The Geography of Law: Understanding the Origin of State and Federal Redistricting Cases

James G. Gimpel1, Tristan M. Hightower1, and Patrick C. Wohlfarth1

Abstract
Knowing where legal complaints arise can tell us something about them and reveal clues about their conditions of origin. In this paper, we examine the geographic origins of litigation challenging the boundaries of electoral districts—an increasingly salient and prominent source of political conflict. We construct an original dataset of all redistricting cases in state and federal courts nationwide, from 1960 to 2019. We show that redistricting litigation surfaces not just in states where there are regions undergoing rapid population change or that have a greater proportion of aggrieved racial minority groups but also in areas where there is close partisan competition. The filing of redistricting litigation is highly responsive to hypercompetitive political environments, suggesting that parties pursue judicial intervention vigorously when political power hangs in the balance and not simply due to demographic changes associated with decennial population measurement. These findings have important implications for understanding the temporal and spatial dynamics of redistricting politics and the consequences of intense partisan electoral competition in the United States.

Keywords
redistricting, law, states, legal geography, gerrymandering, state legislative districts, congressional districts

Where do redistricting cases originate? And does their uneven distribution across space tell us something important about these disputes? As late as 1960, courts played a minimal role in the politics of redistricting. A surprising number of states had not updated their legislative boundaries to account for sweeping population changes for more than a decade. Malapportionment was the norm, not the exception. Almost every state legislature was malapportioned, as were the state congressional delegations (David and Eisenberg 1961; Goldberg 1962; McConnell 2000). Since the U.S. Supreme Court opened the door to the justiciability of claims of unfair apportionment in 1962, courts’ dockets have been regularly stocked with redistricting cases working their way through both state and federal court systems.

Yet, in subsequent decades, grievances about redistricting abound across the states, but we do not see litigation arising uniformly across the nation’s terrain. Why is this so? Given the critical link between the contours of legislative districts and representation and that the political manipulation of the redistricting process is the norm, why does litigation appear so unevenly throughout the country? Part of the answer must be that the geographic and temporal origins of redistricting complaints offer important insight into the history and development of redistricting litigation and partisan competition in the U.S. political system.

Most lower courts in the United States have explicit territorial jurisdictions; they cannot hear just any case but consider cases that arise within their limited geographic domain. Thus, where cases originate offers valuable information about them. Location may not matter to every outcome of interest, but if a particular legal complaint repeatedly arises in one area but is never voiced in another, there may be important differences about the locales that can explain the pattern.

For this research, we gathered data on every federal and state court case since 1960 that adjudicated disputes over the redistricting of congressional and state legislative, local government, and school district boundaries. This undertaking is important because legal complaints about redistricting arise neither randomly nor evenly.

1University of Maryland, College Park, USA

Corresponding Author:
James G. Gimpel, Department of Government, University of Maryland, 3140 Tydings Hall, College Park, MD 20742, USA. Email: jgimpel@umd.edu
across the country. Yet, it is not obvious why this is so. One might think, for instance, that specific kinds of criminal cases arise in particular courts in direct proportion to where (geographically) particular kinds of crimes are committed. But there are many reasons why this correspondence is weak, including the way criminal activity is policed, decisions by prosecutors on which cases to pursue, and decisions by jurists about which cases ought to command their attention (Henning and Feder 2005; Kutateladze et al. 2014; Lynch 2011; Nisbett and Cohen 1996; Shermer and Johnson 2010). Redistricting complaints, in particular, do not always emerge in places that we might expect based on observations of unequally sized districts and other alleged infringements on fairness in representation. A variety of theories may explain the gap between apparent slights created by the redistricting process and the emergence of litigation aimed at a remedy, but no one can doubt that there is puzzling variability across jurisdictions that requires explanation.

The results show that states with large populations undergoing change in the intercensal period certainly stimulate redistricting complaints when new plans are enacted. States with large minority populations see a high volume of complaints, which is not surprising given the large volume of complaints about racial fairness and representation. Yet, we also find that the political characteristics of states explain substantial demand for court action on redistricting. Specifically, even after controlling for the degree of disproportionality across legislative districts, states that are closely divided between the two parties see many more redistricting lawsuits flow to the court than states where the balance of partisanship tips more predictably toward a single party. This is likely reflective of the fact that redistricting plans are always more controversial when the balance of congressional and state legislative seats hangs in the balance, and a favorable court ruling could tip the scale. Taken together, these results speak to the importance of geographic variation to the incidence of litigation, and, in particular, how partisan electoral competition fuels challenges to electoral maps in the United States.

Geographic Variation and the Legal System

Our investigation takes up an examination of the geography of redistricting litigation in state and federal courts. There is growing interest in the geography of law, enabled by additional geographic data and new analytical techniques that advance both theory and hypothesis testing (Fontana 2016; King, Johnson, and McGeever 2010; Lemos and Young 2018; Rhee and Scott 2018; Schultheis 2014; Stephanopoulos 2012; Stoler and San Roman 2016; Yu 2017). Decades of research have established that courts’ dockets across most venues of law are connected to the particular social, economic, and political settings in which they operate (Atkins and Glick 1976; Brace and Hall 2001, 397; Brace, Hall, and Langer 2001; Dumas and Haynie 2012; Grossman and Sarat 1971; Heydendar 1976). Certainly, previous research has found that citizen litigiousness in civil cases is not uniform across U.S. judicial systems. Caseloads vary across states due to a number of factors, including the professionalization of the courts, and characteristics of the states’ political, social, and economic environments (Dumas 2016; Yates, Tankersley, and Brace 2010). Similarly, U.S. Supreme Court cases do not emerge randomly from the various lower courts but reflect a range of factors, including the strategic choices made by justices (e.g., R. C. Black and Owens 2009; Epstein and Knight 1998; Perry 1991) and litigants (e.g., Boyd 2015; Caldeira and Wright 1988), the prestige of particular state court systems, as well as the various political, social, and economic circumstances responsible for the events that generated the original complaint (Boyd 2017; Brunn et al. 2000).

