

Local Matters: Political Opportunities, Spatial Scale, and Support for Green Jobs Policies

David J. Hess, Quan D. Mai,* Rachel Skaggs,* and Magdalena Sudibjo*

*Equal contributions: authorship in alphabetical order.

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Abstract

Research on the politics of sustainability transitions can benefit from more attention to the political opportunity structure and its variation at different levels of spatial scale. The study focuses on policy conflicts in the U.S. as represented in the media during the Obama administration years of 2007 -2013, when the opportunity structure became increasingly closed. Energy-transition policies were often framed as green jobs and green economic development to overcome opposition from regime actors and conservative politicians. We show that media reports of the policies at the national and global level are less positive than at the local and state-government level. Furthermore, articles that quote from business leaders tend to be more positive. Scalar variation in political opportunities is of general interest for the politics of transitions, especially in countries where conservative parties control national governments and oppose sustainability policy development.

1.0 Introduction

Because efforts to develop and deepen policies in support of sustainability transitions often encounter opposition from actors associated with the incumbent organizations of an industrial regime, researchers have increasingly recognized the importance of studying transitions as political processes (Meadowcroft, 2011). The study of the politics of transitions has to date developed several dimensions of transition politics, including analyses of the resistance of regime organizations, the role of social movements and countervailing industry groups, and the importance of policy advocacy coalitions both for and against transition policy proposals (Elzen et al., 2011; Geels, 2014; Hess, 2014; Markard et al., 2016). However, an important but not yet well explored aspect of the politics of transitions is the analysis of political opportunities and their relationship to spatial scale.

In this study, we develop the case for including the analysis of the political opportunity structure in the emerging field of the politics of transitions. Although the concept has been used before in transition studies (e.g., Elzen et al., 2011), this project develops a more systematic theorization and a mixed-methods analysis. Political consensus for sustainability transitions remains strong in some countries, and approaches to transitions that focus on implementation and management remain important. However, there is a growing breakdown of consensus in other countries, and where this occurs, the analysis of political opportunities becomes especially salient.

We further argue that a complete analysis of political opportunities requires attention to differences across levels of spatial scale. Like the politics of transitions, the topic of spatial scale has received growing attention in the recent literature (Hansen and Coenen, 2015; Raven et al., 2012; Truffer et al., 2015). This attention comes as a corrective to the first wave of transition studies, which “can be criticized for being spatially blind and for (implicitly) overemphasizing the national level at the expense of other geographical levels” (Truffer and Coenen 2012: 3). Although our focus is on the politics of transitions rather than on their geography, we suggest some ways forward for bringing these two streams of research into conversation.

In the empirical research that follows, we study one type of transition policy in one country to develop several insights of general interest. The project brings the concept of political opportunities into the literature, develops a strategy for analyzing the scalar dimension of opportunities, and demonstrates the value of a quantitative multilevel methodology that is especially appropriate for this type of problem. In addition to the theoretical and methodological contribution, we also suggest that the topic has broad practical implications. In the developed Anglophone countries, there are increasing signs of opposition to transition policies from mainstream conservative political parties (e.g., Carter and Clements 2015, Young and Coutinho 2013), and this opposition is also evident in conservative and right-wing parties in continental Europe. When these parties are able to block policy development at one level of spatial scale, it becomes especially important to understand how the opportunity for transition policy support may be different at other levels and indeed may interact across levels.

2.0 Conceptual Framework and Methodological Strategy

2.1 Conceptual Framework

We advance the politics of transitions theoretically by examining the intersections of spatial scale and the political opportunity structure. Although we draw on the geography of transitions literature as a point of reference for our focus on spatial scale, we do not review the literature here, partly because good reviews are already available and partly because our primary focus is on the politics of transitions (Coenen et al., 2012; Truffer et al., 2015).

Various researchers have indicated the need for transition studies to have more adequate analyses of their political dimensions (e.g., Meadowcroft, 2011; Shove and Walker, 2007). One important area of research on the politics of transitions is resistance to policies from regime actors (Geels, 2014). Another area of research draws attention to coalitions of actors in the political field—including elected officials, advocates from civil society organizations, business groups, researchers, and journalists—that emerge to support transition policies, while other coalitions emerge to oppose them (Markard et al., 2016). Broadly conceived, we will understand the term “politics of sustainability transitions” to refer to the conflicts that occur in the political field over the pace, direction, and depth of efforts to make industrial and technological systems less environmentally harmful and more sustainable.

Researchers who examine the politics of transitions have drawn on a wide range of theoretical frameworks, including theories of advocacy coalitions, institutional logics, governmentality, structuration, and practices (Avelino et al., 2016). We consider the structural perspective developed here to be complementary to approaches that focus on agency and coalitions (e.g., Hess, 2014; Markard et al., 2016), on the analysis of systems of meaning such as

institutional logics (e.g., Feunfschilling and Truffer, 2016), and on technological design and readiness (e.g., Elzen et al., 2011). All perspectives are important dimensions of a comprehensive theoretical framework that recognizes agency, meaning, materiality, and structure.

The term “political opportunity structure” is widely used in sociology and political science in the study of advocacy, social movements, and policy. In the original formulation, Eisinger (1973) included the factors that make a government more open or closed to citizen participation, but definitions have varied in the subsequent literature (Meyer, 2004). In the context of the politics of transitions, we understand the term to mean the institutional factors that affect the openness of a government to proposals for policies supportive of a sustainability transition in one or more industries or technological systems. The main value of the concept, like that of the landscape in transition studies (Geels, 2014), is to bring a structural counterbalance to analytical frameworks that might otherwise emphasize actors, meaning, and material design. The political opportunity structure may be considered as a dimension of the landscape in the multilevel perspective of transition studies (Geels, 2014).

As with any type of structural concept, the configuration of political opportunities in a time and place may be treated as a stable exogenous variable. However, over time the opportunities change as a result of action, such as mobilizations of extra-institutional social movements and of intra-institutional advocacy coalitions (Meyer, 2004). The most obvious example of a shift in political opportunities occurs when a new coalition of political parties is elected, and the new parties bring with them promises of sweeping change. In addition to variation and change over time, political opportunities also vary by spatial scale. A well-known

example is the case of advocates for change who are blocked at a national government level but succeed in shifting the national political opportunity structure by mobilizing foreign governments and transnational actors (Sikkink, 2004). Conversely, advocates may also shift to lower levels of geographical scale. Thus, scalar differences in the political opportunity structure are important because they can be used strategically to reopen closed opportunities.

