

Course overview:

This course will provide you with an introduction to quantitative research methods in the study of the Middle East. The course is *not* a comprehensive training in the technical aspects of quantitative research methods. What the course *will* provide is an introduction to what quantitative research looks like when applied to questions of substantive interest in the study of the modern Middle East. This means being able to understand, articulate, and identify the underlying assumptions and structure of research employing quantitative techniques. It also means being able to criticize and unpack this research. Finally, it means being able to reproduce some of these results using a given programming language. The aims of this course in brief, then:

1. An ability to understand use the language of quantitative research design.
2. An ability to understand and criticize the underlying assumptions and structure of a quantitative research design.
3. An ability to reproduce the results of published research using computer code (in this course: the R programming language).

Each week the readings selected are aimed at the analysis of a different type of data. Here, I aim to convince you that large-N quantitative analyses can rely on diverse forms of data. In the last instance, however, what we are working with are quantitative information arranged in the form of a spreadsheet. In R, we usually refer to these spreadsheets as “dataframes.” These are, quite simply, sets of variables (numeric or categorical), stored as columns alongside each other. Nothing more, nothing less!

What we’ll discover over the course of this module is that these data, while similar in appearance, permit us to answer an extremely diverse set of questions. We’ll see this diversity in terms of the level of analysis (are we measuring things at the individual level, at the community level, or at the level of countries?), the types of measurement made (are we counting events, are we assigning a sentiment score to a set of texts, or are we asking people questions?), and the sources of the data itself (are we using a survey questionnaire, are we extracting information from maps, or are we analysing the content of somebody’s Twitter feed?).

Structure of seminars:

For each week, we will discuss several papers that use quantitative methods to answer questions relating to the MENA region. I set two or three of these each week. These articles **must be consulted in full**

before each week's seminar. The seminar will take the form of a discussion. I will take as much of a backseat as I deem appropriate.

Course content:

Alongside these empirical case-study articles, I have set articles that discuss more general issues relating to the type of data or the empirical strategies used to analyse them. These articles are also to be consulted as they supply more general background to some of the questions tackled in the case-study material. We will not discuss these directly in the seminar but, if you want to have a better grasp of what the methods used in the case studies entail, you'd be minded to consult these.

Finally, for the more avaricious readers among you, I list further case studies that exploit the same sorts of data. These can be consulted at your leisure.

Take-home work:

For each week, I will also be supplying you with a take-home coding and analysis task to complete. These will be replication tasks based on the replication materials (data uploaded online for other researchers to check published results against) supplied for one of the week's case-study articles. Four principal data sources are used for these, one for each corresponding week: 1) the SISI-SCIAT survey data used in the paper by Truex and Tavana (2019) 2) protest event data from the 2011 Syrian Revolution used by Mazur (2019); 3) historical data on Muslim Brotherhood branch foundations in Egypt used by Brooke and Ketchley (2018); and 4) Twitter data from Saudi Arabia used by Pan and Siegel (2020).

One final disclaimer: give it a go!

One final disclaimer: the articles I'm asking you to read are accessible but difficult. They will challenge you and you won't understand everything in them or everything about the methods used in them. This is the case even for the more experienced practitioner (myself included). What I ask is that you engage with them, try to unpick the underlying assumptions of each article, try to discern what the methods entail, try to question and unpack the data sources used etc. You'll find a more thorough guide on how to read a quant. article [here](#). In reading these articles together, assembling and disassembling their parts, we will be able to discuss several important questions that the quantitative researcher has to face. I include some of these in the seminar questions for each week. Doubtless, you will also come armed with your own.

I was a languages and literature (Arabic and French) student as an undergraduate. I never believed myself to be a "maths person" or a "stats person." Happily, some influential research has revealed that there is no such thing (see, e.g. [here](#)). Instead, what we find is that by approaching new and less familiar

topics as opportunities to develop and explore new ways of knowing, versus seeing e.g. quant. methods as something for which we "have" or "don't have" an innate ability, we have a much better chance of getting on in a subject. The relevant buzzword for this is "growth mindset." I certainly didn't think I had an innate ability for stats. But here I am! I'll leave it up to you to decide whether I have grown into this role or not...

