

Beyond data collection and access: to what degree can qualitative research benefit from analytical transparency?

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Data sources in qualitative research are often diverse and unstructured. Qualitative researchers frequently face criticism regarding data access, production and analytical transparency. Critiques have been rather severe with process research that relies on interviews, one of the most unstructured data sources. Document-based studies have been considered more reliable in terms of data and analysis, whereas interview-based studies have been accused of bias and arbitrariness. In this paper, we will go beyond the debate about data collection and argue that researchers can increase validity through analytical transparency, by approaching data analysis in a more systematic manner. The main elements of analytical transparency are the use of structured content analysis or coding to categorize the data, relying on software whenever possible to make the interpretation and coding process accessible, as well as publishing both the results of the process and the codebook. We will compare two different empirical approaches that rely on interview data: a process analysis of strategic framing in legislative decision-making in the EU and the use of heuristics in decision-making in public administration. Both studies use systematic coding but at the same time still rely on substantial interpretation by the researcher. Therefore, they present good examples to explore the possibility of systematization and transparency. At the same time they highlight the role of the individual researcher, which is crucial to social scientific qualitative studies, in research on highly secluded political decision-making processes, where expert interview data cannot be systematically published and standardization is not possible.

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INTRODUCTION: More than just a pretty narrative: improving qualitative research through more analytical transparency

Why does qualitative research still face so much criticism regarding its reliability and validity? The answer is that qualitative research is still challenged about transparency, because we have failed to sufficiently invest in improving analytical transparency and not just production transparency. The quality of qualitative research can be improved through a more systematic handling of data in the analytical process. To achieve that, we need to make our analytical proceedings more transparent by consistently employing systematic data analysis strategies when making causal inferences.

In this paper, we will argue that qualitative research can successfully address critiques regarding reliability and validity through more reliance on data analysis methods like coding and a thoroughly structured approach to qualitative text analysis (Lieberman, 2009). Regardless of which type of qualitative content analysis, the goal should be to provide clear, straightforward and credible criteria for the analysis and apply them rigorously in the analytical process (Tracy, 2010). Rather than just providing a well-structured and well-thought-through narrative, the researcher should provide a recount of each step of the analytical process, including the production and collection of data, the process of development of criteria for coding and other forms of content analysis, the evaluation and categorization of the evidence and the final conclusions drawn (Carter and Little, 2007; Nelson, 2017). Process-tracing studies come closest to the goal, but often present a conundrum with high methodological standards and expectations about analytical transparency, but often insufficient results. This seems to suggest that the criteria might not correspond to the demands and the reality of qualitative research (Goia, Corley and Hamilton, 2012). We argue that studying informal political processes presents a particular challenge precisely because of the informality, access to data can be difficult and researchers often face confidentiality problems (Baxter and Eyles, 1996; Conti and O'Neil, 2007).

We proceed as follows: first, we take stock of the existing literature on qualitative standards and the transparency challenge in particular to show that production transparency and data access can alleviate some of the problems, but they cannot address the issue of opaque and subjective analytical narratives. We then discuss how systematizing data analysis and reflecting the different analytical steps in the textual narrative of articles and books can be a solution to the transparency and reliability issue. To illustrate our argument, we will subsequently present and critically discuss two exemplary ways of systematizing qualitative content analysis and possible approaches to presenting a transparent, clear and reliable narrative of the political process that is investigated.

