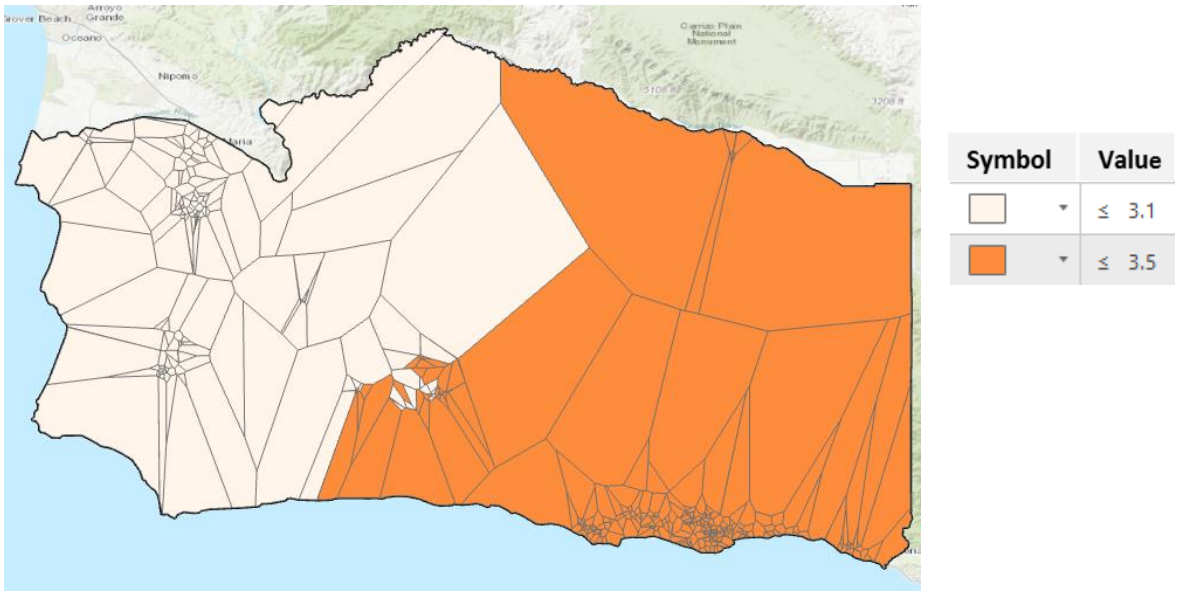
Appendix B-13. REDCAP, two political ideology regions. Mean attitude towards abortion rights. Note that the scale runs from 1 (extremely conservative) to 5 (extremely liberal). The county-wide average is 4.4.



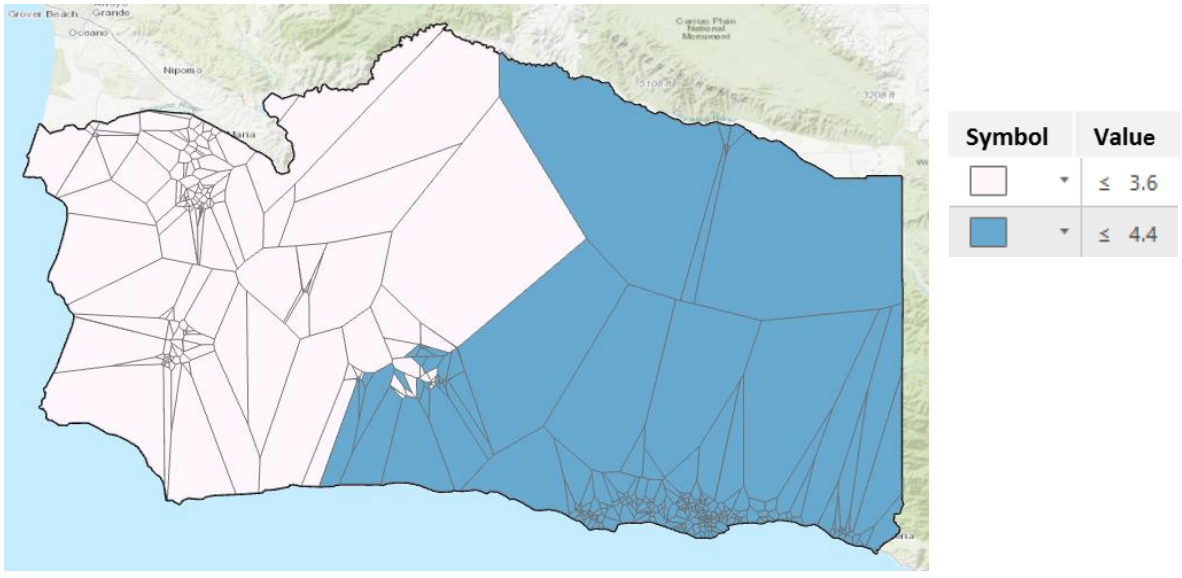
Appendix B-14. REDCAP, two political ideology regions. Mean attitude towards immigration. Note that the scale runs from 1 (extremely conservative) to 5 (extremely liberal). The county-wide average is 3.6.



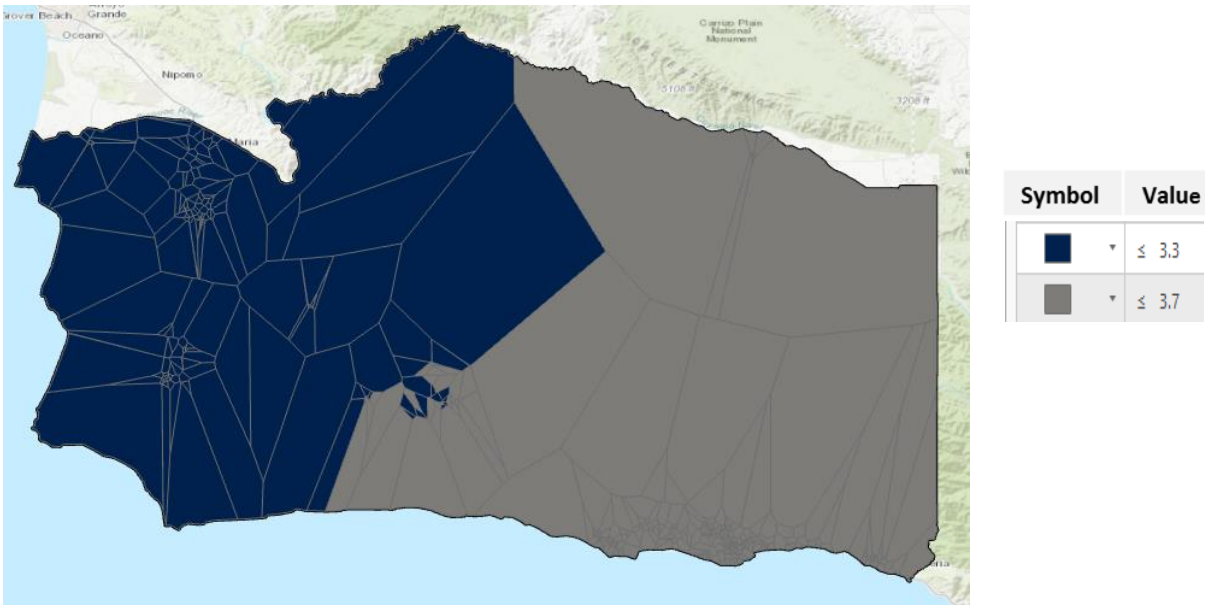
Appendix B-15. REDCAP, two political ideology regions. Mean attitude towards taxes. Note that the scale runs from 1 (extremely conservative) to 5 (extremely liberal). The county-wide average is 3.4.



