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RESEARCH ARTICLE OPEN ACCESS

# Visualizing Qualitative Research

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## ABSTRACT

Although qualitative research is typically seen as working with verbal text, visual representations are frequently used in qualitative research in our field. This paper examines visualization as a research practice, aiming to encourage its reflective use and further development. We contribute to the literature on qualitative research in public administration, first, by discussing key concepts and the work visuals do. Second, we explore the way visualization can enrich the research process by shaping interactions within texts and with audiences. Third, we connect the practice of visualizing to the dialogue on methodological understandings and traditions in our field. For this, we outlined two distinct approaches to visualizing that researchers may draw upon: an iterative-progression approach (inductive) and a pragmatic-bricolage approach (abductive). We conclude by connecting visualization to thick description, suggesting how visuals can add layers of meaning in qualitative public administration research.

## 1 | Introduction

Doing state-of-the-art qualitative research in public administration is quite demanding (Haverland and Yanow 2012; Ospina et al. 2018; Ashworth et al. 2019; Nowell and Albrecht 2019; van Hulst and Visser 2025). To do justice to the complexity and multiplicity of the phenomena under study, qualitative researchers are expected to set up projects with emergent designs; generate and analyze large volumes of mostly textual data in iterative cycles; be open to and make notes on surprise, tension, and doubt throughout the research process; read and contribute to the relevant, ever-expanding literature; and live up to the quality standard of developing thick verbal descriptions of “real-life settings and understandings of participants’ worldviews” (Ospina et al. 2018, 593). Qualitative research could therefore be understood as consisting mostly of text work (Golden-Biddle and Locke 2007) and qualitative analysis as “essentially concerned with the massaging of words” (Langley and Ravasi 2019, 174). However, in publications of qualitative research in public administration, visual representations—in short, visuals—can also be frequently encountered.<sup>1</sup> For quantitative researchers in

our field, visuals like graphs, charts, and models have long been as indispensable as they are in other disciplines (Tuft 2001), but why would qualitative researchers want to visualize their research? How does it relate to the research process and its various aspects, such as analysis and thick description? There is hardly any discussion of such questions in methodological discussions in public administration. Visualization is mostly known as a way to communicate findings (Isett and Hicks 2018).

The aim of this paper is to examine visualization as a research practice for our field. We position visualization as a practice that can enrich qualitative inquiry and expand the repertoire of qualitative researchers in public administration. With this, we show the value of visualizing throughout the qualitative research process, rather than merely as a medium for communicating the research findings after text work is done, and encourage its reflexive use. In this paper, we proceed as follows. We first offer the reader a solid understanding of visualizing as such. Even though ontological discussions, the visual and methodological guidelines of visuals and visualization exist, they are scattered across time and disciplines (Strauss 1987; Miles

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### Evidence for Practice

- Creating maps, tables, or models can help scholars gain overview and generate theoretical insights.
- By thoughtfully considering how visuals interact with text and intentionally layering complexity into or across their visuals, qualitative researchers can enhance both the depth and quality of their research.
- Visualizing can support the research process by serving as a tool for thinking and as part of a broader toolbox for analyzing and theorizing.
- Scholars and practitioners can use visuals to initiate conversations and collaborate throughout the research process.
- Journals, editors, and reviewers can encourage scholars to visualize their work more to further scholarly conversations in the field.

and Huberman 1994; Langley 1999; Clarke 2005; Buckley and Waring 2013; Meyer et al. 2013; Kress and van Leeuwen 2021). In addition, new ideas and findings about visualizing have been developed over the last decade (e.g., Ravasi 2017; Meyer et al. 2018; Langley and Ravasi 2019; Cloutier and Ravasi 2021). As public administration scholars, we should always learn from the disciplines surrounding us (Raadschelders 2011). Therefore, we synthesize available knowledge and discuss what visuals are and what work they do. Next, we explore the way visualization can enrich the research process through the interaction between (1) verbal text and visuals, and between (2) visualizers and their audiences. For public administration, the interaction with different audiences is of particular interest. Third, we outline two distinct approaches to visualizing in the research process, connecting visualization to the conversation on methodological understandings and traditions in public administration (Raadschelders 2011; Haverland and Yanow 2012; Ospina et al. 2018; Ashworth et al. 2019; Nowell and Albrecht 2019; van Hulst and Visser 2025). The iterative-progression approach focuses more on the incremental refinement toward a final visual representation. The pragmatic-bricolage approach embraces visualization as a creative tool that can be used flexibly at various points in the research process and also for theoretical papers. The connection of visualizing with understandings and traditions is furthered in the discussion, where we think through visualization in relation to thick description (Brower et al. 2000; Ospina et al. 2018).<sup>2</sup> With this paper, then, we contribute to the literature on qualitative research in public administration by reviewing and advancing the practice of visualization.<sup>3</sup>