Related research in the geography of law has noted that neighboring states sharing political and cultural values more regularly draw upon precedent from nearby states than from those at a distance (Caldeira 1985, 1988; Stoler and San Roman 2016). Communication across state judicial systems most often occurs among those proximate to each other, sharing cultural similarities. These communication flows are demonstrated by case citations showing that courts respect the decisions of other courts with which they agree with and share traditions (Caldeira 1985; Harris 1985, 450; Hinkle and Nelson 2016). This research has established that some courts lead and others follow, with habits of citation developing along network paths between geographically proximate nodes (Caldeira 1988).

The perspective that lawsuits arise out of the political and socioeconomic cultures of states and localities contrasts with the idea that cases emerge solely out of evidence of malfeasance, wrongdoing, crime, or injustice. Most courts do not have control over their own caseloads and must respond to those complaints initiated by litigants. When bringing complaints, these litigants must commonly reside within each court’s geographic jurisdiction, though not in all circumstances. Given the territorially bounded nature of most courts, the political, economic, and social characteristics of populations can explain variations in legal traditions (Grossman and Sarat 1971). Law has an ecology that dictates its development and legal norms (Harris 1985). Users and providers of legal services vary across space, just as citizens will be variously tolerant of criminal and civil offenses, reflecting their values (Granovetter 2007; Thomas, Cage, and Foster 1976). Particular institutional patterns and
practices in law emerge out of social needs and political demands, making some courts more receptive to particular kinds of claims and others less so. From these varying conditions arise geographical differences in complaint filings and case outcomes as well as deviations in substantive law. The right answer to questions of law and policy will vary from place to place (Posner and Sunstein 2006, 154). This is why social scientists and legal scholars can point to temporal and regional variation in law enforcement, litigiousness, caseloads, and legal precedent (e.g., Enns 2014, 2016; Neuman 1987).

The suspicion that redistricting cases exhibit a distinctive geography is not solely due to cross-state variation in political and legal conditions but also to the territorial nature of representation itself. In redistricting, complaints about the drawing of boundaries usually arise as constitutional equal protection claims—a claim that one group has been disadvantaged relative to others by the way districts are drawn. Complaints originate first in lower state and federal courts within the same state in which the allegedly violative district exists. The geographic origin of the complaint matters because representation is based on where citizens reside. Discrimination claims based on redistricting require that courts scrutinize whether the plaintiff’s equal status has been undermined by virtue of where they happen to live (Rhee and Scott 2018, 598–599). Thus, the geographic basis of representation ties the standing of a complainant to the district that is challenged. Litigation cannot flow from areas where plaintiffs are unable to point out an arguable injustice.

The Temporal Flow of Redistricting Complaints

Three kinds of cases, focused on particularly important aspects of equal protection and voting rights jurisprudence, have dominated the history of redistricting litigation in the United States. Sometimes these are thought of as different “generations” of redistricting law. The first generation was the concern for population—the series of cases beginning with *Baker v. Carr* (369 U.S. 186, 1962) and, continuing through the 1960s and 1970s, forcing states and localities to adhere to the one-person–one-vote rule in the design of legislative districts. The focus of this litigation was to extend equal population requirements to state and local legislative institutions. Courts came to force states and localities to adhere to the high standard required for congressional districts, although with some leeway to deviate from strict equality.

The second generation of cases arose mainly in the 1980s and 1990s, requiring the creation of majority–minority districts to promote the descriptive representation of significantly sized minority groups. Beginning with *Shaw v. Reno* (113 S.Ct. 2826, 1993), courts under the Voting Rights Act (VRA) of 1965 authorized states to augment minority descriptive representation but not use race as the predominant factor in drawing boundaries. This ambiguous mandate opened the door for litigation aimed at clarifying how redistricting could enhance minority representation without paying primary attention to racial and ethnic settlement. Subsequent cases in this stream have sought to force the courts to determine permissible uses of race in redistricting (Rush 1995, 159; 2016, 387–393).

The third generation of complaints began to percolate in the 1980s and 1990s but flowed more swiftly in the 2000s and 2010s. Plaintiffs often charged that Republicans used majority–minority districts created under the auspices of the VRA to crowd Democratic voters into one-sided districts, thereby creating unfair political advantages in remaining districts and excessive partisan gerrymanders. Other cases simply sought to curb the practice of incumbency protection in redistricting, prioritizing new redistricting values of political competition and proportionality between statewide majority opinion and the size of majorities in state legislative and congressional delegations (Hasen 2004). Through the 2010s, social scientists and legal scholars sought earnestly for a convincing test for partisan gerrymandering (e.g., McDonald and Best 2015; Stephanopoulos and McGhee 2015; Tam Cho and Liu 2016), only to have a narrow Supreme Court majority rejecting the feasibility of such standards in *Rucho v. Common Cause* (139 S.Ct. 2484, 2019; Grofman 2019). This recent focus on gerrymandering as a political process that produces election results that are unrepresentative of the overall population’s partisan preferences gives rise to the hypothesis that the rising disproportionality of seat shares to vote shares in a state will generate more legal complaints.

Spatial Variation in Redistricting Complaints

Some may jump to the premature conclusion that the geography of redistricting litigation will be almost exclusively Southern in origin, given that region’s troubled history of race relations. Powerholders in the South must have had a greater motivation to manipulate political boundaries in unfair ways than those living elsewhere. The idea that diverse populations and redistricting issues will be collocated is certainly a plausible hypothesis, but the South has no monopoly on diversity. Given that district boundaries have often been weapons of political inclusion and exclusion, we should not be surprised to see the number of complaints rise in locations where large populations are also racially and ethnically diverse.
Boundaries are even found to proliferate, fragmenting local governments and school districts, in areas with heterogeneous populations. In these diverse locations, places are regularly broken up into more homogeneous political units that exhibit substantial disparity in social and economic conditions (Bischoff 2008, 183). Thus, populous and diverse locations with a greater number of boundaries may increase the number of redistricting-related complaints that arise.

