

# **Spatial patterns of Thermidor: Protest and Voting in East Germany's Revolution, 1989-1990**

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## **Abstract**

This article engages in a spatial analysis of the link between protest and voting during the *Wende*, East Germany's revolution of 1989. Are the same places that protested more also the places that decided the revolution's fate by supporting CDU's ticket of quick reunification? The revolution is approached through the conceptual metaphor of Thermidor, a conservative backlash to the revolution's initial radical impulse. Spatial methods are used to investigate the local-level relationships between protest and voting. The article finds a weak link between protest and voting, which suggests that something akin to Thermidor occurred in East Germany. While certain towns initiated the revolution with their protests, other localities stepped in at a later stage and finished the revolution by voting for reunification, the revolution's main outcome. The article pays special attention to the divide between East Germany's north (Berlin, Brandenburg and Mecklenburg-West Pomerania) and south (Saxony and Thuringia).

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## **Introduction**

East Germany's revolutionary events of 1989-1990 have been analyzed from a variety of perspectives.<sup>1</sup> The final outcome of the *Wende* is well known: the abolition of SED's dictatorship and the unification

of the two Germanys. Reunification became irreversible after the victory of Helmut Kohl's CDU in the first and last competitive election for East Germany's *Volkskammer* in March of 1990. And though much has been written about the processes that launched the revolution, its most dramatic moments such as the fall of the Wall, and the subsequent malaise, disappointment and resentment that took hold in the new *Bundesländer*, the link between revolutionary protest and voting has not been investigated in much detail.<sup>2</sup>

This article aims to shed light on this relationship. It does so through a statistical examination of the spatial patterns of contentious action and electoral results. Which places protested more and which voted for CDU's agenda of quick reunification? What about the other parties that competed for the votes of East Germans? Was there a link between protest and voting for the various leftist options, including Alliance 90 (*Bündnis 90*), the heterogeneous coalition of citizen movements and oppositional groups? What is the relevance of the regional divide that characterized – and still characterizes – East Germany: that of the more agricultural North dominated by Berlin and the more industrial South whose large cities such as Leipzig made the revolution famous? These are the questions tackled in this article.

The motivating metaphor used in the article is Thermidor. It refers to the conservative reaction to revolutionary radicalism. Thermidor was the eleventh month of the French revolutionary calendar, the month when conservative forces managed to force a retreat of the Jacobin agenda. As a concept, Thermidor is usually tied to Crane Brinton's work on the “natural history” of revolutions.<sup>3</sup> Brinton's book, *The Anatomy of Revolution*, has been either forgotten or neglected, probably because his comparison of revolutions to fevers suggests that protests are somehow unhealthy. This is a view that most social movement scholars would now reject as conservative. Indeed, Brinton's ideas may seem a little dated in light of the advancement of scholarly research on revolution.<sup>4</sup> Even so, some scholars continue to see his work as valuable.<sup>5</sup> In line with such work, this article will make the claim that the notion of Thermidor continues to have relevance.

For Brinton, Thermidor stands as shorthand for the entire disappointing conclusion of a period of revolutionary upheaval. For example, he sees the French Revolution as having largely failed in its goals of establishing the “brotherhood of man” and “justice on this earth.”<sup>6</sup> Instead, the main achievements of the revolution, for Brinton, were rather mundane things such as the establishment of a coherent system

of weights and measures. As Brinton says, “the blood of the martyrs seems hardly necessary to establish decimal coinage.”<sup>7</sup> Outcomes of other revolutions are similarly disappointing. In England, Thermidor took the shape of Cromwell's dissolution of the “Rump Parliament.” In Russia, the Bolshevik revolution led to the “New Economic Policy” of the early 1920s. In all cases, the initial radical impulse is lost, conservative forces make a come-back and capitalism reasserts itself.

This is an analytical lens that can make sense of the East German case too. That the revolution's main outcome, i.e. reunification, turned out to be disappointing to many is well-known. Publications dedicated to the recent 20 year anniversary of the revolution show this well. For example, Charles Maier spoke of the “lingeringly imperfect unification”<sup>8</sup> and recounted how quickly the mood shifted on the ground, from revolutionary exhilaration to post-revolutionary nostalgia.<sup>9</sup> Initial proposals of *Neues Forum* and other oppositional groups for a new type of socialism dissipated as Kohl and the CDU gained control of the reunification process. As Jeffrey Anderson noted, there was no attempt to “search for a blend of the best that both Germanys had to offer.”<sup>10</sup> Of course, this is not to deny that the political, economic and social transformations in East Germany probably compare favorably to what other East European countries witnessed. As Eric Langenbacher says, the Germans “must have done something right.”<sup>11</sup> Yet, this type of consolation is not very effective when confronted with the high hopes of October 1989, the jubilant period after the regime began to give way but before the Wall was breached.

Indeed, for many leftist activists the trouble began with the opening of the Wall. They feared that the allure of the capitalist West would throw the revolution off track. East German dissidents, intellectuals and artists had never wanted reunification and saw many communist achievements worthy of preservation. They did not wish to replicate in East Germany the West German society of “elbowers” (*Ellenbogengesellschaft*), i.e. an individualistic society with a much weaker foundation of social solidarity.<sup>12</sup> Testimonies of some of the central protagonists of the period all communicate a sense of unease and disappointment with the revolutionary events after the fall of the wall.<sup>13</sup> Some even called the opening of the wall “a misfortune.”<sup>14</sup> The painter and activist Bärbel Bohley said that, when she heard the news, she took a stiff drink, went to bed and pulled the covers over her head.<sup>15</sup>

The social vision of the leftist oppositional groups was not formed beyond the wish to commence a

renewed process of public discussion and build some form of “third way” socialism. When the elections of March 1990 came, the vast majority of the voters chose the simpler reunification agenda instead. With the election, the revolutionary dynamic slipped irretrievably from the hands of *Neues Forum* and similar groups. The parallel institutions of the *Runde Tisch* also failed in their attempt to control the dynamics of the *Wende*. The “third way” lacked coherence and could not compete with the allure of fast reunification.

## **Data and methods**

Data used in this article come from a variety of sources. Protest event data were coded to location from a published event catalog.<sup>16</sup> This list relies on several sources including reports of the *Stasi*, reports of local police to the Ministry of Interior, various newspapers and secondary sources. It has been relied on in a variety of publications on the East German revolution.<sup>17</sup> In total, it includes more than three thousand protests from the fall of 1989 and the spring of 1990. The period under observation begins with September 1st 1989 and ends with March 18th 1990, the day of the *Volkskammer* election. While not necessarily completely exhaustive, police and administrative data tend to be more thorough than the data one finds in newspapers.<sup>18</sup> Demographic and electoral data were drawn from official publications.<sup>19</sup>

This article uses spatial methods. Individual-level data on both protest participation and voting choices are relatively rare. In the absence of such data, a spatial approach offers the next best thing. This means that one must avoid the temptation of using knowledge derived from larger units such as counties in order to offer explanations of the behavior of lower level units such as individuals.<sup>20</sup> Instead, the conclusions reached through spatial methods are strictly about the places in which individuals live.