## 2 | Visuals and Visualizing Work

### 2.1 | What Are Visuals and How They Are Different From (Purely) Verbal Text

To better understand visualization practices, we should first make a broad distinction between the verbal and the visual mode of giving meaning to phenomena (Kress and van Leeuwen 2021). Compare a verbal text and a visual. Strictly speaking, reading a verbal text is a visual practice. However,

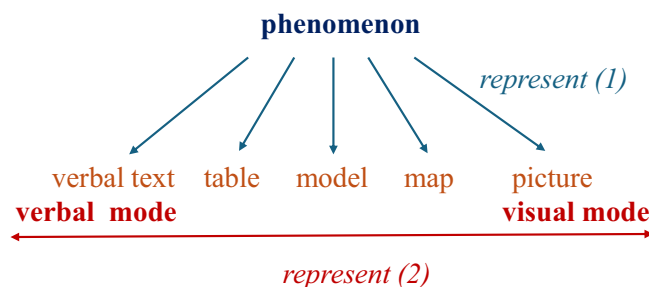


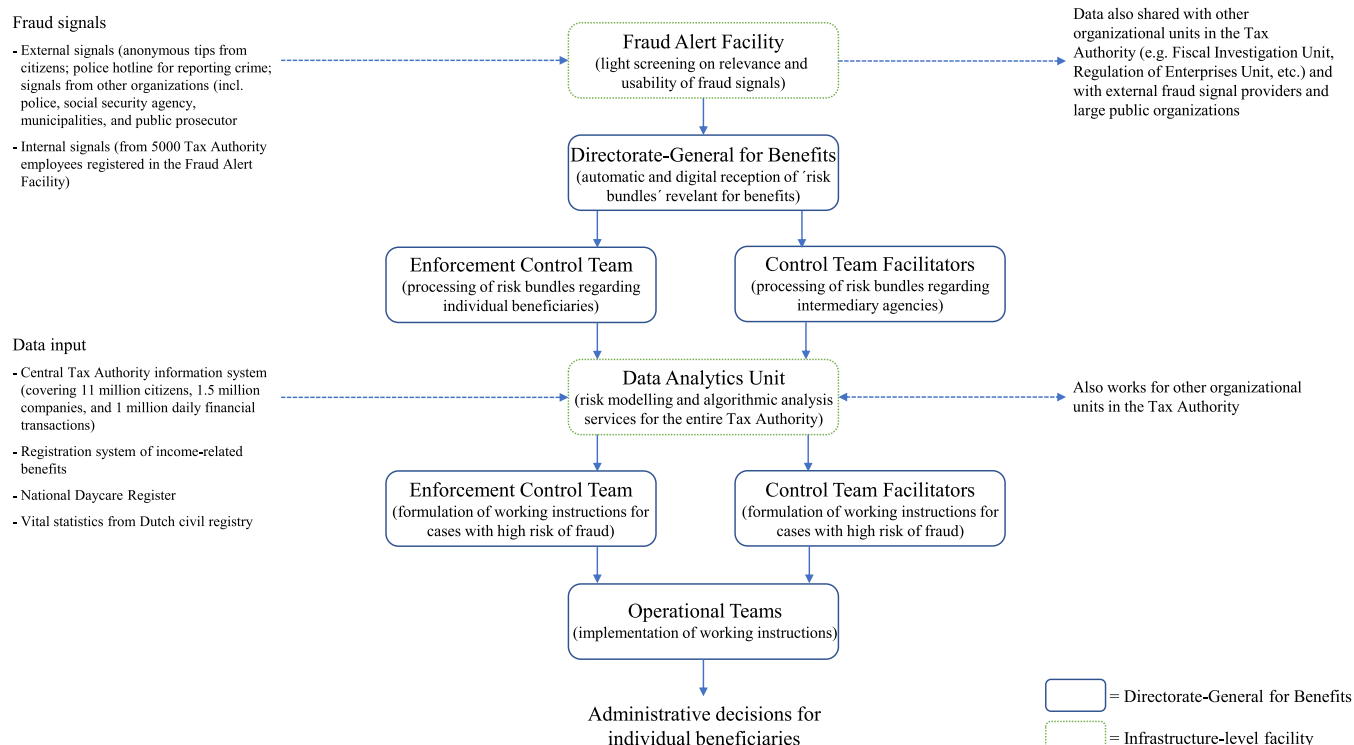
FIGURE 1 | Representing phenomena.