African Americans’ durable one-sided support for Democrats bears mentioning, here, as they have become a bloc vote for a single political party (Bullock 1981; Lublin 1999). Their spatial concentration and disadvantage also varies directly with population size (Frisbie and Neidert 1977; James and Taeuber 1985; Marshall and Jiobu 1975), with black–white segregation persisting through time (Massey 2020). Long-standing settlement patterns have offered a very reliable foundation for descriptive representation, allowing black voters to elect candidates of their choice. In the redistricting process, however, black support can also be spread across multiple districts to bolster support for other Democrats, or in other areas to dilute their numbers so as to favor the election of Republicans. Even when the goal of a plan is to distribute black voters to elect more Democrats, controversy arises between black and white Democrats about their optimal dispersion across districts (Lublin et al. 2020). Given the push-and-pull of these contending arguments, one should expect more complaints about redistricting in locations with diverse identity groups competing for political power through the boundary-drawing process. Claims of discrimination attend complaints about redistricting plans exhibiting both minority concentration (i.e., “packing”) and dispersion (i.e., “cracking”), with courts being asked to identify the elusive but appropriate balance.

Spatial variation in the origination of redistricting litigation should also be tied to the existence (or not) of legal remedies. While federal law mandates that districts should be equally populated (U.S. Constitution, Article I, Section 2)1 and should not discriminate on the basis of race (U.S. Constitution Equal Protection Clause, VRA), there may be areas of law and policy where the federal courts choose to withdraw, citing the need to rely on local majorities. This appears to be the course taken in many disputes about partisan gerrymandering. State governments have codified into their laws—often in their own constitutions—a variety of redistricting principles. For instance, many states (though not all) have specified that districts must be contiguous, compact, and that they ought to preserve communities of interest, among other principles. What is more, at least since 2010, some states have explicitly prohibited drawing districts to favor incumbents, political parties, or even with the aid of data detailing local party leaning.2 These legal differences across states (that may also vary across time) likely contribute to patterns of redistricting litigation.3

Similarly, challenges to state legislative redistricting plans do not automatically go to state courts. A recent case challenging Wisconsin’s 2011 state legislative districts, Gill v. Whitford (218 F. Supp. 3rd 837 (2016)), went directly to federal court, and on appeal, eventually to the U.S. Supreme Court (see Gill v. Whitford (585 U.S. (2018))). A case challenging Pennsylvania’s congressional districts, Agre v. Wolf (284 F. Supp. 3rd 591 (2018)) found its way directly to federal court, but a related case, League of Women Voters of Pennsylvania v. Commonwealth of Pennsylvania (178 A.3d 737 (Pa. 2018)) was ultimately decided in the Pennsylvania Supreme Court, adjudicated under the state’s constitution. Our more general expectation is that over time as federal courts step in, state courts hear fewer of these cases. Indeed, federal courts enunciate standards by which states and their localities must abide. There is less leeway under state law to bring challenges as federal courts extend universal standards for equal population and racial balance to state and local governments.

Litigants additionally face the strategic choice over whether to pursue a remedy in state versus federal court. Such a decision may be shaped both by available state-level legal remedies and the state of federal doctrine and U.S. Supreme Court precedent. Of course, federal courts do not have jurisdiction over purely state matters where redistricting principles found in the U.S. Constitution do not apply. Yet, there may be considerable ambiguity over when a state-level redistricting dispute does legitimately implicate federal law. Thus, many litigants may push a dispute to federal court and invoke the U.S. Constitution in their legal challenge to establish the greatest policy impact and broadest legal precedent.

**Political Motivations behind Redistricting Litigation**

If population size and racial diversity are obvious factors that explain redistricting complaints, a variety of political circumstances are also relevant. First, there is the obvious consideration that redistricting complaints arise because political parties are vying for power. Litigation is costly, however, so not every suspicion of perverse boundary drawing motivates a legal complaint. Minority parties should seek court redress if they believe that the investment in fighting such cases might pay off in a remedy that could alter the balance of power. In closely competitive states, minority parties in particular seek to use the judicial system to advance their position...
in myriad ways. Courts become an avenue for making claims that would not receive a favorable or timely reception by other institutions of state government (Dumas 2016, 296; Yates, Tankersley, and Brace 2010). A reasonable hypothesis follows—a larger number of redistricting cases will originate in states and at times when there is hard-fought competition between the parties for control of government. A recent loss of power by a majority party can also trigger both the instinct to use the redistricting process to entrench newfound gains by the majority party and the impetus for the new minority party to reverse any changes that might impede their effort to recover lost ground.

Legal Traditions and the Representation of Politically Cohesive Groups

Real, measurable imbalances in the representation of politically active population subgroups can be considered a key alternative explanation for the instigation of redistricting lawsuits. The clearest Supreme Court mandate is equal population—the one person, one vote rule (Kang 2006). Unequally sized districts are most certainly going to generate complaints. Beyond equal population, simply having previous cases filed in the voting rights arena will trigger greater suspicion of new redistricting plans and give rise to more legal action. Citizens often bring similar cases against the same institutional actor over a short period, making the same or somewhat different arguments but demanding substantially the same remedy. States have distinctive political/legal cultures which drive complaint frequency and citizen willingness to pursue litigation (D. J. Black 1973, 128; see also Collins, Galie, and Kincaid 1986; Grossman and Sarat 1971; 1975, 321; Harris 1985; Yates, Davis, and Glick 2001). Accordingly, in the data analysis to follow, we control for the recent history of similar litigation in the same state by including a temporal lag for the number of court cases filed in the previous year.

Circumstances in which states have deeply entrenched partisan majorities in their congressional or state legislative delegations are unlikely to trigger redistricting complaints. Even if a minority party might win a few such cases, an occasional victory is not likely to alter the balance of power in a politically lopsided state. Similarly, when a majority party is safe, map drafters in the legislature are not likely to engage in the kinds of questionable redistricting practices that might draw scrutiny. There is no need to draw unusual or distorted districts if a few seats will not change anything. When a legislative delegation is evenly divided, however, a win in court might change a sufficient number of districts to shift majority party control. For this reason, we hypothesize that those states in which congressional and state legislative delegations are evenly divided will see more redistricting litigation than those states that are either safely Republican or Democratic.