Week 1: Survey data

Survey data is one of the most regularly used type of data—certainly in the field of sociology and cognate fields interested in individual-level inferences. But surveys are also how we measure unemployment, population, and migration etc. This week provides an introduction to these data. Using nationally representative surveys will also give us the opportunity to discuss surveying techniques, more recent innovations in so-called "survey experiments" (Bush et al. 2016; also: Nugent et al. 2018), questions of measurement validity and cross-cultural comparison (Fair et al. 2018), as well as the potentials and pitfalls of different surveying techniques (Truex and Tavana 2019; also: Brooke 2017). For each of these empirical papers, I have selected some more general readings, and further case studies, pertinent to the issues raised in each. The paper by Adcock and Collier (2001) gives some insights into the importance of measurement validity. The papers by Krumpal (2013) and Ksiazkiewicz and Hedrick (2013) provide general overviews of issues of social desirability bias and so-called "implicit attitudes" techniques in survey research. The book by Kuran (1995) is a classic of social science research and should be consulted in part, if not in full. The (1991) *World Politics* article by Kuran provides an accessible application of the theory of preference falsification to contexts of political revolution.

The aim of the practical exercise to help you understand, analyse, and reproduce aggregate descriptive statistics. Here, we will be using data from a recent article in the *Journal of Politics* by Truex and Tavana (2019) that investigates levels of support for the authoritarian government of Abdel Fattah El-Sisi in Egypt. The exercise will show you how to replicate their results in R and you will also be set some coding tasks to complete yourselves.

Questions to consider in the seminar: Can we rely on individuals to give honest answers? Can we accurately measure complex concepts in surveys? What criteria might we use to ensure the validity of survey instruments? Can we measure opinions without directly asking for them? How might we over-

come response biases in survey research? Does experimental evidence tell us something meaningful about real-world social phenomena?

Data for take-home exercise: Truex and Tavana SISI-SCIAT survey data: https://cjbarrie.shinyapps.io/MMES_week1_20/

Case studies:

- Bush, Sarah Sunn, Aaron Erlich, Lauren Prather, and Yael Zeira. 2016. “The Effects of Authoritarian Iconography: An Experimental Test.” *Comparative Political Studies* 49(13):1704-1738.
- Fair, C. Christine, Rebecca Littman, and Elizabeth R. Nugent. 2018. “Conceptions of Shari’a and Support for Militancy and Democratic Values: Evidence From Pakistan.” *Political Science Research and Methods* 6(3):429-448.
- Truex, Rory and Daniel L. Tavana. 2019. “Implicit Attitudes toward an Authoritarian Regime.” *Journal of Politics* [dx.doi.org/10.1086/703209](https://doi.org/10.1086/703209).

General:

- Adcock, Robert and David Collier. 2001. “Measurement Validity: A Shared Standard for Qualitative and Quantitative Research.” *American Political Science Review* 95(3): 529-546.
- Ksiazkiewicz, Aleksander and James Hendrick. 2013. “Implicit Attitudes in Political Science Research.” *PS - Political Science and Politics* 46(3):525-531.
- Krumpal, Ivar. 2013. “Determinants of social desirability bias in sensitive surveys: a literature review.” *Quality & Quantity* 47(4):2025-2047.
- Kuran, Timur. 1991. “Now Out of Never: The Element of Surprise in the East European Revolution of 1989.” *World Politics* 44(1):7-48.
- Kuran, Timur. 1995. *Private Truths, Public Lies: The Social Consequences of Preference Falsification*. Cambridge: Harvard University Press.

Further case studies

- Brooke, Steven. 2017. “Sectarianism and Social Conformity: Evidence from Egypt.” *Political Research Quarterly* 70(4):848-860.
- Nugent, Elizabeth, Tarek Masoud, and Amaney A. Jamal. 2018. “Arab Responses to Western Hegemony: Experimental Evidence from Egypt.” *Journal of Conflict Resolution* 62(2):254-288.

Week 2: Event data

Event data can take on a wide variety of different forms. This week, we will be reading several articles that each use one or other of these types of data. Events, as you will see, are very broadly defined. In the paper by Chiozza (2002), events take the form of international conflict events; in the article by Mazur (2019) they are protest events in the early stages of the Syrian Revolution. In the article by Ketchley and Biggs (2017), the event of interest is an arrest. What is common across these literatures is a concern to explain systematically the occurrence of discrete events in time. Each of the papers has been selected to give you a flavour of what forms event data might take, as well as the potential benefits and pitfalls of their collection and use.

The paper by Ketchley and Biggs (2017) is important not only in its novel use of arrest data to shine a light on the so-called “ecologies” of Islamist activism in Egypt, but also as an example of the importance of overcoming sampling bias when studying social scientific phenomena. This latter question is taken up in the general reading by Berk (1983) and the chapter by King et al. (1994).