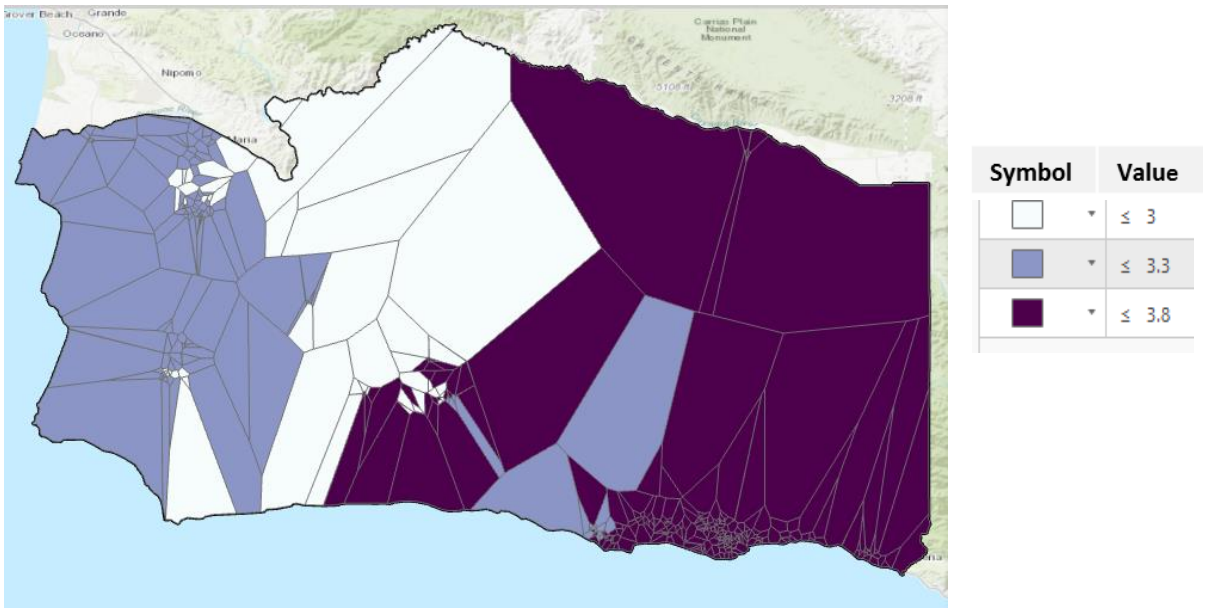
Appendix B-16. REDCAP, two political ideology regions. Mean attitude towards transportation infrastructure. Note that the scale runs from 1 (extremely conservative) to 5 (extremely liberal). The county-wide average is 3.3.



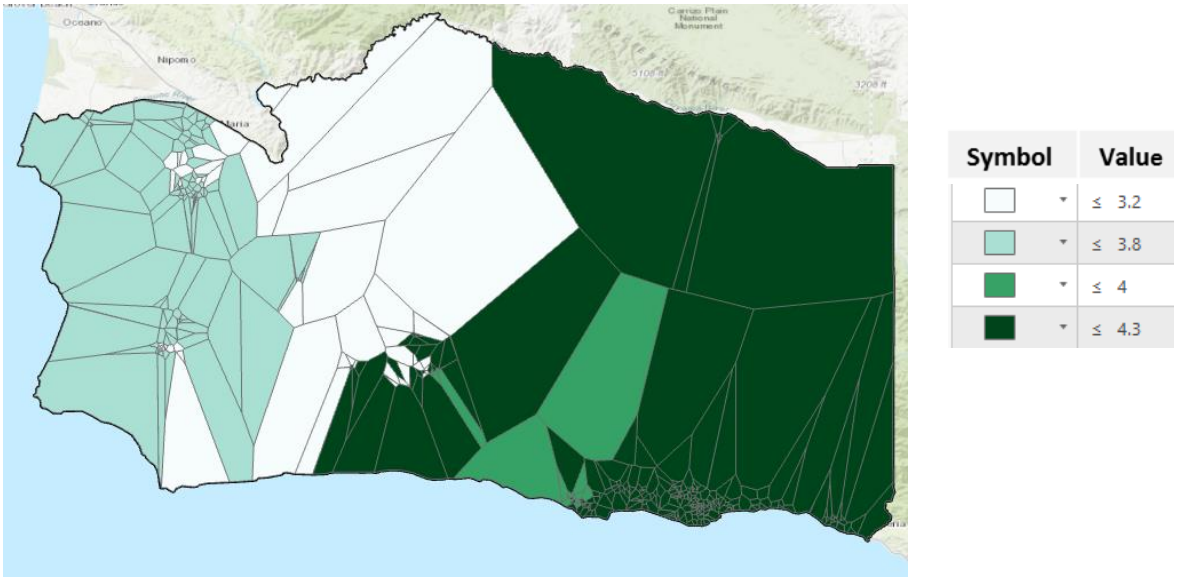
Appendix B-17. REDCAP, two political ideology regions. Mean attitude towards energy policy. Note that the scale runs from 1 (extremely conservative) to 5 (extremely liberal). The county-wide average is 4.1.