Data Sources

To determine the geographic characteristics of redistricting litigation, we sought to identify all federal and state court cases involving some aspect of redistricting law. To do this, we first searched the Westlaw database, gathering all cases that have the following terms: “redistrict” and/or “districting.” This yielded 1,540 unique federal cases. We then examined each of these cases to identify those that, in fact, involved some judicial challenge to the redistricting of an electoral district and discarded those false positives that were not relevant to redistricting policy. This filtering process yielded 1,245 federal cases that matched these criteria. This subset of cases represents a wide range of litigation, ranging from local governments, school boards, and statewide offices, to seats in the U.S. House of Representatives. Lastly, because losing litigants frequently appeal lower court decisions to higher courts, the initial search often yielded multiple case entries for a given redistricting dispute (i.e., including multiple decisions across successive levels of the judicial hierarchy). Thus, to focus our analysis on each redistricting dispute, we retained the case entry corresponding to the highest court that issued a decision on the merits and set aside all lower court decisions. In sum, our data consist of 917 unique federal redistricting disputes.

We approached the process of identifying state court cases in a similar way using the search terms of “districting” and/or “redistricting.” This returned an initial list of 1,493 cases. However, state courts hear a range of topics rarely discussed at the federal level. Specifically, our search terms captured a significant number of cases that revolved around zoning permits for building and construction. Because of this, we performed an additional search for “zoning” and excluded the resulting cases. In total, this reduced the number of cases to 1,105. Like federal redistricting cases, there was a large subset of cases representing a wide range of litigation, from local government and school boards to statewide offices. We consolidated cases that were later appealed (and therefore had multiple initial entries) to list only the entry from the highest court. Next, state judicial systems differ significantly across the United States. To accurately capture the distribution of cases across various judicial hierarchies, we developed a three-category measure that we applied
across the dataset. The categories represent “lower,” “appellate,” and “supreme” courts. The “lower” category included the first court that had jurisdiction over the case. “Appellate” included all courts above “lower” but beneath the highest court, and the third category represents the state courts of last resort.9 Like the federal cases, we retained the case entry corresponding to the highest court that issued a decision on the merits and set aside all lower court decisions.

After isolating all redistricting disputes to appear in state and federal courts, we created several indicator variables to capture differences across the types of redistricting cases. We then identified the central legal complaint involved in each case, which included claims of population disparities, race-based claims, and partisan gerrymandering.11 We also included dummy variables for the appearance of “race” and “partisan” in the case text to account for multiple complaints. Next, we recorded the individual judicial district (and state) in which the legal dispute originated.12

Descriptive Statistics: Overtime Patterns

Figure 1 displays temporal trends in the frequency of federal redistricting caseload from 1960 to 2019, including all disputes and those specifically involving partisan- and race-based claims. Perhaps the most notable aspect of this trend in the number of cases is its seasonality, peaking at every decennial redistricting, as new redistricting plans are set in place and immediately challenged. The three separate generations of redistricting litigation do show up in this graph, with the first representing the local peaks in the 1960s and early 1970s. The second is unquestionably the peak in the early-1990s, during the time in which the family of race-based redistricting cases were being decided. The third generation is evident in the local peaks occurring after the 2010 redistricting. Beginning in 1960, the overall linear trend in the number of redistricting lawsuits filed is steadily upward, increasing by about nine cases each year, on average, though dropping from the peak of forty-one cases in 1992 to twenty-seven in 2018. What is more, the descriptive data also indicate that the frequency of partisan redistricting disputes has increased markedly over time, especially relative to the presence of race-based litigation. In fact, the data suggest that, in recent decades, partisan-based litigation has matched the frequency of race-based legal claims.

We have suggested above that as the federal courts became increasingly active in the area of redistricting, there are fewer redistricting complaints brought to state courts. Accordingly, Figure 2 shows the temporal patterns in state case law from 1960 to 2019. There is a very evident decline in the number of state-level redistricting cases through the 1960s and 1970s. This was a period in which the federal court’s action to ensure equal population districts was taking hold across the nation and in lower level elective offices. Just as the overall linear trend in federal redistricting has been about nine cases per year since 1960, the state-level trend can be summarized over this same time as an average decline in about twenty cases per year. With the U.S. Supreme Court increasingly signaling a willingness to allow states to set their own priorities for redrawing district boundaries,13 the decade of the 2020s may see a resurgence in cases filed in state-level courts. In addition, partisan- and race-based claims have represented only a small and relatively stable number of redistricting disputes at the state level over time.
Descriptive Statistics: Geographic Patterns

Next, we examine the descriptive geographic pattern of federal case incidence by state and U.S. court district from 1960 to 2019, as presented in Figure 3. The cases are mapped according to the present ninety-one federal judicial districts (excluding districts in Guam, Puerto Rico, and the Virgin Islands) in which they were originally filed. Consistent with expectations, the general pattern is for the larger number of cases to emerge in more populous and diverse states, commonly with large urban and minority concentrations. The average number of court cases arising over the period is 9.5 ($\sigma = 9.4$). The two busiest districts are the Middle District of Alabama and the Northern District of Illinois, reporting 43 and 42 total cases, respectively. The Southern District of Mississippi ranks third, reporting 37 cases. The Southern District of New York has seen 28 cases filed. At the other end of the distribution are rural states and those with only a single congressional seat, which have commonly avoided redistricting disputes altogether. Western states and small New England states have mostly avoided controversy—sixteen districts have seen one case or none over the 60-year period.

Without question, the Southern states exhibit a very high volume of cases, reflecting not only their diverse populations but also their rapid growth, necessitating wide-reaching boundary revisions with the addition of new congressional seats. Of the top-20 districts hearing the most redistricting litigation, for example, 14 of these are in Southern circuits (not counting the District of Columbia and Maryland).

Figure 4 exhibits the distribution of state redistricting cases reaching regional and state supreme courts from 1960 to 2019. The mean across all states is 13.6 ($\sigma = 15.4$). New York State is something of an outlier in this distribution with 85 cases. The next three leading states are Illinois, California, and New Jersey. The only Southern state among the top-10 is Florida, although
Georgia, Louisiana, Texas, and Tennessee sit among the second-10. Certainly, there is a contrast then with the preponderant origins of federal caseload, as shown in Figure 3. The main thing the states at the highest end of the state redistricting caseload have in common is their sheer population size, which entails having more districts to draw and more boundary lines to adjust under circumstances of population change in the intercensal periods. Of the four states with the fewest redistricting cases, two are very small (Vermont and Delaware), registering one case each. Among the state courts of Utah and South Carolina, there are no redistricting cases reported filed during this era.