Transparency and clarity: wrapping up the current discussions on qualitative research standards

In their 1994 book, King, Keohane and Verba presented their idea of good qualitative research, which essentially consisted of an adapted set of standards taken from quantitative methods, with a strong emphasis on the comparativist and frequentist logic. Case studies

become a supplement to large-n studies rather than a self-sufficient method, qualitative analysis is expected to conform to the demands of quantitative research: increase variance, rely on the language of variables and presume that the correlation between X and Y tells us all we need to know about the outcome. A set of scholars have subsequently criticized the one-sided approach to qualitative methodological standards and KKV's predominance in the field: "Designing Social Inquiry's prominence was also an outgrowth of its authors' provocative central mission: KKV sought to improve qualitative research by using well-established norms drawn from quantitative research, in particular, ideas from regression analysis. Their tacit assumption was that "mainstream" quantitative research employs superior methods and that qualitative research could benefit from adopting these methods to the extent possible. (...) Many believe, however, that this aspect of the book has hindered progress in political science." (Mahoney, 2010: 121)

It has been observed that only a small number of subsequent books have responded to the KKV approach and criticized it and we have entered a "post KKV era", with quite some success, as new and properly qualitative methods schools have been developed, such as process tracing (Beach and Pedersen, 2013; Beach and Pedersen, 2016) and Qualitative Comparative Analysis (QCA) (Rihoux and Ragin, 2008; Schneider and Wagemann, 2010). Nonetheless, KKV is still an important item on any graduate syllabus concerning qualitative methods and research design (Mahoney, 2010: 122) and their critique dominates the debate about qualitative standards.

A critical review of qualitative standards certainly is necessary and the following parts of this paper show that qualitative researchers evaluate and assess their work critically and work towards developing and improving their own sets of criteria of what constitutes good qualitative research. Scholars relying on interview data have shown great degrees of awareness. The benefits and pitfalls of expert interviews as a basis of social science research have been discussed at length (Bogner and Menz, 2009; Bogner, Littig and Menz, 2009) and the conclusion is unequivocal: expert interviews are one of the most challenging types of qualitative data, prone to methodological fallacies and at the same time often the only means of getting access to highly secluded political processes.

Researchers often use interview data to gain insight into these processes. However, expert interviews will always be subjective as a data source to some extent, the process of data collection cannot be without bias, if it is the researcher herself conducting the interviews. The way interview questions are asked, the setting and the dynamic of the interview strongly depend on the relationship between interviewer and interviewee, information might be more or less readily available depending on the interviewer, the day, the overall atmosphere and other relevant types of information that will help improve the reliability of the data sources (Tansey, 2007; Hermanowicz, 2002).

Intersubjectivity and inter-reliability cannot be guaranteed for expert interviews in the same way than for documents or other types of data: other researchers will most likely not be able to replicate the data collection process in the exact same way (Armstrong et al., 1997; Gläser and Laudel, 2010). Non-standardized interviews, open or semi-structured, can highly vary from conception to conduction and providing the interview guide cannot necessarily

enable the reader to reconstruct the dynamics of the interview and understand how the data was gathered (Tansey, 2007). High degrees of standardization increase inter-reliability and validity, but can compromise the richness and quality of the data (Dorussen et al., 2005).

To address this lack of intersubjectivity and inter-reliability, one can triangulate interviews with other types of data sources, such as documents: “Beyond reporting the basis for trusting some interviews over others, it is useful to remember that very few studies rely exclusively on interview data for their conclusions. While other types of sources have their own weaknesses, when interview evidence is ambiguous or not dispositive, scholars can fruitfully triangulate with other sources to resolve ambiguities in the record in order to gauge and to confirm the reliability and validity of the information gathered.” (Bleich and Pekkanen, 2015: 11). While it certainly is desirable, it is not always possible to use other types of data, either because there is no document data available, or because interviews are the best possible and most appropriate way of making inferences.

