

Cali Curley

Peter Stanley Federman

Indiana University–Purdue University Indianapolis

State Executive Orders: Nuance in Restrictions, Revealing Suspensions, and Decisions to Enforce

**COVID-19
Viewpoint**

Abstract: *In the absence of a large-scale federal response to the COVID-19 pandemic, state and local elected officials have enacted executive orders that include restrictions on public liberties as well as the suspension of rules and regulations. While these restrictive policy actions have received extensive media attention, the suspensions, including regulatory rollbacks, waivers, and extensions, are lesser known. This Viewpoint essay offers insight from a working database that captures the nuance and variation across restrictions, suspensions, and enforcement mechanisms being utilized at the state level.*

Already, there are public-facing dashboards, media reports, and articles that discuss and examine state-level executive orders, focused on activities such as school closures, restaurant closures, mass-gathering bans, and travel bans (ASTHO 2020; CCHP 2020; KFF 2020; NCSL 2020). However, the actions taken by states are far more comprehensive and robust than these explorations imply. As will be laid out in this essay, executive orders across the states contain both actions restricting individual liberties and the suspension of rules that guide administrative agency action (e.g., health care licensing, public hearing requirements, unemployment, teleworking, and access to services). They can and often do include very significant changes to long-standing policies on public meetings, eligibility for public benefits, electoral processes, and other critical democratic infrastructure.

This Viewpoint essay provides two primary contributions. The first is a description of the database that has been compiled by the authors through inductive process tracing. The second is an exploration of preliminary findings in executive orders and a deep dive into a case study that offers insight into how the information may be useful to practitioners and researchers moving forward. The case studies are chosen for their representation of different response strategies taken by states; a number of states had centralized responses within the governor’s office, while others leaned more formally on agency directors to adopt or suspend rules. We include a deeper discussion of a single case (Montana) to demonstrate how this information may be useful in the future. We explicitly lay out the demographics, history of disaster, and active

COVID-19 situations, which should be more formally explored in future research. The Viewpoint concludes by outlining future directions that the pursuit of this work can offer scholars, practitioners, and citizens alike.

Capturing Nuance in Executive Orders **Rationale**

Most of the initial public-facing projects that have explored the effectiveness of social distancing guidelines and other orders have treated these measures as binary. For example, many projects treat stay-at-home orders identically, but they actually have wide variation within them, from their enactment of enforcement mechanisms to their designations of essential businesses. Other public-facing projects have also jumped, fairly quickly, to utilizing various metrics such as critical care capacity, positive tests, and deaths to predict the outcomes of social distancing interventions (Goodreau et al. 2020; IHME 2020; Matrajt and Leung 2020) prior to a real understanding of the variation present within these orders. In fact, each executive order has a wide degree of variation regarding how restrictions and closures are to be carried out. This seems to be motivated, in part, by the cultural complexity and political context within each state.

Process

To capture the full range of variation in executive orders, a detailed process-tracing approach is necessary. In an effort to keep track of the policy actions occurring at the state level across the country, the project team coded more than 1,000 executive orders adopted and implemented between March 1 and April 11, 2020, by every U.S. state and continues

Cali Curley is assistant professor in the Paul H. O’Neill School of Public and Environmental Affairs at Indiana University–Purdue University Indianapolis. Her research focuses on local government policy tool choices and measuring their effectiveness, typically in sustainability. Dr. Curley’s recent work more explicitly incorporates equity into the study of policy tool choices made by local governments.

Email: curleyc@iupui.edu

Peter Stanley Federman is assistant professor in the Paul H. O’Neill School of Public and Environmental Affairs at Indiana University–Purdue University Indianapolis. His research focuses on the politics of administration and how bureaucrats engage in political action and behavior. Dr. Federman’s recent work looks at the manifest ways these politics impact the policy-making process, particularly in local governments and public safety agencies.