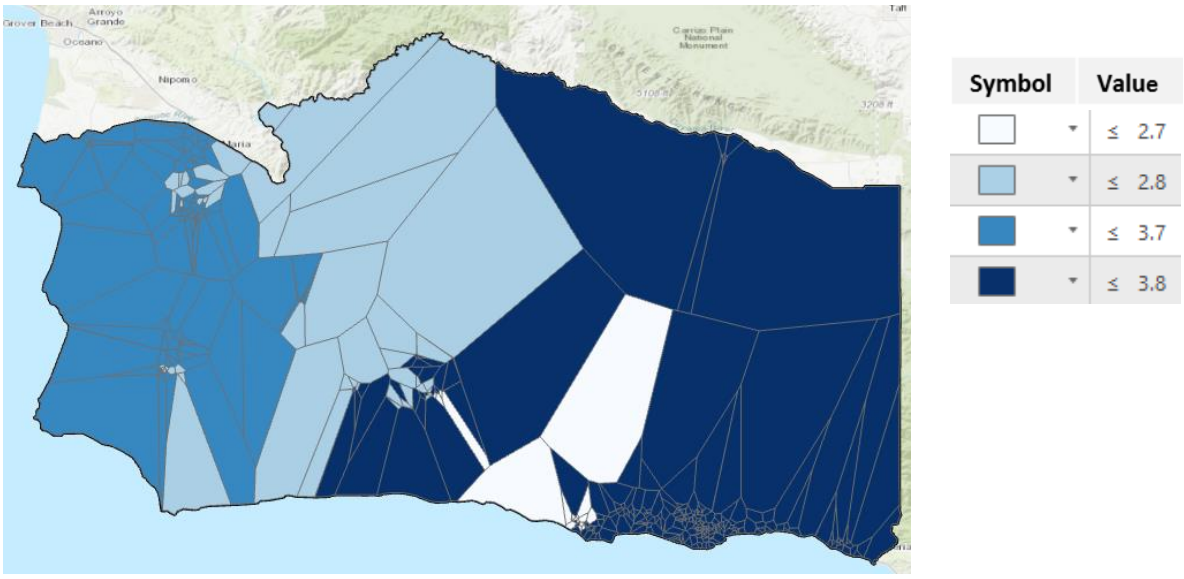
Appendix B-18. REDCAP, two political regions. Mean attitude towards sense of place identity with Santa Barbara County. Note that the scale runs from 1 (extremely conservative) to 5 (extremely liberal). The county-wide average is 3.5.



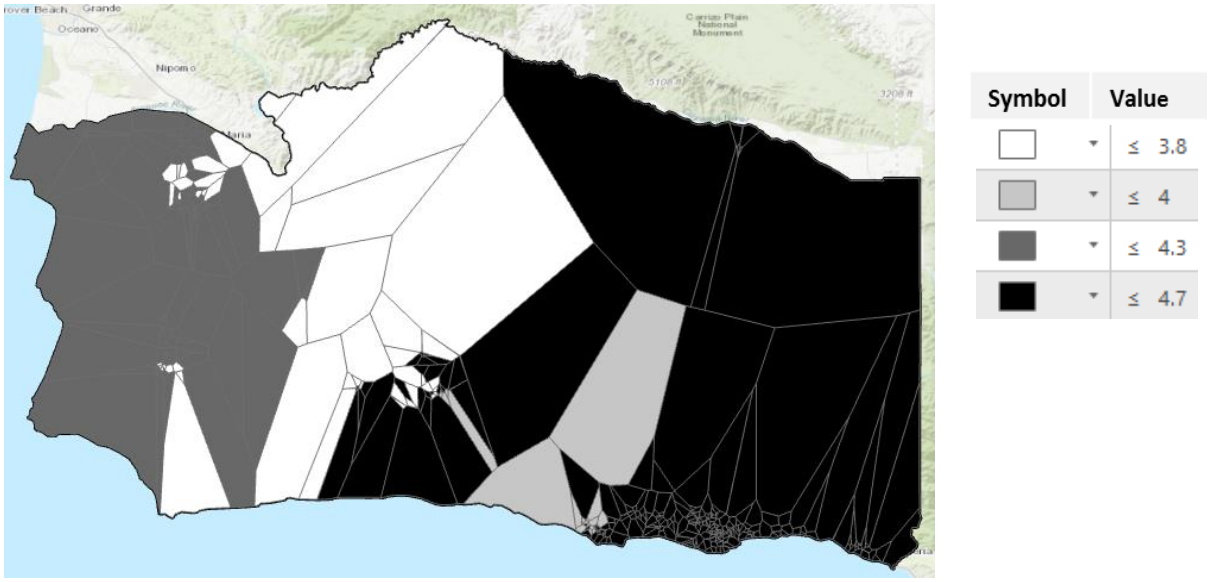
Appendix B-19. REDCAP, four political ideology regions. Mean attitude towards marijuana use and legalization. Note that the scale runs from 1 (extremely conservative) to 5 (extremely liberal). The county-wide average is 3.6.



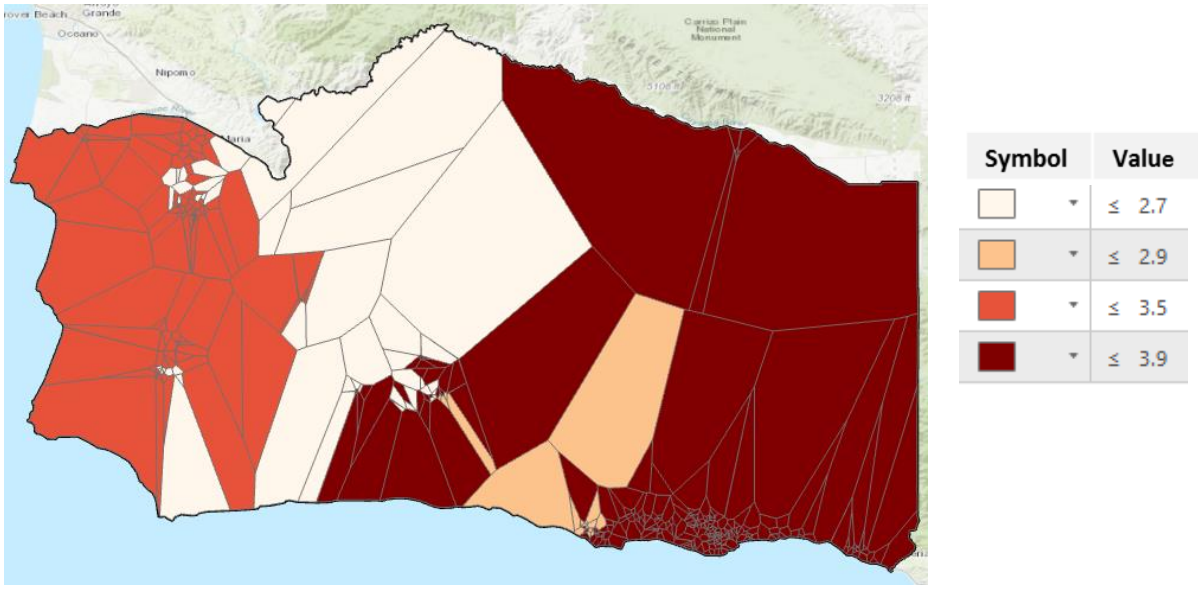
Appendix B-20. REDCAP, four political ideology regions. Mean attitude towards gun control. Note that the scale runs from 1 (extremely conservative) to 5 (extremely liberal). The county-wide average is 4.0.