With this caveat in mind, spatial methods offer a variety of advantages. Unlike classical regression techniques, spatial analysis is sensitive to the problem of positive spatial auto-correlation. Data organized into counties are not distributed randomly. Instead, like tends to cluster with like, such that a county high on one variable will probably be surrounded by counties that are also high on the same variable.<sup>21</sup> This means that ordinary least squares estimation is an inappropriate choice when dealing with data organized into spatial units.

The two most common methods of spatial analysis, at least when it comes to inference through model-fitting, are spatial dependence and spatial error models.<sup>22</sup> Spatial dependence models include spatially lagged values of the dependent variable. In other words, values of the dependent variable are assumed to depend, among other things, on the values that the neighboring units have on that same variable. This model assumes a process of diffusion: what happens in one place has an impact on surrounding places. This model was not used in this article since it could not be theoretically motivated. While protest activity could be expected to diffuse from one location to surrounding units,<sup>23</sup> voting behavior cannot since citizens cast their votes simultaneously. Instead, this article uses spatial error models which do not require assumptions about the process generating the spatial agglomeration of data. The approach of spatial error models assumes that there is some unmeasured factor which contributes to the failure of independence and the resulting spatial clustering of the data, but goes no further. A spatial regime approach can be used to extend the spatial error models. With this technique, researchers can use mid-level agglomerations of lower-level units, i.e. they can combine a portion of the lower-level units without exhausting the entire map under observation.

Spatial regime models consider distinct regions and investigate if the relationship between the dependent variable and its predictors works in one way in one part of the map and in another way in another part of the map.<sup>24</sup> As suggested in other work, this article combines the spatial error and the spatial regime approach.<sup>25</sup> The first is used when we know that data cluster spatially but do not have a basis for assuming the process according to which it clusters. The second employs regions, i.e. regimes, that are known to be different and asks if the connections established at the macro level work differently across mid-level spatial regimes. It investigates “heterogeneity in relationships”: the possibility that the same relationship can “work differently” in different parts of the map.

In the context of this article, the most relevant division is between the north and the south of East Germany, since the southern regions of Thuringia and Saxony are considered to be different from the north. In the 1920s and 1930s, the south was a predominantly left-dominated region. The SPD built strongholds in parts of Saxony that were perhaps the most resistant to Nazis. Saxony in particular was known as *rote Sachsen*.<sup>26</sup> Yet, the Nazi era and four decades of communist rule had more or less wiped out this legacy. Instead of reviving Weimar era loyalties, the Volkskammer election of 1990 led to a

rejection of leftist parties, including the SPD.

The south is where much of East Germany's industry was located, compared to the relatively more agricultural regions of Brandenburg and Mecklenburg-West Pomerania.<sup>27</sup> The course of socialist industrialization re-enforced the clustering of certain social ills in the south. Therefore, the divide between the south and north became entrenched in the SED era. Industrial pollution and urban squalor were much bigger problems than in the north. On the other hand, northerners – and especially Berliners – could enjoy advantages such as access to employment in the state bureaucracy and better infrastructure. Therefore, it can be said that southern resentment of northerners (especially Berliners) and their stronger dislike of the communist regime centered around the issue of who suffered more during communist rule.<sup>28</sup>

This divide has persisted as the south has continued to give more votes to the CDU, relative to the SPD and various leftist options. The north, on the other hand, has tended to vote more for the left, including the reformed SED (first as PDS and then as *Die Linke*). In other words, the divide made visible by the Volkskammer election of 1990 has persisted: the more left-leaning north versus the anti-communist south. In that respect, the election has indeed become a watershed moment, not only because it signaled the end of the SED regime and the East German state, but also for indicating the main cleavages that would dominate politics in the new *Bundesländer*.

## **Analysis**

The theoretical expectations drawn from the Thermidor metaphor can be formulated into two opposing hypotheses. The first hypothesis is that the same places that carried the revolution also voted for the revolution's main outcome, i.e. reunification. Alternatively, the Brintonian hypothesis would suggest the opposite: one set of locales initiated the revolution, while another finished it in conservative fashion. The goal of the rest of the analysis is to investigate which of these fits the data better and whether there are spatial patterns that deserve attention.

Figures 1 through 6 present the main variables in space. All maps (apart from Figure 6) use quantiles. Figures 1 through 4 present maps of the vote for CDU, SPD, PDS and Alliance 90, respectively.<sup>29</sup>

Figure 5 presents a map of protest activity. And finally, Figure 6 presents a map of the north versus the south (Saxony and Thuringia). Visual inspection reveals that the CDU did well in the south, although there are urban islands where they did less well. The support for the CDU is relatively weak in and around Berlin. The leftist parties present a mirror image of the CDU vote: they performed better in the north and in the areas around Berlin. They also managed to perform better in the southern urban centers. The protest map does not correspond well to the map for CDU's vote share. There is more protest in the south, but there is less visible spatial agglomeration than with voting data. Urban centers stand out as hot spots of protests but are typically surrounded by places which protested less. This would suggest that the link between protest and the vote for CDU's agenda of reunification is weak.

Table 1 presents an overview of the election results for the main parties involved: CDU, SPD, PDS and Alliance 90. The table breaks down the vote according to various criteria, all of which will be used as predictors in multivariate spatial models. The CDU won 40.8 percent of the vote, SPD won 21.9 percent, PDS won 16.4 percent and Alliance 90 won 2.9 percent. Next, Table 1 breaks down counties in terms of how much protest activity they witnessed. As can be seen, there does not seem to be much difference between counties that protested more and that protested less. This would also suggest that protest activity and the vote for CDU's agenda of reunification are relatively disconnected phenomena. Therefore, the empirics so far point to the relevance of the Thermidor hypothesis.

Some of the other comparisons point to more noticeable differences between locales. For example, the vote for CDU was much higher in the southern regions of Saxony and Thuringia, 61.2 percent compared to 34.1 percent in the north. This suggests that the division of south and north is indeed an important one. Other differences are less stark. Cities, i.e. 24 counties officially designated as cities, voted much less for the CDU: 32.8 percent in cities as opposed to 45.4 in counties that are not cities. The left did better in cities. For example, PDS raised its vote share from 14.3 to 21.2 in cities. The leftist Alliance 90 also did better in cities, almost doubling its vote from 2.0 to 3.7.

Counties are also broken down according to how big of a problem pollution was. Two of the most common industrial pollutants, Carbon Monoxide and Sulfur Dioxide, are used here. It would appear that those counties with higher levels of Sulfur Dioxide tended to vote more for the CDU and less for the left. In counties above the median level of Sulfur Dioxide pollution, the CDU raised its vote from

38.9 to 47.9, while the left lost a couple of percentage points. And finally, counties are broken down according to whether they had access to West German television or not (the northeastern corner around Greifswald and the southeastern corner around Dresden). The channels that could be received were public television channels (ARD and ZDF). One could expect that access to West German television would increase the popularity of the CDU. However, this does not seem to be the case: the SPD seems to be the main beneficiary of West German television reception.

Table 2 presents the correlations for the main variables of interest. As can be seen, the correlation between the vote for CDU and the number of protest is practically absent at 0.09. It seems that evidence in favor of the Thermidor hypothesis accumulates: the link between protest activity and the vote for CDU is weak. On the other hand, the correlation between protest and vote share is not much higher for other parties either. The exception is the correlation between the number of protests and the vote for Alliance 90, which stands at a moderate 0.27. At around  $-0.6$ , the correlations between CDU's vote share and the other electoral results are negative and high. This suggests that the leftist parties functioned as political alternatives to the CDU. This strengthens the interpretation that the election was really a plebiscite on CDU's agenda of reunification. The next step in the analysis is to turn towards the estimation of multivariate spatial models.