As noted above, the definitional scope of the political opportunity structure varies across analysts. One approach is to focus on the organizational structure of the government, such as the independence of the legislative body or the judiciary, coupled with the more ephemeral configurational structure of parties in power. A more expansive approach, which we adopt, is to include the institutional field or institutional environment of a government (Barley, 2010; Eisinger, 1973). This approach includes factors other than government or party structure, such as the configuration of foreign relations, the presence or absence of an economic crisis, and the influence of the media or other institutions.

There is no single way to measure or to operationalize the political opportunity structure. In comparative, cross-national studies, researchers examine differences in the organizational structure of the government and the relationship between the government and other institutions (e.g., Kitschelt, 1986). In temporal studies of a single country or region, changes in the configuration of actors, especially the parties in power, are more salient (Kriesi, 2004). As a single-country project, this study begins with changes in the configuration of parties in power during a specified time period. We then use media representations to develop an approach to the measurement of political opportunity and its scalar variation. This approach is

consistent with methodologies that use political “signals” such as media representations as “an issue specific indicator of political opportunities” (Meyer and Minkoff, 2004: 1470).

The media play an important and well-recognized role as part of the institutional field that affects political opportunities, and incumbent industrial organizations rely on the media to reach the public with their message (Smink et al., 2015). As the “fourth estate,” their institutional influence on the political field involves both representing politics and influencing public opinion and political debate. On the one hand, the media may be viewed as a representational institution, that is, as a stage on which actors in the political field attempt to gain credibility and support among the broader public (Gamson, 2004). This passive or reflective dimension of the media is reinforced by the norm of journalistic objectivity, which requires different sides of a political conflict to be represented (Boykoff and Boykoff, 2004). Policy leaders select frames to deploy in the media in order to show alignments of policy initiatives with broader cultural values and ideological preferences among the consumers of the media and voters (Ferree, 2003). On the other hand, the media can also affect public opinion formation and public support for different policy options. They do so by affecting issue salience, cognitive maps, and other aspects of public opinion associated with agenda setting (McCombs, 2004). They can also publish exposés that reveal scandals, provoke public outrage, and place demands on public leaders to respond to the “backfire” (Martin, 2007). The relationship between these two sides of the media is complicated. Through their editorials, journalists can be opinion leaders, but their opinions also tend to track those of political leaders (Habel, 2012). Thus, even as the media can influence the political opportunity structure for an issue, they also

tend to reflect dominant positions in the political field and to provide a window on the political opportunity structure.

In summary, there are various ways to study the political opportunity structure, and we focus on developing an analysis using media representations. The strategy provides dividends by enabling quantitative analysis and the testing of hypotheses, but it also enables qualitative analysis of perceptions and content. The strategy is also helpful when working across spatial scale, where there is a methodological risk of using different metrics at different levels (Batel and Devine-Wright, 2015). In summary, with respect to the literature on the politics of transitions, we develop the structural dimension by bringing attention to the analysis of the political opportunity structure. We draw attention to variation by spatial scale in the political opportunity structure, thereby connecting the politics of transitions with the emerging interest in spatial dimensions of transitions. Although we focus on one country and one policy field, we argue that this topic is of general importance wherever political opportunities are closed at the national government level.

2.2 Research Hypothesis and its Importance

There is to date no systematic analysis of scalar variation in the political opportunity structure for sustainability transitions, and the literature provides differing perspectives on the topic. One body of research is on public perceptions at different levels of spatial scale. For example, stronger place attachments (sense of belonging) at the global level, in comparison with the national level, may favorably affect attitudes toward sustainability issues such as global warming (Devine-Wright et al., 2015). Likewise, public support for renewable-energy

technologies such as wind turbines can differ at the national and local level, and some communities have mounted mobilizations against local siting of wind farms even when there is general support for national-level energy-transition policies (Bell et al., 2013). This finding has led to the idea that there may be a “local gap”; that is, political opportunities may be greater at higher levels of spatial scale. Of course, this perspective recognizes complexity. For example, local opposition may change to acceptance if there is local participation in siting processes and especially if there is local ownership of the energy generation (Toke et al., 2008). But the general point is that there is a line of research that suggests that political opportunities may be more open when sustainability projects and policies are configured at higher levels of spatial scale.

A different body of research suggests that opportunities may be more open at the local level. Studies of “grassroots innovation” show the many collaborative efforts to develop sustainability projects at the local level (Smith et al. 2016). Likewise, the comparative history of industrial innovation and change associated with more sustainable technologies—such as renewable energy, recycling, and organic farming—show the important role of grassroots movements of activists, advocates, and entrepreneurs in the early phases of industrial development (Hess, 2007). Likewise, in some countries industrial policy is blocked at the national level because of sectional rivalries but more open at subnational levels (Eisinger 1986). For example, the uneven distribution of fossil-fuel resources within a country can lead to regional differences in the willingness to support clean-tech versus fossil-fuel industries.

These differing perspectives on the relationship between political opportunities and spatial scale suggest the need for additional research. We do not propose that the difference in

perspectives can be resolved with a single data set. Rather, as the research in the field develops, we expect to find complex relations among types of sustainability policy, political opportunities, and spatial scale, with considerable cross-cultural variation. We argue that the U.S. is a good site to explore some of these relationships because the highly polarized political field has led to blocked political opportunities at the national level and in many states for energy-transition policies such as carbon regulation and a renewable portfolio standard.

In the U.S., political opportunities for energy-transition policies underwent significant changes after 2008. During the 2008 presidential election cycle, both the Democratic candidate, Senator Barack Obama, and the Republican candidate, Senator John McCain, agreed that federal policy was needed to mitigate the country's greenhouse-gas emissions. The 2008 election results gave the Democrats control of both houses of Congress and of the presidency, and this situation represented a maximum opening of political opportunity for sustainability policy. Cognizant of climate denialism and concern with the economic crisis, the Obama administration and Democrats carefully framed their reform efforts as "green job" creation and green business development rather than as environmental regulation. For example, during the 2008 election campaign, candidate Obama promised to create five million green jobs when elected. This framing was intended to appeal to voters concerned with high unemployment because of the financial crisis, but it could also parry claims by opponents that the policies would create undue burdens on business, lead to increased costs to consumers, and hurt the fragile economy. This framing strategy also appears in other countries where there is opposition from conservative coalitions (Markard et al., 2016).

