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Letter from the Editor

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This issue of QMMR is all about good fits. The theme is an important one. A lot of what we do as researchers centers around this goal. Where will I study political science? (Which program is the right fit?) How can I understand this research problem? (Is there a good theoretical fit for this topic?) Identifying the appropriate method for answering the research question at hand is an integral component of the early stages of any research project. It is, in other words, about finding the right methodological *fit*.

The right methodological fit may not be obvious. It may also be controversial. Take, for example, the pursuit of data transparency in political science. The ethical and practical ramifications of transparency have been debated widely. This is for good reason. The practice is not always appropriate and therefore should not be universally promoted. Debate is also fundamentally important for methodological praxis.

However, this issue of QMMR sets the debate aside to acknowledge, quite simply, that many qualitative scholars are committed to making their research more transparent. This issue offers a set of case studies on how to undertake transparent qualitative research successfully and effectively. These case studies come from transparency practitioners with different epistemological perspectives and who use a variety of methods. Transparency, as the introduction succinctly highlights, is not a “one size fits all” proposition.” The essays, therefore, offer a variety of strategies for fitting the goal of transparency into different types of qualitative research projects.

The issue also provides insight on a challenging practical problem associated with spatial analysis. Many of the groups, units, and areas that we study do not easily conform to formally recognized borders. Consequently, it is often very difficult to fit the unit of analysis to the shape files available. The original article included in this issue explores different qualitative and mixed methods techniques that can be used to construct more accurate shape files for the “non-jurisdictional units”—gangs, immigration patterns, religious or ethnic groups, neighborhoods—that so often are the object of our research. The authors ask: How can we better fit the spatial analysis to the research at hand? They explore a variety of techniques that can be used to achieve this goal.

I would like to close out my letter with an appeal to our readers, and especially to junior scholars and graduate students: If you have an idea for a symposium or an original article that engages with the use of qualitative and mixed methods, please send it to QMMR! You may not be sure that your idea or article is appropriate—in other words, you may worry about its *fit*, heh, heh, heh—but I encourage you to send it anyway. QMMR is a great opportunity to circulate methodological innovations in a shorter and therefore more accessible format. I hope to hear from you soon!

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Exploring the Boundaries of Non-State Units: Using Qualitative Techniques for Spatial Analysis

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Scholars that are interested in accounting for space in their research may run into difficulty when studying phenomena at a sub-state unit of analysis. Recent literature argues that theory and causal mechanisms should motivate the incorporation of crucial components of spatial analysis such as the selection of units of analysis (Darmofal 2015; Harbers and Ingram 2018; Soifer 2019) and the construction of spatial weights (Neumayer and Plümper 2016). This can be a challenge for studies that use jurisdictional units, such as provinces, districts, or other government administration units (Soifer 2019, 96). Additionally, this can be particularly difficult for studies that utilize non-jurisdictional units that have some cohesive ethnic, religious, or power grouping, such as Kurdistan, the Uighur region of China, or gang-controlled territories. This, however, may not just be an issue for informal, occupied, or sub-states, but also those with fluid boundaries. In addition to ethnic or religious groupings, this can be applied to the study of areas controlled by gangs, insurgent territorial control, immigration patterns, or the spread of pandemics, among other topics. These examples elucidate difficulties in selecting the appropriate unit of analysis, especially as people's perceptions of unit boundaries may be different than that of researchers (Soifer 2019, 104). For non-jurisdictional units it may be particularly difficult to find sufficient available shapefiles and geo-referenced data, which may not exactly line up with the units needed to study outcomes of interest. It is valid to use available data to study subjects that do not follow traditional political boundaries, or phenomena with non-jurisdictional units (Soifer 2019, 108). However, it is important to think critically about how to choose the units of analysis that best align with the outcome under study. In the example provided later (see section "The Hypothetical"), we work through the different ways in which a study to understand civilian support for the Islamic State could be navigated using our approach.

The Problem

A core issue in spatial analysis is the consideration of "place" and ensuring that the units of analysis we use capture the underlying processes that we study. The selection of the correct unit is important for ameliorating the modifiable areal unit problem (MAUP), "which makes it very likely that findings will change as they are measured across differently drawn spatial units, whether different in scale, or different in shape, that is, where the borders are drawn" (Soifer 2019, 93). The best solution for dealing with this issue is to select a unit that corresponds with our theory (Darmofal 2015; Harbers and Ingram 2018; Soifer 2019). However, as Soifer (2019, 104-5) notes, the appropriate units may be obvious in some cases but ambiguous in others. Furthermore, data disaggregated to the appropriate unit is difficult to find in some cases, especially for phenomena that do not follow political boundaries. Social scientists may therefore have to compromise accuracy for availability. Below, we offer two examples that highlight the difficulties of using non-jurisdictional units at the sub-national and transnational levels.

In a separate project, we study variation in ethnic group mobilization in the Philippines. We collected event-level data by coding news sources via NexisUni and are only able to filter this within provinces, a jurisdictional unit of analysis. While it would be ideal to use groups as the unit of analysis, they span across provinces and do not align with the boundaries of the provincial units. A potential solution to this issue might have been to use neighborhood- or city-level jurisdictional units, but there were data availability problems. For instance, we could not accurately geo-tag our data for cities because the information was not reported in the news sources. In these cases, we could only geo-tag our data at an aggregated level (city or province).

Studies which include the Kurdish nation also illustrate the difficulty in studying outcomes that do not align with traditional political boundaries. In this instance, the “boundaries” of Kurdistan cut across not only the state boundaries of Syria, Iraq, Turkey, and Iran but also provincial boundaries within these states. For example, in a previous attempt to study Kurdistan, we compiled a shapefile using provincial-level data (see Figures 1 and 2) using several sources (Kurdish Institute, n.d.; The Kurdish Project, n.d.; Izady 2015). By merging selected parts of Syria, Turkey, Iran, and Iraq deemed to be Kurdish-majority areas (see Figure 2), we can roughly distinguish the shape of what should be Kurdistan. The provincial map at the bottom of Figure 1 is likely inclusive of portions of provinces that are not considered to be part of Kurdistan by Kurdish peoples or scholars. For example, only part of Aleppo province is regarded as part of Kurdistan: the city of Aleppo, for instance, is not included. Alternatively, it may not include what should be considered as part of Kurdistan. Therefore, using either aggregated jurisdictional units at the state level or units disaggregated to the provincial level may misrepresent the spatial relationship of interest as they do not align with the “boundaries” of Kurdistan.

Figure 1. Map of Kurdistan A.rea

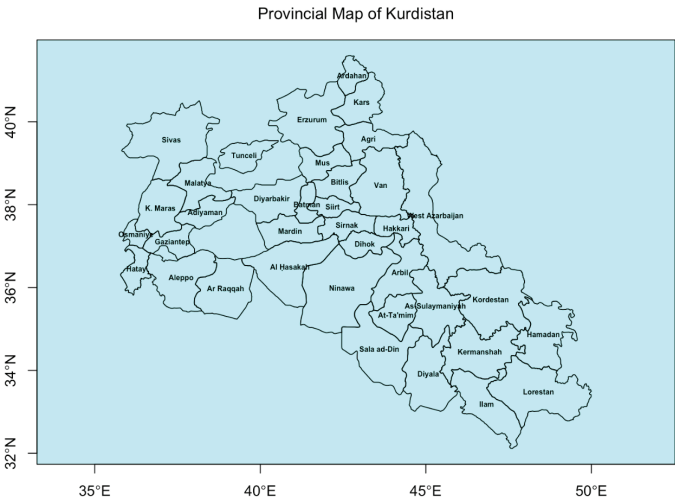


Approximation of Kurdish-majority area using Google Maps in April 2018. Area selected based on the following sources: Kurdish Institute, n.d.; The Kurdish Project, n.d.; Izady, 2015; Izady 2018.¹

Studies of Kurdistan may benefit from using city- or neighborhood-level units of analysis, yet there was no source readily available to help us identify the boundaries. One potential solution is to collect data on the boundaries and to build an original shapefile, but this process may be expensive and time consuming (Soifer 2019, 108). However, even this process may not yield an accurate understanding of the boundaries of an area like Kurdistan as the boundaries are contested. In this case,

varying groups may have different understandings of delineations between “Kurdish” areas and “Syrian” areas; an Iraqi from Dohuk may understand differently where Kurdistan starts and ends than a Kurd from a different city. Given the potential issues with studying non-jurisdictional units outlined in the previous section—notably, the difficulty in finding shapefiles and available data—we offer some ways to approach researching such units in the next section.

Figure 2. Merged Shapefile of Kurdistan



Kurdish-majority provinces selected based on the following sources: Kurdish Institute, n.d.; The Kurdish Project, n.d.; Izady, 2015; Izady, 2018.

The Solution

As previously discussed, trying to analyze and discern the boundaries of non-jurisdictional units, such as groups of people, areas affected by natural disasters, or the spread of disease, can be challenging. We offer a few potential solutions to resolve this issue.

The first potential solution is to travel to the region of interest and conduct interviews, focus groups, or surveys to ascertain the demarcations of such units. Researchers could use tablets or similar electronic devices and ask respondents to draw their understanding of the boundaries. The boundaries of the units of interest could then be created by aggregating and averaging the drawings of each respondent. A shapefile could then be created by sub-setting countries’ shapefiles in programs such as R at a lower level of aggregation. For example, in the case of Kurdistan, one would merge relevant municipal units in the shapefiles of Iran, Iraq, Syria, and Turkey. One could also use programs such as ArcGIS or QGIS and create a shapefile by uploading an image of the aggregated boundary. This approach

1. The Izady (2018) map highlights some Kurdish-majority areas in more inland Turkey and near the Turkmenistan border; our conceptualization is a conservative depiction because those were not areas that the other sources highlighted.

is the reverse of the traditional large-N/quantitative to small-n/qualitative case study mixed-method research design prescribed by Lieberman (2005) and Seawright and Gerring (2008). The approach outlined below may provide clues about boundaries, causal processes, spatial weights, and other aspects of the outcome of interest to ensure measurement validity.

However, an important caveat to delineating boundaries using qualitative data collection is that, as with many subjects in the social sciences, such boundaries are socially or culturally constructed to a certain extent, therefore the conception of the phenomena's frontier may vary from person to person. An individual living in the space outside the non-jurisdictional area may have a different conception of where the boundary lies than someone living within it. Furthermore, the units of analysis may not be homogenous and contestation over their boundaries may occur among those living within the area. For example, Kurds, Arabs (of various ethnicities), Persians, Azeris, Turks, Lurs, and Syrians all live in the area known as Kurdistan. However, each group may give different answers to questions about Kurdistan's boundaries at the neighborhood, city, or state level. Thus, even these qualitative techniques may yield contested boundaries which may create replicability issues (Soifer 2019, 99).

To alleviate some of these issues, we recommend interviewing people in different roles and varying relationships to the outcome of interest to the extent possible for triangulation purposes. Examples of different groups of interviewees may include members of the ethnic group of interest, members of different ethnic groups in the area, as well as local politicians, scholars, development aid workers, health officials, law enforcement, store owners, and teachers, among others. As part of interviews, subjects could be asked to demarcate on a map the neighborhoods or cities they recognize as Kurdish or non-Kurdish dominant; or respondents could be asked to fill in pre-drawn geographical units of neighborhoods. An alternate approach would be to overlay a grid on a city or state map and have respondents shade in their understanding of the Kurdish-dominant areas. Those who are not familiar with Kurdish neighborhoods or areas could be asked to mark areas they are familiar with, and the groups that are dominant there. Researchers could use information about where other groups are dominant to inform their understanding of Kurdish-dominant areas. As previously mentioned, a researcher could create a shapefile of the region of interest based on an aggregation of respondents' drawings of the boundaries. One could also create several shapefiles based on the results from different groups of interviewees if the

results are significantly different, which may be an important finding on its own.

Traveling to the region of interest and conducting fieldwork to identify boundaries may not be possible for a variety of reasons. Consequently, we offer several options to gather this information remotely. First, interviews conducted remotely through Skype or other videoconferencing software could be used to collect information about boundaries. Related files, for the drawing of maps as discussed above, could be easily shared, filled in, and sent back electronically. Another option would be to work with local survey agencies or academics, who could liaise with the local community, ask questions, and bring tablets for drawing maps. Local partners are more proximate to the phenomena and could leverage their social networks to contact law enforcement, politicians, or aid workers and ask them questions about ethnic-majority areas and to draw the boundaries on a tablet. Proxies could also email interviewees a survey or questionnaire and blank template for the boundaries to be drawn, scanned, and sent back to the researcher. A third solution is to apply the same techniques to diasporic members, refugees, former gang members, former insurgents, and others. The researcher could still ask interview subjects to draw the borders of the unit of interest on a tablet or similar device. Similarly, scholars could work with local social service providers and non-profits in refugee camps to schedule interviews. These organizations may have resources to set up a room for a videoconference interview (e.g., Zoom or Skype). Finally, researchers can use crowd-sourcing programs such as Zooniverse and ask respondents to identify the boundaries of a region of interest. Researchers may want to use more than one method for the purposes of triangulation.