Table 3 presents the first set of models. The first two models estimate the number of protests in a county, using a spatial error and a spatial lag model. In order to smooth the distribution of data, and to control for population size, all models use a natural log transformation of the number of protests. The spatial error parameter is not statistically significant in Model 1 and neither is the spatial lag coefficient in Model 2. This confirms what visual analysis suggested, namely, that there is little spatial clustering of protest data. As can be seen, the results of the two models are essentially the same. The results suggest that a county was more likely to experience a larger number of protests if it was located in the south (Saxony and Thuringia) and if it was a large city (one of 24 urban centers).

The other two models in Table 3 use the vote share of the CDU as the dependent variable. The task is to compare the determinants of protest activity with the determinants of the vote for CDU and, by extension, the support for reunification. If the determinants are largely the same then we can say that protest activity and the vote for CDU shared the same social and demographic foundation. As is visible



in Table 3, the predictors of protest and the predictors for CDU's vote diverge. The most important difference is urbanization: large city centers tended to protest more but vote less for the CDU. Furthermore, the coefficient for the number of protests is not statistically significant in models 3 and 4. This yet more evidence in favor of the Thermidor hypothesis. Model 3 uses OLS, while Model 4 uses a spatial error approach.

There are several differences between the models which suggest that a spatial approach is an improvement over OLS. Most importantly, the spatial error parameter is positive and statistically significant in Model 4. This suggests that spatial auto-correlation was present in the data and should be corrected for. Next, the categorical variable which identified the south was positive and statistically significant in the OLS model from Model 3, but not in the spatial error model from Model 4. Clearly, the south is relevant, but it would appear that the spatial error component absorbs most of this spatial aspect of the data.

Table 4 extends the analysis to the leftist alternatives to the CDU: SPD, PDS and Alliance 90. The factor that stands out for all three parties is urbanization. Counties were more likely to vote for the leftist alternatives to the CDU if they were large urban centers. No conclusive findings emerge with regard to other demographic variables. Model 3 in Table 4 is also the only one where protest activity seems to play a role. As can be seen, the coefficient for this variable is positive and statistically significant which suggests that counties that protested more tended to have higher vote shares going to Alliance 90. Therefore, if there is a connection between protest and voting in East Germany, it is a link between protest and voting for leftist oppositional groups, the CDU's starkest alternative. In all three models the spatial error parameter is positive and statistically significant which suggests that spatial auto-correlation needed to be corrected for. In summary, it would appear that the same rural-urban divide continues to be relevant. Additionally, West German television seems to have benefited the left and should not be accused of favoring the existing CDU government in Bonn.

The final step is to estimate spatial regime models. As discussed, the most plausible division of the country is into the north and south (Saxony and Thuringia). Table 5 presents the results for CDU and SPD, while Table 6 presents the results for PDS and Alliance 90. The goal is to investigate if there is heterogeneity in relationships, such that the relationship between the dependent variable and its

predictors works in one way in the south and in another way in the north. In particular, the task is to see if the relationship between protest and voting varies across spatial regimes. As can be seen in Table 5, there are a few minor differences between spatial regimes in the equation for CDU's vote share, but they do not concern the number of protests which remains statistically insignificant.

Table 6 presents the most interesting finding. The model for Alliance 90 shows a difference across spatial regimes in how the protest variable behaves. More protest is connected to a larger vote share of the Alliance 90, but only in the north. Therefore, the finding from Table 4 which suggested that there is a relationship between protesting more and voting for Alliance 90, is one that should be qualified. In the south, the relationship is weaker and was not statistically significant at conventional levels. This is consistent with the literature's emphasis on the weaker popularity of the oppositional groups in the south.

An interesting finding that emerges from the spatial regime analysis concerns the impact of Western television. As suggested earlier, it would seem that access to West German television did not benefit the CDU, despite the fact that its chancellor was on the news every night. Rather, it was the leftist parties such as SPD and PDS who benefited. The coefficient for the variable that tracks the presence of West German television in a county is negative and statistically significant for both the south and the north in the first model in Table 5. In other words, its link with CDU's vote share works in the same (negative) manner in the south and the north. However, as can be seen in the second model in Table 5 (for SPD) and in the first model in Table 6 (for PDS), the relationship varies across spatial regimes for these two parties. It is positive and statistically significant only in the north. In other words, only in the north was exposure to West German television associated with higher vote shares for the leftist parties.

### **Concluding remarks**

This article has engaged in an examination of the link between protest and voting in the East German revolution. Can such a link be empirically established? If so, it would be possible to say that the protest activity that initiated the revolution and the vote for reunification – i.e. the revolution's most tangible outcome – naturally flow from each other. If the opposite is true, then the old concept of “Thermidor” would be a more appropriate name for the way the *Wende* unfolded. Crane Brinton's concept may seem

slightly *passé*, 77 years since the publication of his largely forgotten book *The Anatomy of Revolution*. Yet, the concept of Thermidor continues to capture an important aspect of revolutions and, in the case of East Germany, describes well the relationship between protests and voting in 1989 and 1990.

To summarize the analysis, a spatial examination of East Germany's counties revealed that the places that protested more are not the ones that gave the most support to CDU's agenda of speedy reunification. The clearest difference between the two is the urban versus rural divide. Large cities protested more and gave relatively fewer votes to the CDU. Overall, the connection between protest and voting is weak. There is one link between protest and voting that stands out: counties that protested more tended to give relatively higher vote shares to the leftist Alliance 90. However, spatial regime analysis revealed that this relationship is stronger in the north than in the southern regions of Saxony and Thuringia. The divide between the north and the south comes across in the stronger support that the CDU amassed in the south, while the north tended to give relatively more votes to CDU's leftist alternatives. The vote was most probably fueled by dissatisfaction with communist rule and the resentment that those in East Germany's southern regions of Saxony and Thuringia felt *vis-à-vis* the privileged north, especially Berlin. Other demographic factors – such as the share of working class or industrial pollution – did not yield conclusive results. Overall, the spatial analysis of the link between protest and voting suggests that something resembling Thermidor occurred in East Germany. One set of towns unleashed the revolution, but another stepped in at a later stage and voted for reunification, the revolution's most durable outcome.

An additional unexpected finding concerns the impact of West German television: it seems not to have favored the ruling CDU but the leftist parties, chiefly the SPD, but also the PDS. Spatial regime analysis revealed that this was something that held more strongly in the north. This finding opens up the interesting question of whether the citizens of East Germany were “fooled” during the *Wende* by Western Media. In various forms, this issue is one that continues to be relevant in the research on the media in East Germany.<sup>30</sup> This article points towards a cautious “no”: the re-unification ticket did not build its success on Kohl-friendly broadcasts aired by ZDF and ARD. If anything, the analysis performed here would suggest that Kohl could claim *he* was the injured party: the public television channels were benefiting his main rival, the SPD. It seems best to argue that the West German public television largely did its job, i.e. delivered professional journalism that did not pander to those in

power. Interestingly, the weaker link in the south would suggest that these regions were already more hostile to the SED regime and more ready to support the CDU, regardless of what the Western media said.