We treat “green jobs” and “green economic development” (GJGED) not as social science terms but as political terms or frames for energy-transition politics. In other words, a cultural methodology underlies our analysis of these terms, which are treated from an emic rather than etic perspective. Obama’s use of the phrase “green jobs” was not based on a concept from social science; rather, he used the term in a flexible way to connect with constituencies in his political coalition: an environmental movement that sought low-carbon energy, unions that wanted high-paying manufacturing jobs and construction jobs for green buildings, low-income and ethnic minority-group constituencies that were attracted to the combination of reducing home energy costs and the creation of weatherization jobs, and the high-technology industry’s interest in next-generation clean technology and the smart grid. The connections with these constituencies were embedded in the 2009 American Recovery and Reinvestment Act (ARRA), which was a substantial economic stimulus measure that responded to the economic crisis and received bipartisan support. To some degree the ARRA programs matched the political constituencies that had supported the green jobs initiatives; for example, the programs provided support for green jobs in areas such as weatherization for low-income households, steel manufacturing for wind turbines and high-speed rail, and new smart-grid technologies.

The phrase “green economic development” was used less frequently, but it also appeared in the media reports and political debates over the topic. Whereas “green jobs” focused on workers and the advantages of employment availability and quality of employment, “green economic development” focused more on the advantages for businesses. Policies included a wide range of supply-side or business support, such as research-and-development funding, job training, businesses loan programs and subsidies, the formation of business

associations and other instruments of regional development clusters, and assistance with services such as gaining access to capital and to markets (Hess, 2012).

After the passage of the ARRA, the House of Representatives passed the more significant energy-transition reform policy, the American Clean Energy and Security Act of 2009. The bill authorized a national renewable portfolio standard and carbon emissions trading; however, by 2010 the corresponding bill in the Senate had failed. Reasons included a strategy of Republican legislators to block all Democratic reform measures and intense lobbying by the fossil-fuel sector. Conservatives argued against a national economic development policy that strengthened green jobs and green business by claiming that markets, not the government, should be in the role of choosing winners and losers in the private sector. After the legislative failure, Congress passed few other environmental laws during the Obama administration, and by 2011 the Democrats had lost control over the lower legislative chamber. Once in control of the House, Republicans increased their criticisms of GJGED frames and corresponding energy-transition policies. For example, they pointed to the failure of one solar company supported by the administration's policies as a general example of the mistaken assumptions of industrial policy that underlay green economic development policies, and in 2012 they passed the "No More Solyndras" bill (HR 6213). In doing so, they rejected not only the frames of GJGED but also the associated government programs of the ARRA and of policy initiatives for carbon emissions trading. For conservatives, all were associated with unwelcome government intrusion in markets that would cause undue hardship on consumers and businesses. By the 2012 election, the president had backed away from his embrace of GJGED framings, and the appearance of "green jobs" and related terms in the media also declined, as we saw in counts of newspaper

articles per year. Thus, the window of political opportunity at the federal government level had largely closed by 2012.

The debate over GJGED and related policies also took place at the level of state and local governments, many of which had their own initiatives that were developed partly in response to federal funding that was becoming available through the ARRA programs. In some cases, Republican leaders at the state and local level were so opposed to the GJGED initiatives that they turned down federal funding, such as for high-speed rail development. They also led efforts to overturn GJGED policies and to block further development, and we have reviewed these efforts elsewhere (Hess, 2012; Hess and McKane, 2017). In other words, the disagreements over GJGED policies were not restricted to the national level.

In this study, we seek to understand the degree of differences in political opportunities on this issue between the local and state level and higher levels of spatial scale. Clearly, there was a closing of political opportunities at both levels when viewed from the perspective of legislation, policy development, and policy implementation. However, the policy perspective is also complicated because there is evidence that in some cases, state and local governments moved forward with some energy-transition initiatives. This pattern is not simply limited to “blue” states where the Democratic Party was in power. It occurred also in “red” or conservative states, although support for energy-transition policies in those states was more limited (Hess et al., 2016). In other words, there appears to be more flexibility at the local and state level on some policies related to GJGED.

To understand better the extent to which political opportunities were more open or closed at lower levels of spatial scale, we investigate media coverage of GJGED during this

period. There is a background literature on media coverage of green jobs and the related topic of renewable energy, but this literature has not yet attended to the relationship between scale and favorable coverage of the topic (Kouri and Clarke 2014, Langheim et al. 2014, Sengers et al. 2010, Wolbring and Noga 2013, Stephens et al. 2009). We investigate the following hypothesis: media portrayals of GJGED will be more positive in articles that focus on the local or state scale of the issue rather than on the national or global scale. Although we examine one dimension of the political opportunity structure for one type of policy in one country, we suggest that there may be general interest in this approach, both for the methodology and for the attention that we bring to the importance of studying political opportunities and scalar variation as part of the literature on the politics of transitions.

3.0 Data and Method

3.1 Data Sources and Coding

Our primary data are newspaper articles that we collected using the ProQuest online database. We collected articles from U.S.-based newspapers with a circulation of above 200,000 that contained the search term “green job*” for the time period of 2007-2013. The time period was selected because it covers the period of heightened attention to GJGED and the subsequent decline of attention, and it includes both the year before the 2008 presidential campaign and the year following the 2012 election. We selected 29 newspapers in a sample that was stratified to represent markets from the four main regions of the country. Circulation varied from 202,181 readers to 2,406,332 readers. Using these search parameters, we collected 1,601 articles. For an article to be retained in our sample, coders had to agree independently,

based on the article's content, that it should be retained. We excluded articles that did not discuss issues relevant to the political and public dialogue regarding GJGED. For example, we excluded articles on topics such as a local business calendar, obituaries, and the lack of racial diversity in the leadership of environmental organizations.

After deleting duplicates, we retained 901 articles (60 percent of the original sample). The coding process relied on iterative group training that allowed coders to come together and establish a common understanding of what constituted positive portrayal of GJGED. Each article was coded twice, once by each of two coders independently, with four coders initially working on the entire data set. After the two sets of coders went through all the articles, a fifth coder reviewed and adjudicated disagreements. The four original coders were trained simultaneously as is recommended by Gorden (1992), using the same set of news articles to practice coding. The articles and codes were reviewed as a group and discussed to ensure that each coder had the same understanding of code meanings as each other. The fifth coder underwent the same training at a later date, again to ensure that the specific meanings of each code were understood.

For the data analysis, we also adopt a mixed-methods approach that involves qualitative analysis of why differences emerged between the lower and higher levels of scale of media coverage. The qualitative analysis follows from the quantitative analysis to address the patterns found and to explain why they have emerged.