Researchers should be clear about the data collection method and critical towards potential biases, missing data and general problems associated with the data collection method chosen to obtain the data (Büthe and Jacobs, 2015). However, rather than further increasing standardization, researchers relying on qualitative data should display awareness of the pitfalls and fallacies and include an open discussions of the data collection approach and outcome: “As with quantitative work, it will be impossible for qualitative researchers to achieve perfection in their methods, and interview-based work should not be held to an unrealistic standard. But producers and consumers of qualitative scholarship profit from being more conscious about the methodology of interviewing and from being explicit about reporting uncertainty.” (Bleich and Pekkanen, 2015: 9)

In the following paragraphs, we will examine two types of transparency, production and analytical transparency, in more detail to show that both have merits, but production transparency can be difficult to implement when dealing with confidential data and research subjects that are sensitive. Political decision-making processes are a good example, as they are sensitive, information is often confidential and difficult to access and the researcher is often not allowed to make interview or document data public. This complicates production transparency and renders data access difficult if not impossible, a problem we argue can be resolved through greater investment in analytical transparency. The central task in this case is to be clear about the research design and the process of analyzing data and drawing inferences. Investing in a clear and comprehensible analytical narrative remedies much of the reliability problem.

Production transparency and access to data: a possible answer to the replicability problem

For decades, qualitative studies have been criticized for the way data is collected and processed: an opaque data collection process, no sufficient discussion of biases included in the data due to data collection processes, as well as for an unstructured and non-transparent analytical process: insufficient justification of data choice, insufficient specification and systematization of the data collection process, selective and/or not

interreliable use of evidence from the data in the analytical process, subjective interpretations. While document-based research can more easily respond to these critiques, expert interview data is a more complicated data source. Researchers have responded to the criticism by formalizing theory, selecting cases strategically to maximize cross-case causal inference or employing classic process tracing, without however combining them with a rigorous approach to citation and the treatment of evidence (Moravcsik, 2010).

Moravcsik (2010) has argued, among others, that existing qualitative methods do not have to emulate quantitative research by resorting to formalization, as it is not necessary where analytical narratives are accompanied by the necessary rigor in presenting and weighing evidence to avoid the risk of imparting a bias in favor of the preferred explanation. Process tracing is rigorous in this regard (Beach and Pedersen, 2013), yet the treatment of evidence is lacking in terms of precision and transparency, citation and general use of primary and secondary sources is often imprecise and vague where it should be precise and annotated. Evidence is also often selectively presented, which is critical when using this evidence to support claims about political preferences or processes (Moravcsik, 2010). Also, rigorous case selection alone does not exempt the researcher from having to provide primary sources and extensive within case analyses, “high-quality, transparently sourced evidence again becomes the vital link in any qualitative study” (Moravcsik, 2010: 30). Moravcsik concludes that qualitative research still faces an unresolved replicability problem: once theories and cases have been selected, the analysis often proceeds without explicit methodological rules with regard to the treatment of evidence: “The selection, citation, and presentation of sources remain undisciplined and opaque. The drawing of causal inferences from evidence lacks transparency, precision, rigor, and, therefore, replicability.” (Moravcsik, 2010: 29)¹

This can of course be explained and justified by the fact that qualitative researchers often have to deal with a large dataset that is unstructured and makes a straightforward analytical approach more difficult, because quantification and high level of abstraction are not desirable. The replication problem has been justified in reference to this issue: “Often, qualitative research also draws on large volumes of disorderly data. Even if these raw data are made available, sorting through them to replicate analyses or to conduct a new study could require unreasonable effort. For all of these reasons, qualitative research may be especially subject to concerns about its veracity and the ability of others to build upon, extend or reimagine the empirics that inform its findings.” (Nelson, 2017: 7)

Increased production transparency, through explanation of the genesis of the data collected or generated, can enable other scholars to understand and interpret the data. But we need a specific focus on the element of transparency in the use of expert interview data in process

¹ “What, besides their conscience, prevents authors from cherry-picking evidence more likely to support a preferred description, interpretation, or causal theory? Similar concerns arise around the selection of specific theories, hypotheses, and methods: scholars must inevitably select certain frames, interpretations, theories and methods for intensive attention, while setting others aside. (...) Production transparency requires that scholars explain to the reader how such choices of evidence, theory, and method were made. At the very least, it gives readers a better awareness of the potential biases that a particular piece of research may contain. At most, the need for scholars to make this explicit will encourage and assist them to conduct less biased research. (...) Very little scholarship explicitly mentions, let alone addresses in detail, the selection criteria for evidence.” (Moravcsik, 2014: 49)

research with regard to balancing transparency and validity without compromising the quality of the data or the possible insights to be gained from that type of data. A way of dealing with transparency demands in this case has been identified in the APSA guidelines as follows: “One way in which qualitative researchers can provide data access, achieve production transparency, and engage in analytical transparency, is by developing a transparency appendix to their published work. A transparency appendix typically consists of two elements: active citations and an overview section.” (APSA guidelines, 2013)