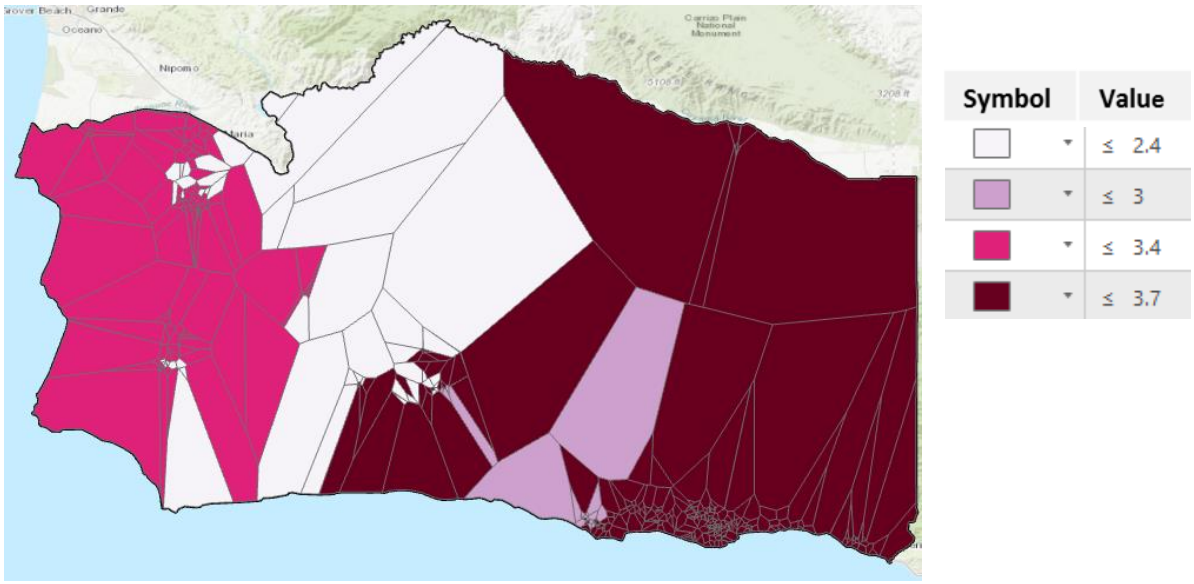
Appendix B-21. REDCAP, four political ideology regions. Mean attitude towards the issue of homelessness. Note that the scale runs from 1 (extremely conservative) to 5 (extremely liberal). The county-wide average is 3.6.



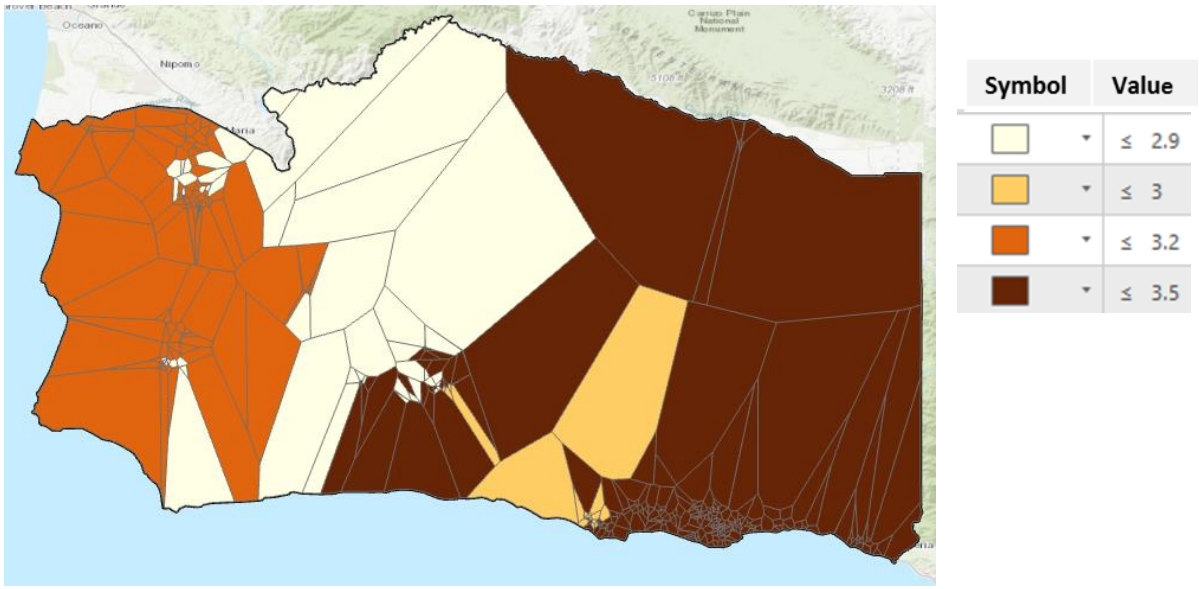
Appendix B-22. REDCAP, four political ideology regions. Mean attitude towards abortion rights. Note that the scale runs from 1 (extremely conservative) to 5 (extremely liberal). The county-wide average is 4.4.



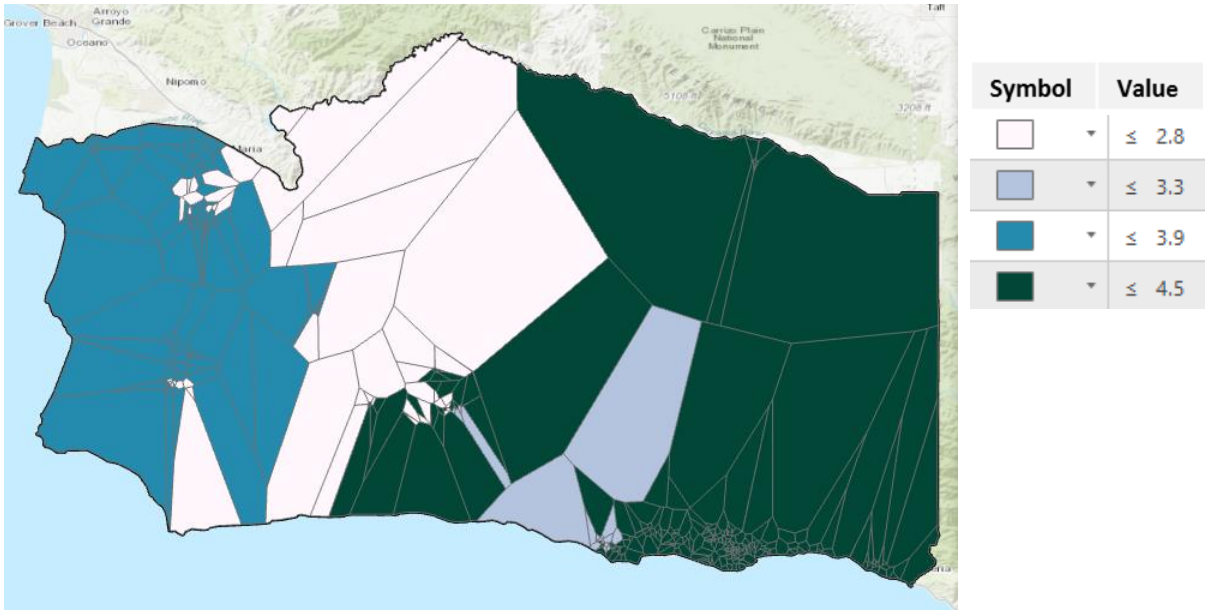
Appendix B-23. REDCAP, four political ideology regions. Mean attitude towards immigration. Note that the scale runs from 1 (extremely conservative) to 5 (extremely liberal). The county-wide average is 3.6