In addition to getting enough information about non-jurisdictional units to construct a shapefile, qualitative methods can provide insight into the appropriate spatial weight matrices, the patterns of the interaction between the spatial units, for analysis. As Harbers and Ingram (2017) note, the selection of an appropriate spatial weight matrix (W) is important because it underlies assumptions about the regression and the results. The W demarcates the relationship between the units. Interviews with individuals who live near the non-jurisdictional area or members of proximate groups may reveal how the spatial units interact in practice. For example, are refugee populations typically relocated into one unit from another and if so, what is the trajectory? The W might also be useful to account for the informal historical and cultural institutions and their influence on the present context. For example, many Kurdish subgroups did and continue to operate with tribal kin groups for political

organization, governance, among other societal activities (McDowall 2000). Kurds within a specific area may relate to our outcome of interest differently based on historical and cultural contexts, which a spatial weight could capture. This qualitative technique comports with Neumayer and Plümper's (2016) recommendation to select the W based on causal processes and theory. We add that there may not be a theoretical reason for a consistent W across the entire shapefile; depending on the information gained through interviews, the researcher may opt to construct a hybrid W where there is variation in the spatial relationships between units. Furthermore, one may want to run more than one regression based on different W if interviews reveal that the relationship between the spatial units varied over time. For example, were refugee populations relocated to one area at one time and then to another area at a different time? If so, the relationships between the variables of interest may have changed.

The Hypothetical

In this section, we outline a proposed process for collecting data on a project about civilian support for the Islamic State in Syria. This subject would be best studied at a disaggregated level—such as a neighborhood or family level. Given the ongoing Syrian conflict and diminishing state capacity, the potential for data availability for the neighborhood level is low and data at the family level is not available. For this project, it would be important to understand which part of the country falls into the area known as Kurdistan. Historic Kurdish areas will likely have different trends given Kurdish militants' fight against the Islamic State (Jayamaha 2014; Salih 2015; Jones et al. 2017). Conceptualizing what constitutes Syria is significant for understanding where Syrian Kurdistan is, but also in finding an appropriate unit of analysis and how Kurdistan should be differentiated from the rest of Syria. The appeal of the following approach is centered on providing researchers a process by which to solicit and quantify inductive measures in the early stages of analysis.

Given the difficulties of traveling to Syria for research, we would leverage virtual tools to determine a scope of analysis. Through this method, we could engage with multiple groups, including academics, politicians, and journalists currently or recently in the field, as well as subject matter experts and recently repatriated Syrian refugees. Researchers could solicit different groups based on their needs and timelines, while considering IRB approval and other necessary measures. Researchers may select different groups based on their own constraints. For example, IRB approval is easier for working with

elite subjects (i.e., politicians) as opposed to vulnerable populations (i.e., refugees).

After identifying the appropriate groups for outreach, we would select a suite of Syrian maps at various levels to provide subjects for denoting Kurdish-, Islamic State-, and other majority areas. As we are concerned with Syria writ large, we select a country-level map for an overall image appended with province-level maps with topography, highways, and other broad indicators for subjects' reference. It is up to the researchers' discretion about how to disseminate and receive the maps. For instance, these maps could be hosted on a platform, such as Zooniverse, that allows users to draw and submit online. Alternatively, maps could be attached to an email, downloaded by subjects, drawn in stock applications (e.g., Microsoft Paint), and sent back. Subjects could also print the maps, physically draw on them, and then scan and send them back electronically. In addition to the maps, we would include a short survey for the respondents, including the last time of travel to have a point of reference, which can be informative once the files are digitized. Researchers' choice of how to disseminate their maps depends partially on their target populations and considerations of respondents' anonymity. Once the submissions are collected, the input needs to be standardized. Physical maps should be scanned and converted into images. In ArcGIS or QGIS, the images could be converted into shapefiles. The final shapefile could be created by averaging the boundaries created from respondents' maps. Additionally, depending on research needs, shapefiles could be created for different time periods.

Once a shapefile—or series of shapefiles—is constructed, researchers can determine the most effective means of collecting data. Ideally, we would again enact a similar approach to collect data, whether by retracing our process with interviewees for determining the units of analysis. If available data is georeferenced, it could be sorted into the units of analysis that were constructed—using the previous approach—for the study. Other ways to collect data could include sampling or restructuring of available data. For instance, if the units of interest are disparate, researchers may opt for sampling households as opposed to collecting data at the district level. Alternatively, if data is collected at the district or province level, it could be sliced into different units of analysis, informed by the aforementioned process. With this approach, researchers could add the indicators for majority areas, in efforts to capture variation attributed to immeasurable sociopolitical institutions and therefore provide some alleviation of omitted variable bias.

Conclusion

It is increasingly important to study non-jurisdictional phenomena as the world becomes more connected and population flows become easier and more frequent. Accordingly, many contemporary social science and policy issues involve units of analysis that do not comport with traditional political boundaries, such as terrorist group cells, insurgent safe havens, refugee populations, or diasporas. Thus, it is imperative to find adaptable, feasible means to acquire and study these outcomes, and it is the responsibility of social scientists to find spatial units appropriate to studying their outcome variable. We recommend a qualitative to quantitative approach to ameliorate this problem: by using qualitative interviews of individuals familiar with the non-jurisdictional region, researchers can more accurately create a shapefile and select the proper spatial

weight matrix to properly measure their outcome of interest. If the solutions provided in this article are not feasible, Soifer (2019) recommends other approaches, such as shifting the study to a more aggregated level or stipulating data availability as criteria for choosing the level of analysis (109). Each of the strategies outlined here come with tradeoffs. When seeking to collect more fine-grained data, there are obvious costs associated for researchers and in-country data collection. However, such an approach could lead to greater accuracy. In contrast, data at a more aggregated level may be readily accessible but lead to potential misspecification of the outcome of interest. Alternatively, the latter may mean that the researcher will not be able to study their research question and hypotheses of choice, but instead need to tailor it to the data available.

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Symposium:

Varieties of Transparency in Qualitative Research

Qualitative and Multi-Method Research

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<https://doi.org/10.5281/zenodo.5495548>**Introduction:****Case Studies in Transparent Qualitative Research**

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The discipline of political science has been engaged in vibrant debate about research transparency for more than three decades. Over the last ten years, scholars who generate, collect, interpret, and analyze qualitative data have become increasingly involved in these discussions. The debate has played out across conference panels, coordinated efforts such as the Qualitative Transparency Deliberations (Büthe et al. 2021), articles in a range of journals, and symposia in outlets such as *PS: Political Science and Politics*, *Security Studies*, the newsletter of the Comparative Politics section of the American Political Science Association (APSA), and, indeed, QMMR. Until recently, much of the dialogue has been conducted in the abstract. Scholars have thoroughly considered the questions of *whether* political scientists who generate and employ qualitative data and methods can and should seek to make their work more transparent, *what* information they should share about data generation and analysis, and *which* (if any) data they should make accessible in pursuit of transparency (see Jacobs et al. 2021).

Building on the important groundwork laid by these discussions, researchers have recently begun to develop and experiment with a range of exciting, creative approaches to achieving transparency in qualitative inquiry. Making their work more transparent can help scholars who engage in all types of qualitative inquiry to elucidate their research practices and clarify the empirical underpinnings of their work. Doing so enables scholars to demonstrate the rigor, enhance the comprehensibility, and augment the evaluability of their research.

As is well known, however, multiple pressures—epistemological, ethical, legal, and logistical, for instance—compel and constrain the pursuit of transparency (see e.g., Elman, Kapiszewski, and Lupia 2018; cf. Feldman and Shaw 2019). The creation and use of a range of distinct strategies for achieving transparency reflects and reinforces the reality that the effect of those pressures—on the degree to which scholars are transparent about their work and how they achieve that end—varies across types of inquiry. The diversity of techniques, in other words, demonstrates that transparency is neither an “all or nothing” nor a “one size fits all” proposition: it can be and is pursued to different extents, in different ways, in different kinds of research.

It is critically important that the communities of scholars who conduct qualitative research continue to develop, pioneer, and refine epistemologically appropriate and ethical techniques and strategies for making the kinds of inquiry that they conduct transparent. Encouraging continued progress toward that end is our goal in assembling this symposium. It offers and elaborates on an initial menu of options for making scholarship more open among which scholars may choose as appropriate to the way they conduct research.

Specifically, the symposium gathers five contributions that detail how the authors used one or more techniques to enhance the transparency of their qualitative research. In these coordinated contributions, authors describe what transparency techniques they used; how they integrated them into their writing process; how doing so benefited their scholarship; what difficulties and costs increasing transparency entailed; and what lessons they suggest for

other scholars who wish to use similar strategies. These authors hold varying epistemological commitments, use different methods of data generation and analysis, and explore varied topics across a range of disciplinary fields and subfields. Consequently, they pursue research transparency in different ways. Demonstrating that emerging transparency techniques accommodate the epistemological and methodological heterogeneity that is a hallmark—and strength—of qualitative political science, as well as highlighting the enthusiasm for transparency among scholars engaging in such diverse types of inquiry, are important contributions of this symposium.

To briefly summarize, Slaven discusses the methodological appendix assembled to accompany an article in which he and co-authors used process tracing to examine the link between immigration and welfare policy in Germany, France, and the United Kingdom, drawing on both archival research and elite interviews. Betancourt, Piñeiro, and Rosenblatt, working within a positivist framework, focus on strengthening the evidence of objective empirical claims: they describe how they created a pre-analysis plan for their study of how organizational rules awarding a political role to grassroots organizations advanced party activism in Uruguay, which drew on both an online survey and in-depth interviews. O'Mahoney outlines how he used Annotation for Transparency Inquiry (ATTI) to enhance his comparative historical analysis of how the normative arguments states make in international negotiations affect subsequent behavior, with an illustration from the Indo-Pakistani war of 1971. Rohlfing and Bermakutnova R. consider how Qualitative Comparative Analysis (QCA) can be made more transparent and reproducible through sharing QCA Software Output, basing their discussion on an article examining the political trajectory of federal ministers in Germany.

Fuji Johnson works within an interpretivist framework, emphasizing that she and her co-author are not “asserting truths but rather interpreting communicative exchanges” (this issue, p. X). Focused specifically on the impact of her piece beyond academia, she employs transparency to highlight the intelligibility and rigor of her methodology. Specifically, she describes how and why she shared the data generated by, and created an elaborate methodological appendix for, her ethnographic study of sex worker rights organizations in North America. She discusses how she reconciled her commitments to conducting research ethically and openly in this challenging terrain, in which her vulnerable subjects have experienced “criminalization, persecution, stigmatization, and other forms of oppression” (this issue, p. X). As noted above, the diversity of this

work—including types of inquiry in connection with which scholars have expressed concern and doubt about pursuing transparency—demonstrates the broad possibility and promise of openness in qualitative inquiry.

We encouraged authors to write their pieces with a focus on practical issues and specifics, drawing directly and unabashedly on their own experiences. We are delighted with the wealth of practical advice and concrete recommendations they generated specific to the kind of research in which they were engaged and the specific transparency techniques they used. Still, some general themes emerged across the contributions.

Recognizing and Mitigating the Time and Effort Transparency Requires

All symposium authors point to the careful, detailed, and time-consuming work required to make their research transparent, and the opportunity costs of that work. Their reflections are in line with other scholars' discussions of the practical challenges that enhancing research transparency entails, such as writing lengthy appendices, preparing accompanying documents, or using additional software (e.g., Saunders 2014; Hall 2016, 32-4; Jacobs et al. 2021, 192, 194). In part, these costs derive from the pursuit of transparency being a new endeavor for many scholars whose work is qualitative in nature, meaning that they are developing and improving their practices as they carry them out (O'Mahoney). Importantly, all contributors find the additional effort to be worthwhile. Of course, that may be a selection effect given that we requested contributions specifically from researchers who had published transparency-related materials.

Several authors highlight steps that scholars can take to reduce the “transparency tax” on their work. For instance, some note the importance of planning in advance for how transparency will be achieved (e.g., Fuji Johnson). Others describe how structuring workflows, preparing the way for transparency as research is conducted by tracking evidence and analysis, and identifying and setting aside material to be included in an appendix or annotation, can improve the efficiency of transparency (Slaven). Others point out that identifying the optimal moments at which to integrate transparency into one's workflow, and using appropriate tools, can significantly reduce the burden of pursuing transparency (O'Mahoney; Rohlfing and Bermakutnova R.). We anticipate that as scholars become more familiar with and adept at employing different transparency techniques, some of the current costs of pursuing transparency will decrease.