while a verbal text is apprehended linearly, sequentially, and additively, a visual like a picture is grasped in a more spatial, immediate, and holistic manner (Meyer et al. 2013, 494–495; Meyer et al. 2018; Kress and van Leeuwen 2021). A visual can typically be apprehended almost instantaneously, even if its meaning still requires interpretation. Visuals allow us to “eyeball” what is going on (Miles and Huberman 1994, 93), seeing “it all at a glance” (Mintzberg 2005, 363).<sup>4</sup>

If we look more closely at research publications in our field, a sharp distinction between verbal and visual modes is not enough (Figure 1). It is more useful to think in terms of a spectrum of forms through which researchers represent phenomena (Banks and Zeitlyn 2015, 26–27). Phenomena in qualitative public administration are represented through distinct forms which range from a verbal to a visual mode (1 in Figure 1). Even if there are many ways to visualize, here we limit ourselves to the forms of the verbal text, the table, the model, the map, and the picture. All publications contain extended verbal text. Tables are used very frequently, while maps and conceptual models are used as well. Pictures are quite rare. Tables, maps, and models are hybrids of verbal and visual. Tables are filled with verbal text, yet typically fit on one page, so they offer an overview of data or categories ordered in certain dimensions. Models and maps typically contain some text but not much.

Representations can also be turned into other forms (2 in Figure 1), for example, when a conceptual model is made from verbal text or when a verbal text is derived from an overview presented as a map. As science studies have taught us, both ways to represent (1 and 2 in the Figure 1) are transformations of the phenomenon studied (Latour 1987). As representations, they inevitably fall short of capturing what is represented (Knorr Cetina 2001; Mol and Law 2002). However, in the very process of transformation, they create new understanding and practical ways to deal with it.

In this paper, we are concerned with visuals that researchers generate themselves “at their desk” from data, findings, and ideas, that is, the hybrid forms we encounter between the “purely” verbal and the visual mode: tables, maps, and models.<sup>5</sup> When we talk about visuals, in what follows we thus refer to these hybrid forms and not to pictures or visuals generated by people in the field. Moreover, with visualizing qualitative research, we are not referring to, for instance, getting researchers to make more models or take photos, but to the various ways in which researchers develop and represent data, findings, and ideas in ways other than only through (extended) verbal text.



**FIGURE 2** | Information flows and procedural steps in the Dutch Tax Authority (Peeters and Widlak 2023, 868). The original source can be found at <https://onlinelibrary.wiley.com/doi/epdf/10.1111/puar.13615>.

Our next step is to further explore the work that visuals can do not just for readers but also for researchers throughout the research process.

## 2.2 | The Work Visuals Do

Like verbal text, visuals help us to understand field realities and the research process itself. They do hermeneutic work, making sense of and giving meaning to phenomena (Kress and van Leeuwen 2021). Different forms do so somewhat differently though, and this is what we will now discuss. In keeping with the visual metaphor, we could say that visualizing helps to offer overview and insight. Let us start, first, with visualizing through making maps. Langley and Ravasi (2019, 173) define mapping as “directly coding data into visual forms such as cognitive maps, flow charts or relational diagrams, an approach that may offer a useful complement to traditional verbal coding.” Mapping is mostly a way to orient in order to get or keep overview. It can, for instance, help to sketch the context of a phenomenon and its boundaries. It can also be a way to get going with the analysis of data (Strauss 1987, 143).