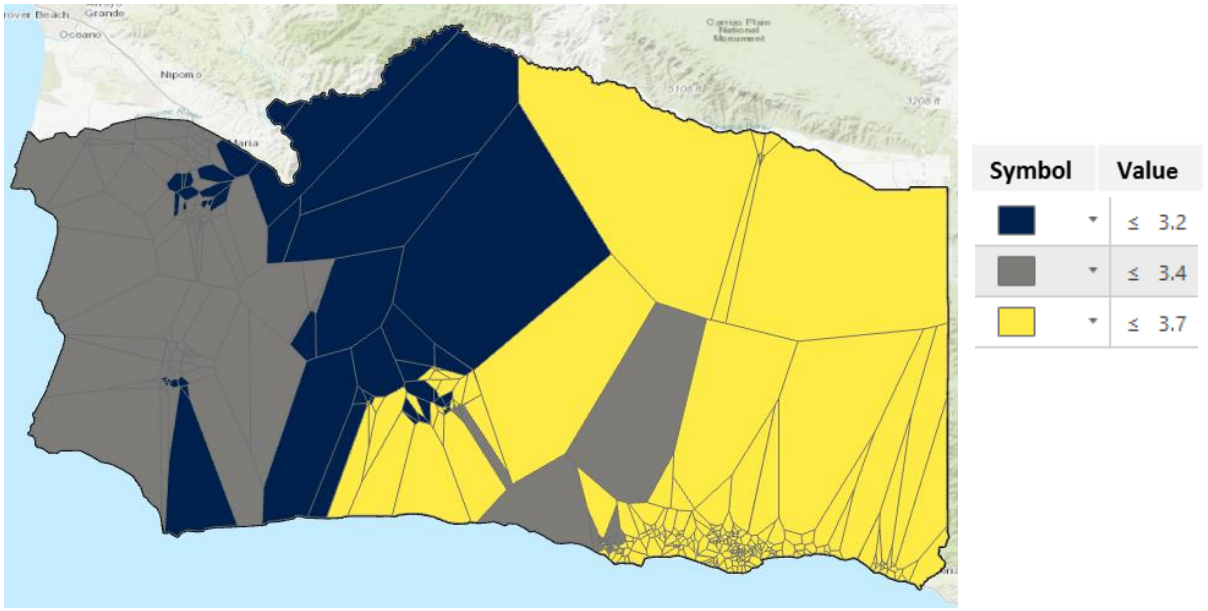
Appendix B-24. REDCAP, four political ideology regions. Mean attitude towards taxes. Note that the scale runs from 1 (extremely conservative) to 5 (extremely liberal). The county-wide average is 3.4.



Appendix B-25. REDCAP, four political ideology regions. Mean attitude towards transportation infrastructure. Note that the scale runs from 1 (extremely conservative) to 5 (extremely liberal). The county-wide average is 3.3.



Appendix B-26. REDCAP, four political ideology regions. Mean attitude towards energy policy. Note that the scale runs from 1 (extremely conservative) to 5 (extremely liberal). The county-wide average is 4.1.

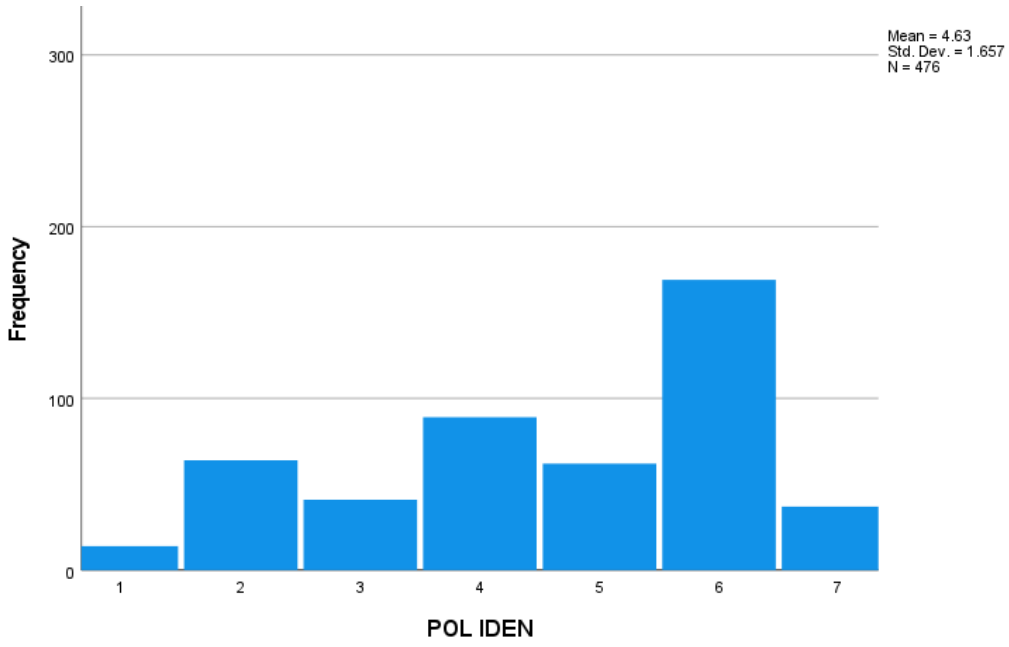


Appendix B-27. REDCAP, four political ideology regions. Mean attitude towards send of place identity with Santa Barbara County. Note that the scale runs from 1 (extremely conservative) to 5 (extremely liberal). The county-wide average is 4.1.

