

Taking space seriously: the use of geographic methods in the study of MENA

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The use of geo-spatial methods in political science has grown rapidly over the last decade.¹ In studies of the Middle East, these methods have been used to examine important social and political outcomes including the origins of Islamist political organizations, the distribution of public goods, local levels of religiosity, and dynamics of civil war violence,² as well as to understand the political implications of significant changes to people's lived environments, such as checkpoints, road blocks, border walls, and humanitarian aid.³ In this symposium, we highlight the potential opportunities and pitfalls of using these methods in the study of MENA politics.

The contributors to this symposium share a common interest in adopting spatial approaches for understanding political phenomena in the MENA region. As a whole, their pieces indicate that we need to take space seriously in the study of politics in the region, but that in doing so, we need to be 'serious' about it—that is, cautious and aware of both the limitations and ethical dilemmas that these approaches bring forth. While they all agree that GIS can be a boon for researchers, including helping to overcome data limitations and

¹ For overviews of the ways in which social scientists generally and political scientists more specifically have used GIS-based approaches, see: Dimitris Ballas et al. *GIS and the social sciences: Theory and applications*. Routledge (2017). Jordan Branch, "Geographic Information Systems (GIS) in International Relations." *International Organization* 70, no. 4 (2016): 845-869; Luke J. Keele, and Rocío Titiunik, "Geographic Boundaries as Regression Discontinuities," *Political Analysis* 23, no. 1 (2015): 127-155; Katsuo Kogure and Yoshito Takasaki, "GIS for empirical research design: An illustration with georeferenced point data," *PLoS ONE* 14, no. 3 (2019). In conflict-related research, this has been enabled in part by the development of major georeferenced datasets, most prominently the [Uppsala Conflict Data Program Georeferenced Events Dataset](#) (UCDP GED) and the [Armed Conflict Location Events Dataset](#) (ACLED). For a comparison of these two datasets, see Eck, Kristine. "In Data We Trust? A Comparison of UCDP GED and ACLED Conflict Events Datasets." *Cooperation and Conflict* 47, no. 1 (March 2012): 124-41.

² Steven Brooke and Neil Ketchley, "Social and Institutional Origins of Political Islam," *American Political Science Review* 112, no. 2 (2018): 376-394; Christiana Parreira, "Power Politics: Armed Non-State Actors and the Capture of Public Electricity in Post-Invasion Baghdad," *Journal of Peace Research* (2020), doi:[10.1177/0022343320940768](https://doi.org/10.1177/0022343320940768); Avital Livny, "Can Religiosity be Sensed with Satellite Data? An Assessment of Luminosity during Ramadan in Turkey," *Public Opinion Quarterly* (Forthcoming); Sabri Ciftci, Michael Robbins, Sofya Zaytseva, "Devotion at Sub-National Level: Ramadan, Nighttime Lights, and Religiosity in the Egyptian Governorates," *International Journal of Public Opinion Research* (2020), <https://doi.org/10.1093/ijpor/edaa019>; Adam G. Lichtenheld and Justin Schon, "The consequences of internal displacement on civil war violence: Evidence from Syria," *Political Geography* 86 (2021).

³ Roy van der Weide, Bob Rijkers, Brian Blankespoor, Alexei Abrahams, "Obstacles on the Road to Palestinian Economic Growth," *World Bank Policy Research Working Paper* 8385 (2018); Alexei Abrahams, "Hard Traveling: Unemployment and Road Infrastructure in the Shadow of Political Conflict," *Political Science Research and Methods* (2021): 1-22, <https://doi.org/10.1017/psrm.2021.8>; Anna Getmansky, Guy Grossman and Austin L. Wright, "Border Walls and Smuggling Spillovers," *Quarterly Journal of Political Science* 14, no. 3 (2019): 329-347; Shaza Loutfi, "The Impact of Humanitarian Aid on Internally Displaced Persons' Movement: A Case Study in Syria," Master's Thesis, (University of Illinois at Chicago, 2017). <https://hdl.handle.net/10027/21958>.

paucity in both historic and contemporary contexts, it also has important challenges that, while not unique to the MENA region, may be more readily apparent in countries in the region. In this brief introduction, we highlight some of the overarching themes and questions that this collection raises.