If qualitative researchers find their way in the field or try to get a handle on data they have generated or accessed, a chronology of an organizational process or a flowchart of a routine can be helpful. They might reconstruct these from observation notes, interviews, or policy documents. Some kinds of maps, like organizational charts, are available in the field. Qualitative researchers treat these as espoused and anticipate differences from what happens, for example, in informal backstage practices or implementation (van Hulst and Visser 2025). Careful mapping can be

crucial for developing a comprehensive view of a phenomenon, as can be seen in the following example; a visual depicts the information flows and procedural steps in the Tax Authority of the Netherlands (Figure 2). In the boxes, we encounter the actors and what they do in the different parts of the process depicted (what is between brackets verbalizes what the arrows stand for). Using colors (blue and green), the authors further distinguish between types of actors. Two moments of input entering the process are visualized with text and arrows on the left side of the figure; two contextual asides are added on the right.

Making tables, as a second form of visual, starts from comparisons and leads to an ordering of data or ideas in analytically relevant dimensions. This comparative analytical work lies at the core of grounded theory (Strauss 1987; Strauss and Corbin 1990). Tables are filled with words, but they function visually by arranging them along relevant dimensions. Although such dimensions can sometimes be drawn from the literature, inductive and abductive approaches generally require researchers to develop and refine them during the analytical process. As Ravasi (2017, 242) notes:

Whatever it is, it seems to be working for me, as tables in-the-making offer me a visual framework to organize cues into emerging concepts, the visual proximity of fragments facilitating their comparison, and helping me assess whether the provisional way in which I am gathering them and labeling them ‘makes sense.’

Tables are very common in qualitative public administration. They can support understanding by visually contrasting what

**TABLE 1** | Summary of findings of opportunities and constraints of agile (Mergel 2024, 942). The original source can be found at <https://onlinelibrary.wiley.com/doi/10.1111/puar.13787>.

| Types of affordances                                              | Perceptible affordances supporting the adoption of agile practices in public administrations | Hidden, false, rejected affordances preventing public administrations from adopting agile practices                                                                                                                                                                                                                        |
|-------------------------------------------------------------------|----------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Agile practices</b>                                            |                                                                                              |                                                                                                                                                                                                                                                                                                                            |
| 1. Self-organizing crossfunctional teams                          | If legitimization is possible, it would reflect ongoing informal practice                    | <ul style="list-style-type: none"> <li>Existing ridged, inadequate top-down leadership prevents cross-silo communication and collaboration</li> <li>Limited by habitus, social structures, hierarchy</li> </ul>                                                                                                            |
| 2. Task prioritization in teams                                   | Recognizable as part of one's bureaucratic discretion                                        | <ul style="list-style-type: none"> <li>Not recognized as part of agile practices, therefore neither adopted, nor rejected</li> </ul>                                                                                                                                                                                       |
| 3. Open communication and courage to point out what does not work | Only possible without top leadership in the room                                             | <ul style="list-style-type: none"> <li>No psychological safety: Fear of speaking up</li> <li>Restrictive practices: Only highest-ranked person speaks at meetings</li> <li>Retributions and bad experiences</li> </ul>                                                                                                     |
| 4. User centricty                                                 | Partly open to it and digital transformation is seen as a window of opportunity to implement | <ul style="list-style-type: none"> <li>Outright rejected by leadership: <ul style="list-style-type: none"> <li>By law, the only people to speak to the public</li> <li>Fear of loss of professional status</li> </ul> </li> <li>Rejected due to too many “unicorn” solutions</li> <li>Unknown to civil servants</li> </ul> |
| 5. Iteration (testing and prototyping)                            | “This is how we already work”                                                                | <ul style="list-style-type: none"> <li>Preference for linear problem solving, instead of chaos and complexity</li> </ul>                                                                                                                                                                                                   |

is different in one aspect, yet similar in another. They combine overview and insight. One might say that in tables, the empirical and the theoretical meet halfway. The distinctions and content of Table 1, for example, are at once theoretical and empirical. The table offers two types of affordances that can be found in five agile practices. In developing this table, the author drew on a variety of materials, both theoretical and empirical (Mergel 2024).