3.2 Variables and Estimation

For the quantitative analysis, the dependent variable is GREENPOSITIVE, a dichotomous variable that classified an article as either positive toward GJGED (1) or not positive (0). To be classified as positive, the article had to have an overall favorable portrayal of GJGED. Although one or two negative statements toward GJGED could be included in the article, the general perspective of the article was positive. An article classified as “not positive” could be negative and opposed to the policy, but alternatively it could be neutral in tone, that is, balanced and objective with some benefits or criticisms raised. In other words, if an article provided balanced perspectives both opposed to and in support of GJGED, it was classified as not positive. In the event of disagreements between the two sets of coders, the two coders discussed it and made a decision. If they did not agree, the article was sent to a third coder to adjudicate the disagreement. For the purposes of this paper, we focus on articles that portray GJGED positively compared to those that convey a neutral or negative message because we are interested in the factors that lead to support of GJGED. This research problem is potentially separate from factors that would lead policies and initiatives to be ignored or opposed.

Our independent variable is SCALE. This is a dichotomous variable based on whether the article discussed GJGED at the state and local level (coded as 1) or at the national and global level (coded as 0). In most cases, this classification was not difficult. Generally, articles were limited to the state-and-local scale or a higher scale, usually national government politics. For example, an article discussing a local solar company might mention a national statistic in one or two sentences, but the focus would still be local. The adjudication procedure described above was followed for refereeing articles where the determination was not clear.

Because our concern is with the spatial dimension, we included several potential confounding variables. Because political opportunities at the national level gradually closed down during this period, we controlled for time by adding in dummy variables for the year. We also controlled for national press or prestige press (NPRESS), that is, the five newspapers in our sample that have a more national readership: *Los Angeles Times*, *New York Times*, *Wall Street Journal*, *Washington Post*, and *USA Today*. We did so because Boykoff and Boykoff (2004) found that the emphasis on journalistic bias and balance in the prestige-press newspapers tends to lead to negatively biased coverage of global warming and climate change. Note that although these papers tended to cover articles at the national scale, they could also have reports with a local focus.

We also added controls at the article level, including controls for whether the article was editorial or news (EDITORIAL=1), whether it was on the front page or another page (FIRSTPAGE=1), and controls for persons quoted. Independent of scale, it is possible that if Republicans were quoted more frequently (QUOTESREP), then an article would be more likely to have a negative portrayal of green jobs, because we would expect Republican leaders to make negative statements about GJGED. Likewise, we would expect the opposite from Democrats (QUOTESDEM). Many of the articles also quoted business leaders (QUOTESBUSINESS), so we added a control variable for the number of times a business leader was quoted.

Due to the binary nature of the dependent variable, logistic regression is the most suitable estimator. The model is specified as follows:

$$\ln\left(\frac{\hat{p}}{1-\hat{p}}\right) = \beta_0 + \beta_1 ScaleLocal + \beta_2 QuotesDem + \beta_3 QuotesRep + \beta_4 QuotesBus \\ + \beta_5 NationalPress + \beta_6 FirstPage + \beta_7 Editorial + \beta_8 2008 + \dots + \beta_{13} 2013$$

4.0 Results

4.1 Descriptive Statistics

Table 1. Summary Statistics

Statistic	N	Mean	St. Dev.	Min	Max
Green Positive (reference group = not positive)	901	0.667	0.472	0	1
Scale (ref = National/Global)	901	0.503	0.500	0	1
Quotes from Democrats	901	0.351	0.706	0	5
Quotes from Republicans	901	0.123	0.405	0	3
Quotes from Businessperson	901	0.357	0.775	0	6
National Press (ref = non-national press)	901	0.290	0.454	0	1
Editorials (ref = non-editorials)	901	0.196	0.398	0	1
First Page (ref = other pages)	740	0.218	0.413	0	1

Table 1 shows the descriptive statistics of all variables. The data set had a total of 29 different newspapers representing 15 states and 20 metropolitan statistical areas (MSAs), with 261 articles coming from the national press newspapers. Out of the 901 articles, 453 had a state and/or local scale of coverage, and 448 had a national and/or global scale. Two-thirds (601) of the articles were classified as GREENPOSITIVE, while the rest were either negative or neutral. The majority of articles quote neither politicians nor businesspersons.

4.2 Bivariate Association

Table 2: Bivariate Association between Scale and GJGED

	National/Global	State/Local	Total
Non-Positive	204 22.6%	96 10.6%	300 33.3%
Positive	244 27.1%	357 39.6%	601 66.7%
Total	448 49.7%	453 50.3%	901 100.0%

Yule's Q: 0.513

Chi-Squared Test (with Yates' continuity correction):

Chi-Squared value: 59.01, p-value <0.0001

Table 2 shows a two-by-two table assessing the bivariate association between SCALE and GREENPOSITIVE for all newspapers. About half of the coded articles operate at each scale. For articles focusing on the global/national dimension, an article is 20% more likely to be positive toward green jobs than to be non-positive toward green jobs. In contrast, an article focusing on the state or local dimension is 273% more likely to be GREENPOSITIVE. In other words, if one were to randomly select an article among articles focusing on the state or local dimension, the odds of selecting an article with a positive view toward GJGED is about four times that of selecting an article without positive valence. Among articles at the state/local level, only 21% have non-positive portrayal of green jobs, compared to 45% among articles at the national/global level. The bivariate analysis provides initial confirmatory evidence for the hypothesis that articles are more likely to provide a positive depiction of GJGED if they focus on

the state/local economic scale rather than the national/global scale. The Yule's Q value is 0.5, indicating a moderate and positive association between the two variables. The Chi-square test of independence yields a p-value under 0.000001, showing strong evidence of interdependence between our main predictor of interest and our dependent variable.

4.3 Multivariate Analysis

Table 3. Logistic Regression Coefficients Predicting the Likelihood of an Article Being Positive Toward GJGED