The article by Mazur (2019) details the sources and techniques used for collecting event data, as well as the possible biases introduced by the use of these sources. The paper by Earl et al. (2004) tackles questions related to the use of newspapers for studying collective action phenomena, while that by Baum and Zhukov (2015) engages a similar topic but asks questions specifically of the use of newspapers in non-democratic contexts.

Finally, the paper by Chiozza (2002) takes up a question that has received outsized attention in ME studies: the clash of civilizations theory first proposed by Samuel P. Huntington in a *Foreign Affairs* article here: <https://www.foreignaffairs.com/articles/united-states/1993-06-01/clash-civilizations>. This will give us the opportunity to engage questions of measurement, how best to elaborate a quantitative model to test such questions, and whether the design proposed does the job it claims to do. References to a back-and-forth between Huntington and the authors of a previous test of his conjecture are listed in the further case studies (Huntington 2000; Oneal and Russett 2000; Russett et al. 2000), as is a later test of his theory by Neumayer and Plümper (2009).

Questions to consider: What issues need to be considered when categorizing events into discrete categories? What constitutes a valid sample from which to make population-based inferences? Are newspapers valid sources of data? Is information bias particularly acute in non-democracies? Can we accurately measure contentious and disruptive political phenomena (war, conflict, protest)?

Data for take-home exercise: Mazur Syria Revolution Dataset: <https://cjbarrie.shinyapps.io/>

MMES_week2_20/

Case studies:

- Chiozza, Giacomo. 2002. "Is There a Clash of Civilizations? Evidence from Patterns of International Conflict Involvement, 1946-97." *Journal of Peace Research* 39(6):711-734.
- Ketchley, Neil and Michael Biggs. 2017. "The Educational Contexts of Islamist Activism: Elite Students and Religious Institutions in Egypt" *Mobilization* 22(1):57-76.
- Mazur, Kevin. 2019. "State networks and intra-ethnic group variation in the 2011 Syrian uprising." *Comparative Political Studies*. 52(7):995-1027.

General:

- Baum, Matthew A. and Yuri M. Zhukov. 2015. "Filtering revolution: Reporting bias in international newspaper coverage of the Libyan civil war." *Journal of Peace Research* 52(3):384-400.
- Berk, Richard A. 1983. "An Introduction to Sample Selection Bias in Sociological Data" *American Sociological Review* 48(3):386-398.
- Earl, Jennifer, Andrew Martin, John D McCarthy, and Sarah A Soule. 2004. "The Use of Newspaper Data in the Study of Collective Action." *Annual Review of Sociology* 30:65-80.
- King, Gary, Robert O. Keohane, and Sidney Verba. 1994. *Designing Social Inquiry: Scientific Inference in Qualitative Research*. Princeton: Princeton University Press. Ch. 4.

Further case studies

- Huntington, Samuel P. 2000. "Try Again: A Reply to Russett, Oneal & Cox." *Journal of Peace Research* 37(5):609-610.
- Kadivar, Mohammad Ali and Neil Ketchley. 2018. "Sticks, Stones, and Molotov Cocktails: Unarmed Collective Violence and Democratization." *Socius: Sociological Research for a Dynamic World* 4:1-16.
- Russett, Bruce M., John R. Oneal, and Michaelene Cox. 2000. "Clash of Civilizations, or Realism and Liberalism Déjà Vu? Some Evidence." *Journal of Peace Research* 37(5):583-608.
- Neumayer, Eric and Thomas Plümper. 2009. "International Terrorism and the Clash of Civilizations." *British Journal of Political Science* 39(4):711-734.

- Oneal, John R. and Bruce M. Russett. 2000. “A Response to Huntington.” *Journal of Peace Research* 37(5):611-612.

Week 3: Historical data

This week we will be looking at a type of data that is becoming increasingly commonly used—historical data, or the use of large-N data for the pursuit of questions of historical interest. When I first started learning quantitative methods, I was working under the assumption that large-N analysis was restricted to the study of topics of contemporary interest. After all, surveys weren’t widely used until the second half of the Twentieth Century, and how could we possibly obtain systematic data on historical phenomena when modern social scientific methods hadn’t yet been invented? Not only is historical data used in the quantitative literature, its use is becoming increasingly popular. Here, we will firstly look at a recent article by Brooke and Ketchley (2018) that uses so-called “historical GIS” techniques (computational methods to geocode phenomena of interest and extract data from maps). This will give us the chance to discuss the potentials and pitfalls of historical-GIS techniques, questions relating to appropriate units of analysis (Branch 2016), as well as classic problems in spatial analysis relating to the ecological fallacy (Robinson 1950) and spatial dependence (Logan 2012).