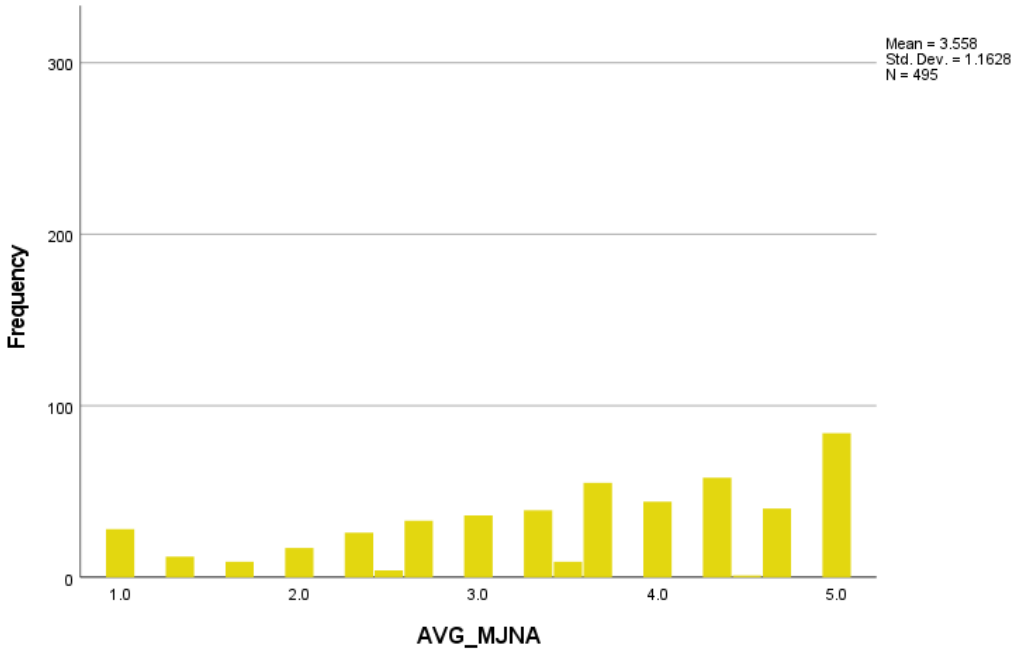
Appendix C

Political Issue Histograms

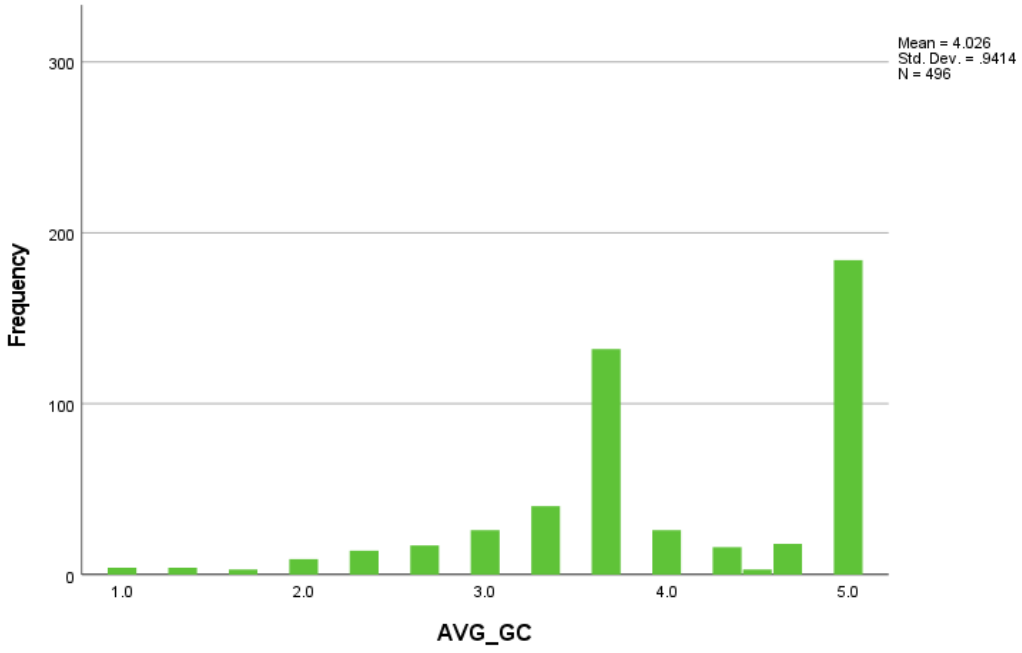
The following histograms illustrate the distribution of county-wide responses to 27 public opinion and political statements found in Part 3 of the survey instrument. These 27 statements were grouped into nine topical categories, which are shown here as indices. For the sake of comparison, I also include a histogram showing county-wide distribution on the single question of political ideology.



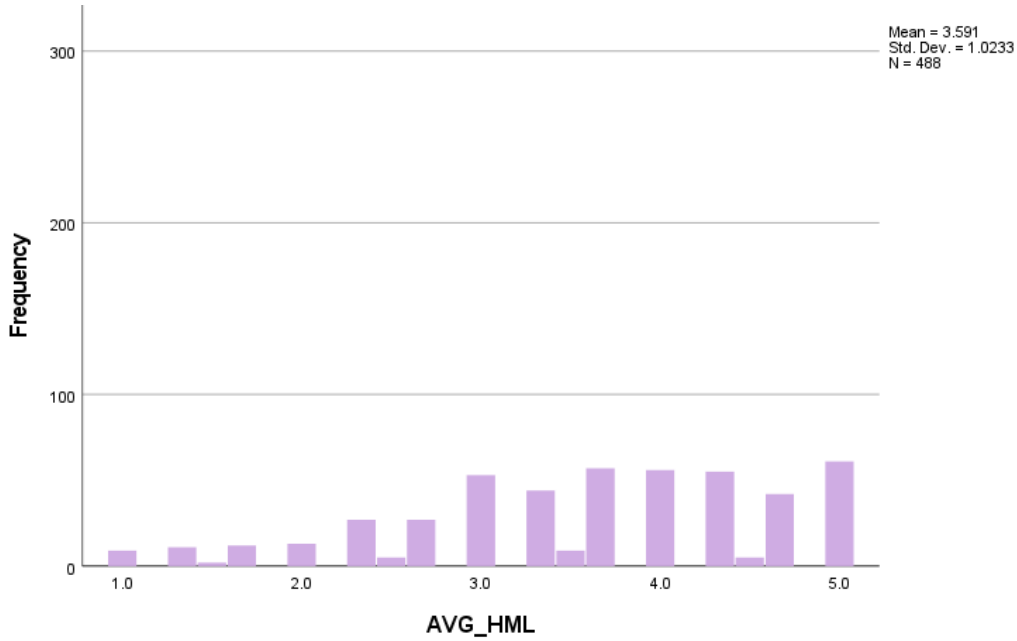
Appendix C-1. Political ideology.



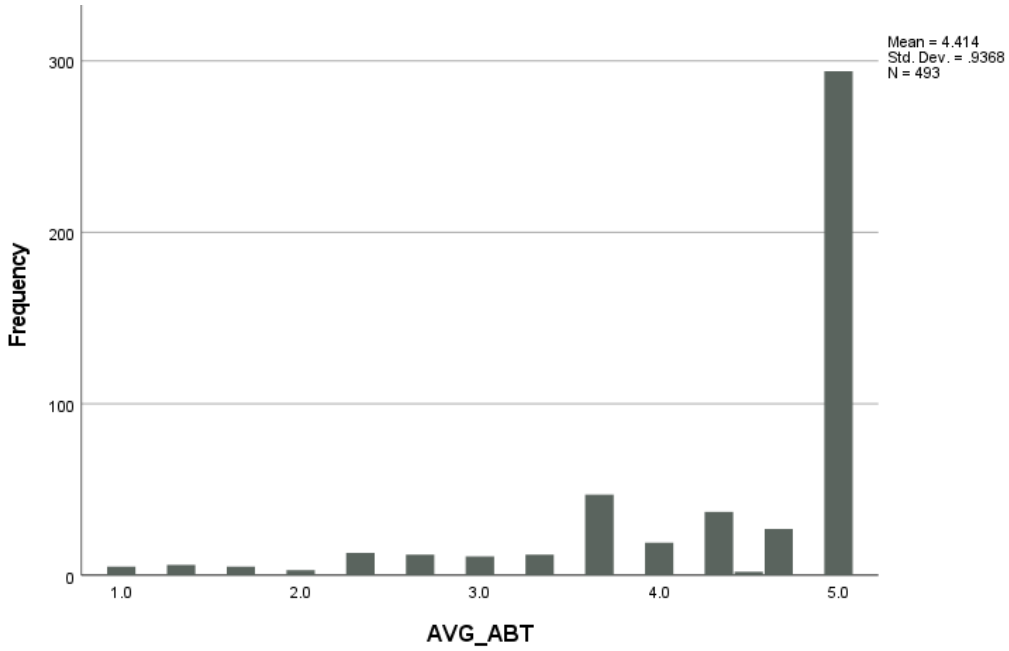
Appendix C-2. Marijuana use and legalization.