Improving Manuscripts and Avoiding Mistakes

Given the time and effort that making research more transparent requires, it is important to identify the benefits that transparency delivers, as these can serve as incentives for scholars to pursue transparency. Several authors describe how being more transparent helped them to strengthen their work in perhaps unexpected ways. Betancourt, Piñeiro, and Rosenblatt discuss how creating a pre-analysis plan for pre-registration gave them a baseline against which to evaluate subsequent choices and changes and enhanced the efficiency of their field research. O'Mahoney details how planning for transparency helps authors stay organized and encourages careful thought about the selection and deployment of evidence. In particular, he notes how creating annotations helped him to identify some (albeit minor) issues with his use of primary sources. Slaven details how crafting a methodological appendix helped him and his co-authors to sharpen their analysis and strengthened the writing of the article proper. Perhaps these observations should not surprise us; as we make our data and procedures more visible to others, we are bound to consider them more closely ourselves, and in that process, clarify our own thinking or even spot mistakes we may have otherwise missed.

Assisting Readers—including Reviewers—by Working Transparently

Most contributors also highlight the ways in which transparency benefits readers and research communities as well as authors. O'Mahoney, for instance, discusses how the annotations he created allowed interested readers to learn more from his work; in this way, the original scholarship becomes an even firmer foundation on which to build, hastening and strengthening the accumulation of knowledge. Slaven recounts being pleasantly surprised at how often readers consulted his transparency materials, in turn enhancing their overall engagement with his research. Betancourt, Piñeiro, and Rosenblatt describe how reviewing their original pre-analysis plan and its amendments helped readers to understand and evaluate changes that the authors introduced to the research process as their project proceeded.

In addition, some symposium contributors (Slaven; Betancourt, Piñeiro, and Rosenblatt) see publication advantages from making their work more transparent. Reviewers found the twists and turns in their scholarship easier to follow, they suggest, because they were more transparent about how they conducted their research.

In the case of Slaven, the transparency materials also offered a venue in which to respond in full to reviewers' requests and critiques, providing an opportunity to demonstrate the utility and value of those comments. In a healthy caveat that should inspire critical thought, some contributors implicitly and explicitly flagged the risk of the emergence of a transparency "arms race," in which reviewers expect authors to jump through an increasingly onerous and burdensome set of transparency hoops.

Conclusion: Linking Theory and Praxis

This symposium's contributions describe and critique a series of established and emerging techniques for achieving transparency in qualitative research. Reflecting the views and insights of scholars who have successfully made various types of qualitative inquiry more transparent, these case studies demonstrate a diverse set of suggestive possibilities. As disciplinary conversations about transparency in qualitative inquiry continue, it is critical that they expand to include more practical discussion about how transparency can be achieved, about the concrete, demonstrable challenges pursuing transparency presents, and about the concrete, demonstrable benefits pursuing transparency delivers.

Expanding the conversation in these directions should proceed *in tandem with* continuing consideration of broader questions about what transparency means for political science scholarship. As Fuji Johnson elegantly argues, being transparent is a research responsibility: contributing to the evidentiary stock in a research area, clarifying the soundness of research, and elucidating findings represent a way of ethical research. Yet simultaneously, if transparency increases the overall cost of research, that "tax" can exacerbate inequalities, calling the ethical bases of the practice into question (Fuji Johnson; Betancourt, Piñeiro, and Rosenblatt).

In short, neither the conceptual consideration nor the practical discussion about transparency should proceed independently of, truncate, or pre-empt the other. On the one hand, reflection on the broad imperatives, challenges, and concerns about transparency must inform conversations about the practical steps involved in making our work more open. On the other hand, carefully considering praxis as part of the conceptual debate can prevent the exaggeration of disagreements and the adoption of unproductive binary "for or against" stances. We hope readers will find the selection of reflections in this symposium, and the diversity of methods and perspectives they represent, instructive, inspiring, and a contribution to both conversations.

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Using Pre-Analysis Plans in Qualitative Research

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Introduction

In the last decade, there has been a significant push for greater transparency in the social sciences. For example, epistemological and methodological debates have addressed the scope, meaning, and appropriateness of research transparency, and scholars have developed tools and practices to facilitate the process. One such approach is preregistration, the practice of recording a priori a study's design and its plan of analysis in open and public repositories (Haven et al. 2020). While it is a standard practice in experimental social science, it has been a matter of contested debate in observational work, both quantitative and qualitative. Arguments in favor of using this practice in qualitative inquiry, as well as opposing views, have recently been published (Büthe et al. 2015; Elman and Kapiszewski 2014; Elman and Lupia 2016; Kern and Gleditsch 2017; Haven et al. 2020; Jacobs et al. 2021; Kapiszewski and Karcher 2020; Moravcsik 2014; Piñeiro and Rosenblatt 2016).

Preregistration serves both the overarching goal of improving research transparency and, in our experience, also improves the research process itself. Regarding the former, preregistration increases the credibility of research because it facilitates the scientific community's access to a researcher's theoretical and methodological decisions (Nosek et al. 2015). Regarding the latter,

preregistration benefits the research process in several ways: it helps one develop parsimonious theories; it encourages one to articulate a clear relationship between theory, hypotheses, and evidence; it improves the dialogue between data and theory; and it fosters efficiency in fieldwork (Pérez Bentancur, Piñeiro Rodríguez, and Rosenblatt 2018b; Piñeiro and Rosenblatt 2016).

A Pre-Analysis Plan (PAP) is one tool that scholars—including those who conduct qualitative inquiry—can use to preregister their research. As defined in Evidence in Governance and Politics (EGAP)'s methods guide on the tool, a PAP is a document that "...formalizes and declares the design and analysis plan for your study. It is written before the analysis is conducted and is generally registered on a third-party website" (Chen and Grady, n.d.). There is no general agreement about what a PAP for qualitative studies (PAP-Q) should contain. There are several general PAP guidelines, models, and templates for preregistering qualitative research (Kern and Gleditsch 2017; Haven et al. 2020; Piñeiro and Rosenblatt 2016). Haven et al. (2020) conducted a study identifying the main sections that scholars who conduct qualitative research in various disciplines should include in a preregistration template. Their findings suggest that a PAP for qualitative studies (PAP-Q) should include four basic categories of information: study information, the

design plan, data collection method, and analysis plan.¹ A PAP-Q further develops a conventional research project. It provides additional specifications of the theory and more details on the methodological design, type of data and its sources, and the probative value of the evidence for assessing each hypothesis.

In this short paper, we explore the practical use of preregistration in qualitative research through detailing the experience of preregistering our study of the origins and reproduction of activism in Uruguay's Frente Amplio (FA, or Broad Front) (Pérez Bentancur, Piñeiro Rodríguez, and Rosenblatt 2020; for the PAP-Q see Piñeiro, Pérez, and Rosenblatt 2016a). We emphasize how the process of drafting a PAP-Q improved the theoretical and analytical quality of our work. We also describe how creating a PAP-Q significantly improved the efficiency of our field research by forcing us to think through the type of evidence necessary to test a given hypothesis or claim. Our contribution to this symposium builds on the results of the Qualitative Transparency Deliberations (QTD), summarized in Jacobs et al. (2021). We also take into account the recommended practices for studies that use process tracing, as outlined by Bennett, Fairfield, and Soifer (2019). Thus, this essay may prove useful to researchers who would like to follow the latter's recommendations in the future.

PAP-Q, Research Transparency and Fieldwork Efficiency

In what follows, we illustrate how we carried out preregistration and used a PAP-Q in our in-depth case study of the reproduction of activism in the FA in Uruguay. In this study, we describe and explain the development and reproduction of the FA as a party with a grassroots structure through which activists regularly engage with the party. The FA is a deviant case that helps explicate the reproduction of activism. We argue that the internal structure of the FA—and the rules that ensure a role for grassroots activists in the highest decision-making bodies of the party—are the product of the extraordinary political conditions that existed at the time of the party's birth in 1971. The intense autonomous activism that occurred during this stage thus acts as an historical cause. Our study shows that the decision-making authority of the grassroots activists, granted incrementally since the FA's foundational stage, enables activists to block changes that reduce their power, engendering a lock-in effect and positive feedback. We show how these rules grant FA activists a significant voice, which imbues activists' participation with a strong sense of efficacy. This perceived efficacy operates as a selective incentive for activists to engage with the party.

We registered a PAP-Q before conducting fieldwork and introduced amendments as our fieldwork proceeded to register updates in our theory and empirical strategy. Thus, preregistration established a “formal beginning of the iteration between theory, evidence, and the interpretation of the evidence” (Piñeiro and Rosenblatt 2016, 788). This PAP-Q covers three of the main dimensions of a study that Jacobs et al. (2021, 176) suggest that scholars should be transparent about: “research goals,” “processes of generating evidence,” and the “analytic processes.”

Our PAP-Q included a theoretical section in which we specified the main concepts and our causal argument. It described in detail the causal mechanisms of the reproduction of activism and the theoretical leverage of the FA (i.e., the FA as a deviant case), as was later recommended by Bennett, Fairfield, and Soifer (2019). The document also specified the empirical strategy and design. It included a set of concrete working hypotheses (both descriptive and causal). Each hypothesis was accompanied by a list of the pieces of evidence required to confirm it, the sources that could provide the needed evidence (e.g., documents, interviews, survey, administrative data, and observation of party's activities), the potential biases in the types of evidence collected. The PAP-Q also stated alternative hypotheses and the related evidence that could challenge our theory. Finally, the PAP-Q contained conventional process-tracing terminology to establish the probative value of each piece of evidence (see Piñeiro, Pérez, and Rosenblatt 2016a, 10-8). Thus, our PAP-Q disclosed our initial research goals, the process we planned to follow to generate the evidence needed to test our hypothesis, and the analytic process that we committed to pursue.

The Benefits of Preregistration for Transparency and the Importance of Flexibility

Preregistering is a way of generating *ex ante* transparency that improves *post hoc* transparency. *Ex ante* transparency refers to clarifying one's theoretical starting point and empirical expectations. This allows readers to trace the research process and to understand the researcher's iteration between theory and fieldwork. It also entails a researcher's commitment to search for a specific set of evidence and its probatory nature. Thus, if the researcher does not find certain evidence mentioned in her preregistered design, or finds evidence that challenges her prior theoretical expectations, the researcher is compelled to explicitly address it. This reduces the moral hazard associated with the temptation to cherry-pick evidence, or engage in *ad hoc* analyses tied

¹ The template is available at: <https://osf.io/w4ac2>.

to the evidence collected (Jacobs 2020). Preregistering makes post-hoc disclosure of the research process more meaningful as it covers the entire research process and not merely what the researcher decides to disclose at the end of the research.

The qualitative research process implies an iterative process between theory and evidence (Elman and Lupia 2016; Mahoney and Rueschemeyer 2003; Yom 2015). Preregistration in qualitative research needs to take the iterative logic of qualitative research into account. It must allow for the possibility of updating the theory by amending a PAP-Q (Piñeiro and Rosenblatt 2016). In our study, for instance, we amended our theoretical argument in light of evidence collected in our fieldwork and specified the new evidence required to test the amended theory. Specifically, after 22 in-depth interviews and a focus group with party activists, we were able to determine more precisely the role grassroots activists play in the process of building the FA. In one of the amendments (Piñeiro, Pérez, and Rosenblatt 2016b), then, we amended the theory and the hypothesis preregistered in the original PAP-Q, further specifying the components of the causal path between the causes and the dependent variable, and we explained why the changes were introduced.

Given that our PAP-Q included the pieces of evidence, the sources, and the tools to collect the evidence that we had anticipated using, amendments also allowed us to publicly update the evidence or the method of collecting it in response to problems that emerged during fieldwork. In our study, we first planned to conduct a self-administered survey of grassroots activists. We encountered several problems during its implementation and decided to change to an online survey. The online survey allowed us to obtain information not only from activists, but also from party adherents whom we initially had not planned to study and, thus, to collect additional evidence. This change in plans led us to introduce two new amendments to our PAP-Q related to the evidence collected with the survey instrument (Piñeiro, Pérez, and Rosenblatt 2016c, 2016d).

PAP-Qs and their amendments allow readers to understand changes in the research process. This brings more transparency to the research process and promotes understanding of the challenges that emerge during fieldwork, which published papers rarely discuss. In this vein, readers are able to evaluate crucial decisions that the researcher made, and the value of the evidence presented. The disclosure of fieldwork problems and how they were resolved might also be useful to scholars who want to conduct similar empirical strategies. Preregistration serves the goal of improving causal inference through the iteration of theory and fieldwork. The PAP-Q reflects,

in a formal and public document, the natural iterative process of qualitative research, which researchers usually do not explicitly present (Yom 2015).

How Preregistration Benefits Fieldwork Efficiency

PAP-Q not only improves transparency, but also enhances fieldwork efficiency in at least two interrelated dimensions: First, it facilitates the calibration of research instruments, helping authors to maximize their potential to collect relevant data, and, second, it improves the practical organization and planning of fieldwork. As Kapiszewski, MacLean, and Read (2015) note, planning one's fieldwork is essential. Many fieldwork activities constitute a one-shot opportunity to collect evidence (e.g., there may be few opportunities to travel or to interview an important political leader). A PAP-Q provides an opportunity to maximize the results of the fieldwork.