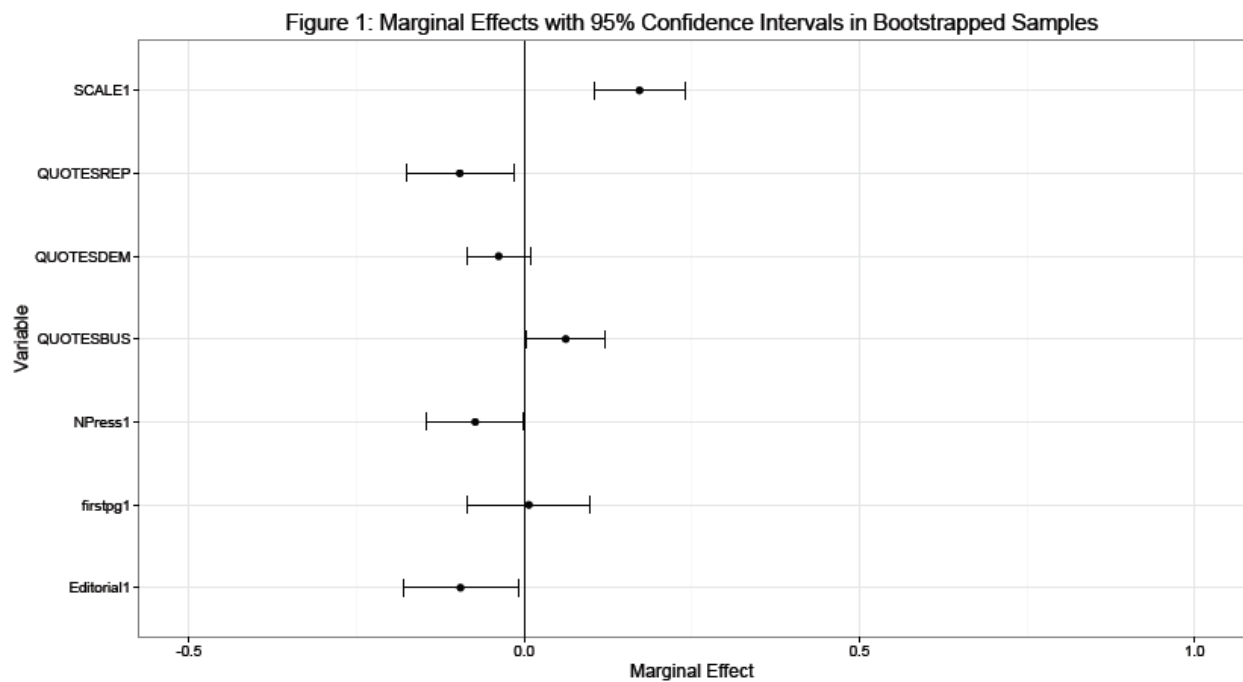
Independent and Control Variables	Model 1	Model 2	Model 3	Model 4	Model 5
	<i>b</i> (<i>se</i>)	<i>b</i> (<i>se</i>)	<i>b</i> (<i>se</i>)	<i>b</i> (<i>se</i>)	<i>b</i> (<i>se</i>)
Scale (Reference group = National/Global)	1.259 *** (0.167)	1.205 *** (0.191)	1.120 *** (0.199)	1.206 *** (0.196)	1.111 *** (0.199)
Quotes from Democrats			-0.451 *** (0.120)		-0.392 ** (0.129)
Quotes from Republicans				-0.558 * (0.223)	-0.303 (0.240)
Quotes from Businessperson			0.512 ** (0.159)	0.537 *** (0.158)	0.511 ** (0.160)
National Press (ref = non-national press)	-0.151 (0.178)	-0.432 * (0.193)	-0.477 * (0.198)	-0.479 * (0.197)	-0.462 * (0.198)
Editorials (ref = non-editorials)	-0.902 *** (0.193)	-0.536 * (0.226)	-0.574 * (0.236)	-0.441 + (0.230)	-0.567 * (0.235)
First Page (ref = other pages)		0.000 (0.235)	-0.133 (0.256)	-0.209 (0.255)	-0.105 (0.258)
Constant	1.976 + (1.060)	2.105 * (1.067)	2.290 * (1.082)	2.056 + (1.080)	2.241 * (1.082)
Number of Observations	901	740	740	740	740
Nagelkerke R-square	0.26	0.23	0.28	0.26	0.28

Note: Year dummy control not shown. Unstandardized coefficients with standard errors in parentheses.

† p < .1; * p < .05; ** p < .01; *** p < .001 (two-tailed tests)

Table 3 displays the results of logistic regression models estimating the likelihood of an article having a positive view of GJGED. The effect of SCALE is positive and significant in all five models. In the model that takes into account all predictors, articles that depict GJGED at the local or state level are over three times more likely to be positive than those that depict the

issue at the national or global level. Several of the control variables are also significant. When an article quotes a businessperson, it is more likely to be positive, whereas articles in national press outlets and editorials are more likely to be negative or neutral. Articles that quote from Democrats and/or Republicans tend to be negative or neutral. The result for Democrats was different than anticipated and is discussed below.



In order to further check the robustness of the finding, we ran model 5 100 times from 100 bootstrapped samples. These samples are created by sampling with replacement 100 times from our original sample. The coefficients associated with each covariate with their corresponding confidence intervals are plotted in Figure 1, and the year fixed effects are included but not shown. The results are remarkably similar to the ones shown in model 5. However, the confidence intervals indicate that most of the control variables are within the margin of error, whereas SCALE shows the strongest marginal effect.

Because articles of the same newspaper could be subjected to similar editorial practices and articles of the same year could be describing the major events that transpired during that time period, we accounted for potential clustering of observations. With 29 newspapers and 7 years in the sample, we developed three-level generalized hierarchical linear models with articles nested within newspaper-year, which are in turn nested within newspapers. (See Table 4.) This strategy allows us to account for additional possible confounding variables at the newspaper level (e.g., political bias of the newspaper and circulation), and it also controls for change over time (e.g., political events, economic conditions, and growing partisanship). These models have the same sample predictors as those in Table 3, except that the “national press” variable is excluded because its variation is completely absorbed by variation at the newspaper level. We do not introduce level-2 and level-3 predictors because the number of newspaper units (29) is smaller than the number of units required for meaningful inference. The nested models are more conservative than the logistic regression models in the sense that they account for the nesting structure of data.

Table 4. Generalized Hierarchical Linear Model Predicting the Likelihood of an Article Being Positive Toward GJGED

Independent and Control Variables	Model 1	Model 2	Model 3	Model 4	Model 5
	<i>b</i> (se)	<i>b</i> (se)	<i>b</i> (se)	<i>b</i> (se)	<i>b</i> (se)
Scale (Reference group = National/Global)	1.107 *** (0.184)	0.929 *** (0.204)	0.877 *** (0.213)	0.916 *** (0.210)	0.856 *** (0.214)
Quotes from Democrats			-0.392 ** (0.127)		-0.283 * (0.136)
Quotes from Republicans				-0.692 ** (0.229)	-0.502 * (0.247)
Quotes from Businessperson			0.457 ** (0.164)	0.484 ** (0.162)	0.467 ** (0.166)
Editorials (ref = non-editorials)	-0.680 *** (0.223)	-0.455 † (0.247)	-0.496 † (0.259)	-0.369 † (0.252)	-0.473 † (0.259)
First Page (ref = other pages)		-0.162 (0.251)	-0.240 (0.273)	-0.293 (0.271)	-0.200 (0.276)
Constant	0.461 † (0.254)	0.666 * (0.267)	0.730 ** (0.280)	0.620 * (0.277)	0.742 * (0.282)
Number of Newspaper*Year	148	127	127	127	127
Intercept Variance by Newspaper*Year	0.759	0.785	1.000	0.811	0.932
Number of Newspapers	29	24	24	24	24
Intercept Variance by Newspaper	1.058	0.878	0.832	0.913	0.861
AIC	953.4	786.5	768.8	768.5	766.1
BIC	977.4	814.1	805.7	805.4	807.5