Email: federman@iu.edu

Public Administration Review,
Vol. 80, Iss. 4, pp. 623–628. © 2020 by
The American Society for Public Administration.
DOI: 10.1111/puar.13250.

to track and code orders as they are released. These orders cover a wide range of style, format, tone, and substance, and there are degrees of nuance present within these orders regarding social distancing restrictions, a wide range of administrative rules and adjustments to regulations, and rules around enforcement. The coding was conducted inductively in an effort to process trace and capture fine-grained variation across state-level executive orders. Process tracing is utilized as a tool because it enhances understanding of the “unfolding of events or situations overtime” (Collier 2011, 824). The executive orders are treated as snapshots of a specific point in time that describe current conditions within the respective states, and the process notes how each of these documents offers a new step in the state’s response to the COVID-19 crisis. This process-tracing approach offers the ability to “contribute to supporting or overturning alternative explanatory hypotheses” (Bennett 2010, 208).

Coding

The coding process follows each state’s executive orders over time, identifying and building a series of variables that are reflective of the content of the executive orders. Instead of simply assigning a binary attribute to a given variable, the coding team copied relevant language from the executive order to be coded into our database. Each restriction and suspension has vast degrees of variation that need to be examined independently. One of the techniques utilized to do this is to employ elements of the Institutional Grammar Tool (Crawford and Ostrom 1995; Siddiki et al. 2019), which offers insight into the stringency of the language utilized within the order.

As is known from existing data, there are a series of shared actions within the issued executive orders, including restaurant closures, business closures, school closures, and mass-gathering bans. However, until now, there has been little work to differentiate the specific approaches and variations between states. Although existing data repositories currently provide evidence of the presence of these actions, this data set captures differences in implementation, execution, and enforcement, among other characteristics. In the following sections, some preliminary insights from the data set are examined.

Definitions and Preliminary Insights

Restrictions

Restrictions reference the regulation of private-party activities such as business operations and gatherings. From the coding of the 1,000-plus orders, a series of variations across these restrictions that make binary treatment less informative than a more nuanced coding were identified. These restrictions included school closures, restaurant closures, and stay-at-home orders. To offer insight to the degree of variation, school closures included yearlong closures, allowances to be open for food distribution, mandates that technology be provided to students, mandates that schools be open to essential workers as “day care,” and allowances for staff to be in the office. Restaurant closures varied by capacity restrictions; limits on delivery or takeout; requiring separate staff for money and food; and making exceptions for specific forms of eateries such as hospital cafeterias, airports, and others. Stay-at-home orders varied primarily by their essential activity definitions, including exempting churches or specific business establishments, and by their enforcement mechanisms.

Suspensions

Suspensions capture the temporary revoking or reducing of rules governing both public and private actions that cannot be followed in accordance with social distancing guidelines. In coding for nuance in these executive orders, a substantial amount of changes within the executive orders that were not being popularized in public dashboards became apparent—specifically, suspensions of rules. Commonly adopted suspensions included waiving hours worked limits on trucking; changes to procurement regulations; rule suspensions covering protections for workers in the medical field (such as removing restrictions on personal protective equipment use); relaxing restrictions on qualifications for medical professionals; suspending rules around access to facilities like juvenile detention centers, nursing homes, jails, and other facilities; and suspending requirements for in-person public meetings by utilizing technology to shift online or through the posting of transcripts. Other significant suspensions that impacted democracy and governance included election delay, increasing vote-by-mail opportunities, and decreasing stringency on petition requirements.

Enforcements

Enforcement descriptions outline which actors have the authority to enforce and potentially prescribe enforcement actions regarding reporting and punishment. Having coded for restrictions and suspensions, it became clear that the variations were fairly large both over time and across states. As the process-tracing method is intended to capture variation over time, this coding process captured changes to executive orders that were reissued. Notably, some states reissued business closures, stay-at-home orders, or social distancing guidelines with embedded or updated enforcement language. This enforcement language typically targeted individuals, businesses, and even local governments that are found to be out of compliance with the state executive orders. The violation of these rules was often considered a Class 2 misdemeanor with fines ranging from \$50 to \$1,000 and potential jail time from two weeks to one year.