In our study, the PAP-Q prompted us to calibrate our survey and in-depth interview questionnaires so as to ask information directly tied to our outcome of interest. In addition, it helped us to establish the precise requirements of the archival research (e.g., types of documents, availability). Specifically, the PAP-Q encouraged us to thoroughly evaluate the logical validity, measurability, reliability, and the viability of collecting the evidence (both in terms of ethical restrictions and resource limitations).

PAP-Q also guided the organization of our fieldwork. A clear specification of the different tools and the required evidence and sources helped us decide where to invest our scarce resources (both time and money), a critical issue for any scholar, and especially for those of us in the global South. Planning fieldwork entailed preparing a draft list of potential interviewees, checking beforehand the availability of archives (how much was available and the characteristics of the material), and considering other strategies of data gathering. Data gathering has to be planned and prioritized as a function of the probative nature of the evidence that would be collected from the alternative sources (Bennett and Checkel 2015). This is only possible when the researcher articulates beforehand a set of working hypotheses, the possible sources from which information may be gathered, and the probative nature of the evidence to be collected.

Qualitative scholars, especially those who conduct process tracing, usually develop a more or less formal pre-analysis plan of their research before conducting fieldwork. They also transform it during the research process (Kapiszewski, MacLean, and Read 2015). Making this practice public through preregistration incentivizes the adoption of such practices by the academic

community as a whole. For those who usually perform these tasks, preregistration improves the transparency of their work. For those who do not, preregistration forces them to adopt these good practices associated with the research process.

Conclusions and Open Questions

In this brief note, we have presented how preregistering qualitative research improves transparency and the quality of research in general. We have used this practice in various research projects.² We described the contents of a PAP-Q, and how each part promotes different recommended research transparency practices. We believe that preregistering research designs not only improves the transparency of different aspects of the research process, but also promotes greater investment in research design and improves efficiency in the field.

A potential limit to preregistering qualitative research is that preregistering implies some degree of knowledge of the cases to be analyzed. Because scholars who conduct field research often learn a great deal as their work in the field progresses, preregistering a study might entail investigators introducing several amendments to their preregistered plan, increasing the burden on them in the initial phases of the research process. Yet, once the researcher has gained some footing in the study (e.g., after pre-fieldwork) or after finishing fieldwork for one of her cases, she might register the PAP-Q for other cases in which the theory will be tested.

Some authors have raised concerns about employing this practice in qualitative research, ranging from epistemological and methodological critiques to practical considerations. For example, these questions were discussed in the Fall 2018 issue of *Qualitative and Multi-Method Research*, which examined DA-RT guidelines, raised again during the Qualitative Transparency

Deliberations process, and have been summarized by Jacobs et al. (2021). As we have argued elsewhere (Pérez Bentancur, Piñeiro Rodríguez, and Rosenblatt 2018a), preregistration likely would not benefit scholars who work in non-positivist traditions and whose research has different epistemological grounds. Thus, our claims in favor of PAP-Q (cf. Pérez Bentancur, Piñeiro Rodríguez, and Rosenblatt 2018b, Piñeiro and Rosenblatt 2016) do not imply that preregistration should become a hegemonic practice in the discipline. In more positivist work, however, we believe there are clear rebuttals to some of the most common critiques of preregistration in qualitative research.

For instance, one of the most significant methodological critiques of preregistration is that, according to some scholars, preregistration functions as a straitjacket that inhibits potential inductive findings and limits a researcher's creativity. In our experience, preregistration orders what would otherwise be an overwhelming world. It equips researchers to assess discoveries. PAP-Q helps researchers clarify their theoretical and empirical expectations. This, in turn, helps elucidate the value of the emergence of unexpected evidence.

Another critique of preregistration is that excessive research transparency requirements might increase the overall costs of research (Jacobs et al. 2021), creating a barrier for those with fewer financial resources and thereby widening the research gap between scholars from the global North and those in the global South. However, by encouraging researchers to better organize the research process prior to embarking on it, preregistration can actually reduce the costs of fieldwork. In our own case, preregistration made our fieldwork more efficient, which, in turn, helped us use our scarce resources wisely.

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² For the sake of brevity, we have discussed only one example. However, we have also used this practice in a study of the determinants of the strength of Freedom of Information oversight institutions in Latin America. For the pre-analysis plan of this study, see Piñeiro et al. 2019.

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Research Transparency: Less about Rigor and More about Responsibility¹

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Researching the governance role of sex worker rights organizations in North America has deepened my commitment to a broad conception of research transparency. Because buying or selling sex is typically criminalized, sex workers face a high risk of direct harms (e.g., violence) and indirect harms (e.g., deportation, barriers to healthcare). As such, an argument for research transparency in this case may appear misguided. Wouldn't transparency increase the risk of harms against sex workers by "outing" them to police, immigration officials, service providers, and family members? When researching individuals, groups, and communities experiencing criminalization, persecution, stigmatization, and other forms of oppression, certain kinds of transparency can indeed increase the risk of harm (Htun 2016; MacLean et al. 2018; Parkinson and Wood 2015; Shih 2015). Clearly, we have ethical obligations related to our research, which are *primary*; we have ethical obligations to protect our research participants and collaborators, and these obligations must dictate the *how* and the *what* of research transparency. In other words, our responsibilities related to research transparency are *secondary*, taking their form and substance from our primary obligations. In important ways these latter responsibilities can, and ideally should, serve in bolstering the former obligations. In this short paper, I offer thoughts on ways in which I've worked to uphold my ethical obligations and to bolster them through three broad transparency steps including (1) publishing a coding scheme, (2) archiving public transcripts, and (3) sharing a community report.

As I write this piece, I am mindful of the words of Lee Ann Fujii (2016): Research transparency "is but one scholarly value among many...and as such, cannot stand as the single barometer for 'rigor' in the discipline" (26). I want to be clear that, while I am making a case for transparency, it is not principally about a conception of scientific rigor. It is more about my understanding of my privilege as a scholar and my corresponding responsibilities and obligations to a range of individuals who are differently positioned but are involved in my research, who may read and apply it, or who are affected

by it. As a researcher, I have ethical responsibilities and obligations with respect to participants in my projects, research assistants I employ, professionals whose services I procure, members of larger research communities of which I am a part, decision makers who may draw from my research, and the public at large who funds my research (see also Maclean et al. 2018). Thus, I make judgements and corresponding decisions about the informed and active consent of research participants, fair pay and hours for my research assistants, the integrity of businesses I engage, the research materials and methodology with which I work, and the processes of communicating my work. I believe that I have corresponding responsibilities to consider the *extent to which* and the *means by which* I can achieve transparency to not only uphold but deepen the commitments articulated in the prior set of research ethics decisions. Both prior and ensuing decisions need to be contextualized and oriented toward meaningfully respecting the humanity of participants and employees, minimizing harm to them and to others who may be affected by the research, while maximizing the social good of developing and sharing knowledge.

The claims I make in this short piece are based on my long-time research with sex worker rights activist, Kerry Porth. Kerry is a prominent activist, who has spent many years advocating for legal reform to recognize and uphold the fundamental rights of sex workers. She has engaged in community organizing, given public talks and media interviews, participated in research projects, worked on the constitutional challenges to Canada's former prostitution laws, and appeared as an expert witness in parliamentary hearings on what would become the country's current laws around sex work (i.e., Bill C-36). In the following, I outline how I came to view realizing specific forms of research transparency as responsibility to communities of sex worker rights advocates, and how I have worked to fulfill this responsibility in a way that bolsters research ethics.

Research Transparency as a Responsibility

My research is a form of normative theorizing that is grounded in empirical study (see Ackerly et al. 2021).

¹ I express my gratitude to Kerry Porth, Esther Shannon, Chris Atchison, Nadine Flagel, Beatrice Omboga, and all of the sex worker rights activists who have supported our work over the years.

I often work within a critical framework but draw from both interpretivist and positivist methodologies. In recent years, my work with Kerry has become explicitly solidaristic (Johnson and Porth forthcoming). My research has taken this turn because the evidence from health sciences, social sciences, and legal analyses has become crystal clear: Criminalization increases harms to sex workers and violates their human rights (see Abel et al. 2014; see also Canada (Attorney General) v. Bedford 2013). Yet, sex workers continue to be criminalized through laws around the commercial exchange of sex. Solidaristic research involves recognizing the privilege and power we have as scholars and deploying our resources of social capital, time, and money toward ending forms of oppression. Wherever possible, I use my resources as a tenured professor to make contributions to endeavors to decriminalize (and destigmatize) sex work and sex workers.²

From the beginning, ethical and transparency considerations have been paramount in my research on sex work policy and governance. I decided to focus my analysis through an empowerment lens and examine sex workers as agents of political change, as I recognized early in my exploration of the literatures on sex work and sex workers that certain research topics had been saturated, certain communities of sex workers were over-studied, sex workers were asked to share and re-share personal information, their engagement in research projects involved personal risks and costs, much sex work research was “extractive” in nature, and some research further stigmatized sex workers. I decided to focus on the work of sex work activists and organizations to raise awareness, advocate for legal reform, and participate in policy processes. I also decided to focus first on publicly available research materials and second on research interviews. In addition, I wanted to be accountable to my participants throughout the research and beyond. This has involved checking in with interviewees regarding direct quotations and altering them if necessary, sharing drafts of my academic papers and incorporating suggested changes, paying open access fees for peer-reviewed work, and writing community reports in accessible language. Measures to fulfill my ethical obligations to research participants and collaborators have always been built into my research designs, and these measures have been bolstered by elements of transparency.

In addition to obligations to research participants, thanks to extensive conversations with Kerry, I now understand my obligations to the sex worker rights community more broadly. This community is fighting for

the decriminalization of sex work, and the fight is real. Indeed, Kerry has faced vociferous—even violent—criticism from individuals calling for the eradication of prostitution and the prohibition of sex work. Arguments put forward by “prohibitionists” are often highly moralized. Notably for this discussion, they are often based on poor research design, data, and analysis (see Benoit et al. 2019; Bruckert 2015; Weitzer 2015; Zhang 2009; see also Bedford v. Canada 2010). In many ways, the fight is for the recognition of evidence and the development of evidence-based policy. Certain steps in research transparency can enable law makers to better assess research methods, findings, and conclusions that in turn can influence their policy decisions. Kerry has always stressed to me the importance of doing sound and accessible research in order to be better than the opponents and ultimately to defeat them in the fight for policy. In a way, the transparency steps that we take represent a challenge to prohibitionists: We have nothing to hide. Do you? In a way, these steps are expressions of political solidarity with sex worker rights communities.

Another set of conversations that have deepened my understanding of research responsibilities and obligations were with Esther Shannon, a long-time feminist activist and ally to the sex worker community in Canada. In the fall of 2014, Esther shared with me her views on the recently completed parliamentary hearings on Bill C-36—a bill prompted by the successful constitutional challenge of Canada’s prostitution laws. The Supreme Court had reached a unanimous decision that the provisions in the Criminal Code concerning prostitution represented an unjustifiable infringement of sex workers’ rights to life, liberty, and security of the person (Canada (Attorney General) v. Bedford 2013). The government responded with Bill C-36, which criminalized the buying of sexual services. Esther had followed the hearings closely and observed that they were unfair with respect to the treatment by committee members of witnesses seeking the full decriminalization of sex work. “Wouldn’t it be interesting,” she asked, “to study these hearings to see if they were biased against sex worker rights advocates?” Shortly after that conversation, Kerry and I decided to conduct that very analysis.

Research Transparency in “A Question of Respect”

Our overarching question for this analysis centered on whether parliamentary committee members treated witnesses testifying on Bill C-36—*The Protection of Communities and Exploited Persons Act*—respectfully and

2 The reference to being a tenured professor is deliberate. By making this reference, I wish to signal that there is a relationship between privilege and positionality, and responsibilities and obligations. The essential idea is that the “better” socially placed we are, the greater the imperatives to deploy resources toward combatting various forms of oppression, including the criminalization of sex work.

fairly. Kerry and I, along with Mary Burns, a master's student at the time, analyzed the transcripts from the hearings of the Commons and Senate committees on the bill. We focused on the questions from committee members to witnesses and found that the vast majority of them were respectful, neutral, and fair. However, our findings indicated bias from the majority Conservative Party of Canada (CPC) members with respect to witnesses against the bill, many of whom were sex worker rights advocates or allies. All disrespectful questions were asked by members of the CPC, with all but one posed to individuals testifying against the bill. CPC members asked the largest percentage of negative-tone questions, which were all directed to opposing witnesses. Similarly, all of the combative questions from CPC members were posed to opposing witnesses.