Moravcsik argues that active citation would undermine bold interpretations that lack substantive evidence and the use of active citation “promises to validate traditional scholarly virtues of hermeneutical precision and subtlety, and expand the community of those to practice them.” (Moravcsik, 2010: 34). Replicability and transparency can be improved through active citation: “the use of rigorous, annotated (presumptively) primary-source citations hyperlinked to the sources themselves” (Moravcsik, 2010: 31). Researchers have to provide “precise and annotated citation to one or more presumptively primary sources” for “any critical and contested substantive empirical point in a scholarly case study” (Moravcsik, 2010: 31). And citations should contain a hypertext link to a reproduction or transcript of some part of the source (Moravcsik, 2010: 31), which again does not function when facing data confidentiality requirements and constraints.

The APSA guidelines for good qualitative research largely echo Moravcsik’s arguments in terms of granting access to data, namely providing access to primary sources and citing verbatim wherever possible (Moravcsik, 2014: 48), as they request qualitative researchers to reference the data on which descriptive and causal inferences and interpretations are based and make data that has been generated or collected available or explain why it cannot be made available (APSA guidelines 2012; 2013). We argue, however, that this amount of transparency in terms of data access is not always possible, for example in the case of interview data where interviewees have not granted the right to publish confidential interview material or cite verbatim. Rather than insisting on production transparency and data access and potentially abandoning worthwhile research because data transparency cannot be guaranteed, researchers should be more explicit about why data cannot be shared and discuss the implications of publication for sensitive data.

Indeed, Moravcsik (2010) argues that scholarship would benefit from making primary sources, such as interview data, available to the public by publishing it on a database to allow for replication attempts and potential challenge of the claims. While this would extend the amount of qualitative data available, it creates significant discrepancies and potential confidentiality issues for researchers who operate with sensitive data.

Analytical transparency: handling replicability issues in the presence of data confidentiality requirements

Critiques of analytical transparency argue that “citations and references in qualitative research appear to assure openness. Nevertheless, imprecision in citation, high transaction costs of actually locating cited evidence, and the opacity of links between data and conclusions, combine to make the critical evaluation of descriptive and causal references or

cumulative deepening of data analysis a rare event.” (APSA guidelines, 2013). While we agree that qualitative research would benefit from “enhancing understanding of the process and products of qualitative research” and facilitate the “accumulation of knowledge” (APSA guidelines, 2013), we believe that it is necessary to further invest in discussing analytical transparency and evaluate to what extent current standards are sufficient. Analytically transparent research aims at producing intersubjective knowledge through transparency by sharing evidence, results and arguments. This would enable the research community to reconstruct the research process, distinguish between valid and invalid propositions and comprehend the underlying interpretations.

APSA has identified the following standards as being required for qualitative research to be considered good science: “Providing information about decisions made and processes carried out in the course of collecting and generating data, selecting them for inclusion in published work, and presenting them makes it easier for other scholars to understand and interpret the data; allows them to assess whether those processes were carried out in an unbiased manner; and helps them to evaluate the validity of the claims made on the basis of the data.” (APSA guidelines, 2013)

A review of the existing standards and the relevant literature reveals a key challenge with regard to analytical transparency that we need to address: we have to define criteria, but avoid generalization of principles that only correspond to a subset of the data. To take the example of expert interviews again, there are many different kinds of interviews, even expert interviews take on a different shape depending on the setting and research design, yet the criteria by which we evaluate the interview method are standardized.