Specific Examples of Variation in Executive Order Directives

To provide some additional examples of the variation across state executive orders, Montana, Ohio, and Florida are used to describe different approaches and offer three examples of how language, despite similar directives, varies by state. Table 1 offers insight into the issuing office and order type by state. The variation suggests that these states took different response strategies. Montana had a very clear governor-led approach, with all actions executed through the purview of the governor’s office. Ohio tended to have a more balanced approach, with the governor and appointed officials at the state administrative level enacting orders to address COVID-19. Florida applied a third approach, in which the agency directors appear to be primarily responsible for agency suspensions and the governor’s office primarily responsible for restrictions.

Table 1 Issuing Office and Order Type by State

	Governor’s Restrictions	Governor’s Suspensions	Agency Restrictions	Agency Suspensions
Florida	15	8	6	20
Montana	8	18	0	0
Ohio	2	10	13	2

Table 2 Examples of Variation in Common Orders

Directives	Florida	Montana	Ohio
Restriction: Alcohol sales	<p>Title: State of Florida Office of the Governor Executive Order Number 20-68: Emergency Management—COVID-19</p> <p>Date: March 17, 2020</p> <p>“Pursuant to sections 252.36(5)(g)–(h), Florida Statutes, any licensee authorized to sell alcoholic beverages for consumption on premises that derive more than 50% of its gross revenue from the sale of alcoholic beverages shall suspend all sale of alcoholic beverages for 30 days from the date of this order, effective at 5 p.m. today, March 17, 2020.”</p>	<p>Title: Office of the Governor State of Montana: Directive Implementing Executive Orders 2-2020 and 3-2020 and providing for measures to combat the spread of COVID-19 via food and beverage services or casinos.</p> <p>Date: March 20, 2020</p> <p>“The places subject to this Directive are permitted and encouraged to offer food and beverage using delivery service, window service, walk-up service, drive-through service, or drive-up service, and to use precautions, including social distancing.”</p>	<p>Title: Director’s Order: Order Limiting the Sale of Food and Beverages, Liquor, Beer and Wine to Carry-out and Delivery Only</p> <p>Date: March 15, 2020</p> <p>“Liquor, beer and wine sales in the State of Ohio are restricted to carry-out sales and delivery only to the extent permitted by law. No onsite consumption is permitted.”</p>
Suspension: Public meeting rules	<p>Title: State of Florida Office of the Governor Executive Order Number 20-69: Emergency Management—COVID-19—Local Government Public Meetings</p> <p>Date: March 20, 2020</p> <p>“Section 1. I hereby suspend any Florida Statute that requires a quorum to be present in person or requires a local government body to meet at a specific public place. Section 2. Local government bodies may utilize communications media technology, such as telephonic and video conferencing, as provided in section 120.54(5) (b)2, Florida Statutes.”</p>	<p>Title: Office of the Governor State of Montana: Directive Implementing Executive Orders 2-2020 and 3-2020 providing measures for the operation of local government</p> <p>Date: March 24, 2020</p> <p>“Local governments may modify the hours that their offices are open for the transaction of business. Strict compliance with § 7-4-2211, MCA, § 3-6-106, MCA, §7-4-102, MCA, and other related statutes governing the business hours of local governments in Montana are suspended during the emergency, but only to the extent necessary to respond to the emergency and to protect public health and safety.”</p>	No explicit orders referencing the suspension of public meeting rules
Enforcement: Stay at home	<p>Title: State of Florida Office of the Governor Executive Order Number 20-82: Emergency Management—COVID-19—Isolation of Individuals Traveling to Florida</p> <p>Date: March 24, 2020</p> <p>“Failure to follow Section 1 of this Order is a second-degree misdemeanor pursuant to section 252.50, Florida Statutes, and is punishable by imprisonment not to exceed 60 days, a fine not to exceed \$500, or both.</p> <p>Section 3.</p> <p>A. Pursuant to section 252.47, Florida Statutes, I hereby direct all state, county and local law enforcement authorities to enforce this Order. Any law enforcement authority that interacts with a person in violation shall immediately report the individual to the Florida Department of Health.”</p>	<p>Title: Office of the Governor State of Montana: Directive Implementing Executive Orders 2-2020 and 3-2020 providing measures to stay at home and designating certain essential functions.</p> <p>Date: March 26, 2020</p> <p>“This Directive, along with any prior Directive that implements and references the public health authorities of the Department of Public Health and Human Services (DPHHS) provided in Title 50, constitutes a “public health . . . order[]” within the meaning of § 50-1-103(2), MCA, and is enforceable by the Attorney General, DPHHS, a county attorney, or other local authorities under the direction of a county attorney.”</p>	<p>Title: Director’s Stay At Home Order</p> <p>Date: March 22, 2020</p> <p>“This Order may be enforced by State and local law enforcement to the extent set forth in Ohio law. To the extent any public official enforcing this Order has questions regarding what services are prohibited under this Order, the Director of Health hereby delegates to local health departments the authority to answer questions in writing and consistent with this Order.”</p>