Kerry and I knew from the inception of this project that we had a responsibility to bring in elements of transparency. We decided to focus on three elements: publishing a coding scheme, archiving the hearing transcripts, and sharing a community report.³ With respect to the first element, we wanted to create and share a comprehensive coding scheme to enable individuals to understand—even scrutinize—how we conducted our analysis and developed our findings. We also wanted to provide as much information as possible to enable individuals to employ our methodology in other policy areas should they wish. The coding scheme therefore contained descriptions of our key assumptions, unit of analysis, coding process, reliability measurements, and code definitions.

We began the process of writing the scheme during our first team meeting and continued throughout the project. A foundational assumption that we wanted to clarify was that we would not be asserting truths but rather interpreting communicative exchanges. Although we would express our findings in quantitative terms, providing descriptive statistics and reliability measurements, we wanted to be clear that we would be drawing meaning from exchanges in the context of parliamentary hearings on a highly contentious topic. We thus included details about the polarized nature of positions on the legal status of sex work and about the arguments typically used by the opposing sides in this debate. Knowing that we were documenting the process for both ourselves and others, we continuously wrote research memos to ensure accuracy.

In the first coding phase, I worked face-to-face with Kerry and Mary, meeting with them several days a week. During this, we decided that our unit of analysis would be committee members' questions and that within each question, we would examine three dimensions: content, tone, and nature. The second phase involved developing evaluative codes for each dimension. We developed the codes of respect and disrespect for the content of questions. For the tone of questions, we developed positive, negative, and neutral codes. For nature, we developed the codes of sympathetic, combative, and fair. The third phase involved the consensual application of these codes to the transcripts. Our consensual coding involved weekly meetings to check our individual coding and resolve differences. Where there was disagreement over the coding of particular questions, we discussed the reasons. Once any differences were resolved, we coded the transcripts using NVivo software. Throughout the second and third phases, we refined our code definitions. In the fourth phase, close to a year and a half after we finished our consensual coding, Mary and I recoded the transcripts. Since Kerry had participated in the hearings, we decided to exclude her from this round of coding to see if there were significant differences between the two rounds. There were not. Throughout all four phases, writing and revising the coding scheme was a parallel project.

The scheme was ultimately appended to our peer-reviewed paper (Johnson, Burns, and Porth 2017a) and archived it in the Qualitative Data Repository (QDR) (Johnson, Burns, and Porth 2017b). I decided to archive it in the QDR because the administrators would issue a separate DOI for the scheme. To me, this was an important symbol of the independent value of this work but, it also meant that the work could be cited on its own. More pragmatically, it was a way of highlighting to my tenure and promotion committee the considerable work we had accomplished.

The second way we pursued transparency was by assembling and archiving the complete set of hearing transcripts. Archiving these transcripts was straightforward but time consuming. The original transcripts are housed on a Government of Canada website, searchable by bill number and date. While the transcripts remain accessible through the government's website, we believe that archiving them on QDR minimizes the labor of those wishing to examine our methodology. It takes time to navigate websites and downloading transcripts from

3 There is an extended discussion to be had about what we chose not to make transparent. Why not our memos, for example? The short response is that this would have taken more time and energy, and the methodologically relevant parts of our memos were worked into our coding scheme. Why not our interviews? Again, this would have taken more time and energy. As a basic practice, going public with transcripts requires consent not only at the beginning of an interview, but ongoing consent in terms of participants having autonomy to redact anything they may wish and to reverse their consent to public posting.

sessions on different days and during different time slots can be tedious. A DOI link now directs individuals to a single webpage that houses both our coding scheme and the transcripts.

The third component of our transparency strategy took the shape of a community report (Porth, Burns, and Johnson 2017). Kerry took the lead on the report, working to ensure that it would be legible to individuals outside of academia. She also sent out a questionnaire to her colleagues who had participated in the hearings, the results of which she incorporated into the report. This allowed Kerry to provide more context from the lived experiences of hearing participants, and enabled an airing and sharing of concerns among community members. This component of Kerry's research was very important, giving a sharp voice to serious concerns about how sex worker advocates were treated during the hearings—a voice that is too often suppressed by our academic writing. We distributed the community report through FIRST, which is an online network of hundreds of sex worker rights advocates and allies. In the work that has followed, we have continued to write community reports—including one that takes the shape of a short graphic novel (see anunusualacademic.com)—corresponding to our peer-reviewed work (Johnson and Porth forthcoming). Perhaps pushing the parameters of transparency, we believe that it is important to be creative in efforts to widely communicate our research and that creative expressions are ways of remaining accountable to the communities on which we research. I have learned over the years that sex workers and their allies are not pleased with academic norms of jargon-laden writing, the length of time between research and dissemination, and the prevalence of journal paywalls—all of which obscure research and research processes. These are hallmarks of extractive research, and I have come to understand that it is my responsibility as a scholar to counter them.

The Cost and Benefits

Developing all three components of our transparency plan involved labor. It effectively amounted to writing two more papers (i.e., the coding scheme and community report) in addition to our peer-reviewed paper. The time spent archiving the transcripts in QDR was not insignificant. The reality is that we are all maxed out—women in particular—and this additional labor contributed to an existing load. However, QDR provided very helpful administrative support, which expedited the process. In addition, there were budgetary implications of dollars per hour that Kerry and Mary worked on the project. But the costs to my research fund translated into material benefits for Kerry and Mary, who were paid between 25 and 33 Canadian dollars per hour for work

that I believe they found enjoyable.

As scholars, Kerry, Mary, and I deepened our understanding of ways of conducting interpretive and qualitative research and of how we were conducting this particular research. Working on our coding scheme and the community report created opportunities for more discussion, sharing, and learning among us. This work resulted in our spending more face-to-face time together and collaborating on a project meaningful to all of us, which resulted in deepening the basis of our friendship. As activists, we developed our understanding of sex worker rights advocates as political actors, highlighted one of the ways they participate in policy processes, and evaluated how they were treated. We did all of this in a way that enabled individuals, including skeptics and critics, to see how we conducted our work and to scrutinize it should they wish. In a small way, we signalled to prohibitionists that our research is sound and that, if they do not believe us, they can check for themselves. Maybe they will invite us to scrutinize their work in turn. Again, with respect to this particular project, we believe that this way of working is a responsibility, if not an obligation, to the sex worker rights communities.

Rigid transparency requirements by journals or funding agencies are problematic if they function as barriers to important research. As a woman of color, I am not looking for additional obstacles to getting my work published—obstacles that impact my career progress, salary and benefits, and retirement planning. As a researcher who has long been drawn to policy areas that are stigmatized (e.g., nuclear waste management (Johnson 2008) long before sex work governance), and whose area expertise is Canadian public policy, I would like to avoid additional obstacles to publishing in large international (including American) journals positioned to represent the discipline of political science. Despite these concerns, I believe that, where ethical responsibilities and obligations related to research participants, materials, processes, and implications are both upheld and deepened, and where it is feasible in terms of time, money, and other logistics, the benefits of certain forms of transparency outweigh the costs. Regularly sharing research materials with participants is a way of ensuring their active consent; communicating back to community through accessible reports can facilitate accountability; and other, more creative works can ensure that researchers are not just taking something away without giving back. In the work that Kerry and I do, transparency can be an expression of solidarity.

For scholars seeking to incorporate transparency into their work, my overarching suggestion is to think first about your ethical obligations as researchers and then about the ways in which these can be bolstered

by elements of transparency. Use your contextualized judgements about research ethics to guide your decisions about transparency. Be thoughtful; be creative. Making decisions about ethics and transparency is not easy, as Lauren Maclean (2018) and her colleagues on the QTD Working Group 1.2 render vivid (see also Johnson, Pickup, de Rooij, and Léger 2017), but it is important.

Also necessary is that those with decision-making power within the discipline examine their racialized and gendered privilege and act on corresponding obligations to conceptualize and operationalize transparency in ways that address those “ugly realities” of political science that Fujii (2016, 26) so clearly and forcefully identified.

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A Practical Introduction to Annotating for Transparent Inquiry in Qualitative Research

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When we do historical research, or political science research using primary source historical evidence, a major barrier to transparency is the fact that the archival documents used are inaccessible. Whereas citations to journal articles and, increasingly, books and some other data sources, can usually allow a reader to check evidence within minutes, citations to archival documents can require months or years to verify, if it is even ever possible. This is a serious problem for qualitative and multi-method research in my field, international relations and the study of foreign policy decision-making, which often relies heavily on archival documentary evidence (Moravcsik 2014). Elman, Kapiszewski, and Lupia (2018) claim that scholars “may be unable to imagine a practical way to share” the archival documents they use in their analyses (41). In this symposium contribution, I describe and analyze such a method, that is, annotating a journal article using Annotation for Transparent Inquiry (ATI). This new approach to transparency allowed me to create a digital overlay on top of my published article comprising “annotations.” Through those annotations, I could provide instant access to annotated copies of the archival documents my research is based on, and expanded commentary on citations to those archival documents. The annotations thus increase both data access transparency and analytic transparency (see Elman, Kapiszewski, and Lupia 2018, 34 for a discussion of the latter). I also discuss some thoughts on the benefits and costs of using ATI for both the author and the reader, inspired by my experience annotating

Using Annotation for Transparent Inquiry (ATI)

In my analysis of foreign policy decision making (O'Mahoney 2017), I refer to many primary documents, including ones physically sourced from the United Kingdom National Archives at Kew. Previously, a reader would either have to take my word for the contents of the documents or make their own trip to Kew, which is mostly infeasible. However, a new initiative run by

the Qualitative Data Repository (QDR) at the Center for Qualitative and Multi-Method Inquiry at Syracuse University now allows for instant access to the original documents. Annotation for Transparent Inquiry (ATI), a new approach to making qualitative and multi-method research transparent, involves using Hypothesis software to allow annotations to be added to articles. Such annotations:

“include ‘analytic notes’ discussing data generation and analysis, excerpts from data sources, and links to those sources stored in trusted digital repositories. Readers are able to view annotations immediately alongside the main text, removing the need to jump to footnotes or separate appendices. Sharing the data sources via a secure repository ensures that they are findable, accessible, interoperable, reusable, and preserved for the long term” (QDR Blog, n.d.)

So, what exactly did I do?¹ First, I went through all of the times I directly refer to an archival source in the published article and made a list. Then I categorized each of the citations into A (important) and B (perhaps important). An A label was supposed to indicate that a claim was central to the main argument, and so should definitely be annotated. A B label indicated that the claim was ancillary in some way. My reasoning for doing this was so that I could prioritize the A sources and reevaluate whether the B sources were worth annotating later. Mostly, I ended up also annotating the B sources as well as the A sources. Sometimes I did not. For example, given that some quotations were already quoted in their entirety in the article, an annotation seemed superfluous.² Also, in annotating this article, I focused heavily on providing access to source text that was not directly quoted in the main body of the article. This involved both providing the source text in an annotation as well as a link to a PDF of a photo of the archival document the source text came from. I also aimed to provide access to documents that were not easily accessible elsewhere. For example, the Foreign Relations of the United States

¹ It is important to note that I did not build annotation into the writing of the article from the start; I annotated after the article had already been published.

² I say “seemed” here because in fact there are analytic transparency benefits to annotation beyond just providing full source text. See below for more on this point.

series is available in full text online,³ and is keyword searchable, so providing an annotation seemed relatively superfluous. Similarly, UN Security Council records are publicly available online. However, in the future I would also annotate this type of source, as the benefits of annotation go beyond simply providing access to a downloadable document, as I highlight below.

One concern might be that I was only annotating sources mentioned in the paper and ignoring sources *not* mentioned. Perhaps this means that the reader will not know whether there is other evidence which is against the claims being made. However, this is an issue covered by considering alternative explanations. If there is evidence in favor of an alternative explanation, this should be evaluated in the paper regardless of annotation or transparency.

In the end, I had a list of 33 individual citations, and for each of these I wrote an annotation. The annotations consisted of four parts: an analytic note, a source excerpt, a link to the data source (i.e., a PDF digital photo of the document in question), and a full citation.

The analytic note consisted of a comment on the context of the document and its interpretation. The context included what type of document it was. Verbatim minutes of a meeting? An extract from briefing notes? Secure telegram between diplomatic sites? Summary of a public press event? All of these have different implications for how we should evaluate the evidentiary value of this document for the claim being made, and few of them are necessarily understandable from a footnote. The interpretation consisted of a claim that “this excerpt shows that...”, which related the raw empirical content of the source to the claim in the paper.

The source excerpt was the verbatim text I had used to underly the empirical claim being made. I included enough that it made sense, usually about 100 words, but not the text of the entire document, which could have amounted to multiple pages of text.

The link to the data source was to a PDF of a digital photo that I had taken in the archive. The purpose of this was both to present the excerpt in the context of the actual document, for example including the preceding and following paragraphs, but also as proof that that is what the document contained.