Note: Year dummy control not shown. Unstandardized coefficients with standard errors in parentheses. † $p < .1$; * $p < .05$; ** $p < .01$; *** $p < .001$ (two-tailed tests)

Compared with the models in Table 3, those in Table 4 tell a strikingly similar story. The coefficients of SCALE become somewhat smaller, but the effects remain positive and significant across all five models. Editorials are less friendly to GJGED than to other kinds of articles, although the effects are only marginally significant. Whether or not the article appears on the front page has no effect on its stance toward GJGED. Similarly, articles that include more quotes from businesspersons are more likely to be positive toward GJGED, whereas if an article quotes from Democrats and/or Republicans, it will tend to be negative or neutral. We also estimated another set of 3-level generalized hierarchical linear models that conceptualize articles as nested within 112 MSA-years, which are in turn nested in 20 MSAs, and the results are very

similar to the ones reported in Table 4. Furthermore, we ran models with articles nested within MSA-year which are nested within MSAs. All of our effects remain robust in these models as well. These results are not shown but are available upon request. Thus, our evidence is consistent across different nesting structures and different sets of controls.

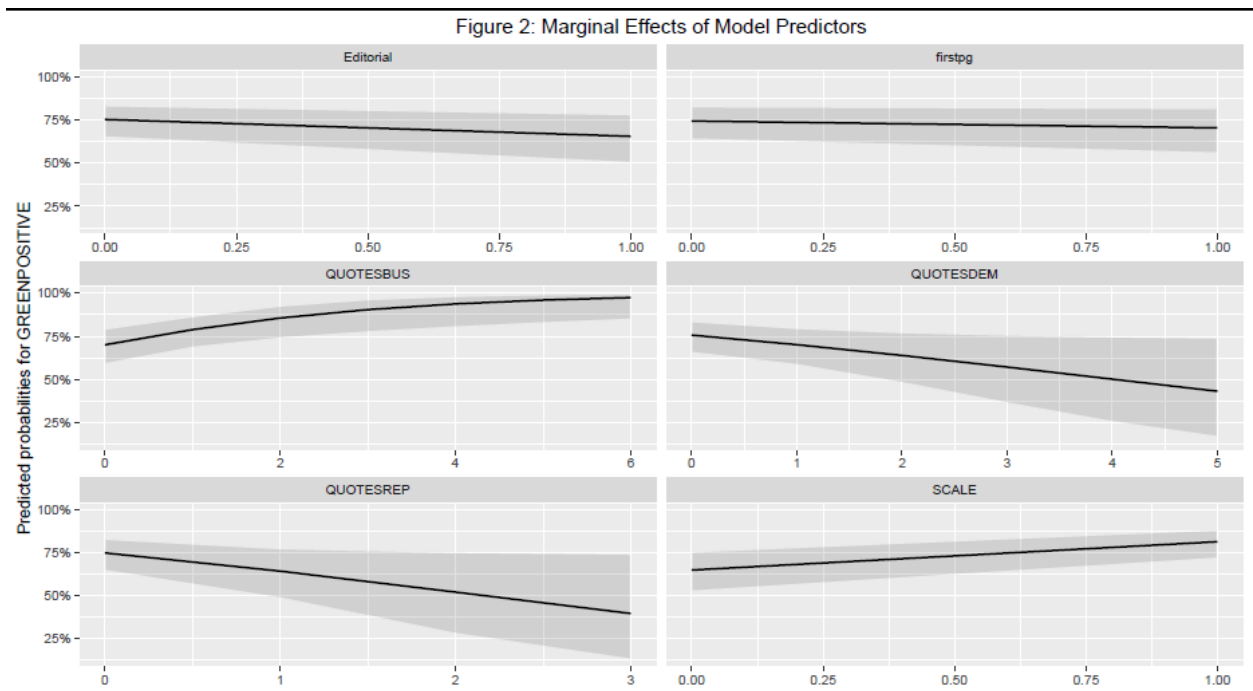
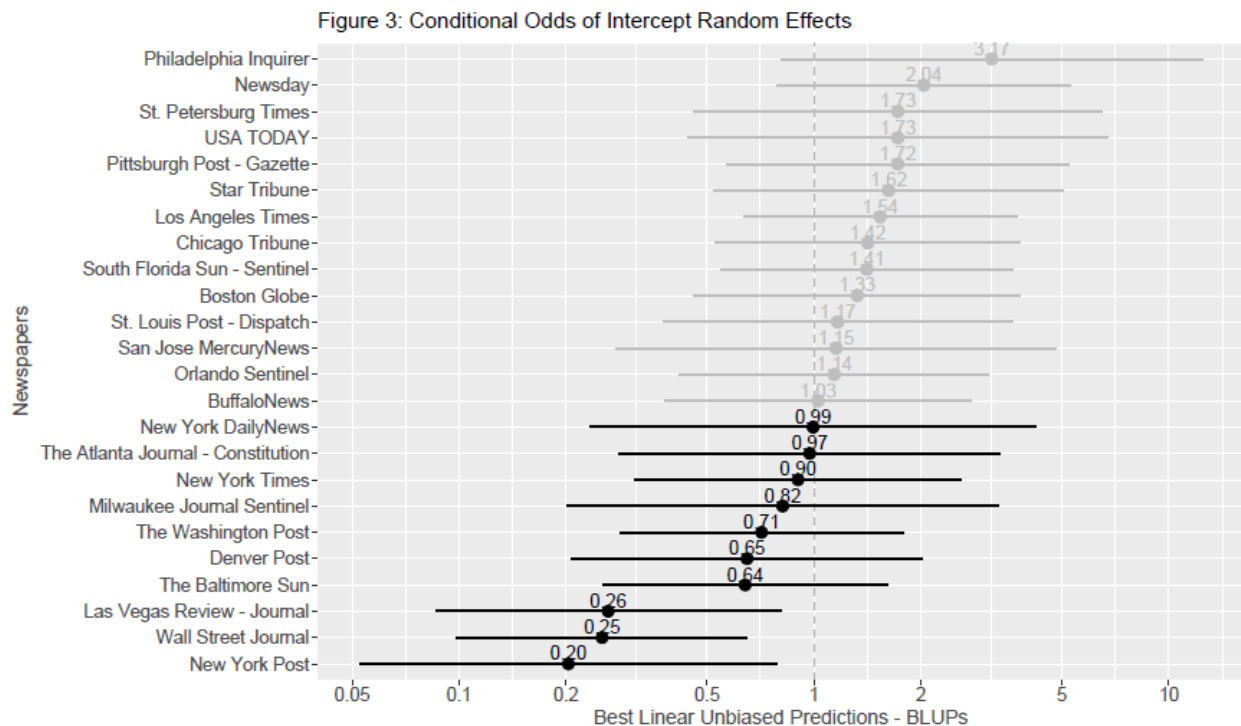