The figures showing caseloads over time and across the geography of the state and federal court systems suggest that the geography of redistricting law follows a straightforward logic of population concentration and diversity, with federal and state cases being in a somewhat substitutionary relationship, such that in times and places where federal cases are frequently filed, state cases are rather less common. Over nearly 60 years, the number of state cases filed has declined relative to federal cases, though most of this decline occurred in the earliest period of redistricting law. From a geographic standpoint, the Southern states are not especially a hotbed of state redistricting jurisprudence, but the federal courts have been very active there. The principal difference appears to be that state-level cases are far less likely to involve racial claims, which have usually started in federal courts directly. A notable uptick in recent state-level cases has involved claims about partisan gerrymandering in which plaintiffs are seeking redress under peculiar state constitutional rules for drawing districts.

**Multivariate Analysis of Federal and State Case Filings**

To evaluate competing explanations for the geography of legal disputes on redistricting, we turn to a multivariate analysis of caseloads for four relevant quantities: all

![Figure 4. Redistricting cases filed at the state level, 1960–2019.](image)
federal cases filed by state and year, all state cases (by state and year), all partisan gerrymandering cases in federal and state courts, and all race-related redistricting claims filed in federal and state courts. We measure the outcomes as the count of cases within each category. For each dependent variable, there is a decided right skew to the distribution, as is commonly the case for count variables with a large proportion of zero observations. Diagnostic tests indicate that the case counts were characterized by overdispersion, with the variance much greater than the mean, leading us to reject Poisson regression in favor of a negative binomial model for cross-sectional time-series data.14

Specifically, our model predicts the state and federal case count for each state-year. The assembled dataset is a panel of annual observations from 1960 to 2019 for each of the fifty states. We modeled the cases filed in a given state-year as a function of the following explanatory variables:

- **Single-Period Lag of Cases**—The one-year lag of the number of cases in each category for each state.
- **Number of Districts**—The sum of the number of congressional and state legislative districts in each state.
- **Single Congressional District States**—A dichotomous (1,0) variable for the smallest states with only a single congressional district.
- **Year**—A continuous variable for year, an indicator of linear patterns of increasing/decreasing case filings.
- **Redistricting Cycle**—A dichotomous (1,0) variable indicating the first year of a redistricting plan following a decennial census (does not include off-cycle redistricting adoption).
- **State Population**—The estimated population size of each state for each year (in 10,000s).
- **Percent Black**—The estimated percentage of the state’s population that is African American for each state and year.
- **Percent Latino**—The estimated percentage of the state’s population that is Hispanic for each state and year.
- **Inequality**—The Gini index of economic inequality for each state and year.
- **Balance of U.S. House Seats**—The partisan balance of congressional seats for each state-year = (100 – (% Democratic – % Republican)); higher values indicate closer balance.
- **Disproportionality of Seat Shares versus Vote Shares U.S. House**—Percent of congressional seats occupied by Democrats (Republicans) – Percent Democratic (Republican) vote share received statewide for each state-year; higher values indicate greater disproportionality.
- **Balance of State Legislative Seats**—The partisan balance of state legislative seats for each state-year = (100 – (% Democratic – % Republican)); higher values indicate closer balance.
- **Disproportionality of Seat Share versus Vote Share State Legislature**—Percent of state legislative seats occupied by Democrats (Republicans) – Percent Democratic (Republican) vote share received statewide for each state-year; higher values indicate greater disproportionality.
- **Redistricting Commission States**—A dichotomous (1,0) variable indicating the states and years under which redistricting plans were authored by a redistricting commission with primary responsibility for drawing legislative boundaries.

If the statistical analysis of observations is consistent with our expectations, the number of federal (state) redistricting cases will increase as a function of the number of previous cases filed, the total number of districts, the population size of the state, the percentage of African Americans, the percentage of Latinos, and greater income inequality. As for political forces driving redistricting, we hypothesize that the number of cases rises as the two-party balance of state legislative and congressional seats reaches 50–50.15 We also hypothesize that the initial year that a redistricting plan takes affect will be positively associated with cases filed, as court challenges are initiated soon after plans go into effect. The control variable for the linear trend in cases is expected to pick up any temporal patterning in the filing of cases once other variables are considered.

We expect that the proportion of African American citizens in a state will drive up the number of race-related case filings in state and federal courts. The measures for the difference between seat share and vote share should increase the number of complaints about partisan gerrymandering. If our theory about the political motivation behind litigation is correct, complaints about the political manipulation of boundaries are also anticipated to rise as the balance of power between the parties in the congressional delegation and in the state legislature draws closer to even.

### Results for All Federal and State Cases

Table 1 reports results for the cross-sectional time-series regression analysis for all federal and state redistricting cases; and then the subsets of those cases focus specifically on partisan gerrymandering and racial redistricting. The summary for all federal cases shows...