Table 2 explores the interstate variation in restrictions, suspensions, and enforcements, including excerpts of the language within the executive order that addresses the specific category. To facilitate future quantitative analysis, this might be translated into a binary operationalization, but it is also clear that the particular language and directives are more informative than a binary indicator will allow. For example, there is decent variation in stringency and specificity of the orders, with some providing detailed references to state statutes dictating authorization and enforcement power and others utilizing more ambiguous language. Florida forcibly closed bars, while Montana and Ohio both authorized some type of carryout alcohol sales, with Montana explicitly encouraging social distancing mechanisms to be employed. Florida explicitly limits public hearing attendance, Montana offered local governments discretion as to operating hours and procedures, and Ohio did not address public meetings at all. Florida and Ohio both allowed state and local law officers the ability to enforce the stay-at-home order, while Montana authorized the local health departments to enforce the stay-at-home order. The variation present across these examples offer just some examples as to why binary coding does not capture

the degree of variation present in executive orders and the utility of developing this proprietary data set.

Montana

Montana offers a case in which only the governor issued suspensions and restrictions.¹ Two figures are provided that detail the time line of restrictions and suspensions present within Montana executive orders. This time line is mapped against data that have been utilized frequently as dependent variables in the initial proliferation of COVID-19 research: recreational and retail mobility (Kumar and Nataraj 2020; Luther 2020; Wellenius et al. 2020) and positive case counts (Abouk and Heydari 2020). Then, a brief description of Montana as a state is included, highlighting a series of factors that will likely be important in understanding and unpacking state-level responses to COVID-19 in the future. These include political climate (Bui and Sankaran 2006; Burkle and Hanfling 2015; Hahn et al. 2020), state demographics (Laurencin and McClinton 2020), disaster and emergency response history (Kapucu and Van Wart 2006), as well as COVID-19 case severity. Future work should consider questions of causation, but this preliminary case

is meant to offer some insight into the proliferation of restrictions and suspension. Linking this information to mobility, as tracked by Google, as well as the number of COVID-19 cases on each date as per Unacast data (Google 2020; Unacast 2020) is meant to prompt thinking around future investigation, not to imply any causal evidence. It is also important to note that it has been widely reported that these numbers may not be completely accurate and should be taken as evidence of trends rather than exact calculations (Lachmann et al. 2020; Shinkman 2020).

Montana did not declare a state of emergency until March 11, 2020, which was later than the majority of other states. However, from that point, the state moved swiftly and within four days had closed schools and issued a strong recommendation to cancel large gatherings. Restaurants were closed by March 20 (nine days after declaring a state of emergency), and a stay-at-home order was in place by March 26. The first suspension was adopted on March 15 to lift transportation restrictions on medical supplies, followed in quick succession by suspensions of rules around unemployment, medical insurance for COVID-19 treatment, and allowances for telemedicine services. Many of the issues addressed at the state level related to democratic concerns and social service provisions. More detail is offered in figures 1 and 2.