Standards against which qualitative research is currently measured within the qualitative community include elements such as rigor in theory, data and methods of data analysis, sincerity as in self-reflexive and transparent proceeding, credibility through triangulation, thick description and explication of knowledge, resonance as a form of external validity capturing the potential transferability of findings and the contribution and the overall coherence of the approach (Tracy, 2010: 839-841). Those are not hard criteria in the quantitative sense that are in any way comparable to statistical tools and are actually the right basis from which to develop standards of good practice for qualitative research.

As argued above, not all types of qualitative studies can cater to the demand in terms of providing access to data, confidentiality requests by interviewees are very common and to make the data public would compromise its quality: “At the same time, we fully recognize that it will be impractical and even impossible in many cases. Even setting aside resource constraints, interviews are often granted based on assurances of confidentiality or are subject to conditions imposed by human subject research, raising not only practical, but also legal and ethical issues.” (Bleich and Pekkanen, 2015:10).

A first step is of course to try to improve transparency in the provision of data and acknowledgement of potential biases included in the data through the process of data collection as much as possible (Tansey, 2007): “Whether it is possible to provide full transcripts, redacted summaries of interviews, or no direct information at all due to ethical

constraints, we think it is vital for researchers to communicate the accuracy of reported interview data in a rigorous manner.” (Bleich and Pekkanen, 2015:10). This production transparency can be significantly improved by including information about the interviews, the collection process and potential difficulties therein when analyzing the data: “We believe that doing this in advance of the interviews, and then reporting interviews successfully obtained, requests refused, and requests to which the target interviewee never responded, has many benefits.” (Bleich and Pekkanen, 2015:9).

Analytical transparency starts where production transparency meets its limits. Our argument is that in those instances, where data cannot be made available, cannot be quantified or rendered objective, being explicit, straightforward and most importantly systematic in the analytical process can remedy remaining reliability problems. This is particularly valid for the study of collective decision-making processes for example and can be perfectly well combined with existing highly developed methods of tracing processes (Beach and Pedersen, 2013), where higher analytical standards in evaluating the data and drawing inferences can significantly improve the credibility of the findings and the interpretation by the researcher.

Comparing tangerines to oranges: a critical comparison of two process analyses in public administration and EU politics

The study of political decision-making processes presents a particular methodological challenge not only to quantitative researchers, but also to qualitative scholars: “Yet most readers of qualitative scholarship today find it difficult to “get inside the heads” of the individuals and groups that other political scientists study. The perceptions, beliefs, interests, cultural frames, identities, deliberative processes and (often non-rational) strategic choices of those individuals and groups are more often assumed, asserted or implied than actually portrayed empirically.” (Moravcsik, 2014: 52)

While there certainly is a methodological hurdle qualitative researchers must overcome when trying to investigate collective political decision-making processes, process tracing in combination with rigorous qualitative content analysis have provided important insights into these informal and secretive processes. In the remaining parts of this chapter, we will present two types of qualitative process analysis, which strive for high analytical transparency while trying to compromise as little as possible in matters of data quality and insight into the black box of decision-making.

1) Framing analysis through qualitative content analysis using MaxQDA: tracing political decision-making processes in the European Union policy process

Tracing strategic choices in policy-making processes where negotiations are not only politically highly sensitive, but also very informal, presents a considerable methodological challenge, since actions and choices are not directly visible in document materials, which makes inferences more complicated, as they are indirect, often drawn from materials that are collected post hoc, usually expert interviews, or secondary evidentiary sources. The most common analytical procedure is qualitative content analysis, usually interpretive, to make

sense of the data and create a credible narrative of the empirical process (Gläser and Laudel, 2010). While interpretive analyses offer thick description and usually excellent accounts of complicated processes, they suffer from a considerable lack in transparency if the procedure of reading and analyzing the data is not made explicit. The researcher has to explicate and justify how claims are made, otherwise the analysis can hardly be judged reliable.