Thirdly, by *making conceptual models*, qualitative researchers can rise “above the data to develop more abstract representations of concepts and relationships” (Langley and Ravasi 2019, 173). This move represents the “conceptual leap” from data to theory discussed by Klag and Langley (2013). From the data, researchers develop an abstract understanding of a phenomenon in general terms, thereby generating theoretical insight. In Strauss (1987) grounded theory, this takes shape in a visual centered on the core category. Because processes and practices encountered during the qualitative fieldwork are typically dynamic, multi-level, and recursive, visuals become particularly useful in thinking them through (Langley and Ravasi 2019). Visuals then become “increasingly complex syntheses of the data” (Star in Strauss 1987, 179).

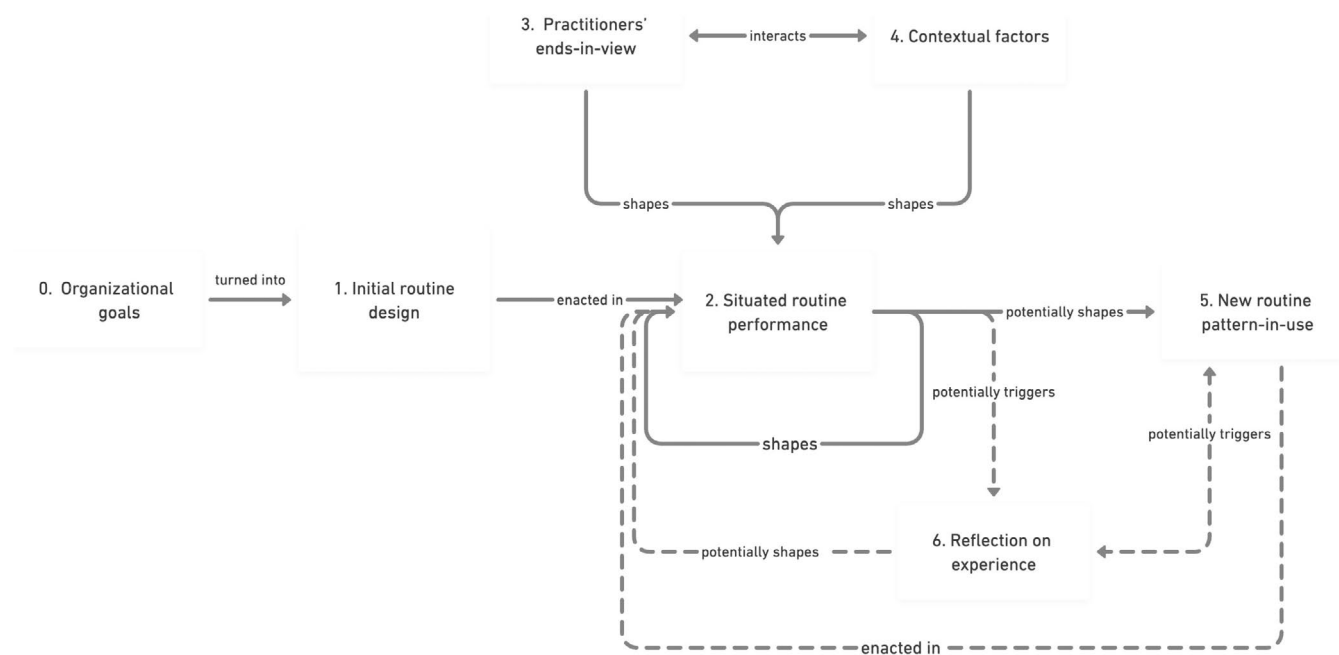
Conceptual models in qualitative public administration typically consist of several nested boxes and arrows. Figure 3 is an example of such a model. It offers an abstract understanding of how street-level routines work, indicating how organizational

goals over time, shaped by actors' views and contextual factors, lead to the situated performance of routines and how new patterns of routines might evolve afterward. Important to notice is that such models might condense a lot of information. Not only through words, but also through the spatial placement of elements in relation to each other and through lines. Lines that create boxes indicate entities (not used in Figure 3). Lines in the form of arrows are typically used to indicate direction in time (which might be two-way, indicating interaction, co-shaping, or feedback). Dotted lines allow for making the difference between closed and permeable entities and between actual (normal arrow) and potentiality (dotted arrow) processes. These are the more conventional elements, and many other elements are possible (Feldman 2017). Visualizing data and ideas thus does different kinds of hermeneutic work, combining overview and insight into field realities to varying degrees.