Political Representation

The current governor of Montana is Steve Bullock, a term-limited Democrat who is running for Senate in 2020. The bicameral state legislature features a Republican-held Senate (30–20) and House (58–42). Montana’s sole member of the U.S. House of Representatives, Greg Gianforte, is a Republican, and Montana is represented in the U.S. Senate by Jon Tester (D) and Steve Daines (R).

Economy and Population

Montana is nearly 90 percent white, with 30 percent of individuals having a bachelor’s degree or higher, 13 percent living at or below the poverty line, and only 6.8 individuals per square mile on average. The economy of Montana is robust and diversified, with health care, trade, and leisure activities making up nearly 45 percent

of the workforce. Finally, it should be noted that despite the state’s rural character and lack of population density, more than 18 percent of Montanans are employed by state and local government.

Emergency Response

Montana Disaster and Emergency Services (MT-DES) is the lead emergency management agency for the state. MT-DES is part of an unusual arrangement that puts the agency under the auspices of the Department of Military Affairs, which includes the office of the adjutant general (de facto commander of the Montana National Guard) and the office of Veterans Affairs. The primary responsibilities of these agencies, as pertaining to emergency management in the state, revolve around wildfires, cold-weather emergencies, and rural search and rescue.

COVID-19

The first COVID-19 case in Montana was reported on or about March 11, and the state reached 332 reported cases by April 11. Figures 1 and 2 lay out a concise time line of the executive orders and directives issued in Montana between March 1 and April 11.

Future Directions

Causality is important to understanding what is and is not working in response to the global pandemic. This research suggests that while current research is important, more nuance may be necessary to understand the responses of state governments to the ongoing crisis. This section outlines a few directions for studying restrictions, suspensions, and enforcement as we move into the next phase of pandemic response.

Restrictions

The first call for future action is to develop a stringency indicator for social distancing restrictions, particularly as governments begin to roll back specific measures. This means moving beyond the traditional binary operationalization of restrictions. The second call for future research on restrictions is to understand the implications of states restricting local government actions through preemption. There has been substantial tension and variation in how states have authorized