The article by Michalopoulos and Papaioannou (2016) uses historical data but claims “long-run” effects of colonialism. A further article by Michalopoulos et al. (2018) also uses historical data to investigate the link between trade routes and the early spread of Islam. This literature is more broadly known as “persistence” scholarship. Such claims, and forms of analysis, naturally give rise to questions concern causality and historical process; questions that are taken up in the article by Kocher and Monteiro (2016).

The article by Chaney (2012) also argues long-run effects, this time of Arab conquest. The article raises questions about the validity of the source material, but also prompts a response by Lisa Blaydes (Blaydes 2012). This exchange sheds light on the problem of “influential cases” in regression design and model specification, as well as their remedy.

Questions to consider: Can we infer individual-level characteristics/behaviour from aggregate statistics? Why might ecological inferences differ from individual-level inferences? What can we measure from maps and what can we not measure? What constitutes a “case” and should all cases be treated equally? By what criteria should we assess the validity of so-called “persistence” arguments? What version of causality is promoted by this literature?

Data for take-home exercise: Michalopoulos and Papaioannou Scramble for Africa data: <https://www.demographicdatacloud.org/dataset/michalopoulos-and-papaioannou-scramble-for-africa>

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Case studies:

- Brooke, Steven and Neil Ketchley. 2018. “Social and Institutional Origins of Political Islam.” *American Political Science Review* 1–19.
- Chaney, Eric. 2012. “Democratic Change in the Arab World, Past and Present.” *Brookings Papers on Economic Activity* Spring: 404-410.
- Michalopoulos, Stelios and Elias Papaioannou. 2016. “The Long-Run Effects of the Scramble for Africa.” *American Economic Review* 106(7):1802-1848.

General:

- Branch, Jordan. 2016. “Geographic Information Systems (GIS) in International Relations.” *International Organization* 70(4):845–869.
- King, Gary. 1997. *A Solution to the Ecological Inference Problem: Reconstructing Individual Behavior from Aggregate Data*. Princeton: Princeton University Press. Part 1. (Available here: <https://gking.harvard.edu/files/gking/files/part1.pdf>.)
- Kocher, Matthew A. and Nuno P. Monteiro. 2016. “Lines of Demarcation: Causation, Design-Based Inference, and Historical Research.” *Perspectives on Politics* 14(4):952-975.
- Logan, John R. 2012. “Making a Place for Space: Spatial Thinking in Social Science.” *Annual Review of Sociology* 38:507-524.
- Robinson, William S. 1950. “Ecological Correlations and the Behavior of Individuals.” *American Sociological Review* 15(3):351-357.

Further case studies

- Blaydes, Lisa. 2012. “Comment on Eric Chaney’s ‘Democratic Change in the Arab World, Past and Present.’” *Brookings Papers on Economic Activity* Spring: 363-400.
- Michalopoulos, Stelios, Alireza Naghavi, and Giovanni Prarolo. 2018. “Trade and Geography in the Spread of Islam.” *The Economic Journal* 128(12):3210-3241.

Week 4: Text data

For the final week, we will be looking at another type of data that is becoming increasingly commonly used (especially given the growing availability of large text corpuses on Twitter, Facebook, Google Books etc.). This is text data. We will be looking at two main case study articles. The first, by Nielsen (2019), uses text from Salafi preachers to argue that social movements, even the more patriarchal among them, might make use of female preachers for pragmatic reasons. The paper by Pan and Siegel (2020) makes use of Twitter data to gauge the impact of repression on online behaviour in Saudi Arabia. For both papers, it is worth considering questions of sample selection, language translation, and the accuracy of some forms of unsupervised machine learning techniques. These are discussed in the three general readings by Grimmer and Stewart (2013); DiMaggio (2015), and Lucas et al. (2015).

We will also be able to use a portion of this week and my office hours afterward to discuss any questions or concerns you may have regarding the assessment.

Questions to consider: Does social media data constitute a valid sample? How do we verify the validity of our sample when it comes to text data more generally? What types of inferences can we make from these datasets? Can we rely on the automatic coding of text data? How might text data be useful for questions of historical and social scientific interest?