To some, the Thermidor metaphor may seem a bit harsh. After all, the SED did not return to power. Furthermore, East Germany's has done more than many other countries in its own process of *Vergangenheitsbewältigung*, by opening up the archives of a variety of institutions, including the notorious Stasi. Yet, there can be little doubt that the glimmer of radical promise that existed for a brief period of time in October of 1989 disappeared with reunification. This was cemented when the Federal Republic used Article 23 of its Basic Law to implement reunification. Article 23 provided for the possibility of new federal units acceding to the Federal Republic. For the West German government, this option was much simpler than any potential alternative. Opening up the constitutional process for a new German state would have slowed the reunification process too much. This was an undesirable path in the international setting of the time, with several European governments still harboring doubts about the reunification of Germany. Instead of establishing a new political framework, East Germany was simply inserted into its Western capitalist neighbor.

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- 7 Brinton (see note 3), 259.
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- 9 Maier (see note 7), 4.
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- 11 Eric Langenbacher, "Conclusion: The Germans Must Have Done Something Right," *German Politics and Society* 28, Number 2 (2010), 185-202.
- 12 Timothy Garton Ash, *The Magic Lantern: The Revolution of '89 Witnessed in Warsaw, Budapest, Berlin, and Prague* (Random House, 1990), 73; Peter Marcuse, *Missing Marx: A Personal and Political Journal of a Year in East Germany, 1989–1990* (Monthly Review Press, 1991), 54; Maier (see note 1), 198.
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- 15 Marcuse (see note 12), 18.
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  - 23 Peter Hedström, “Contagious Collectivities: On the Spatial Diffusion of Swedish Trade Unions, 1890-1940,” *American Journal of Sociology* 99, no. 5 (1994), 1157–79; Daniel J. Myers “The Diffusion of Collective Violence: Infectiousness, Susceptibility, and Mass Media Networks,” *American Journal of Sociology* 106, no. 1 (2000), 173–208.
  - 24 For applications of the spatial regime approach see John O’Loughlin, Colin Flint and Luc Anselin, “The Geography of the Nazi Vote: Context, Confession, and Class in the Reichstag Election of 1930,” *Annals of the Association of American Geographers* 84, no. 3 (1994), 351–80; Katherine J. Curtis, Paul R. Voss and David D. Long, “Spatial Variation in Poverty-Generating Processes: Child Poverty in the United States,” *Social Science Research* 41, no. 1 (2012), 146–59.
  - 25 Luc Anselin, “Spatial Dependence and Spatial Structural Instability in Applied Regression Analysis,” *Journal of Regional Science* 30, no. 2 (1990), 185–207; Luc Anselin, *SpaceStat Tutorial: A Workbook for Using SpaceStat in the Analysis of Spatial Data* (NCGIA, 1992); Curtis, Voss and Long (see note 24).
  - 26 For more see Matthew Stibbe, *Germany 1914 –1933: Politics, Society and Culture* (Longman, 2010); Claus-Christian W. Szejnmann, *Nazism in Central Germany: The Brownshirts in 'Red' Saxony* (Berghahn Books, 1990).
  - 27 Hartmut Berghff and Uta A. Balbier, *The East German Economy, 1945-2010: Falling Behind or Catching Up?* (Cambridge University Press, 2014), 4.
  - 28 See for example the testimonies in Philipsen (see note 13).
  - 29 The CDU formed a post-election coalition called “Alliance for Germany” with two smaller parties. In order to focus on the CDU, these two parties are excluded and all figures on the CDU refer solely to them, not to the coalition.
  - 30 Kern, Grdesic (see note 17), Kurt R. Hesse, “Cross-Border Mass Communication from West to East Germany”, *European Journal of Communication* 5, no. 2 (1990), 355–371; Kurt R. Hesse, 1998, *Westmedien in der DDR: Nutzung, Image und Auswirkungen bundesrepublikanischen Hörfunks und Fernsehens* (Verlag Wissenschaft und Politik, 1992); Monika Lindgens and Susanne Mahle, “Vom Medienboom zur Medienbarriere: Massenmedien und Bürgerbewegungen im gesellschaftlichen Umbruch der DDR und im vereinten Deutschland,” in *Mauer-Show: Das Ende der DDR, die deutsche Einheit und die Medien*, eds. Rainer Bohn, Knut Hickethier and Eggo Müller (Edition Sigma, 1992), 95–113; Michael Meyen, *Einschalten, Umschalten, Ausschalten? Das Fernsehen im DDR-Alltag* (Leipziger Universitätsverlag, 2003); Michael Meyen and Katja Schwer, “Credibility of Media Offerings in Centrally Controlled Media Systems: A Qualitative Study Based on the Example of East Germany”, *Media, Culture and Society* 29, no. 2 (2007), 284–303.

**Table 1.** Overview of results for the 1990 East German Volkskammer election

	Percent of votes			
	CDU	SPD	PDS	Alliance 90
Overall election results	40.8	21.9	16.4	2.9
Counties that protested more (above median)	45.1	18.9	14.5	2.5
Counties that protested less (below median)	42.9	22.6	15.5	2.0
South (Saxony and Thuringia)	61.2	26.9	21.3	3.6
North (regions other than Saxony and Thuringia)	34.1	20.2	14.8	2.7
Above median population density	45.2	18.9	14.3	2.5
Below median population density	42.8	22.5	15.7	1.9
Cities (24 counties designated as cities)	32.8	23.9	21.2	3.7
Not cities	45.4	20.3	14.3	2.0
Above median share of industrial workers in population	48.9	26.2	12.2	2.1
Below median share of industrial workers in population	38.3	25.8	18.1	2.3
Above median pollution by Carbon Monoxide	43.2	21.8	14.3	2.4
Below median pollution by Carbon Monoxide	44.8	19.3	15.7	2.0
Above median pollution by Sulfur Dioxide	47.9	18.0	12.7	2.1
Below median pollution by Sulfur Dioxide	38.9	24.3	18.1	2.4
Counties with West German television reception	43.9	21.6	14.5	2.2
Counties without West German television reception	44.3	12.4	18.8	2.3

**Table 2.** Correlations between main variables

	CDU vote	SPD vote	PDS vote	Alliance 90 vote	Protests (ln)	Population density	Share of industrial workers	Pollution by Carbon Monoxide	Pollution by Sulfur Dioxide
CDU vote	1								
SPD vote	-0.658	1							
PDS vote	-0.739	0.320	1						
Alliance 90 vote	-0.555	0.273	0.322	1					
Protests (ln)	0.085	-0.205	-0.080	0.272	1				
Population density	-0.307	0.054	0.256	0.458	0.230	1			
Share of industrial workers	0.525	-0.551	-0.646	-0.027	0.282	0.093	1		
Pollution by Carbon Monoxide	-0.075	0.155	-0.156	0.169	-0.213	0.060	0.202	1	
Pollution by Sulfur Dioxide	0.169	-0.196	-0.155	0.044	-0.038	0.083	0.489	0.203	1