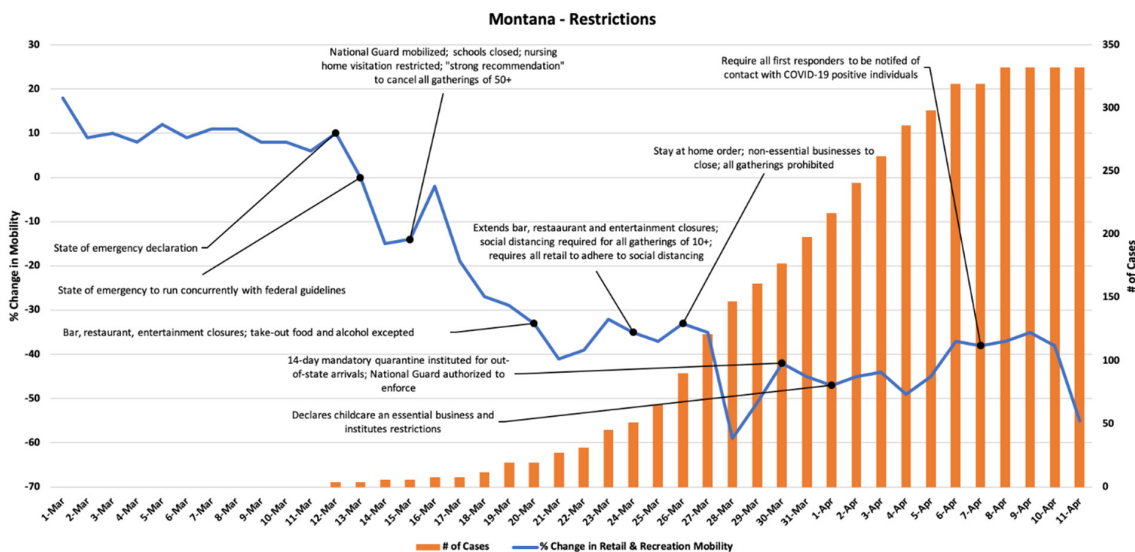


Figure 1 Montana Restrictions

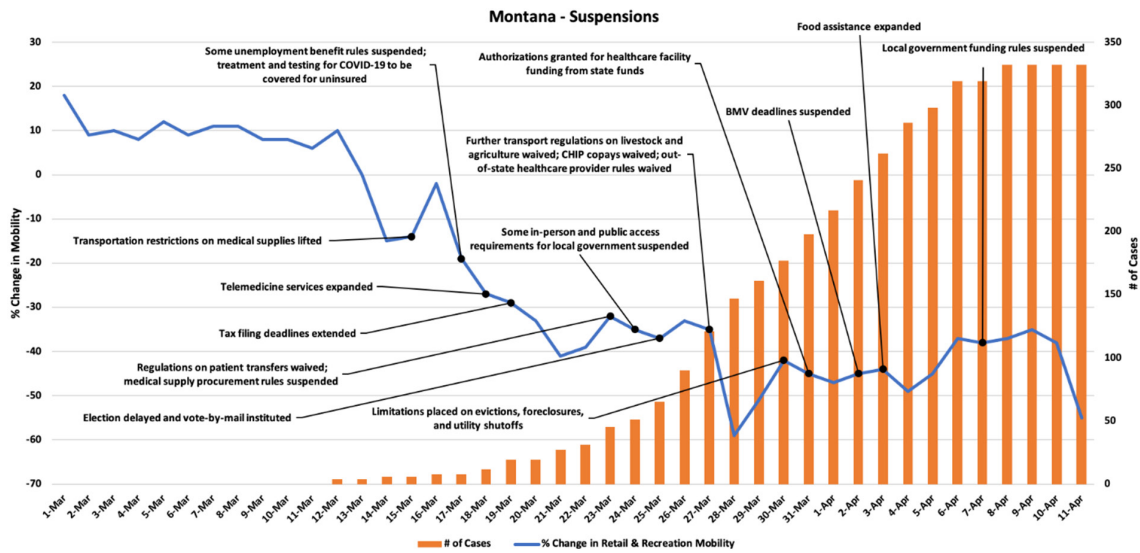


Figure 2 Montana Suspensions

power to local governments; some states have deemed local action that is more stringent than the state to be unconstitutional, other states have preempted local actions, while other states have offered local governments the flexibility to be more stringent but not less.

Suspensions

It is apparent that there are large proportions of orders being issued that do not fit into traditional restrictions and are more likely suspensions of existing rules that hinder response to the pandemic. The first call for future research is to examine how these rule changes impact administrative agencies and democratic function. It will be important to understand the impacts of these changes on equitable access to government, transparency, and accountability. In addition, the suspensions of rules that prohibited telework may have large-scale implications on the administrative agencies scope of work in the future.

Enforcement

Additionally, states have adopted varying degrees of stringency related to enforcement; these can, but do not always, incorporate descriptions of who is authorized to enforce the executive order, describe the potential punishments, and issue clear directives as to what will be enforced. The implications of whether enforcement is effective at increasing social distancing remains to be seen and should be explored in future research.

Summary

After conducting an inductive process tracing of more than 1,000 executive orders issued since February 2020, there are three key takeaways. First, it is apparent that in many states, some actors outside the governor’s office are being given substantial discretion and/or power to make policy. Second, the COVID-19 response toolkit consists of more than social distancing restrictions, incorporating rule suspensions and varied enforcement mechanisms. And third, the nuance present within these actions is not captured through simple binary operationalization. This Viewpoint offers insight into a comprehensive database being established around restrictions, suspensions, and enforcement, provides a series of interesting takeaways from the database development, and offers

potential future research directions for scholars. The process of how these orders are adopted and repealed, the political and administrative actors involved, and what policy arenas are regulated or freed from regulation are important considerations for what happens next. This does not assume positive or negative changes as a result of these orders, but it is wise to be aware and wary.