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<td>−0.582*</td>
<td>−0.227</td>
</tr>
<tr>
<td></td>
<td>(0.305)</td>
<td>(0.320)</td>
<td>(0.525)</td>
</tr>
<tr>
<td>IRR</td>
<td>0.998</td>
<td>0.975</td>
<td>1.022</td>
</tr>
<tr>
<td></td>
<td>(0.083)</td>
<td>(0.093)</td>
<td>(0.166)</td>
</tr>
<tr>
<td>Year</td>
<td>−0.002</td>
<td>−0.025***</td>
<td>0.022***</td>
</tr>
<tr>
<td></td>
<td>(0.004)</td>
<td>(0.005)</td>
<td>(0.006)</td>
</tr>
<tr>
<td>IRR</td>
<td>0.998</td>
<td>0.975</td>
<td>1.022</td>
</tr>
<tr>
<td></td>
<td>(0.083)</td>
<td>(0.093)</td>
<td>(0.166)</td>
</tr>
<tr>
<td>Redistricting cycle</td>
<td>0.344***</td>
<td>0.360***</td>
<td>0.322**</td>
</tr>
<tr>
<td></td>
<td>(0.00009***</td>
<td>(0.00006***</td>
<td>(0.00008**</td>
</tr>
<tr>
<td>State population in 1,000s</td>
<td>0.00009***</td>
<td>0.00006***</td>
<td>0.00008**</td>
</tr>
<tr>
<td></td>
<td>(0.00001)</td>
<td>(0.00002)</td>
<td>(0.00003)</td>
</tr>
<tr>
<td>IRR</td>
<td>1.411</td>
<td>1.433</td>
<td>1.380</td>
</tr>
<tr>
<td></td>
<td>(0.00009***</td>
<td>(0.00006***</td>
<td>(0.00008**</td>
</tr>
<tr>
<td>Percent black</td>
<td>0.062***</td>
<td>0.010</td>
<td>0.066**</td>
</tr>
<tr>
<td></td>
<td>(0.009)</td>
<td>(0.011)</td>
<td>(0.012)</td>
</tr>
<tr>
<td>IRR</td>
<td>1.064</td>
<td>1.010</td>
<td>1.068</td>
</tr>
<tr>
<td></td>
<td>(1.306)</td>
<td>(1.278)</td>
<td>(1.724)</td>
</tr>
<tr>
<td>Percent Hispanic</td>
<td>−0.919</td>
<td>−2.516**</td>
<td>0.263</td>
</tr>
<tr>
<td></td>
<td>(0.835)</td>
<td>(1.286)</td>
<td>(1.304)</td>
</tr>
<tr>
<td>IRR</td>
<td>0.399</td>
<td>0.080</td>
<td>1.301</td>
</tr>
<tr>
<td>Inequality (Gini)</td>
<td>−1.361*</td>
<td>0.725</td>
<td>−2.895**</td>
</tr>
<tr>
<td></td>
<td>(0.390)</td>
<td>(1.286)</td>
<td>(1.304)</td>
</tr>
<tr>
<td>IRR</td>
<td>0.257</td>
<td>2.065</td>
<td>0.055</td>
</tr>
<tr>
<td>Balance of seats U.S. House</td>
<td>0.009***</td>
<td>0.006</td>
<td>0.019***</td>
</tr>
<tr>
<td></td>
<td>(0.003)</td>
<td>(0.004)</td>
<td>(0.007)</td>
</tr>
<tr>
<td>IRR</td>
<td>1.009</td>
<td>1.006</td>
<td>1.019</td>
</tr>
<tr>
<td>Seats–votes disproportionality U.S. House</td>
<td>0.003</td>
<td>0.010</td>
<td>0.008</td>
</tr>
<tr>
<td></td>
<td>(0.009)</td>
<td>(0.009)</td>
<td>(0.016)</td>
</tr>
<tr>
<td>IRR</td>
<td>1.003</td>
<td>1.009</td>
<td>1.008</td>
</tr>
<tr>
<td>Balance of seats state legislature</td>
<td>0.0003</td>
<td>0.008**</td>
<td>−0.008</td>
</tr>
<tr>
<td></td>
<td>(0.003)</td>
<td>(0.004)</td>
<td>(0.006)</td>
</tr>
<tr>
<td>IRR</td>
<td>1.000</td>
<td>1.008</td>
<td>0.991</td>
</tr>
<tr>
<td>Seats–votes disproportionality state legislature</td>
<td>0.010</td>
<td>0.017**</td>
<td>−0.003</td>
</tr>
<tr>
<td></td>
<td>(0.006)</td>
<td>(0.008)</td>
<td>(0.013)</td>
</tr>
<tr>
<td>IRR</td>
<td>1.010</td>
<td>1.017</td>
<td>0.997</td>
</tr>
<tr>
<td>Primary commission state</td>
<td>0.076</td>
<td>0.391*</td>
<td>−0.332</td>
</tr>
<tr>
<td></td>
<td>(0.239)</td>
<td>(0.221)</td>
<td>(0.453)</td>
</tr>
<tr>
<td>IRR</td>
<td>1.079</td>
<td>1.479</td>
<td>0.717</td>
</tr>
<tr>
<td>Constant</td>
<td>2.296</td>
<td>50.529***</td>
<td>−45.345***</td>
</tr>
<tr>
<td>ln_ρ</td>
<td>3.516</td>
<td>3.748</td>
<td>4.060</td>
</tr>
<tr>
<td></td>
<td>(0.399)</td>
<td>(0.470)</td>
<td>(0.624)</td>
</tr>
<tr>
<td>ln_σ</td>
<td>1.564</td>
<td>1.510</td>
<td>1.986</td>
</tr>
<tr>
<td></td>
<td>(0.354)</td>
<td>(0.395)</td>
<td>(0.570)</td>
</tr>
<tr>
<td>Observations</td>
<td>2,842</td>
<td>2,842</td>
<td>2,842</td>
</tr>
</tbody>
</table>

(continued)
statistically significant increases in cases filed when the number of cases from the previous year was also higher (incident rate ratio [IRR] = 1.10, \( p \leq .01 \)), when a new redistricting has just been completed (IRR = 1.41, \( p \leq .01 \)), in larger states with a higher percentage of black residents (IRR = 1.064, \( p \leq .01 \)), and in states where the U.S. House delegations are closely divided—that is, politically competitive states (IRR = 1.009, \( p \leq .01 \)).

Examining other hypotheses, there is no support for the idea that there is a steady linear increase in federal cases from 1960 onward once we account for other variables, nor does the number of state and congressional districts matter to the number of cases filed; though states with only a single congressional district see less litigation (by a factor of 0.89 compared with states with more than one district), the coefficient is not statistically significant.

The percentage of Latino residents in a state is associated with more federal cases, nor do states with commissions have a statistically lower volume of complaints. Having a larger share of seats than votes in both the congressional delegation and the state legislature is positively related to the number of court challenges but not to a statistically significant extent over this prolonged period and across all states.