Figure 2 displays the marginal effects of all predictors with their respective confidence intervals. The effect lines for the variables EDITORIAL and FIRSTPG (first page) are flat, suggesting that they are insignificant predictors. The line for our main variable of interest, SCALE, trends upward. Holding all other predictors constant, an article covering GJGED issues at the national/global level has about a 63% chance of being positive toward GJGED, whereas that percentage for an article covering GJGED issues at the state/local level is about 85%. Similarly,

the percentage of articles favorable to GJGED approaches 92-96% if the article has more than four quotes from a businessperson.



The nesting structure also allows us to see how positive particular newspapers are toward GJGED. Figure 3 displays the conditional odds or incident ratios of newspapers' random effects. The figure is also color-coded. Since the numeric values displayed are exponentiated numbers, the effect sizes split on either side of 1. Conditional odds larger than 1 indicate that being published in the given newspaper increased the chances of an article being pro-GJGED, and vice-versa. The odds larger than 1 are coded grey and those smaller than 1 are coded black. The *Philadelphia Inquirer*, located in a city with a strong sustainable business network and city government support for green jobs, is the most pro-GJGED in our sample. *Ceteris paribus*, if an article appears in this newspaper, the odds of it being pro-GJGED multiply by a factor of 3.17. Similarly, the *New York Post*, a conservative newspaper, appears to be the least GJGED-friendly

newspaper. If a person picks out one article in our sample at random and knows that it is published by the *Post*, the odds of that article being favorable to GJGED decrease by 80%. The random effects are statistically significant only for three newspapers: *Las Vegas Review*, *Wall Street Journal*, and *New York Post*.

4.4 Summary of Results

In summary, we found strong and consistent evidence that media reporting of GJGED was more positive in articles that focused on the local or state scale than on the issue at the national or international scale. This pattern was robust even when multiple control variables were included and in hierarchical linear models. The controls included variables at the newspaper level and for year of publication. We interpret this finding to be consistent with the idea that when political opportunities closed for legislation and policies related to the GJGED frame in the U.S. at the federal government level during the first term of the Obama administration, the opportunities remained more flexible in the aggregate at the local and state level.

5.0 Discussion

To understand in more depth the patterns revealed by the quantitative analysis, we also analyzed the content of the articles. With respect to the SCALE variable, we found that reports at the local scale frequently emphasized the benefits of local job creation, whereas national or global scale articles tend to focus more on national policy conflict. In other words, the “job creation” frame, which is what Obama and the Democrats used at the national level without

great success, was more salient when the media coverage was local, whereas the conflict of party positions was more salient when the coverage was national or global. For example, the local-scale, GJGED-positive article titled “Haverhill Group Picked to Help Veterans Land Green Jobs” described how a veteran’s center in Massachusetts received a grant from the state’s Department of Veterans Services to fund a green jobs training program. The director of the program commented on how the grant would help to reduce unemployment among veterans (Laidler, 2009). This focus on employment was a common theme in many of the local-scale articles.

In contrast, national or global scale articles tended to discuss the debate over green jobs policies, either with a clearly negative position or a balanced portrayal of the debate. For example, one national-scale article, “Don’t Count on ‘Countless’ Green Jobs” (Schulz, 2009), argued that the proposed federal renewable portfolio standard would destroy jobs rather than create them. Articles that discussed the issue at a global level portrayed failures in other countries as a basis for arguing against green development in the U.S. For example, one article noted, “Denmark may be a clear success...but how many green failures have there been in Europe?” (Carroll, 2009). Authors of global-scale articles sometimes cited a controversial European study that claimed that for every green job created in Spain, 2.2 other jobs were destroyed (Álvarez et al., 2010).

With respect to the control variables, it was not surprising that many quotes from Republicans expressed opposition to or skepticism of GJGED policies. The content of the quotations from Democrats provided some insights into the perhaps counter-intuitive finding that the number of times Democrats were quoted was negatively associated with support for

GJGED. Our qualitative analysis suggests two possible explanations for this finding. First, because we coded for positive coverage of GJGED, a neutral or balanced article was coded as a “0.” For example, an article that quoted Vice President Joe Biden supporting green policies noted, “Innovation and energy will go on whether or not we join, and no nation which expects to be a leader of other nations can fall behind” (Myers, 2011). This supportive quote is balanced by a quotation from Republican National Committee spokesman Ryan Mahoney, who commented, “The Obama administration's energy policy has been defined by soaring gas prices and taxpayer money wasted on green job initiatives that have failed to put people to work” (Myers, 2011).

Second, articles with a negative view of GJGED frequently quoted Democrats, including President Obama, to emphasize a particular point of contrast. For example, in an article about the bankruptcy of the solar firm Solyndra in 2011, the writer quoted a 2010 speech in which the president stated the following: “Not only would this spur hiring by businesses, it would create jobs in sectors with incredible potential to propel our economy for years, for decades to come. There is no better example than energy” (Pfeifer and White, 2011). This quote was used to show how mistaken the president was. Likewise, in response to Vice President Joe Biden’s claim that energy reform policies will create jobs, one author devoted an entire article to arguing that taxpayers would be “saddled with the debt created by Washington’s spending splurge” (Carroll, 2009). The author added, “If I were vice president, I'm not sure I'd be boasting about that.”