First, many of the authors highlight the importance of **who determines and draws the boundaries** upon which the analysis and data rely. The geographic boundaries of cities and other administrative units are themselves often the outcome of a political, rather than purely technocratic, process and may not map a specific space as people experience it.⁴ Ahmad Gharbieh, for instance, discusses the tension inherent in acknowledging the utility of shared and standardized spatial boundaries, while recognizing that they do not map onto the socio-political and lived realities of boundaries in Beirut. Alexei Abrahams and Diana Greenwald, drawing on research on Israel-Palestine, discuss the challenge of relying on the demarcations of one actor versus another in a context of contested boundaries.

Second, all the authors discuss the ways in which the development of GIS technology has opened up **new data possibilities**, particularly in the MENA context where the paucity of data is the norm. Ashrakat Elshehawy shares strategies and resources for making greater use of historical records by integrating spatial data and analysis. Historical maps often contain detailed local data that may not be available in historical censuses. Both Christian Parreira and Emily Scott, in each of their contributions, address how GIS allows for collecting data related to local public goods and refugees that would otherwise be difficult and costly, if not impossible, to access. For instance, Parreira demonstrates how nighttime lights data can be used to generate local measures of the provision of key public goods like electricity.

In both Parreira and Emily Scott's contributions, however, they acknowledge that GIS data has its limits and needs to be analyzed and contextualized through other methods, often field-based. As Scott discusses, borders that appear as hard lines in analysis may actually be porous in ways that affect the research and that the researcher should understand as they proceed. Some of these challenges are compounded in contexts in which, as Abrahams and Greenwald emphasize, geospatial data may be some of the most highly politicized, particularly in sites of conflict.

Changing boundaries represent another challenge for using some GIS data that researchers must contend with. Historical units may be difficult to match with contemporary units, making spatial comparisons across time more challenging. Parreira cites the challenge of

⁴ Intissar Kherigi, "Municipal Boundaries and the Politics of Space in Tunisia," *University of Gothenburg Program on Governance and Local Development Working Paper 38* (2021).

accessing up-to-date municipal boundary shapefiles in Lebanon as the units are often subject to change. But these changing borders can also present new research opportunities. In her piece, Julia Clark discusses how shifting municipal boundaries can provide opportunities for new forms of analysis and shares her approach to mapping these boundary changes in Tunisia. Shifting boundaries have important implications for many contexts in the region, where electoral and administrative districts may change regularly, often with important social and political implications.⁵

Third, many of the authors, whether implicitly or explicitly, highlight the **need for geospatial analysis at multiple, interrelated scales**. For instance, drawing on her work on Iraq and Lebanon, Parreira shows how local-level variation in distributive outcomes is driven in part by center-local relations that favor certain locales over others and shape levels of capacity and institutionalization at the local level. Even beyond the level of the state and center-local relations, international factors, such as foreign aid and international sanctions, can have a significant impact on local dynamics. Abrahams and Greenwald caution against “missing the forest for the trees”—that is ignoring the ways in which factors at higher levels of aggregation shape outcomes—when undertaking local level analysis.

Finally, many of the contributions raise **important ethical considerations and challenges of concern in the collection and use of geospatial data**. As discussed above, boundary drawing is not an objective process abstracted away from the interests of the mapmaker. In addition to the implications this has for how we understand and use maps, Gharbieh also suggests that researchers should think critically about the power structures that they reinforce through the use of certain geographic representations. Abrahams and Greenwald highlight the potential threats to privacy and autonomy that can result from the use of geo-coded data from human subjects that may not have given explicit consent, such as cell phone data. And, finally, Scott discusses some of ethical challenges in the adoption of GIS methods to study refugees, including using data that allows the researcher to abstract away from the lived realities of war and migration and ensuring that other actors cannot access geo-referenced data on vulnerable populations for nefarious purposes.

The contributions to this symposium help researchers to think through the potential and pitfalls associated with taking space seriously, both in terms of what it can contribute to our research and in terms of what new questions about power and ethics these methods raise. The research agendas and novel data collection that these geographic methods can contribute are an exciting new frontier in MENA politics research that we are excited to see all of our contributors (and many others) develop in the coming years.

⁵ For instance, Gharbieh discusses electoral gerrymandering in Lebanon.

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