Data for take-home exercise: Twitter data from Pan and Siegel: TBC

Case studies:

- Nielsen, Richard A. 2019. "Women's Authority in Patriarchal Social Movements: The Case of Female Salafi Preachers." *American Journal of Political Science* <https://doi.org/10.1111/ajps.12459>.
- Pan, Jennifer and Alexandra A. Siegel. 2020. "How Saudi Crackdowns Fail to Silence Online Dissent." *American Political Science Review* 114(1):109-125.

General:

- DiMaggio, Paul. 2015. "Adapting computational text analysis to social science (and vice versa)." *Big Data & Society* 2(2):1-5.
- Grimmer, Justin and Brandon Stewart. 2013. "Text as Data: The Promise and Pitfalls of Automatic Content Analysis Methods for Political Documents" *Political Analysis* 21(3):267-297.

- Lucas, Christopher, Richard A. Nielsen, Margaret A. Roberts, Brandon M. Stewart, Alex Storer, and Dustin Tingley. 2015. "Computer-Assisted Text Analysis for Comparative Politics." *Political Analysis* 23(2):254-277.

Further case studies

- Clarke, Killian and Korhan Kocak. 2018. "Launching Revolution: Social Media and the Egyptian Uprising's First Movers." *British Journal of Political Science*. https://www.cambridge.org/core/product/identifier/S0007123418000194/type/journal_article.
- Nielsen, Richard A. 2014. "Networks, Careers, and the Jihadi Radicalization of Muslim Clerics." Pre-publication version of ch. 6 in *Deadly Clerics Blocked Ambition and the Paths to Jihad*. 2017. Cambridge: Cambridge University Press. Available here: <https://pdfs.semanticscholar.org/091b/c167f38254f8c942af1b6864ba79823b43cf.pdf>.

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- Blaydes, Lisa. 2012. "Comment on Eric Chaney's 'Democratic Change in the Arab World, Past and Present'." *Brookings Papers on Economic Activity* (Spring):404-410.
- Branch, Jordan. 2016. "Geographic Information Systems (GIS) in International Relations." *International Organization* 70(04):845-869.
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- Ketchley, Neil and Michael Biggs. 2017. "The Educational Contexts of Islamist Activism: Elite Students and Religious Institutions in Egypt." *Mobilization* 22(1):57–76.
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- Kuran, Timur. 1991. "Now out of Never: The Element of Surprise in the East European Revolution of 1989." *World Politics* 44(1):7–48.

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- Mazur, Kevin. 2019. "State Networks and Intra-Ethnic Group Variation in the 2011 Syrian Uprising." *Comparative Political Studies* 52(7):995–1027. doi: 10.1177/0010414018806536.
- Michalopoulos, Stelios, Alireza Naghavi, and Giovanni Prarolo. 2018. "Trade and Geography in the Spread of Islam." *The Economic Journal* 128(12):3210–3241. doi: 10.1111/ecoj.12557.
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- Neumayer, Eric and Thomas Plümpner. 2009. "International Terrorism and the Clash of Civilizations." *British Journal of Political Science* 39(4):711–734. doi: 10.1017/S0007123409000751.
- Nielsen, Richard A. 2019. "Women's Authority in Patriarchal Social Movements: The Case of Female Salafi Preachers." *American Journal of Political Science* pages 1–15. doi: 10.1111/ajps.12459.
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- Oneal, John R. and Bruce M. Russett. 2000. "A Response to Huntington." *Journal of Peace Research* 37(5):611–612. doi: 10.1177/0022343300037005005.
- Pan, Jennifer and Alexandra A. Siegel. 2020. "How Saudi Crackdowns Fail to Silence Online Dissent." *American Political Science Review* 114(1):109–125. doi: 10.1017/S0003055419000650.
- Robinson, William S. 1950. "Ecological Correlations and the Behavior of Individuals." *American Sociological Review* 15(3):351–357.
- Russett, Bruce M., John R. Oneal, and Michaelene Cox. 2000. "Clash of Civilizations, or Realism and Liberalism Déjà Vu? Some Evidence." *Journal of Peace Research* 37(5):583–608. doi: 10.1177/0022343300037005003.

Truex, Rory and Daniel L. Tavana. 2019. "Implicit Attitudes toward an Authoritarian Regime." *The Journal of Politics* 81(3):1014–1027. doi: 10.1086/703209.