**Table 3.** Models of number of protests and CDU vote

	(1)	(2)	(3)	(4)
	Protests (ln) (Spatial error model)	Protests (ln) (spatial lag model)	CDU vote (OLS)	CDU vote (spatial error model)
Border with West Germany	-0.045 (0.176)	0.045 (0.180)	2.013 (1.392)	-1.534 (1.233)
South (Saxony and Thuringia)	0.592** (0.224)	0.608** (0.235)	5.802** (1.808)	1.752 (2.103)
Population density	0.023 (0.031)	0.021 (0.031)	-0.800** (0.243)	-0.344* (0.164)
City	1.077*** (0.234)	1.087*** (0.234)	-8.869*** (1.900)	-10.773*** (1.241)
Share of industrial workers	0.020 (0.014)	0.020 (0.015)	0.376** (0.115)	0.270 (0.142)
Carbon monoxide levels	-0.429** (0.144)	-0.435** (0.152)	-2.381* (1.173)	-2.763 (1.485)
Sulfur dioxide levels	-0.039 (0.086)	-0.039 (0.089)	0.551 (0.685)	0.223 (0.846)
West German TV reception	0.331 (0.201)	0.334 (0.208)	-3.332* (1.612)	-9.590*** (1.722)
Protests (ln)			-0.020 (0.523)	0.041 (0.309)
Spatially lagged dependent variable		-0.031 (0.097)		
Constant	1.206** (0.371)	1.247** (0.401)	34.031*** (3.035)	46.123*** (4.965)
Spatial error parameter (lambda)	-0.048 (0.100)			0.810*** (0.042)
Number of observations	217	217	217	217
Degrees of freedom	9	10	10	10
Log likelihood	-280.209	-280.282	-718.537	-655.116

Coefficients and standard errors in parentheses. \*p<0.05, \*\*p<0.01 and \*\*\*p<0.001.

**Table 4.** Spatial error models of SPD, PDS and Alliance 90 votes

	(1)	(2)	(3)
	SPD vote	PDS vote	Alliance 90 vote
Border with West Germany	1.200 (0.684)	0.730 (0.720)	0.102 (0.147)
South (Saxony and Thuringia)	-3.003* (1.244)	-0.773 (1.225)	-0.087 (0.244)
Population density	0.052 (0.089)	0.197* (0.095)	0.041* (0.019)
City	3.327*** (0.674)	7.235*** (0.725)	1.127*** (0.149)
Share of industrial workers	-0.171 (0.085)	-0.235** (0.083)	-0.003 (0.016)
Carbon monoxide levels	1.476 (0.854)	-0.535 (0.866)	0.280 (0.173)
Sulfur dioxide levels	-1.328** (0.487)	0.557 (0.493)	0.018 (0.099)
West German TV reception	4.063*** (0.966)	3.131** (1.005)	0.236 (0.204)
Protests (ln)	0.176 (0.165)	-0.229 (0.180)	0.190*** (0.037)
Constant	23.643*** (3.307)	21.475*** (2.884)	1.272* (0.555)
Spatial error parameter (lambda)	0.889*** (0.029)	0.807*** (0.042)	0.773*** (0.047)
Number of observations	217	217	217
Degrees of freedom	9	9	9
Log likelihood	-531.051	-538.312	-193.055

Coefficients and standard errors in parentheses. \*p<0.05, \*\*p<0.01 and \*\*\*p<0.001.

**Table 5.** Spatially corrected spatial regime models of CDU and SPD votes (South=Saxony and Thuringia)

	(1)		(2)	
	CDU vote (South=1)	CDU vote (South=0)	SPD vote (South=1)	SPD vote (South=0)
Border with West Germany	-2.745 (1.794)	-0.332 (1.606)	0.055 (0.975)	1.637 (0.886)
Population density	-0.098 (0.660)	-0.314 (0.168)	0.316 (0.354)	0.017 (0.089)
City	-14.181*** (3.618)	-8.827*** (1.485)	2.468 (1.941)	2.932*** (0.787)
Share of industrial workers	-0.691 (0.347)	-0.117 (0.521)	-0.432* (0.211)	0.256 (0.299)
Carbon monoxide levels	-8.236* (3.949)	1.313 (3.457)	-6.868** (2.391)	0.078 (1.978)
Sulfur dioxide levels	-4.117* (1.602)	3.206 (2.901)	-0.896 (0.947)	-3.831* (1.658)
West German TV reception	-7.198** (2.768)	-10.063*** (2.021)	3.044 (1.563)	4.251*** (1.108)
Protests (ln)	0.086 (0.544)	-0.119 (0.376)	0.417 (0.284)	0.085 (0.196)
Constant	98.168*** (18.260)	50.619*** (10.631)	39.166*** (11.122)	14.166* (6.332)
Likelihood ratio test value for spatial error	89.687***		136.000***	
Number of observations	217		217	
Degrees of freedom	20		20	
Log likelihood	-646.674		-520.759	

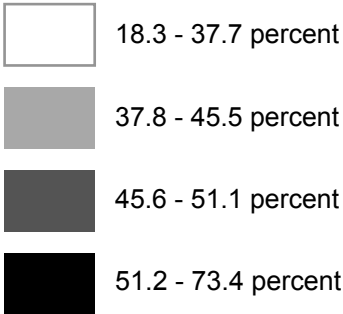
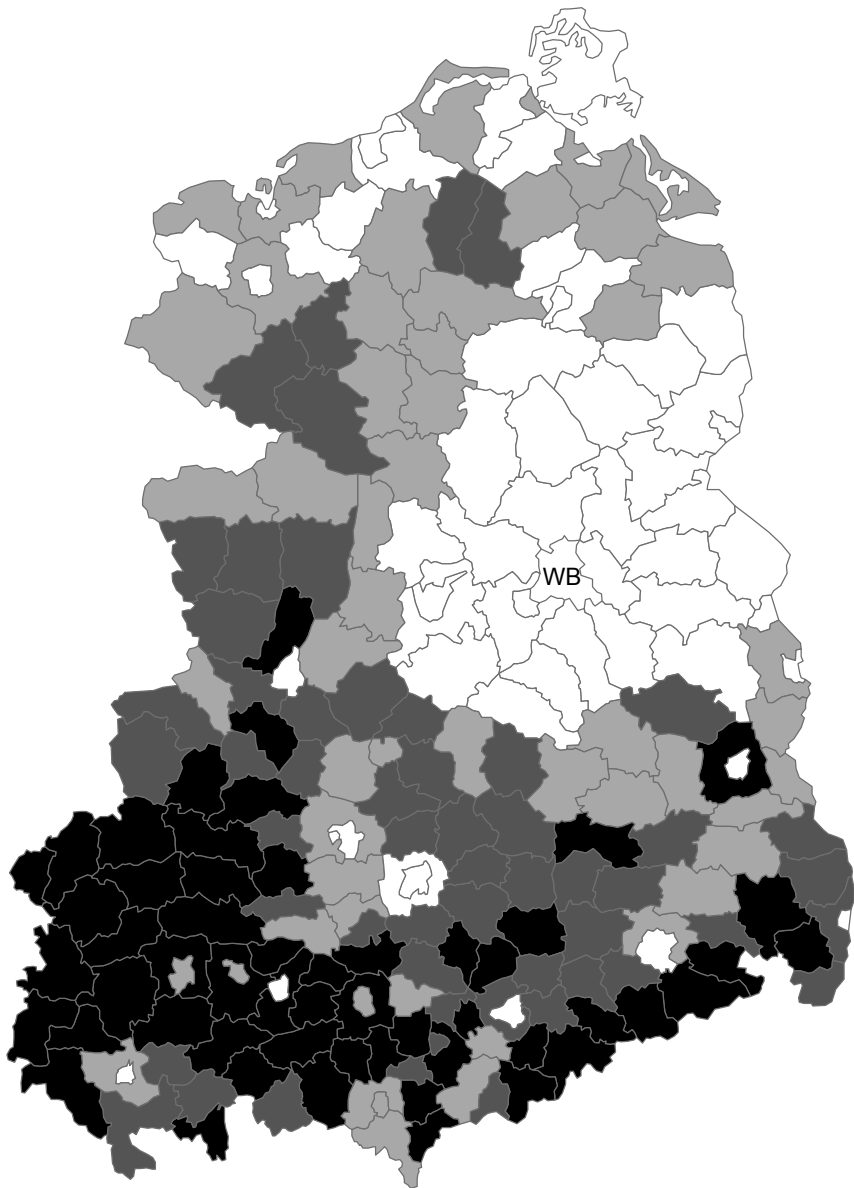
Coefficients and standard errors in parentheses. \*p<0.05, \*\*p<0.01 and \*\*\*p<0.001.