As for the summary count for state-level cases, the number of previous cases filed is again determinative, as each case filed in the previous year increases case filings in the current year by 16 percent (IRR = 1.164, \( p \leq .001 \)). The effect of being new in a redistricting cycle is pronounced, as it was for federal cases, with a jump of 43 percent (\( p \leq .001 \)) in state case filings, compared with 41 percent (\( p \leq .001 \)) for federal cases. The state’s population size is less important to state filings than to federal cases, having about one-third less impact—IRR = 1.0006 (\( p \leq .001 \)) for state, IRR = 1.0009 (\( p \leq .001 \)) for federal—for every 10,000-person increase in size. The percentage of black citizens has no statistically significant impact on total state case filings—a sharp contrast with the federal data. The balance of House seats drives up the number of cases filed in state courts (IRR = 1.006, \( p \leq .16 \)) but not to a significant extent as in the federal courts (IRR = 1.012, \( p \leq .001 \)). The percentage of Latino residents in a state is associated with far lower state case filings (IRR = 0.081, \( p \leq .05 \)), though it bore no statistically significant relationship to federal complaints. Finally, in states where a political party’s state legislative seat share is larger than its statewide vote share (regardless of partisan direction of the advantage), we observe an increase in legal complaints filed at the state level (IRR = 1.017, \( p \leq .05 \))—basically an estimated 17 percent more complaints for every 10 percentage points that seat share exceeds vote share. The disproportionalities of seats and votes in congressional elections, however, has no statistically discernible impact on total cases filed in state courts.

### Results for Partisan Gerrymandering Cases

For litigation concerning the partisan nature of districting plans, results in the middle columns of Table 1 provide the estimates along with the IRRs. One noteworthy result is that there is a linear pattern associated with time, as federal cases brought to contest excessive partisanship in boundary drawing are a recent phenomenon. Each year is associated with a steady two-percent rise in the number of federal cases filed related to partisan line-drawing. State-level complaints about partisan redistricting also increase with time, though not to a statistically significant extent as estimated in Table 1.

Federal complaints about partisan bias increase in the years that new plans are adopted (IRR = 1.380, \( p \leq .05 \)), and also increase along with the population size of the state and the percentage of African American residents. As the congressional delegation becomes more politically divided—an indication of statewide partisan competition—the number of partisan gerrymandering suits also rises, by about two percent (IRR = 1.019, \( p \leq .004 \)) for every ten-point increase in the evenness of the U.S. House delegation.

State partisan gerrymandering cases are far less common than federal cases in the data, and they are best predicted simply by the population size of the state, and the
recency of the redistricting plan. Time is the predominant factor, by far. In the year a new plan is adopted, there is a 158-percent surge in the number of partisan gerrymandering cases filed in state courts (IRR = 2.583, \( p \leq .01 \)). Partisan gerrymandering complaints in state courts do not increase appreciably with a closer partisan division in the state legislature, but they do increase when the congressional delegation is closely divided (IRR = 1.029, \( p \leq .08 \)). This offers an indication that legal complaints about congressional district lines do arise in state courts and are not necessarily tracked directly to federal courts.

**Results for Cases Making Racial Claims**

In the far-right pair of columns in Table 1, we report the estimates for federal and state cases involving claims of racial discrimination in redistricting. As we hypothesized, at the federal level, these are most sensitive to the percentage of African Americans in the state, with a one standard deviation increase (\( \sigma = 11.84 \)) in that percentage generating a substantial 92-percent rise in the number of cases filed (IRR = 1.078, \( p \leq .001 \)). State-level race cases, on the contrary, are also positively related to the share of black voters but not to a statistically significant extent in these estimates (IRR = 1.004, \( p \leq .84 \)).

A state’s Hispanic population is associated with a reduced caseload in federal court, though this coefficient is weakly significant at conventional levels (IRR = 0.026, \( p \leq .09 \)). The federal caseload on racial redistricting also increases with population size (IRR = 1.00012, \( p \leq .001 \); a 12-percent jump in cases filed for every increase of 1 million residents) and the partisan balance of the congressional delegation (IRR = 1.011, \( p \leq .02 \); an estimated 19-percent increase in cases filed for a single standard deviation increase in evenness).

Race-related complaints filed in state courts are mainly sensitive to timing, according to the results presented in Table 1. When states have just adopted a new redistricting plan, there is a substantial, 68-percent (\( p \leq .025 \)) increase in the cases filed that particular year. There is an unsurprising positive association between current race-related redistricting complaints and previous case filings, but the relationship does not reach conventional levels of statistical significance. Otherwise, the number of state-level complaints on racial redistricting issues is quite low across both time and space, and not well predicted by the explanatory variables we have included here.

**Discussion and Conclusion**

The goal of this research has been to present a general picture of the conditions that drive up the number of redistricting complaints across states over an extended period. What have we learned? First, redistricting is an episodic process associated with the population updates provided by the decennial census. Constitutionally, a new apportionment of House seats is required every 10 years. Given that members of Congress are presently seated in every state according to geographically based districts of equal population size (subject to the constitutional rule requiring a minimum of one member per state), the redrawing of legislative district boundaries necessarily follows these apportionment updates. Statutes governing state legislative redistricting require similar updates as population counts are officially updated. These regulations governing the periodicity of redistricting predict that challenges to redistricting plans will surge immediately after those plans are set in place, making time a critical aspect of any effort to explain the emergence of redistricting litigation. In many cases, lawsuits filed in the year a redistricting plan is adopted take years to resolve under multiple rounds of appeal, perhaps until the end of the decade, when a new census count is about to begin. The delay associated with seeing a complaint through multiple layers of the judicial hierarchy requires that plaintiffs file their lawsuits early. As for longer term trends in case filings, the most notable result is the recent increase in federal partisan gerrymandering cases, as this litigation has evolved considerably after 2000. There is no evidence in these data, however, that state partisan gerrymandering cases are also on the rise, though this could certainly change after 2021. Certainly, over the longer span of time, redistricting complaints in state courts have diminished as the federal courts have assumed a more activist role.

Across states and judicial districts, population is clearly important for predicting challenges to redistricting plans, as the equal size requirements necessitate boundary adjustment wherever there are multiple districts and growth has been uneven. As population and the number of congressional and state legislative districts increase, courts hear more complaints about particular districts and their contours. Similarly, cases are going to more frequently originate in states with large African American populations. Certainly, this accounts for the large number of cases emerging in Southern states, but not just there. Urban areas showing high levels of population diversity have generated redistricting complaints in Illinois, New York, New Jersey, and other places where racial residential segregation is a persistent feature of the landscape.