With respect to the variable for national or prestige press newspapers, they tend to be less positive toward GJGED than other newspapers even when controlling for whether an article covers the topic at the local or national-global scale. For example, a *New York Times*

article that reported President Obama's plans "to create the largest public works construction program since the inception of the interstate highway system" quoted both Democrats who were excited about the plans and Republicans who had "long derided public works spending as a poor response to tough economic times" (Baker and Broder, 2008). A *Washington Post* article similarly reported on Obama's remarks on green jobs in his 2013 State of the Union address, but it also included responses from Republican Party leaders (Wilson 2013). Finally, many editorials from these newspapers also tended to be critical of the government's policies. The conservative-leaning *Wall Street Journal* contributed the most editorials in our sample, and many had a tone similar to the one conveyed by a journalist in this lead sentence: "Take this jobs plan and shove it" (Lewis, 2011).

With respect to the number of times a businessperson is quoted, articles that are more positive towards GJGED also tend to quote more businesspeople controlling for other factors. For example, a *Buffalo News* article, titled "Falls Plant to Bring 500 Jobs: Hydropower Deal Aids Silicon Production," discussed how plans to convert an old metallurgical plant in Niagara Falls, New York, into a production facility for silicon products for the solar industry will boost the local economy (Linstedt, 2008). The article quoted the chief executive of Globe Specialty Metals, the company planning to take over the old plant, as follows: "We will educate and train most of these people for an industry with a 30 to 40 percent annual growth rate. This is the right time to be doing this and the right time for prospective employees to be coming in." Because companies seek to portray themselves in a positive light, quotes from businesses would be likely to suggest a positive portrayal of GJGED.

In summary, the qualitative analysis is consistent with the quantitative analysis in suggesting that despite the failed attempt of President Obama and the Congressional Democrats to get the green jobs frame to stick at the national level, it worked better at the local level, where the news stories focused less on clashes of political parties and ideologies and more on the bread-and-butter issues of job creation, new training programs, and business development. This focus also helps to explain why articles that quote businesspeople tend to be more positive because the businesspeople quoted in this dataset tend to be ones involved in energy-transition industries.

6.0 Conclusions

This study analyzes political opportunities for transition policies as they appear in the country with the second-highest greenhouse-gas emissions in the world and with enormous impact on other countries. We explain how the Democratic Party under President Obama framed energy-transition policies as GJGED policies to make greenhouse-gas regulation and renewable electricity standards more palatable to the broader public. However, the framing and associated policies encountered growing opposition from conservatives in Congress, and the signature energy-transition policy initiative of the administration's first term failed. The political opportunities for environmental policies remained mostly closed at the federal government level for the remainder of his term of office, which ended in January, 2017. However, we also suggest that there was scalar variation in the acceptance of the GJGED frame and policies, and we can show this variation with some precision through the analysis of media representations. Our research on media representations is consistent with the analysis of policy

variation at the state-government level, which shows both growing polarization across parties on this issue as well as some continued openings for energy-transition policies even in state governments dominated by the Republican Party (Hess et al., 2016).

Attention to the issue of scalar variation and political opportunities is of general importance because in some countries political parties have become polarized on transition policy issues, especially for energy policy and carbon mitigation. The United States is perhaps the clearest example of this situation, but conservative parties in other countries—notably Australia, Canada, Poland, and the United Kingdom—have also tended to close political opportunities for energy-transition policies when these parties are in power. Opposition to energy-transition policies has also become combined with anti-immigration sentiment and Euroskepticism in some European right-wing nationalist parties. Without leadership and support from the developed Western countries, less developed countries that are facing tremendous energy demand growth will be less motivated to implement even the meager promises of the nationally determined contributions to greenhouse-gas mitigation. In this changing historical context, research in transition studies on the politics of transitions could provide some insights into how to develop and maintain support for the policies in a world where the effects of climate change are becoming increasingly evident but political support for mitigation policies remains inadequate in many countries.

In addition to providing some ways of thinking about an issue that is of growing importance, this study makes some general theoretical and methodological contributions to the transition studies literature. We advance the politics of transitions literature by showing the value of a combined spatial-structural perspective, but we warn against jumping to broad

generalizations when theorizing the relationship between political opportunities and spatial scale. In some cases, evidence will continue to be found to support a national-local gap, where local communities reject energy-transition policies such as renewable-energy siting projects. Likewise, higher-levels of government can serve as a bulwark against lower levels of government that show recalcitrance toward energy-transition policies, such as the European Union on some issues and President Obama's attempted but ill-fated Clean Power Plan. Conversely, when political opportunities close at the national or higher level of governmental scale, the opportunities may remain more open at lower levels of scale.

In addition to our general argument in support of bringing a scalar dimension to the analysis of political opportunities, we also argue more specifically that by reframing policies from environmental regulation to job creation and business development, political leaders may be able to facilitate transition-policy acceptance, especially at lower levels of scale. This is partly because media reporting at the local scale is less focused on party bickering in a distant national capital. At the local scale, place-based identities around "our jobs" and "our business" may be more important than ideological distinctions involving the proper or improper role of government in the economy. But this dynamic may be quite different in the case of green-energy siting such as onshore wind farms. Consequently, the study of the politics of transitions will also need to attend carefully to the issue of different policy types as they interact with different frames and different levels of spatial scale.

The other main contribution of this study is to bring attention to the media as part of the broader institutional field in which the politics of transitions should be situated. In doing so, we suggest a strategy for quantitative analysis of potentially ambiguous concepts such as scalar

dimensions of political opportunity. We argue that this analysis needs to take into account the complex role of the media, which represent political opportunities but also shape them. In this study, we demonstrated how a multilevel method can provide controls for various dimensions of the media (such as bias of individual media outlets and year of publication) and of article content. When combined with qualitative content analysis, this method provides the capacity to test differing views in the literature (such as on the role of scale in political opportunities) while also generating new insights for future research.

Although we think it is valuable to include media representations as a source of empirical material for research on the politics of transitions in general and political opportunities in particular, we also note that it is only one approach. Comparative case studies of different governments in the tradition of Kitschelt (1986) can point to enduring governmental structures that affect political opportunities. Likewise, network analyses of coalition structures (e.g., Markard et al., 2016) and studies of campaign finance and donations (e.g., Hess, 2014) also provide other avenues of research that are also amenable to quantitative analysis. Thus, our approach is meant to expand the resources for the analysis of political opportunities rather than to imply that the analysis of media representations should be the preferred method.

It is an unfortunate but realistic assessment of the state of the world's sustainability transitions to argue that it is necessary to attend to the closing of political opportunities among national governments that has coincided with failures at the international level to advance significant global treaties for greenhouse-gas reductions. The situation today is much bleaker than the optimism suggested by terms such as "sustainable development" during the 1980s,

and after the elections of 2016 the U.S. surrendered any possibility of providing global leadership at the national level. To the extent that the research field of sustainability transitions is to be global in scope, it will need to grapple increasingly with the problem of closed political opportunities.

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