**Table 6.** Spatially corrected spatial regime models of PDS and Alliance 90 votes (South=Saxony and Thuringia)

	(1)		(2)	
	PDS vote (South=1)	PDS vote (South=0)	Alliance 90 vote (South=1)	Alliance 90 vote (South=0)
Border with West Germany	1.145 (1.060)	0.459 (0.948)	0.161 (0.215)	0.058 (0.191)
Population density	-0.446 (0.390)	0.269** (0.099)	0.068 (0.079)	0.036 (0.020)
City	9.245*** (2.138)	7.853*** (0.878)	1.240** (0.435)	0.950*** (0.435)
Share of industrial workers	-0.047 (0.205)	-0.713* (0.307)	-0.011 (0.040)	0.167** (0.061)
Carbon monoxide levels	1.855 (2.328)	1.687 (2.040)	1.117* (0.461)	-0.940* (0.408)
Sulfur dioxide levels	0.978 (0.945)	3.076 (1.712)	-0.033 (0.188)	-0.920** (0.343)
West German TV reception	0.827 (1.634)	4.092*** (1.193)	0.152 (0.329)	0.233 (0.241)
Protests (ln)	-0.106 (0.321)	-0.252 (0.222)	0.117 (0.065)	0.220*** (0.045)
Constant	11.484 (10.762)	30.845*** (6.270)	0.975 (2.126)	-1.909 (1.249)
Likelihood ratio test value for spatial error	31.639***		85.183***	
Number of observations	217		217	
Degrees of freedom	20		20	
Log likelihood	-532.402		-185.566	

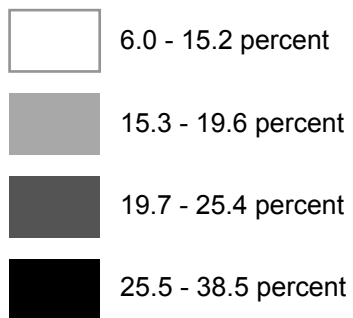
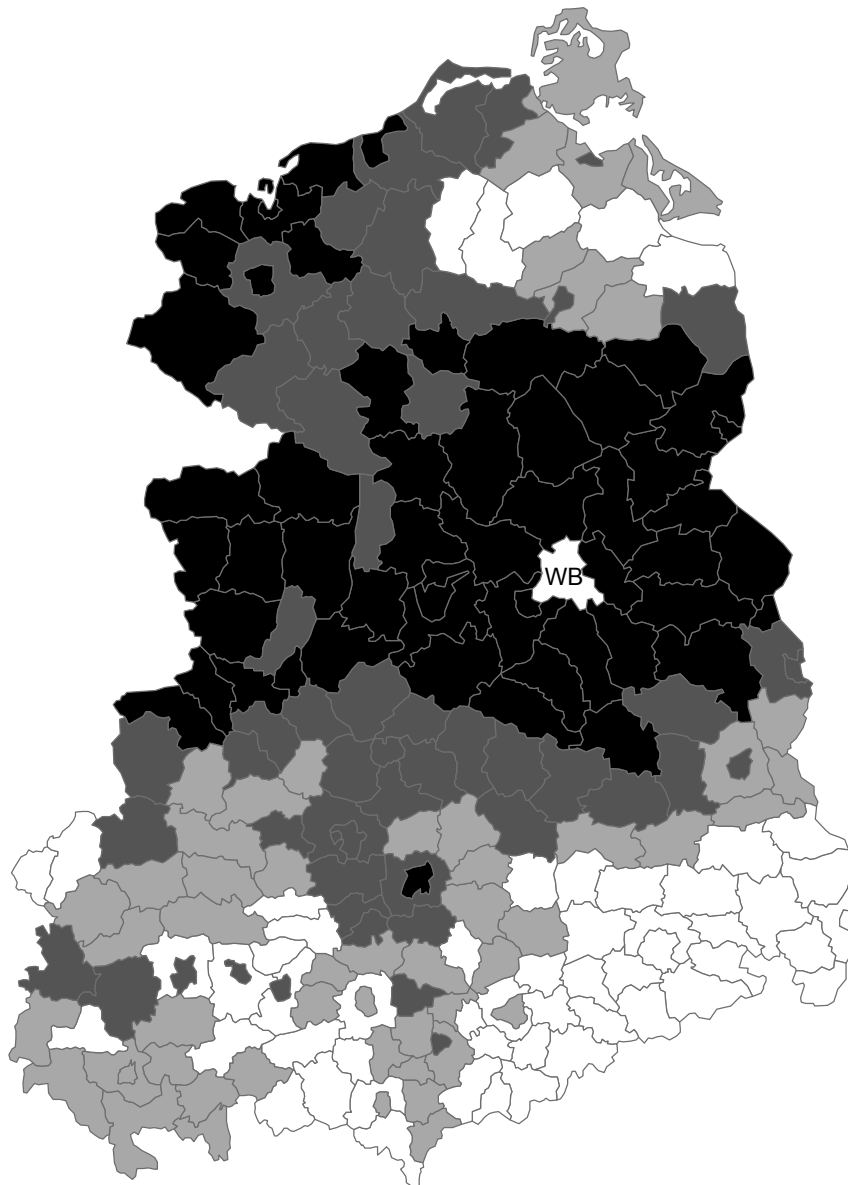
Coefficients and standard errors in parentheses. \*p<0.05, \*\*p<0.01 and \*\*\*p<0.001.