Acknowledgments

We would like to thank the Office of the Vice President for Research at Indiana University for providing funding for our incredible graduate research team.

Note

1. Sources for this case study include the following: Montana Department of Commerce, “Census & Economic Information Center,” <https://ceic.mt.gov/>; Montana National Guard, “Montana Army National Guard,” <https://nationalguard.com/select-your-state/MT>; Montana State Library, “State Librarian’s Letter,” https://mslservices.mt.gov/legislative_snapshot/Default.aspx; State of Montana, “Official State Website,” <https://mt.gov/>; Montana Disaster and Emergency Services, “Preparing Montana Government to be Ready and Safe: COVID-19,” <https://readyandsafe.mt.gov/Emergency>; Politico, “2020 Montana Primary Results,” April 29, 2020, <https://www.politico.com/2020-election/results/montana/>; John Riley, “Montana Army National Guard Prepares for Europe Operation,” KTVH Montana News, February 25, 2020, <https://www.ktvh.com/news/montana-news/montana-army-national-guard-prepares-for-europe-operation>; U.S. Census Bureau, “Quickfacts Montana,” 2019, <https://www.census.gov/quickfacts/MT> (all accessed April 30, 2020).

References

- Abouk, Rahi, and Babak Heydari. 2020. The Immediate Effect of COVID-19 Policies on Social Distancing Behavior in the United States. <https://ssrn.com/abstract=3571421> [accessed June 6, 2020].
- Association of State and Territorial Health Officials (ASTHO). 2020. Coronavirus Disease 2019 (COVID-19) Response Hub. <https://coronavirus-astho.hub.arcgis.com/> [accessed June, 2020].
- Bennett, Andrew. 2010. Process Tracing and Causal Inference. In *Rethinking Social Inquiry: Diverse Tools, Shared Standards*, 2nd ed., edited by Henry Brady and David Collier, 207–20. Lanham, MD: Rowman & Littlefield.