States that are relatively free of redistricting litigation are usually those that are small, less diverse, and often with lopsided partisan majorities. That the most politically divided states would see more complaints makes sense. First, in fiercely contested states, there is a greater
incentive by the political party in charge of redistricting to draw boundaries in ways that might draw complaints from political opponents. Second, in politically divided states, plaintiffs have a greater incentive to complain about even the most modest irregularities they might find in the opposing party’s maps. After all, getting the courts to change a redistricting scheme could alter party control of legislative institutions. In some circumstances, plaintiffs might believe that it is easier to seek to change the balance of power through a court ruling than it would be to change it through the more standard process of biennial and quadrennial elections.

The sizes of the gaps between the seat percentage and vote percentage, either for seats in Congress or the state legislature, are not as relevant to case origination as simply the competitive balance of the parties vying for office. This is surprising, perhaps, given that in very recent litigation, disproportionality has been a major focus of the cases objecting to partisan gerrymandering. Our data suggest that this development is too new to be a major driver of redistricting case law over the longer span of time. One explanation for this is that justices on the U.S. Supreme Court only in the last two decades have appeared open to challenges to redistricting plans on the basis of partisan unfairness. Perhaps future redistricting cycles will see more challenges in states where seat shares do not reflect vote shares. For most of this period, however, there were abundant examples of disproportionality that went unchallenged in federal and state courts.

Future research would do well to investigate other areas of election law litigation in federal and state courts to understand the variability in the flow and volume of complaints across space and time. Just as federal redistricting jurisprudence exhibits a phased history showing different substantive emphases with the evolution of the law, the same is likely to be true of other areas involving voting rights, lobbying, campaign finance, and related rules governing political processes. Similarly, there is no reason to expect that in a country as large as the United States, every location would produce the same number of legal complaints on these other subjects. Complaints arise in areas where there are specifically affected populations and where the stakes are especially high. In the case of redistricting, this points to large and concentrated minority populations in states where legislative delegations of the two parties are evenly balanced. In other areas of the law, such explanations might go to variation in the presence of specific economic interests, the urban–rural division of the electorate, the extent of contact between two or more rival populations, or variation in population growth or decline.

To be sure, there are nuances in the geographic variability of case filings that we do not address in this research. A federal case originating in a large state might be directed to one court as opposed to another for strategic reasons we do not account for here. Some states may have vigorous interest group climates that promote litigation across a wide range of political and policy venues, while other states do not. And, the variation in the available legal remedies across the 50 U.S. states dating back to 1960 may help to drive litigation patterns. Given our extended time span, it is difficult to find indicators for every relevant feature of a state’s political culture and history, even when there are good reasons for expecting some relationship with the filing of redistricting lawsuits. What we have tried to do is set a path that others can readily follow with their own data collections on this and related subjects. Case filings appear to follow a logic involving not just the presence of major stakeholders but also one that tracks closely the balance of political power should not come a shocking surprise. It is a reminder that courts are seen by others as political institutions, even if they do not view themselves that way.

Authors’ Note

For data on which this paper is based, please contact the authors: jgimpel@umd.edu, thighto@umd.edu, and patrickw@umd.edu.

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ORCID iD

James G. Gimpel https://orcid.org/0000-0002-1656-4156

Notes

1. Although for state legislative districts, states may enact varying thresholds for what passes as equally populated.
2. See the compendium of redistricting laws compiled by the National Conference of State Legislatures (https://www.ncsl.org/research/redistricting/redistricting-criteria.aspx).
3. We should note that a full account of variation in redistricting law across the fifty U.S. states since 1960 is beyond the scope of this article. However, such an effort with the requisite archival work is certainly worthy of future research.
4. Competitiveness can be measured in a variety of ways, with an even division in the state legislature or closely divided vote for major statewide offices being among the most common.
5. To ensure that this list was comprehensive, we then performed the same search on Nexis Uni and retrieved identical results.
6. Consider Brown v. Board of Education of Topeka, et al. (1955), which concerned the constitutionality of race-based segregation in schools. This case appeared in our initial search because it dealt with aspects of school “districting” but did not have any direct, substantive impact on redistricting law.

7. We created an indicator variable for those redistricting disputes that originally contained multiple case entries (i.e., those where multiple courts issued a ruling).

8. To ensure the robustness of our data, we cross-checked our cases with those compiled by Justin Levitt’s “All about Redistricting” case database (see http://redistricting.lla.edu/cases.php#lst). Levitt’s dataset was considerably smaller with only 245 federal cases, but it consists only of a subset of redistricting litigation—cases involving state and federal legislative districts—and consolidates some of the higher profile cases. Nevertheless, there was no discrepancy between our data and Levitt’s case list.

9. Usually, the highest state courts take the style of “Supreme Court of,” with a few notable exceptions. New York, for example, designates its “Court of Appeals” as the highest court, and the New York Supreme Court is a trial court with general jurisdiction.

10. Note that this only includes school board elections and not cases that were primarily concerned with school zoning for students (i.e., desegregation cases).

11. Although identifying the central legal claim in each case can sometimes represent a subjective judgment, it was generally clear which legal dimension was dominant.

12. There was only one instance in which the original district court did not exist: Kendrick v. Walder (527 F.2d 44). Here, the case was heard in a now-defunct judicial district, so the current district was used. We dropped the 10 cases that did not originate (or pass through) a federal district court.

13. For instance, in 2018, the U.S. Supreme Court refused to review the Pennsylvania State Supreme Court’s decision to overturn the state legislature’s 2011 congressional redistricting plan on state-level grounds in League of Women Voters v. Commonwealth of Pennsylvania (159 MM 2017, 2018). For discussion of state courts taking action on redistricting, see Grofman and Cervas (2018).

14. Reported results were obtained using xtnbreg in Statatm.

15. The measure for seat competition is familiar: 100 – |(% Republican Seats – % Democratic Seats)|, with higher values of this indicator showing a more even division between the major parties.


References