The full citation was as complete of a description of the document and where it was located as I could give. Word count limitations and style requirements in publications can often inhibit providing clear sourcing information for archival documents and there are no standard citation practices (there are few standards in archives either!). I have had the experience of taking a

footnote to an archivist and had them shake their head in disbelief at how useless it was as a guide to locating that particular document. Providing a full citation in an annotation could mitigate or eliminate that issue.

Lessons Learned

In the beginning, I was not clear what exactly to provide in the analytic notes. I based my practice on the examples from the QDR website, which described the source only. This was appropriate for some archival document citations because I was explicit in the body of the published paper on how the excerpt supported a causal claim and what the implications of the evidence for the claims were. In other cases I did more to relate the content of the source to the claim in the paper. In doing so, I could have been much more explicit about using the theoretical terms and concepts from the paper. I could have made a precise statement of exactly what the status of the claim would have been had this piece of evidence been absent or different. This would have made the empirical analysis more systematic and increased the analytic transparency of the piece.

In the process of annotating, I found myself reproducing the inferential reasoning that had led to my making the empirical claim in the first place. This is one area where I would do things very differently next time. I had made no record of exactly why I had chosen this piece of evidence to support this claim.⁴ In future, it would make both descriptive and causal inference much stronger if I made a record of the reasoning during the writing process, for example by annotating during writing the article. This would be especially valuable for “smoking gun” or “hoop” tests (Collier 2011).

The very first annotation I created led to an interesting finding. The single source cited in the relevant passage of the article by itself did not give as clear of a demonstration of the point I was making as I remembered. Consequently, I went back through the archival documents in the same collection and found another source that complemented the original source and made for much stronger support for the empirical claim. Then I made a second annotation for the second source. This situation was a product of annotating post hoc. Building annotation into the writing process would have allowed me to structure the evidence in layers, so that summarizing rich, multi-faceted evidence into, say, a single line or sentence was not cutting evidence but just making it easier to read. To clarify, there was also a part of my paper (about Italian foreign policy reasoning) that could have been summarized much more succinctly had I built in annotation from the beginning. In the paper as it

³ For an example, see Smith (2005).

⁴ Clearly some hermeneutic distance is inevitable, but it can be reduced.

is, some information has been lost in the revision process. If I had known that I could provide an annotation with more explanation for those who wanted it, I could have made a much shorter and more direct claim without losing nuance, detail, or evidentiary support. One way of building annotation into writing might be to create a list of claims and sources used in the article, either using the ATI software directly or just simply in a Word document.

One very practical issue that the annotation experience made me hyperaware of was keeping track of the archival documents. Partly because the article had come out of a set of documents that had been collected for a different research project and partly because I had made two separate trips to the archive, years apart, my organization of the documents used in the article was not ideal. Now, I always assign an informative unique identifier to all my archival documents (e.g., FCO371020_13_1972jan12_ceyloncable). The National Archives and Records Administration's Access to Archival Databases system for electronic telegrams helpfully does this for you (e.g., 1974THEHA02252).⁵ A unique identifier can be put into your writing as well as used for annotating through ATI. This is labor-intensive but being able to keep track of your files is invaluable and might save a lot of time down the line.

One of the lessons learned was that it is important to be extremely systematic about taking photos of documents in archives. It is not always immediately apparent which parts of which documents will be essential for the argument in the paper. Making sure to get good quality photos (unlike some of mine in this case) is something that I will pay more attention to in the future. I have also learned to photograph as much as possible, always entire documents, and often entire folders or sections of boxes.

These lessons learned, such as being explicit about your reasoning and treating your data in a systematic way, presumably travel beyond archival materials and could be applied to working with other types of qualitative data, such as interview transcripts, etc.

Benefits of ATI

Annotating publications to increase transparency benefits both the reader and the author.⁶ The benefits for the reader of an annotated article vary depending on the reader's depth and scope of interest. Some readers are not concerned with the evidence in a paper, or maybe do not want to exhaustively assess the provenance of each and every piece of evidence. In these cases, annotation does not impose an extra burden on the reader. However, for

readers who are interested in knowing what an archival document actually contains or whether it contains what the author claims, then annotation is invaluable. To illustrate this point using my own research experiences, I recall reading a paper which cited a document which was not available online and was housed in a distant location. I emailed the author to ask about the document. The author replied with a link to a cloud folder containing a photo he had taken of that document at the archive. This meant that I could read the document only a few days after reading the paper. On another occasion when wanting to review a cited document, I emailed the author but they could not find the document. On yet another occasion I noticed that a cited document could not possibly exist, due to an error in the citation format. I emailed the author about it but never received a reply, suggesting I will never know what document was used in the generation of that claim.

In all three of these cases, annotation would have been a substantial improvement. In the third case, a wrong citation would not have mattered because the source excerpt and PDF document would have been immediately available. In the second case, the annotated document would have been available and access would not have been dependent on the author maintaining their own personal archive in perpetuity. Even in the first case, access would be instantaneous with an annotated document rather than require the time and effort to set up a peer-to-peer database connection.

Another benefit of ATI for the reader can be seen by comparing ATI annotations and qualitative methodological appendices. Both are responses to the same problem; qualitative evidence can take up a lot of space. However, there are at least two ways in which annotation can be better than methodological appendices. First, there is a direct link between the claim and the evidence when the annotation is "right there." In a similar way that the inconvenience of endnotes is a barrier to their use, having a 20-page appendix in a separate location is not as helpful. Second, methodological appendices rarely reproduce the original source documents, whereas that is a central feature of ATI. That said, appendices perform other functions not easily captured by ATI. So, qualitative researchers may be pressured (either by their own pursuit of transparency and quality, or by editors and reviewers) to provide both annotations and appendices. This would constitute a substantial amount of extra work over the current situation in which the standard is to provide neither. This extra work should come along with increased credibility of empirical claims.

⁵ Using this document number, you can find this document using the direct link: <https://aad.archives.gov/aad/fielded-search.jsp?dt=2474&cat=WR43&tf=X&bc=,sl>

⁶ See Fairfield (2015) on how transparency improves the quality of process-tracing.

A potential concern for readers is that annotations may be built into the writing process in a way that means that the paper is impoverished without the annotations. Maybe the paper would be nonsensical if crucial aspects of the reasoning of the overall argument are only included in annotations. Another possibility is that the paper puts so much evidence and reasoning in the annotations that it leaves the reader with no way to evaluate the evidence without accessing the annotations. This seems a remote risk, albeit one to guard against. It is also the case that completely unannotated papers currently suffer related problems.

There were also several ways in which the annotation experience benefited me as an author. The first was that it really foregrounded the selection and interpretation of text from archival documents. When reporting the results of qualitative research and relying on single speech acts, their context is often crucial to understanding them (especially if there is illocutionary force). For example, in the paper, I make the claim that “the British government impressed upon him [Mujib] the importance of Indian troop withdrawal for recognition of Bangladesh” (O’Mahoney 2017, 332-3). This is one of many important empirical claims supporting the theoretical argument. But without the annotation, this half a sentence is all the description a reader gets, along with a citation to a physical document. In the process of annotation, I was really astonished at just how much of the detail surrounding this claim had been lost. As an author, annotation allowed me to do justice to the material. In this case, I added two annotations. One was to a document that gave the source text of the minutes of the meeting at which the event occurred, and another was to a document that referred to a separate meeting with an associate of Mujib demonstrating that the linkage had been made clear a second time.

In the annotation, more detail can be added, not just on the speaker or writer, but also on the document, where it comes from, the type of document, who had access to it, and other potentially relevant features of provenance. This extra information may not always mean acceptance or rejection of the piece of evidence, but can often change how authors and readers should weight it as support for inferential claims (or the effect size on priors). Fundamentally, annotation allows far more discrimination in the evidentiary value of different pieces of evidence.

Also, the annotation process made me acutely aware of issues surrounding the *selection* of evidence to put into an article. Imagine an empirical claim that is crucial to a theoretical argument, and an author has five pieces of supporting evidence for this claim. Without annotation, it may be that only one piece of evidence in support of

the claim can be included in a publication. This practical issue means that a solidly supported claim (with five pieces of evidence in support) and a far more tenuous claim (with only one piece of evidence in support) may appear identical. Annotation allows authors to reference the totality of the supporting evidence without making the main text unreadable by including unavoidably large sections of historiographical discussion of each one of perhaps hundreds of pieces of evidence.

Another effect for me as an author was an expanded sense of what counts as credible qualitative research based on archival documents. Annotation could spark a qualitative archival credibility revolution. Without the ability to check or analyze the underlying data, reproducibility is minimal and practically speaking has been non-existent in such historical research. With annotation, every reader can do their own reproduction of an analysis. No longer do you have to basically take someone’s word for it or rely upon (rare) exercises like Moravcsik’s (2013) critique of Rosato’s use of archival sources in his account of European integration. This was perhaps most apparent when thinking about Table 2 in my paper. Table 2 summarizes a lot of qualitative data—claims about 26 different states’ reasons for supporting or opposing a policy. Without annotations, the paper includes a reference to a volume or a folder, not even a specific document. These claims are practically speaking unverifiable in the original paper, although it is possible that I could have explained why each data point is justified. With the annotations, every single claim can be readily verified, with not only an expanded analytic note but a copy of the original document in support. The opportunities for research practice to evolve here are exciting.

Concluding Thoughts on Annotation’s Costs and Limitations

My experience also made me reflect on some limitations of the annotation process. First, foremost, and not insignificantly, it is a time-consuming process. Time to spend on research is unevenly distributed and often systematically less accessible to certain groups. If it is not required for publication, or does not increase the chance of publication, then authors are less likely to do it. There are also complications, such as the copyright on the archival documents, or the potential technical barriers to accessing the annotations. Different archives will have different policies on the extent to which scholars are allowed to distribute information and especially image reproduction. For example, the UK National Archives allowed the distribution of the digital photos I took only if they were in a password-protected database. In another case, Library and Archives Canada were allowed

to share some files in a PDF, but others only on DVD. Other archives may have more restrictive policies on data sharing.

These challenges notwithstanding, as this piece has discussed, there are important reasons to adopt

annotation as a research practice: Annotations increase the quality of research by increasing its transparency and reproducibility as well as the strength of both descriptive and causal inference.

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Upgrading an Old QCA Study to Make it More Transparent and Reproducible Using R Markdown

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In 2006, an article on the causes of resignations and non-resignations of federal ministers in Germany was published, which included one of us, Ingo, as one of three co-authors (Fischer, Kaiser, and Rohlfing 2006). As part of the empirical analysis, the article uses Qualitative Comparative Analysis (QCA) to derive the conditions under which ministers who are under pressure to resign do resign or stay in office. In this contribution to the symposium, we explain why we returned to the original QCA analysis after more than 15 years and how we enhanced its transparency and reproducibility by redoing it using R Markdown.¹

We begin with a brief summary of the QCA workflow. We use a simple template of the workflow for a discussion of how it was implemented in the QCA analysis of ministerial resignations. This will show that a mix of several elements motivates a reproduction

analysis after more than 15 years. First, the original QCA study is transparent in large part, but it is not as transparent as we now think that it should have been. The reanalysis allows us to enhance the transparency of the entire workflow and analysis. Second, the original analysis was implemented with the QCA 3.0 software using a graphical user interface (GUI). A graphical user interface notoriously impedes the opportunity to render a QCA study transparent and reproducible because one has to manually edit the data and intervene in the analysis. This accounts for our decision to reproduce the original study in an R Markdown framework. The reproduction analysis is code-based and allows us to produce a report that combines the code with the reporting of the results. In section three, we explain that the original results can be reproduced using R Markdown and how exactly this allows us to improve upon the original GUI-based study.

¹ We define a study as reproducible when one is able to derive the same results as in the original study when using the same data and following the same procedure as it is documented in the original study.

The final section concludes with a short discussion of the pros and cons of using R Markdown for QCA research, where we argue that the pros outweigh the cons.

The QCA Workflow and the Analysis of Ministerial Resignations in Germany: What Was Done and What Could Have Been Done Better

The original QCA study is based on a dataset of 111 debates about federal ministers in Germany resigning from office.² The outcome of interest is whether a minister finally resigned (positive outcome) or not (negative outcome of non-resignation). The goal was to determine the conditions under which a minister resigns or stays in office. As part of the analysis, we ran a QCA study that derived the conditions of resignation and non-resignation from 111 cases of debates about resignations of federal ministers in Germany from 1969-2005.³

The main finding of the QCA study was that a minister resigns if one of five constellations applies: the minister wants to resign (happened once); the minister's party demands resignation; the trigger of the resignation debate preceded the minister taking office and the issue is political; the chancellor and the opposition demand

resignation; or the reason for resignation precedes the entry into office, there was no judicial investigation, and the opposition opposes resignation. We do not want to go further into the details of the theory and empirical substance here and instead focus on those elements of the QCA workflow that are generic to the set-relational analysis (for a broader view see Schneider, Vis, and Koivu 2019; Schneider and Wagemann 2010; Wagemann and Schneider 2016). From this perspective, one can distinguish four steps of the analysis: (1) calibration, that is, the transformation of variables into sets; (2) the creation of a truth table based on the set-relational data; (3) the derivation of prime implicants from the truth table through a minimization process;⁴ and (4) the construction of minimal *models* based on the prime implicants derived in step 3.⁵ Each of the steps requires researchers to make analytical choices that need to be transparent. We summarize these decisions in Table 1, alongside information about how the decisions were made in the analysis of ministerial resignations.