The answer to this particular problem should not be to entirely abandon qualitative content analysis of data, but rather to improve the handling of it. For the analysis of decision-making and the understanding of how actors make choices in political processes, a systematic content analysis according to Mayring (2007) in combination with framing could be a solution. Framing arguably is a primordial tool for actors to deal with successes and losses in collective negotiation processes and find a face-saving way of dealing with failure (Daviter, 2011; Bovens and t'Hart, 1998). Framing permits to examine the different perceptions and arguments actors present in detail and draw conclusions about their strategic intentions, frame evidence will be systematically taken from expert interviews and documents alike to make them comparable (Gläser and Laudel, 2010; Mayring, 2007).

“To frame is to select some aspects of a perceived reality and make them more salient in a communicating context, in such a way as to promote a particular problem definition, causal interpretation, moral evaluation and/or treatment recommendation for the item described.” (Entman, 1993: 52). Framing permits to capture actor behavior, in particular actor perceptions and thereby enables the researcher to see how actors process issues, create conflicts, mobilize interests (Daviter, 2011:19) and advocate particular problems or dimensions and deal with negotiation losses and gains (Zahariadis, 2008). Successful framing affects the salience of issues and can alter negotiation outcomes, as all actors try to frame the issue in their favor to further their interest (Smeets, 2015). The success or failure of a collective decision-making process is determined by the way actors frame an issue (Radaelli, 1995) and, most importantly, by how they frame their gains and losses (Daviter, 2011; Bovens and t'Hart, 1998; Héritiert, 1999).

A set of framing categories can be developed to characterize and categorize actor behavior in terms of the frames actors use to describe and justify their actions. While this might not be the perfect solution to capture actor behavior, this is not the place to begin a discussion about how to infer strategies and strategic behavior from data that is collected post hoc. A systematic analysis of the framing of choices allows to improve the reliability of the conclusions drawn first and foremost through an explicit and straightforward analytical procedure: every reader will be able to judge whether the categories chosen are appropriate and capture the desired strategic action. In the case of European policy-making, a framing catalogue for an analysis could look as follows, if we consider the political, the economic and the legal aspects of a policy-making process and assume that actor choices relate to the political, economic and legal aspects of a policy proposal. The goal of this particular investigation was to explain controversy about the legislative proposal which ended in legislative failure and depict reasons for how and why controversy leads to failure. To systematize the analysis of documents and expert interviews, a catalogue of different frames has been developed, relying largely on the work of Daviter (2011) and his milestone work on

framing in EU politics, as well as other experts in politics, which have worked with framing as a means of inferring strategies and strategic action (Zahariadis, 2008; Lecheler, De Vreese and Slothuus, 2009; Matthes, 2011). The present catalogue permits to identify which issues actors paid the most attention to, hence deemed the most important and see where the controversies lay and what might explain the escalation. All frames in the catalogue are built on the concepts and the assumptions developed about controversy and reasons for legislative deadlock, which are explained and operationalized in the theoretical framework.

Proposed catalogue to analyze positions and infer mechanisms with MaxQDA	Frame bridging	Frame amplification	Frame extensions	Frame transformations/ Frame resonance
Legal	Legal issue-linkage: linking different issues or issue-areas in the legal text Competence distribution/two-level setting: relating the issue at stake to questions of competence	Soft law/hard law and negative versus positive integration: arguing in favor of more or less supranational legal harmonization	Scope extension/reduction: extending or shifting the scope of the proposal through the choice of or change of legal base (defining the participating actors and the actors affected by the policy)	Legal base change: can concern the specific issue-area or the larger policy area
Political	Political issue-linkage: linking different dimensions of the problem, linking different but related problems	Crises: relating the discussion to a crisis or crisis event to invigorate a position or advocate a particular solution Sovereignty: using a given issue to invigorate positions on	Scope extension/reduction: to incorporate different political actors (parties, institutions) and their views	Agenda setting change: adapting the frames chosen to situate a policy proposal within the broader policy agenda and political context Position change: actors changing their framing