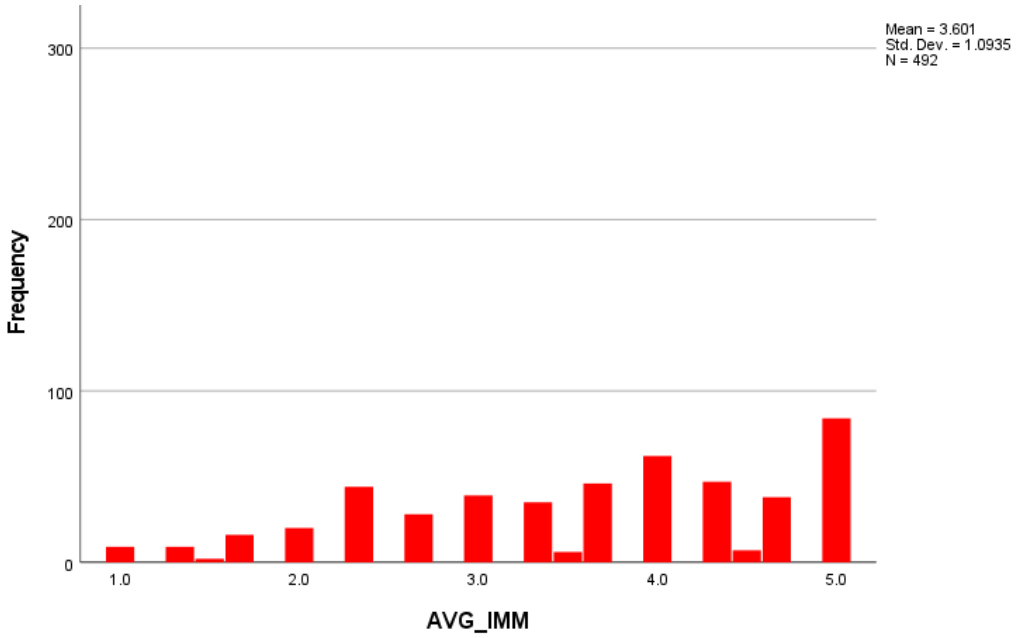
Appendix C-3. Gun control.



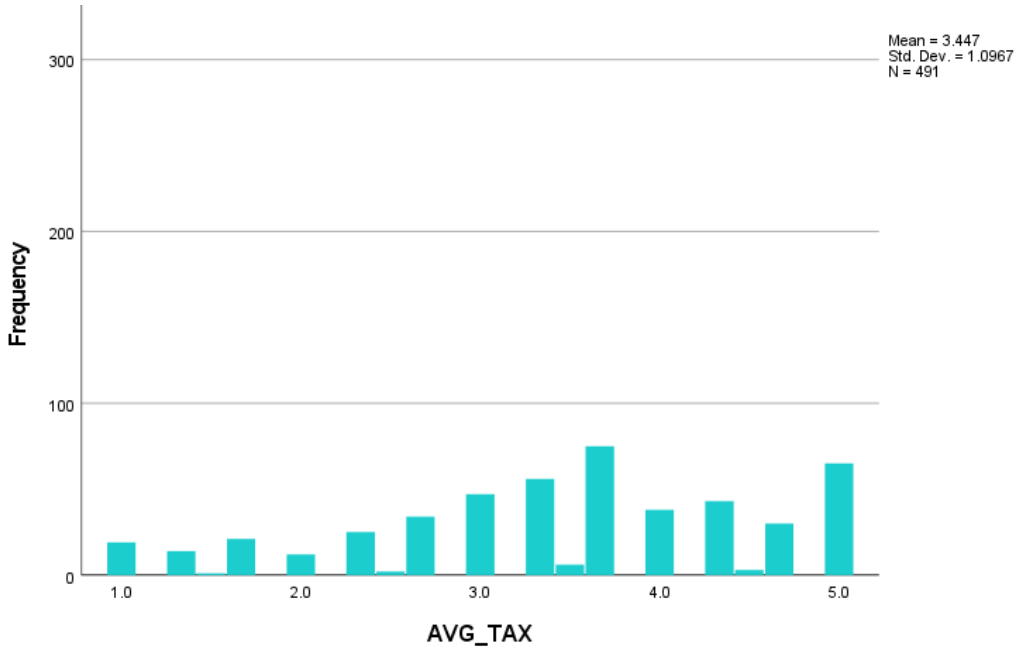
Appendix C-4. Homelessness.



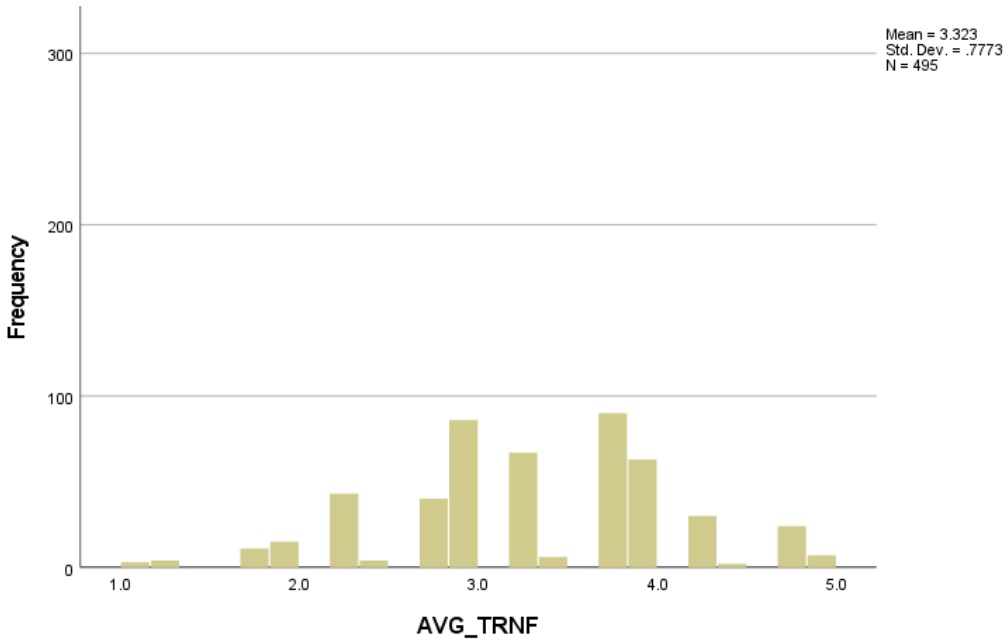
Appendix C-5. Abortion Rights.