Table 1. Example QCA Workflow and Implementation

Stage of the workflow	Design choices	Original study
Calibration	Type of set (crisp, multivalued, fuzzy)	Crisp sets
	Calibration strategy (informal; formalized using link functions)	Informal calibration based on case knowledge
Generation of truth table	Management of contradictions	Case-based discussion of contradictions and resolution of contradictions
Derivation of prime implicants	Decision about sufficiency of truth table rows without cases (i.e., remainders; conservative or parsimonious approach)	Parsimonious approach <i>Issue:</i> Remainders that are assumed to be sufficient not reported
Derivation of solutions	How many and what solutions to report under model ambiguity	No model ambiguity for ministerial resignations reported for original analysis Model ambiguity for non-resignations stated in article <i>Issue:</i> Only one model shown; total number of models not mentioned

² The data was collected by Jörn Fischer, who put in tremendous effort.

³ Ingo was in charge of the QCA study.

⁴ A prime implicant is a superset of a truth table row that is derived through the minimization of a row.

⁵ An additional step that one could integrate is the analysis of necessary relationships between the conditions and the outcome. This is not required for the generation of QCA solutions and was not done in the analysis of ministerial resignations.

The first two stages of the QCA workflow are transparently implemented in the original analysis. It works with crisp sets, that is a case is either a member of a set or a non-member. In stage 1 of the workflow, all sets had been calibrated qualitatively and informally based on case knowledge.⁶

In stage 2, at the time the crisp-set QCA study was conducted, each truth table row had to be either sufficient for the presence of the outcome or its negation. One could only produce a truth table when all rows were free of contradictions, where a “contradiction” is defined by the presence of at least two cases that are members of the same truth table row but that display different membership in the outcome (Ragin 1987, chapter 7).⁷ In the original analysis, one truth table row is a contradiction with 24 cases of non-resignation and two cases of resignation within the configuration. A case-based approach was followed by a discussion of the two resignation cases. It was decided that they displayed singular characteristics and could be dropped from the analysis. This process is transparently described in the article (Fischer, Kaiser, and Rohlfing 2006, 727).

In step 3 of the analysis, the processed truth table was minimized to derive the prime implicants. At the time of the analysis, the conservative (i.e., complex) approach and the parsimonious approach were available. We opted for the parsimonious solution (Fischer, Kaiser, and Rohlfing 2006, 734), which makes assumptions about the sufficiency of remainders for the outcome such that the maximum degree of minimization and simplicity of the final model is achieved (Ragin 1987, chapter 6). While it is transparent that the parsimonious approach is followed, it is not reported what truth table rows without cases were assumed to be sufficient in the minimization processes. This should have been made transparent because the assumptions about remainders are crucial and the reader must be put in a position to evaluate these assumptions.

In step 4, one builds a minimal solution based on the prime implicants such that each truth table row that is sufficient for the outcome is represented by (or covered) by at least one prime implicant. Stages 3 and 4 of the QCA workflow were not clearly distinguished until the phenomenon of *model ambiguity* gained attention in recent years (Baumgartner and Thiem 2017; Thiem 2014, 498–

500). Model ambiguity denotes a situation in which it is possible to represent the truth table rows through more than one combination (disjunction) of prime implicants. The original analysis of ministerial resignations, which was the outcome of prime interest, produced only one model. The analysis of non-resignations yielded model ambiguity (Fischer, Kaiser, and Rohlfing 2006, 734). The original analysis makes transparent which prime implicants were chosen to produce the solution for non-resignations. However, it would have been better to report all models that had been derived for non-resignations because their substantive interpretation differs, and because each model could be the correct one (assuming the results can be interpreted causally) (Baumgartner and Thiem 2017).

All these reasons are related to the goal of making the analysis more transparent and add more information to the reporting of the results. In addition, there are *software-related reasons* that call for a reanalysis.

Software-Related Reasons for a Reanalysis

The software-related reasons are tied to the fact that QCA 3.0 had a graphical user interface (GUI). First, we could not share a script with code for the original analysis that enhances transparency about analysis decisions.⁸ Second, when one faces model ambiguity in a GUI-based analysis, one has to select prime implicants to derive a single model. If model ambiguity is extensive, the manual selection process of prime implications is tedious. One has to do it for each of the models individually, and it is possible that one overlooks one model when selecting the implicants. Third, we explained above that one truth table row is a contradiction in the original analysis. Whatever the approach is towards the resolution of contradictions (Ragin 1987, chapter 7), it required the *manual* editing of the unprocessed dataset either by recoding sets of cases on the conditions or outcome or by removing them from the dataset. This means one dataset was needed to produce the truth table with a contradiction and one processed dataset was needed to have a contradiction-free truth table that can be minimized. Fourth, the original analysis reports descriptive statistics such as the number of truth table rows. This information had to be derived manually

6 The outcome set is the formal resignation of a minister; the negation is the non-resignation. The condition sets are the position for or against resignation by the minister; the chancellor of Germany; their own party; the coalition partner; the opposition parties; the public and media; and the minister. Additional sets include: whether the issue that initiated the resignation was political or personal; whether the debate about resignation started before the minister assumed or had taken office; and whether judicial investigations into the issue that started the debate.

7 A simplified example for a contradiction could be the two resignation debates in which the German chancellor was in favor of resignation, but where the minister resigned only in one of the two cases.

8 The only direct way to document a GUI-based analysis is to screencast it. Ingo had not even remotely considered this previously, and it is, to our knowledge, rarely done at present in empirical research.

from the data and GUI-based analysis. Fifth, even if we accepted all these constraints of a GUI-based analysis, a practical problem would remain. To our knowledge, the QCA 3.0 software is not publicly available anymore to rerun the original analysis and remedy the issues that we discussed above.

Reproducing the Original Analysis Using R Markdown

The reproduction analysis uses the QCA package (Dusa 2019) for R (R Core Team 2020) in combination with R Markdown (Xie, Dervieux, and Riederer 2020). The use of the QCA package in an R Markdown framework allows us to address all the elements that we discussed before. The QCA package allows us to establish full transparency about the entire workflow and analysis decisions. It also makes it easy to extract descriptive statistics about the truth table. The use of a script instead of a GUI enhances transparency intrinsically because all analysis choices are documented by the code. However, a script does not improve transparency about the results because they are displayed in a results window.⁹ In a purely script-based analysis one would also need to screencast the analysis to fully document it and the results.

The QCA study in an R Markdown framework remedies this problem because it produces an *R Markdown report*. An R Markdown file includes plain text (documentation, annotations, etc.) and chunks with code that is the same as in a plain R script. The advantage of an R Markdown file is its dynamic nature, because its execution combines code and results in an html-file, Word file, PDF, or another format (Xie, Dervieux, and Riederer 2020). This feature of R Markdown is invaluable for transparency and reproducibility because it directly ties results to code. It also does not require any manual editing of the data in the workflow.

With regard to the congruence of the results in the original study and the reproduction analysis, we can *confirm* all results of the original analysis. This includes the truth table with a contradictory row; the creation of a contradiction-free truth table by removing the two cases; and the reproduction of the models for resignations and non-resignations that are reported in the article. The realization of the QCA study using R Markdown allows us to improve upon the original analysis in the following ways.

First, we can remove the two cases from the contradictory truth table row during the analysis with code, which means we do not have to work with two

separate datasets. Second, we can derive and show the prime implicants that account for model ambiguity for non-resignations and all twelve models that can be derived from the truth table. Furthermore, R Markdown allows us to present all 16 models in the final report as opposed to manually performing 16 minimizations using a GUI.¹⁰ Third, we report the truth table rows without cases that have been assumed to be sufficient for resignations and non-resignations in the respective minimization processes. This, in turn, allows us to check for contradictory assumptions about remainders without comparing the assumptions by hand. The code-based check for contradictory assumptions confirms the statement in the original analysis that none have been made in the empirical analysis (Fischer, Kaiser, and Rohlfing 2006, 734). Fifth, we can easily report descriptive statistics for the set-relational data and the truth table, such as the total number of rows with cases, the number of rows that are sufficient for resignations, etc. Since the value of R Markdown lies in the production of an analysis report, we invite the reader to visit the repository for the reproduction analysis and to take a look at the R Markdown file and the report that it creates (Rohlfing and Bekmuratovna R. 2021).

5. Conclusion

In our contribution, we reported our motivation for returning to a QCA study from more than 15 years ago to enhance its transparency and verify that it is reproducible. What do we learn from the reanalysis and what does this analysis imply for QCA research and qualitative research more generally?

From the viewpoint of reproducibility, it is positive that we could fully reproduce the original results and confirm that no mistakes had been made in the original analysis, which required multiple manual interventions in the process and data. It might then seem futile to do such a reanalysis, but this would be a false conclusion for two reasons. First, this is a hindsight evaluation of reproduction studies and misses that one does not know whether an original analysis is reproducible until one has done it. Second, from a personal point of view (as Ingo was involved in the original study), it is good to dispel any lingering doubt about whether everything had been done correctly in the GUI-based analysis and to have it now documented transparently.

This point hints at the clear advantages to the realization of a QCA study in R compared to GUI software. An R script increases transparency and relieves

⁹ This is the console or graph tab in RStudio (RStudio Team 2021).

¹⁰ We cannot determine whether the same 16 models could have been produced with QCA 3.0 because the software is not available anymore. Since the solution for resignations is the same as in the original analysis, we believe that the 16 models for non-resignations are those that could have been previously derived with QCA 3.0.

empirical researchers from manually performing the same steps again and again when using GUI software. The realization of the QCA study in R using R Markdown obviously comes at the cost of learning how to code in R, but there are several excellent resources available for getting started with R and R Markdown (Dusa 2019; Xie, Dervieux, and Riederer 2020; Oana, Schneider, and Thomann 2021).

In the context of this symposium, a broader issue concerns the idea and role of “transparency” and “reproducibility” beyond the standardized elements of QCA research. We believe the idea of “transparency” should be a common denominator for all kinds of empirical research, the main question being how to achieve it (Kapiszewski and Karcher 2021). QCA research using R makes it relatively easy to be transparent and achieve reproducibility because it is based on code that can be shared. This element of QCA research does not generalize because other forms of qualitative research—process tracing using primary and secondary sources, discourse analysis, etc.—do not involve code.

Still, we believe there are two broader lessons of this reproduction study. First, one should use software whenever possible. In non-QCA research, this could for example be computer-assisted qualitative data analysis software (CAQDAS) such as Nvivo or Atlas.ti. This software allows one to systemize the collection and management of all types of sources, print, video, and audio, as well as the analysis of the sources and the reporting of results. Second, as a complement to CAQDAS and even more so when it is not used, one should consider the use of a *research diary* (or open notebook) documenting in real time every step of the analysis and the decisions that have been made (Bloor and Wood 2006, 151-3).¹¹ A diary could also be useful for code-based QCA research because it can be equally interesting to document why certain decisions have *not* been made. With these two general tools—software with or without code—and a meticulous documentation of the process, we believe that transparency of different types of qualitative research can be enhanced.¹²

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11 One can conceive of this as the equivalent to an open notebook in code-based research.

12 The question of whether reproducibility follows from transparency is an epistemological question that we cannot cover in detail here (Jacobs et al. 2021). For the standardized parts of QCA, it is clear that it should be reproducible.

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Transparency in Case Studies: Methodological Appendices

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When writing qualitative case study research, most of us find that the very stuff of analysis—that is, the qualitative data—is lengthy and nuanced. Additionally, qualitative methods are often used in situations where “theories are underdeveloped and concepts are vague” (Ragin, Berg-Schlosser, and de Meur 1998, 750). To be robust and compelling, the data we use may require lengthy explanation, precisely because we wish to capture complexity. Overall, qualitative research relies on words—often lots of them—to get our point across.

Moreover, induction is often key to the sorts of insights that qualitative researchers are poised to offer (Bendassolli 2013). We gather data to form new hypotheses and explanations—a process that can be crucial to “gain[ing] inferential leverage over different questions” (Yom 2015, 618). However, inductive reasoning requires moving from observed data to abstract concepts in ways that cannot be fully deduced from initial premises or hypotheses (Bendassolli 2013, 2). Therefore, the transparency goal of clearly “linking evidence to inference” (Bennett, Fairfield, and Soifer 2019, 2) can be particularly challenging to achieve. Forming propositions or generalizations in qualitative research will often involve choosing one interpretation over others when it comes to data and to the vaguer aspects of the theories and concepts with which we are engaging. The fact that qualitative researchers often make these sorts of choices leaves space for particular kinds of questions to emerge on the reader’s part about how we have arrived at our conclusions.