		national sovereignty		
Economic	Labor market regulation: linking issues in the social policy area to labor market regulations	<p>Austerity/financial crisis: referring to austerity and the economic context to advocate a particular position with regard to its redistributive consequences</p> <p>Sovereignty: using a given issue to invigorate positions on national sovereignty</p>	Scope extension/reduction: to incorporate different economic actors (companies, businesses, employees) and their views	<p>Agenda setting change: adapting the frames chosen to situate a policy proposal within the broader policy agenda and political context</p> <p>Position change: actors changing their framing</p>

Political frames describe the political goals actors pursue, references to ideological agendas, instrumentalization of crises and linkages to other related problems. Economic frames refer to actors' positions on distributional issues, in reference to the crises or the cost-benefit dimension of the issue or general budgetary concerns. Lastly, legal frames refer to the judicial dimension of a proposal, generally concerns about the scope, the procedure or the consequences in implementation. Actors use frames to explain their positions and choices and also provide justifications, which can be used to further solidify the narrative and allows to compare different types of actors.

If interview, document and other data are all analyzed based on those kinds of catalogues and categories, the analysis becomes more easily accessible to the reader, as it provides comprehensible criteria and an analytical catalogue, which can be used for replication. Even if the systematic analytical procedure is not used for replication, it at least it improves the credibility and dependability of the analytical narrative. In the analysis, the frames are then always clearly marked and identified in the dataset and then evaluated with regard to their meaning for the overall theoretical framework: what did actors quarrel and bargain about? Which issues were most important and where can we find reasons for failure? By systematically applying framing analysis to all data, documents and interviews alike, the analysis becomes more easily accessible and also clearer in the sense that every inference can be linked back to frames and thereby to the theoretical concepts.

The detection of frames via MaxQDA is then reported in tables and the tables are attached to the narrative, which refers to them stringently throughout the process of describing and analyzing the decision-making process. This improves the desired analytical transparency, as the link to primary data is ensured at all stages of the analytical process.

2) Analyzing heuristic decision-making in public policy processes with the help of systematic coding via Atlas.ti and qualitative content analysis

The second research example we would like to provide here investigates individual decision-making dynamics in public policy processes. We will only give you a very brief introduction to the research topic before laying out the methodological challenges that came with the project and how we attempted to solve them.

The research project looks at three local infrastructure planning processes in Europe and attempts to achieve a better understanding of the decision-making dynamics going on in the process of negotiating the final plan. Key actors in these kinds of processes are city councilors, local administrators, and professional infrastructure planners. They work together towards finding one good planning option. Usually, actors have different preferences and goals, and a great share of political science literature would attempt to explain the policy outcome by applying a theory laying down actors' preferences and goals, their power relations, or something else related to rational choice theory as the explanatory factors. And they would probably even succeed in correctly predicting the policy outcome. A closer look at the negotiations, however, quickly shows, that people's' actions are anything but rational. And this is where our research interest starts.

We assume, that public decision-makers, as any other human being, are not completely rational, but deploy heuristics, i.e., cognitive shortcuts, which people use to make quick and meaningful decisions in complex situations. Traditionally, these kinds of decision mechanisms are researched in well-designed laboratory experiments. By trying to take this research to the field, we encountered the challenge of working in a much messier research environment than the experimental researchers before us. Still, if we wanted to convince them, we had to be as precise and transparent as possible. Standardization would also have to be a characteristic we should have strived for, but for reasons we will shortly elaborate on, this proved to be difficult. Quite naturally, due to the encounter with the experimental research, we tried to implement the quality measures we discussed in the paper so far.