Figure 1  
Vote for CDU in 1990 Volkskammer election



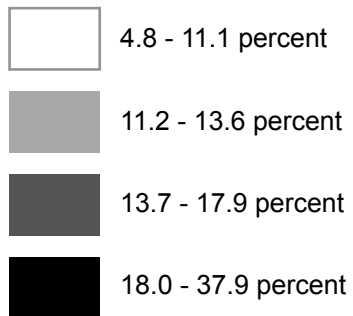
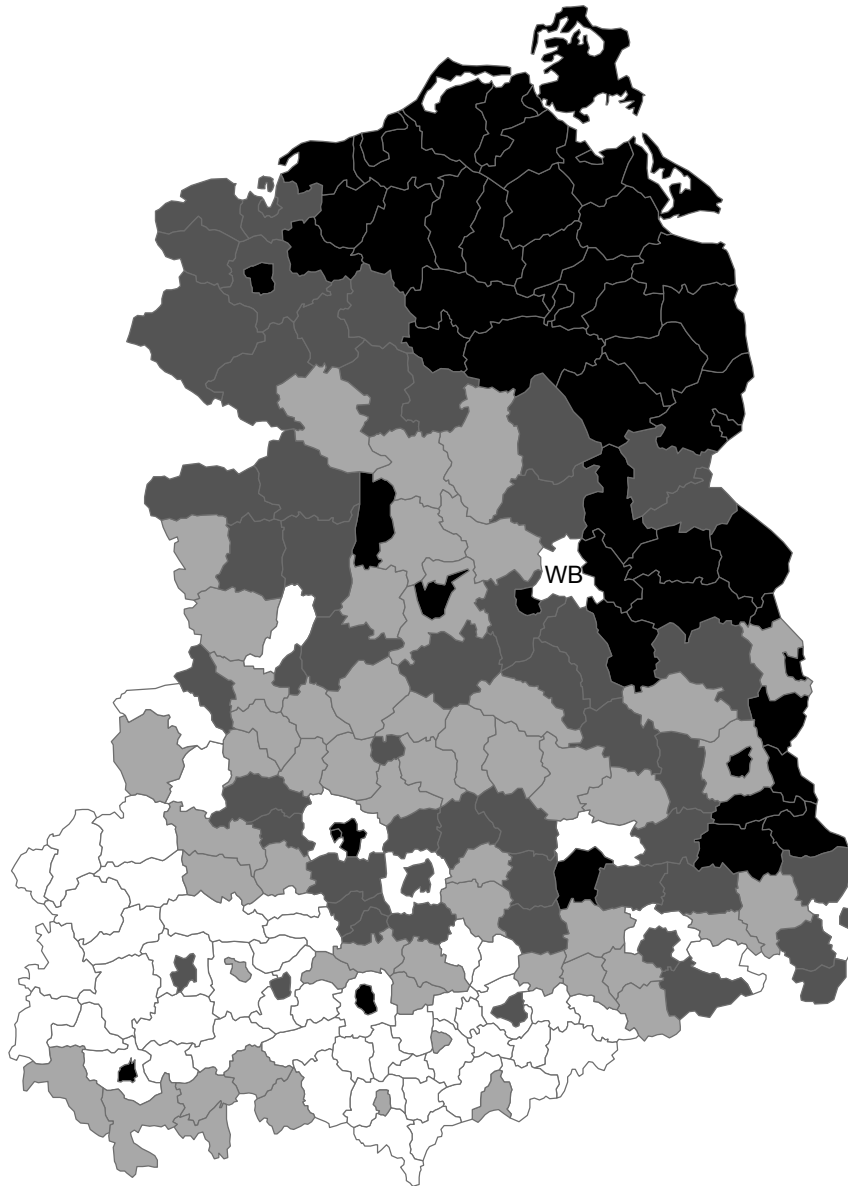
Note: Groups are quantiles.  
WB is West Berlin.

Figure 2  
Vote for SPD in 1990 Volkskammer election



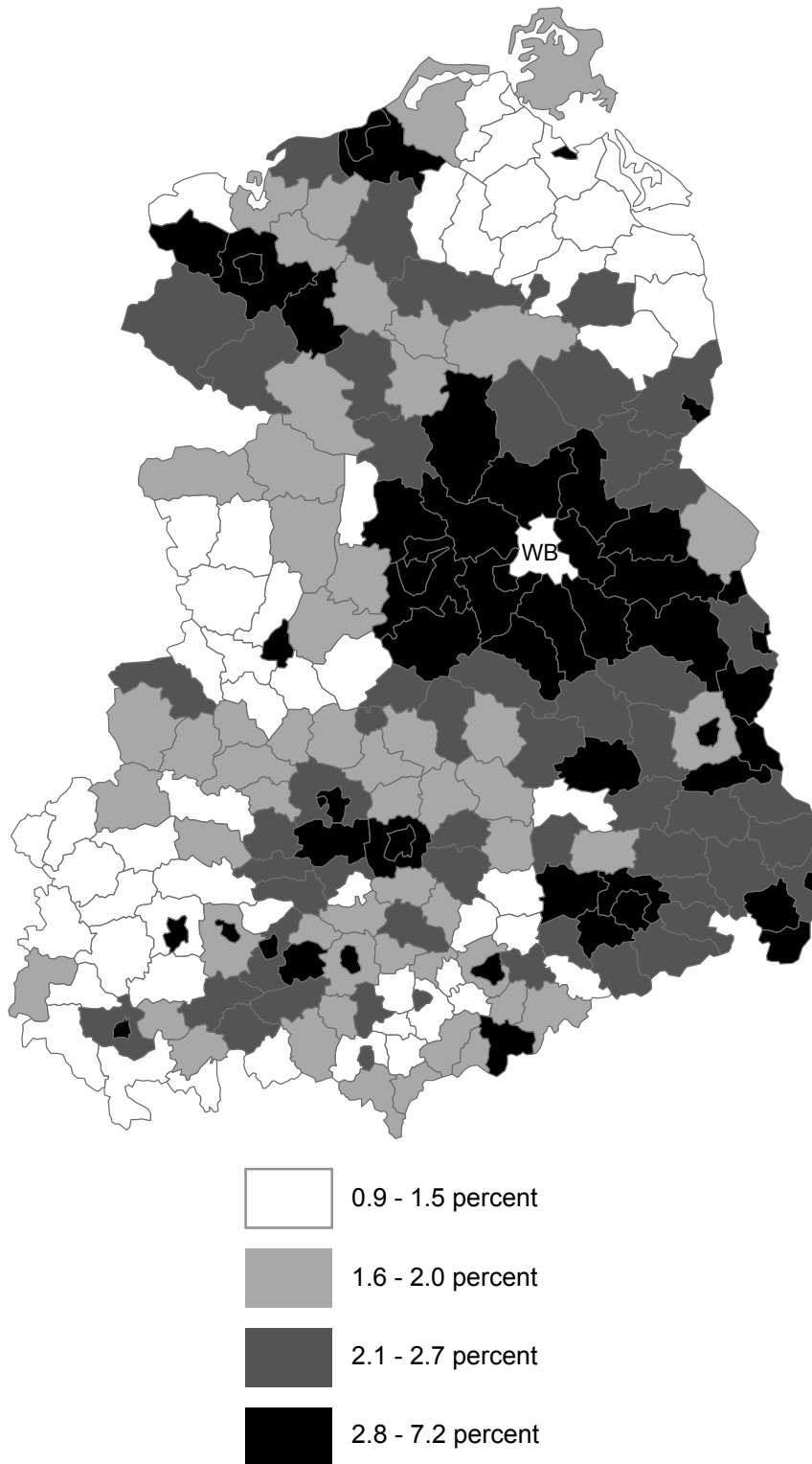
Note: Groups are quantiles.  
WB is West Berlin.

Figure 3  
Vote for PDS in 1990 Volkskammer election



Note: Groups are quantiles.  
WB is West Berlin.