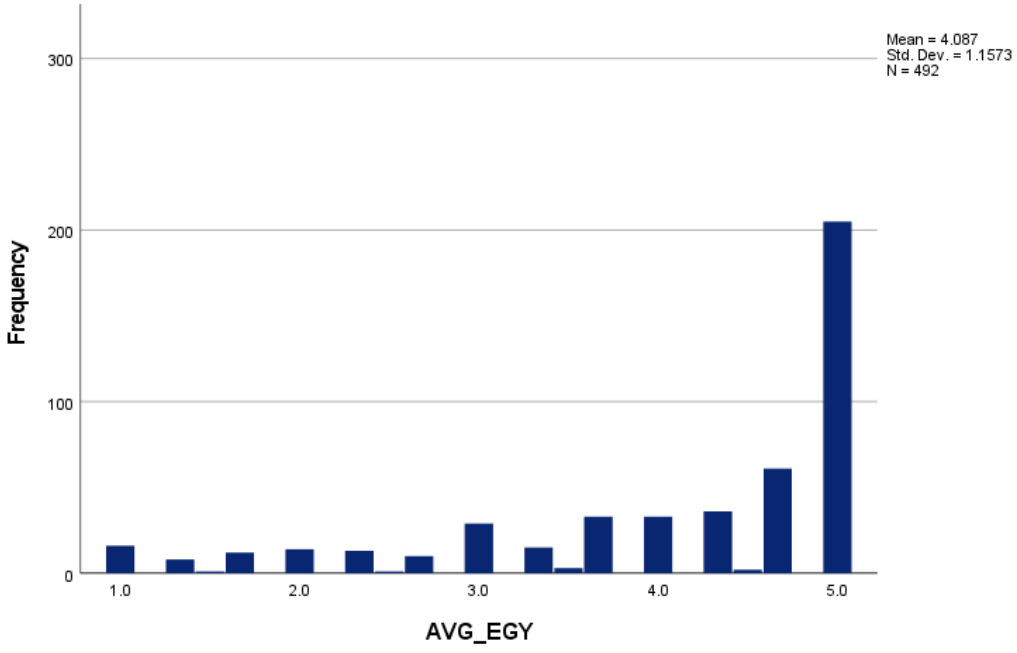
Appendix C-6. Immigration.



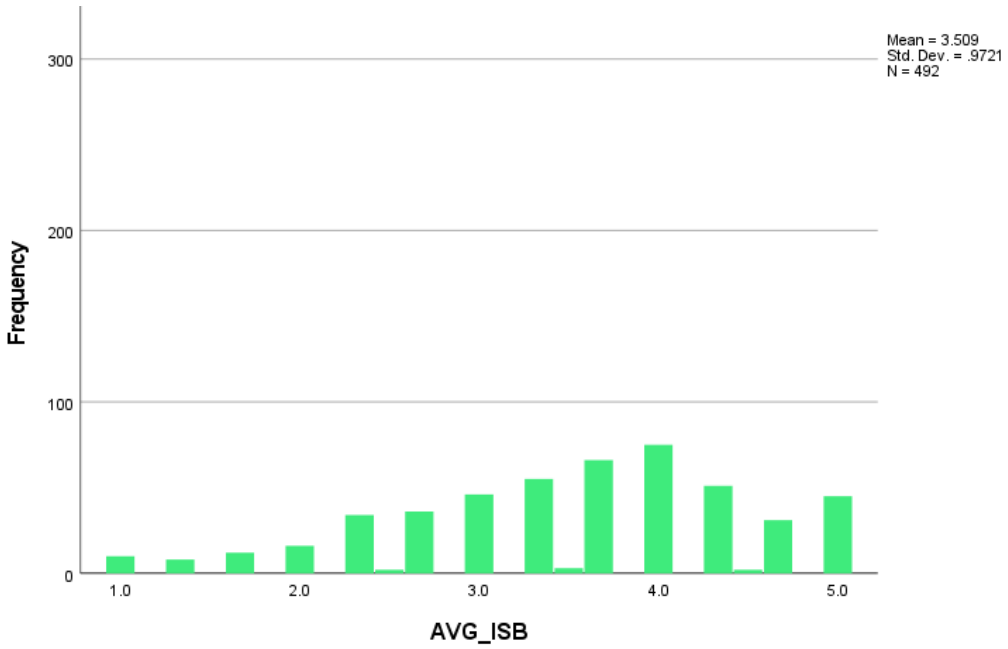
Appendix C-7. Taxes.



Appendix C-8. Transportation Infrastructure.



Appendix C-9. Energy Policy.



Appendix C-10. Place Identity (with Santa Barbara County).

Appendix D

Survey Participant Comments

See next page.

Appendix D. All comments left by survey particpants were read for content and subsequently coded. In some cases a single survey participant left multiple comments, these were counted and coded individually.

CATEGORY	**Category Total**	Subcategory Total
Survey was too simplistic / not able to fully express opinion	**14**	
-Elaborated further on a specific topic		12
Environmental policy and Green Energy	**10**	
-Regulations too onerous		9
-Against offshore oil drilling		1
High cost of living	**9**	
Great weather and natural beauty	**7**	
Immigration	**7**	
-Generally negative views towards immigration		6
-Generally positive views towards immigration		1
Economic inequality	**7**	
Opinion about moving in/out of the area	**6**	
-looking to move out of area due to problems		4
-thankful to have moved into area		2
Homelessness	**6**	
-County is too permissive, has created problem		4
-County should do more to help the homeless		2
Suggested survey should cover additional topics	**6**	
-healthcare (national and local), addiction and mental illness, diversity issues, rules and regulations, quality of local schools, cost of local government		
Regional divide, urban/rural differences	**5**	
Taxes (too burdensome)	**5**	
Quality of local highways and roads	**4**	
-rated as poor		3
-rated as good (rural area particularly)		1
Conservatives unhappy in liberal areas	**3**	
Abortion	**3**	
-Too many abortions occurring		2
-Laws against abortion too strict		1
Local area is boring	**2**	
Guns – need for additional regulations	**2**	
Liberals unhappy in conservative areas	**1**	
Complaints about local college/university students	**1**	
Survey too advanced for those not highly educated	**1**	
Good public school system	**1**	
TOTAL	**100**	

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