When studying heuristics, we deal with subconscious cognitive processes, which often activate without the person's awareness. One well-known example is the availability heuristic, which indicates that people base their judgements on examples that are readily available in their minds. Introduced by Kahneman and Tversky (1974), the heuristic describes that individuals will judge events as more likely if they can easily think of an example for such an event. Generally, individuals can be thought to recall recent events quicker than ones that happened further back in time, and they are more likely to recall personal experiences than second-hand-stories (Miler, 2009). In our research, we are, therefore, not only interested in what people decide, but also in why they decide that way. In the case of the availability heuristic, we are interested to find out what information they accessed when making the decision.

As you can imagine, this kind of information is almost impossible to extract from official reports or newspaper articles. It is people's' personal experiences and thought processes we are after, so we conducted semi-structured in-depth interviews. Interviewees were given the chance to very freely speak about their experiences in the project and were only guided by further questions of the researcher where necessary. That way, we wanted to assure to hear their story and to get as close as possible to their actual process of decision-making. We ended up with a very diverse set of interviews from which we needed to extract information regarding the theoretical concepts of interest – heuristics.

Due to the nature of the theoretical concept, standardization of the data was not desirable. We will also not be able to publish the full content of the interviews we conducted. Furthermore, the set of interviewees is not representative of the decision-makers in the processes, but interviewees were chosen purposefully by their role in the process. Naturally, not everyone agreed to partake, or in some cases we simply did not manage to schedule an interview due to time restraints, so there are also gaps in the data set. These are regular encounters of qualitative researchers, but by no means do they have to undermine the credibility of the research. We counter these challenges in three ways.

First, while the main data source must be expert interviews, we triangulate as much as possible with newspaper articles, official reports, and observations of public meetings. As we cannot publish the whole interview content, we analyze secondary data sources that are publicly available to anyone and which we can publish in an online appendix to substantiate each claim we make based on interview data. The full information about actors' information processing can only be obtained through interviews, but we can find indications for their behavior in publicly available material as well, and this can be used to back up the interview claims, and to make our analysis more transparent for the reader.

Second, we developed a coding scheme to systematically account for our findings in the interview data. While we cannot publish the whole interview content, we are often allowed to publish quotes and excerpts. By using a coding scheme, we make our interpretation more comprehensible to the reader. While the overall analysis concentrated on the bigger picture regarding the heuristics that were applied in the process and the dynamics they fostered, we also report the coding scheme and at least provide exemplary quotes from the interviews to make transparent the specific choices we made during the analysis. The fully transcribed interviews were coded by two independent researchers, one of whom was familiar with the cases and had deep knowledge of the research project and one, who was unfamiliar with both and only received a short introduction into the coding scheme. This way, we ensure that the interpretation is not only due an individual researcher's bias but could be replicated by other researchers as well.

Third, we report every choice regarding the recruitment and conduction of interviews, as well as the collection of other data sources, and the coding process in the methods section. Again, we aim for the greatest possible transparency, both in the process of collecting and analyzing the data.

CONCLUSION: Towards better qualitative research through more transparency and systematic proceeding to data collection and analysis

Analytical transparency improves the credibility and dependability of qualitative studies, which partially answers the replicability question which has been raised by many critiques of qualitative methods. Instead of objectivation, this kind of transparency aims for a straightforward and easily accessible approach to data analysis, which enables other researchers to grasp the analytical concepts easily and verify if the inferences drawn correspond to the theoretical framework, the concepts to be tested and the proposed operationalization.

In this paper, we have shown that analytical transparency is a key component of good qualitative research, especially in cases where the object of study presents a particular challenge with regard to drawing objective inferences: humans as actors in collective decision-making processes. Where qualitative data is used in these cases, it is important to be transparent about the way inferences are drawn from the data sources. Being transparent about the production of data is not enough in these cases to ensure that others can understand, and ideally replicate, the analytical narrative. We have argued that framing and coding can be potential methods to ensure such analytical transparency. Replicability might not be possible for qualitative research in the same way it is for quantitative research, but that does not mean that the analyses cannot be made more credible and dependable.

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