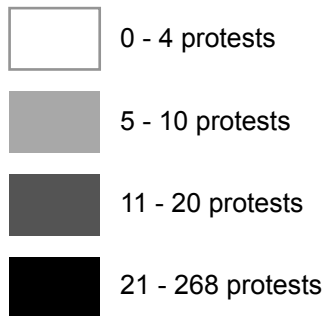
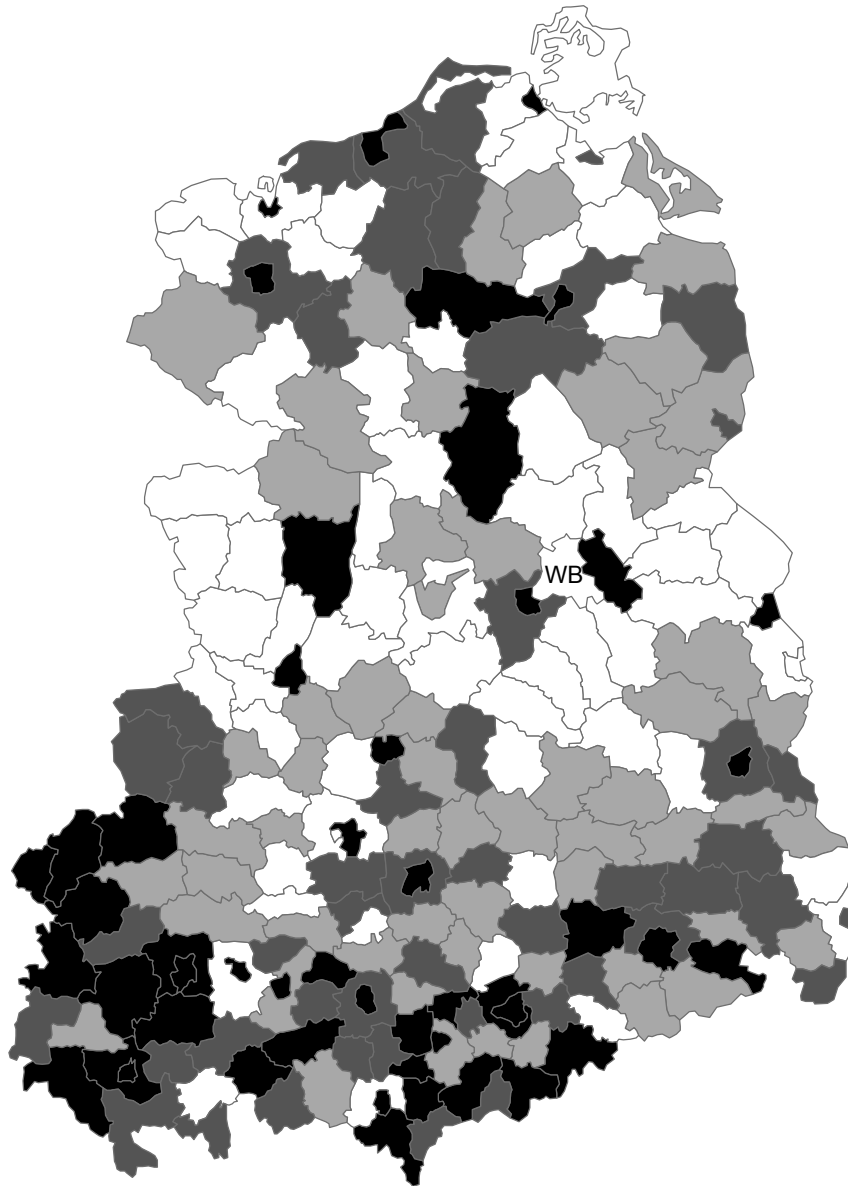
Figure 4  
Vote for Bündnis 90 in 1990 Volkskammer election



Note: Groups are quantiles.  
WB is West Berlin.

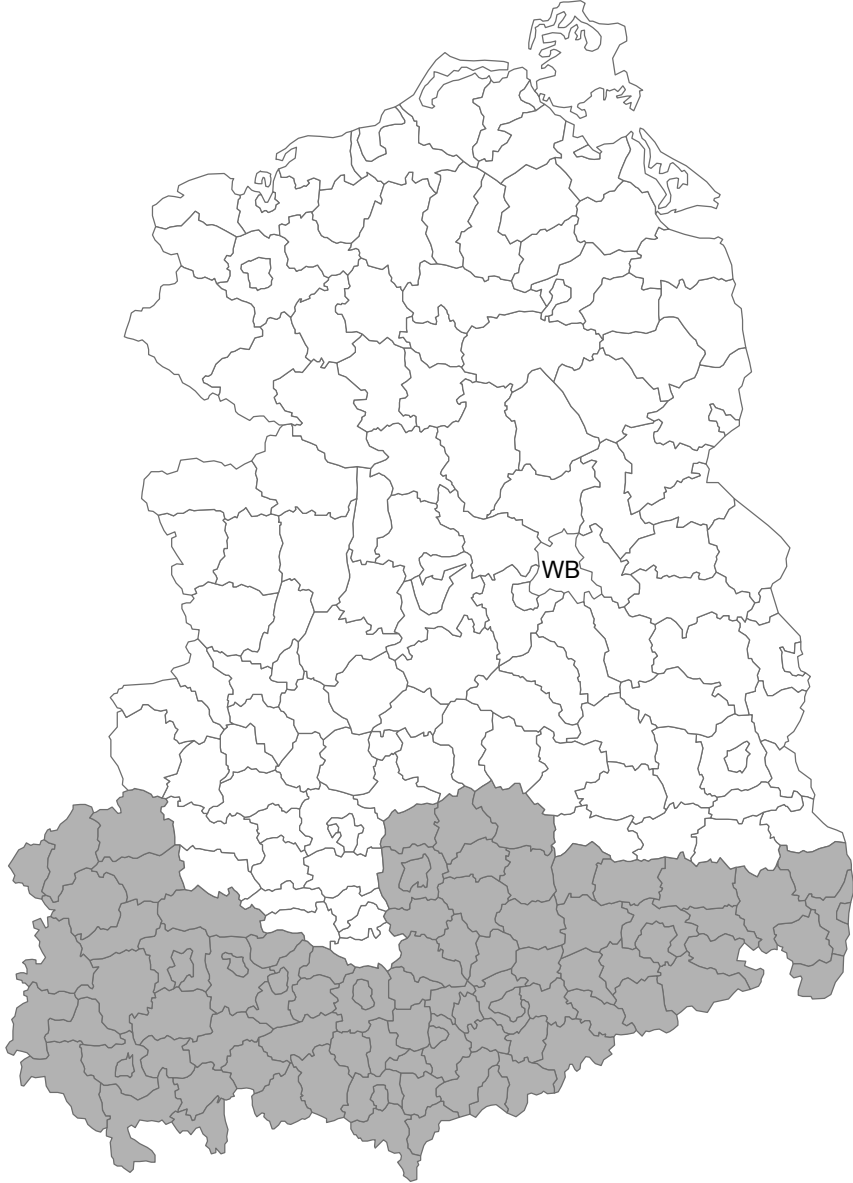


Figure 5  
Number of protests



Note: Groups are quantiles.  
WB is West Berlin.

Figure 6  
North and South



North



South (Saxony and Thuringia)

Note: WB is West Berlin.