This contribution focuses on how my coauthors, Sara Casella Colombeau and Elisabeth Badenhoop, and I used a particular tool—a methodological appendix—to explicitly address some of the concerns that qualitative data and the inductive process in general can raise in the more constrained space of an article-length text. The research and appendix were recently published in *Comparative Political Studies* (Slaven, Casella Colombeau, and Badenhoop 2021). A methodological appendix can be defined simply as supplementary (in this case, online-only) material that provides greater detail and specification of the methodological approach than the traditional format of a qualitative research article would allow. We created the methodological appendix thanks to the encouragement and suggestions from others (see below). In conveying our positive experience here, we hope to inspire others to consider it as an arrow in one’s quiver for bolstering transparency in qualitative research.

The Project

We arrived at creating a methodological appendix for this article relatively late in the process of writing the article (and in retrospect, perhaps a little later than ideal, as discussed below). Indeed, it is important to situate writing a methodological appendix as only part of the longer work process of bringing an article to publication.

The three of us had worked on a comparative project that was fully centered on gathering and analyzing qualitative process-tracing data about policy deliberations surrounding immigration policy. The data were collected through a combination of archival research and elite interviews, which we performed

across three countries (Germany, France, and the United Kingdom). In performing a qualitative three-country comparison, we knew we would have to be extremely concise and economical with the process-tracing data we would present. The article would require intensive co-writing and editing. We also agreed, after substantial conceptual discussion, that our analysis would be most robust if we used our data to examine four distinct theoretical accounts drawn from previous literature; this therefore became a four-by-three (so to speak) qualitative, comparative, process-tracing article.

Because the theoretical accounts we were examining were not fully systematized into theories with already-elaborated sets of observable implications that could be tested deductively, we employed a “theory-building” process-tracing approach. As one example, to test whether the linking of immigration and welfare policy was driven by welfare-retrenchment logics, we had to draw from existing literature to identify what sorts of evidence would show us it was in fact this logic that was dominant in the process and not another one, since this had not been extensively specified in existing theorization. Such an approach “starts with empirical material and uses a structured analysis of this material to detect a plausible hypothetical causal mechanism”; while in this approach “existing theorization is... used to inspire us in collecting evidence,” nonetheless it is “at heart an inductive exercise” (Beach and Pedersen 2013, 60).

Beyond the number of cases and accounts examined, the need to build a single authorial voice from data in three different languages, with all of us (as early career researchers) taking up posts in new locations during the writing process, meant that completing and submitting what would become the “main article” felt like its own milestone. Given the effort it had taken to get to that point, we were eager to start receiving reviews and did not initially contemplate the inclusion of extensive supplementary material.

Writing the Methodological Appendix

The suggestion that we add a methodological appendix emerged from the review process. It was part of how the editors suggested we respond to a cluster of questions reviewers had raised around inductive aspects of our analysis within our research design: specifically, how we determined what would provide evidence for the theoretical propositions we were considering. The theoretical accounts we were examining were not ones previously developed enough such that they came ready with likely empirical indicators to employ deductively in our research. Therefore, in our research design we inductively inferred what would evidence them. The

reviewers accordingly asked for more detail on: how we identified potential empirical “indicators” of these theoretical accounts; our reasoning that interviews with the kinds of policymakers that we focused on sampling would produce this evidence; the specific kind of process-tracing approach we employed; and how we consulted documents as part of triangulating interview data. We were grateful for this feedback and pleased that our article had been received positively on the whole—and though we had focused on developing many of these points to the extent possible within space constraints, we saw that we had quite a lot of specifying to do to address those reviewer requests.

At this point, we resolved to write an appendix to submit with our revisions to the article. Rather than immediately setting about writing a longer and more detailed treatment of our methodology, we first discussed this feedback in order to land on what specific purposes the appendix should serve. The main objectives that we identified for this appendix were to lay out how and why we developed inductive inferences about what evidence would support, fail to support, or refute various theoretical accounts. We did this by referring to existing literature, which suggested these inferences were reasonable. We also sought to make clear our argument for why our approach comprised a robust analysis. While it may be self-evident, it could bear emphasis that including an appendix was not merely a way of getting around article word limits (although the reason it was suggested in the first place was precisely because all of this information could not be accommodated in a qualitative, three-case article of a reasonable length). In addition, it served as a space where—building upon the explication of important points in the article—we could enhance the transparency of our inductive approach in specific and strategic ways related to the particular methodology upon which we relied.

To achieve these analytic ends, we settled on an appendix that would include the following sequence of sections:

Methodological framework. First, we decided to specify the particular model of process-tracing we were adopting for our analysis (along with our operative notion of “causal mechanisms”) and explain why this approach required the researcher to make inductive inferences. This section specifies how induction operates in this sort of research design, why it is a naturally appropriate approach for answering our sort of research question, and what would constitute robust induction in this model. This is the part that deals with what would be most strictly called “methodology.”

Establishing the case for our inferences. Second, we sought to explain that the specific inductive inferences we made as part of this methodology were founded upon a robust reading of previous scholarship. This section built on discussions that had been in the literature review of the submitted article, but it aimed to address the questions that reviewers had raised in a more fully systematic way. Our inferences concerned what sorts of empirical evidence might support (or fail to support) previous theoretical accounts of the policy reasoning underlying the process we were examining. We specified four categories of indicators and what we would expect to see empirically as evidence of each account in terms of each category of indicator. Where the main article focused on and highlighted those indicators that ended up being most analytically relevant to our cases, the appendix also identified how we considered some that turned out to be less specifically relevant.

Explaining our methods and their suitability. Third, we wanted to explain how our decisions about data collection and sampling suited the above and would produce the kind of data the analysis required (or perhaps an analytically useful absence of evidence). Here, we laid out in greater detail how we set about gathering our data and then analyzed it in ways that facilitated cross-case comparison. At the same time, certain aspects of our research design, like our selection of national cases, did not attract any questions from the reviewers, and we decided that these did not bear specific further discussion, as the reasoning behind the logic of case selection already appeared sufficiently transparent to our audience.

The process of conceptualizing and developing this appendix was concurrent with—and interrelated to—working on the main article. Rather than creating a standalone document providing further explanation, working on the appendix meant working on both documents and making sure both reflected and reinforced each other.

Benefits and Challenges

Our methodological appendix was well received by reviewers—which, of course, probably biases the following assessment. Nonetheless, for the purposes of those considering methodology appendices as a tool for increasing research transparency, it is worth laying out rather systematically: What were the downsides of doing this? What were the upsides?

In terms of downsides, the most notable is likely to be the amount of time it can take to write a methodological appendix thoroughly and the effect this can have upon (re)submission timeframes. Our methodological appendix ended up at nearly 6,000 words—close to half the length of the main article. It can be easy to underestimate how much time it will take to compile (in conjunction, of course, with revisions on the main article). In our case, transparently explaining our inductive inferences meant a deeper dive into literatures related both to methodology and methods per se, as well as general theory surrounding the topic of our analysis. Work related to writing the methodological appendix probably corresponded to about two extra months before we could resubmit the article. What we had expected to do in three months, in other words, took us about five. Of course, in principle, much of this kind of work could be done before submission, with revisions occurring after the review. While it stands to reason that writing the appendix before submission may take somewhat less time, it is still likely to be considerable.

Compared to those costs, the upsides for us were far greater in both advancing the analysis and making it more transparent. First, we found that engaging in the writing of this appendix did meaningfully sharpen our analysis, even in our own minds, and improved the main article as well as the overall package. In particular, the process of differentiating which sorts of inductive inferences ended up performing an important analytical function (thus bearing focus in the main article)—and which were important to have considered but did not end up playing such a role (thus meriting discussion primarily in the appendix)—enhanced our own mental maps of the analysis. This benefit on the author's side, of course, translated over to readers (or, at least, to the small sample of them who instrumentally matter most). The reviewers responded that they found it more straightforward to follow all of the significant moves the article made, and that including the appendix made transparent a number of aspects of the analysis which had at first seemed somewhat murky or more tenuous. To that point, the drafting of the appendix played (in our minds) an important part in the review process, because it was a highly legible signal of how much we had valued the feedback we received and how seriously we had taken it. While, of course, that is not sufficient for a positive peer-review outcome, it is usually necessary.

The most notable upside to writing this methodological appendix, however, is one that we did not quite expect: It has strengthened reader engagement with the research. Somewhat surprisingly to us, people have actually read the appendix. Of course, an appendix will not be read by nearly as many people as the number

who will consult an article, and the metrics on our article certainly reflect this. Supplementary material will never get the casual clicks that an article may attract. (And, of course, any reader who still relies on a print copy of the journal will not see it.) However, for readers who are engaging with an article's arguments or topic on a more detailed level, a methodological appendix can strengthen this engagement. The transparency it advances can underscore the robustness of research and (hopefully) its merit as a possible future reference point. Since our article was first published online, people have reached out to us as much about its methodology, appendix, and transparency aspects—with overwhelmingly positive feedback—as much as they have about any other aspect of the work. We have been surprised—very pleasantly—by this.

Given these upsides and downsides, is a methodological appendix worth doing? In our case, it definitely was. The principal cost, the extra time it took to create it, was clearly worth it in order to bolster the transparency of our analysis in ways that resonated with our intended audience.

Suggested Practices

Just as importantly, given this experience, are there any recommendations we can convey? And is there anything that in retrospect we would have done differently?

First, it is worth considering when a methodological appendix may have benefits compared to other transparency measures, such as Annotating for Transparent Inquiry (ATI), which also can offer readers more information about the researcher's choices in analyzing data. Unlike annotations, methodological appendices provide the opportunity to explain analytical choices in a single document that can start by establishing a general approach and then explain in greater detail how it was operationalized. Therefore, compared to ATI, an appendix may be beneficial when the researcher's challenge is to substantiate an approach to interpretation or induction, rather than explain how particular pieces of data have been analyzed. By allowing researchers to address overarching interpretive issues in relation to each other within a single document, an appendix may have advantages in supporting research transparency by deepening the reader's overall view of how an analytical approach ties together.

To this point, from our experience, a main recommendation for those choosing to write such an appendix as a way of advancing the transparency of how you “linked evidence to inference” is to start writing it with a good idea of just what sorts of questions the appendix would need to address for that purpose. This may sound somewhat self-evident, but just as all of the

other “sections” of a scholarly article serve some sort of isomorphic function while performing a particular role in advancing a distinct and original argument, so too should a methodological appendix. It should have, if not an “argument” per se, a sense of purpose, and one which is molded around the argument of the article as a whole and the particular moves in the analysis which additional discussion would ground or enhance. If inductive reasoning is required by a methodology or research design, a methodological appendix is a very suitable place to engage in the kind of extended discussion that explains why it is robust. Without this purpose-driven approach, an appendix could run the risk of being more of a repository of relevant information that did not make the initial cut due to space limitations.

When in the writing process does it make sense to write such an appendix? We had a discussion about this and about how much, in retrospect, we might have done ahead of time. We can see both sides of this argument, and based on our experience, would advise a sort of middle path—though this will, of course, depend on one's individual situation. On the one hand, writing this appendix earlier may have saved us some time and questions later. On the other hand, if the purpose of an appendix is to clarify analysis for readers, it can sometimes be hard to anticipate issues that will arise when it is subjected to the (ideally) deep reading of review. If an appendix ought to have a purpose, it may be possible in great part to know what this is pre-review, but new—or more urgent—objectives nonetheless may emerge in the review process. Considering this and the time it can take to write such an appendix, there will often be a reasonable argument for waiting to write one until after a revise and resubmit decision. In general, we definitely recommend keeping strong accounting of these inductive inferences in a table or other visualization which describes and relates them to various concepts or theories being employed or tested. This can be helpful in drafting an analysis and can serve as the foundation for more extensive elaboration in an appendix. One of the most worthwhile things we did as part of our article was to compile a table that we ended up including in our methodological appendix, which lays out for readers (as well as ourselves) how we identified data that may indicate the policymaking logics we were examining within our cases.

Beyond this, we would recommend—during the research and writing process—flagging and explicitly gathering material for later organization in a possible appendix. One thing to keep in mind here is that the line between “methodology” and “theory” can be quite thin, especially if a researcher's methodology requires inductive inferences to be made based upon previous

theoretical discussion in the field. In this sense, keeping track of references, points, or issues which may not end up playing a main analytical role—but which may be important to include as part of “showing your work”—would be advisable. A methodological appendix is only one possible tool in advancing qualitative research

transparency and will not always make sense. But in our experience, it does make sense to keep it in mind from the start as a potentially worthwhile endeavor which you may end up deciding to do—and to accordingly make some basic preparations.

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