- Bui, Tung, and Siva Sankaran. 2006. Foundations for Designing Global Emergency Response Systems (ERS). In *Proceedings of the 3rd International ISCRAM Conference*, edited by B. Van de Walle and M. Turoff, 72–81. Newark, NJ: ISCRAM. http://idl.iscram.org/files/bui/2006/349_Bui+Sankaran2006.pdf [accessed June 6, 2020].
- Burkle, M. Frederick, Jr., and Dan Hanfling. 2015. Political Leadership in the Time of Crises: Primum non Nocere. *PLOS Currents* 7. <https://doi.org/10.1371/currents.dis.fd8aaf6707cd5dd252e33c771d08b949>.
- Center for Connected Health Policy (CCHP). 2020. COVID-19 Related State Actions. <https://www.cchpca.org/resources/covid-19-related-state-actions> [accessed April 30, 2020].
- Collier, David. 2011. Understanding Process Tracing. *PS: Political Science & Politics* 44(4): 823–30. <https://doi.org/10.1017/S1049096511001429>.
- Crawford, Sue E.S., and Elinor Ostrom. 1995. A Grammar of Institutions. *American Political Science Review* 89(3): 582–600. <https://doi.org/10.2307/2082975>.
- Goodreau, S. M., E. D. Pollock, J. K. Birnbaum, Hamilton D. T., and M. Morris, UW Network Modeling Group. 2020. Can't I Please Just Visit One Friend? Visualizing Social Distancing Networks in the Era of COVID-19. Statnet, April 3. <http://statnet.org/COVID-JustOneFriend/> [accessed June 6, 2020].
- Google. 2020. See How Your Community Is Moving around Differently due to COVID-19. Google COVID-19 Community Mobility Reports. <https://www.google.com/covid19/mobility/> [accessed April 23, 2020].
- Hahn, Ulrike, David Lagnado, Stephan Lewandowsky, and Nick Chater. 2020. Crisis Knowledge Management: Reconfiguring the Behavioural Science Community for Rapid Responding in the COVID-19 Crisis. <https://psyarxiv.com/hsxdk> [accessed June 6, 2020].
- Institute for Health Metrics and Evaluation (IHME). 2020. Social Distancing Assumed Until Infections Minimized and Containment Implemented. Health Data: COVID-19 Projections. <https://covid19.healthdata.org/united-states-of-america> [accessed April 29, 2020].
- Kapucu, Naim, and Montgomery Van Wart. 2006. The Evolving Role of the Public Sector in Managing Catastrophic Disasters: Lessons Learned. *Administration & Society* 38(3): 279–308. <https://doi.org/10.1177/0095399706289718>.
- Kaiser Family Foundation (KFF) 2020. State Data and Policy Actions to Address Coronavirus. <https://www.kff.org/health-costs/issue-brief/state-data-and-policy-actions-to-address-coronavirus/> [accessed April 29, 2020].
- Kumar, Himangshu, and Manikantha Nataraj. 2020. The Impact of Government Restrictions on Human Mobility: Which States Performed Better? <https://mpira.ub.uni-muenchen.de/100283/> [accessed June 6, 2020].
- Lachmann, Alexander, Kathleen M Jagodnik, Federico Manuel Giorgi, and Forest Ray. 2020. Correcting Under-Reported COVID-19 Case Numbers: Estimating the True Scale of the Pandemic. medRxiv. <https://doi.org/10.1101/2020.03.14.20036178>.
- Laurencin, Cato T., and Aneesah McClinton. 2020. The COVID-19 Pandemic: A Call to Action to Identify and Address Racial and Ethnic Disparities. *Journal of Racial and Ethnic Health Disparities* 7: 398–402. <https://doi.org/10.1007/s40615-020-00756-0>.
- Luther, William J. 2020. Behavioral and Policy Responses to COVID-19: Evidence from Google Mobility Data on State-Level Stay-at-Home Orders. Working Paper, AIER Sound Money Project. <https://ssrn.com/abstract=3596551> [accessed June 6, 2020].
- Matrajt, Laura, and Tiffany Leung. 2020. Evaluating the Effectiveness of Social Distancing Interventions Against COVID-19. *Emerging Infectious Diseases* 26(8). <https://doi.org/10.3201/eid2608.201093>.
- National Conference of State Legislatures (NCSL) 2020. State Action on Coronavirus (COVID-19). <https://www.ncsl.org/research/health/state-action-on-coronavirus-covid-19.aspx> [accessed June 6, 2020].
- Shinkman, Paul. 2020. The Flaws in Coronavirus Case Reporting Data. *U.S. News & World Report*, April 6. <https://www.usnews.com/news/world-report/articles/2020-04-06/the-flaws-in-coronavirus-case-reporting-data> [accessed June 6, 2020].
- Siddiki, Saba, Tanya Heikkila, Christopher M. Weible, Raul Pacheco-Vega, David Carter, Cali Curley, Aaron Deslatte, and Abby Bennett. 2019. Institutional Analysis with the Institutional Grammar. *Policy Studies Journal*. Published online July 24. <https://doi.org/10.1111/psj.12361>.
- Unacast. 2020. Social Distancing Scoreboard. <https://www.unacast.com/covid19/social-distancing-scoreboard> [accessed April 30, 2020].
- Wellenius, Gregory A., Swapnil Vispute, Valeria Espinosa, Alex Fabrikant, Thomas C. Tsai, Jonathan Hennessy, Brian Williams, et al. 2020. Impacts of State-Level Policies on Social Distancing in the United States Using Aggregated Mobility Data during the COVID-19 Pandemic. <https://arxiv.org/abs/2004.10172> [accessed June 6, 2020].