### 3 | Interactions

#### 3.1 | Multimodal Interactions

To understand the potential of visualizing as part of qualitative public administration research, we need to dig deeper, however. We need to see better how visual forms relate to each other and to verbal text in publications and also during the research process. A text like a journal publication is *multimodal* if it includes



**FIGURE 3** | The process of deliberative routine performance and development (Visser and van Hulst 2024, 100). The original source can be found at <https://academic.oup.com/jpart/article/34/1/92/7133538>.

more than one mode of representation (Meyer et al. 2013; Kress and van Leeuwen 2021). To understand the meaning-making work texts do, we should view the different modes of representation (verbal, visual) not just in relation to, but also in interaction with each other. This also counts for the distinctive forms (map, table, model) we have discussed. We distinguish two kinds of multimodal interactions. The visual modes, and their different forms, can complement the verbal as well as one another. They can also converse.

First, because visual forms work differently than purely verbal ones, they can complement them. Visuals, when used in academic texts, can be an illustration of what is talked about in the verbal part of the text. They then complement by showing data or ideas instead of telling about them (Höllerer et al. 2018). They help develop a better understanding by presenting information in different, often condensed, ways. Maps and models, in particular, can complement temporal and spatial narratives (Clarke 2005, 30; on complementing through tables, see Cloutier and Ravasi 2021). Moreover, they can help “synthesize empirical stories, offering analytical overlays that draw out key elements, accompanying verbal detail,” give life to theoretical stories that may be difficult to grasp without visual representation, and show linkages between empirical and theoretical narration in an immediate fashion (Langley and Ravasi 2019, 196). In policy analysis, Rein and Schön (1977) have also argued that stories, maps, and models reinforce each other. They are “interrelated ways of translating worries into problems” and “each provides a different way to surface beliefs so they can be subjected to organized skepticism” (1977, 246).

One interesting example of a complementary way of representing findings can be found in Geert Teisman’s (2000) treatment of decision making (Figure 4). He presents the literature (the phase model and the stream model) and his contribution to it (the

round model) with simple conceptual visualizations. The verbal text of the article offers the details of each model, but not the instant grasp that the visual does. Offering short verbal labels and multiple synthesizing figures side by side allows for quick comparison of theories. Including elements of the phase model (sequenced stages, decisions) and stream model (concurrency), the round model complexifies the first two.

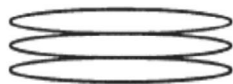
Second, if we look at the process of making visuals, we can see that different modes and forms can be used to enhance one another when they are (metaphorically) brought into conversation. Conversing can happen at various moments throughout the research process and allows researchers to leverage the synergies between modes and forms (Zilber 2018). For example, when researchers make a one-page overview of what they know or tentatively map a policy process they study on a timeline, the verbal materials they have at hand (e.g., quotes, codes, concepts) help them to do this, and the visual in its turn allows them to make better sense of their verbal materials. In the process of making this paper, for instance, at several moments, the first author made map-like overview (one example is Figure 5). Although one might argue that this map is full of words and therefore verbal and not visual, we consider it a hybrid form of verbal-visual in which ideas and concepts are put on display in a dense and, through arrows, visually connected manner that offers an analytical overview.

In reading texts with multiple forms of representation, the conversation might also take place. A table with little accompanying text can be inspected and understood as such, but a map or model and the verbal text of an article or book would typically be read side by side.<sup>6</sup> See, for instance, Teisman’s figure (Figure 4). Corresponding numbers or letters in both visual and verbal text might allow for a coordinated double reading (see also figure 1 and the verbal text referring to it, and Kaplan and



### The phase model

### Distinct stages of formation, adoption and implementation



### The stream model

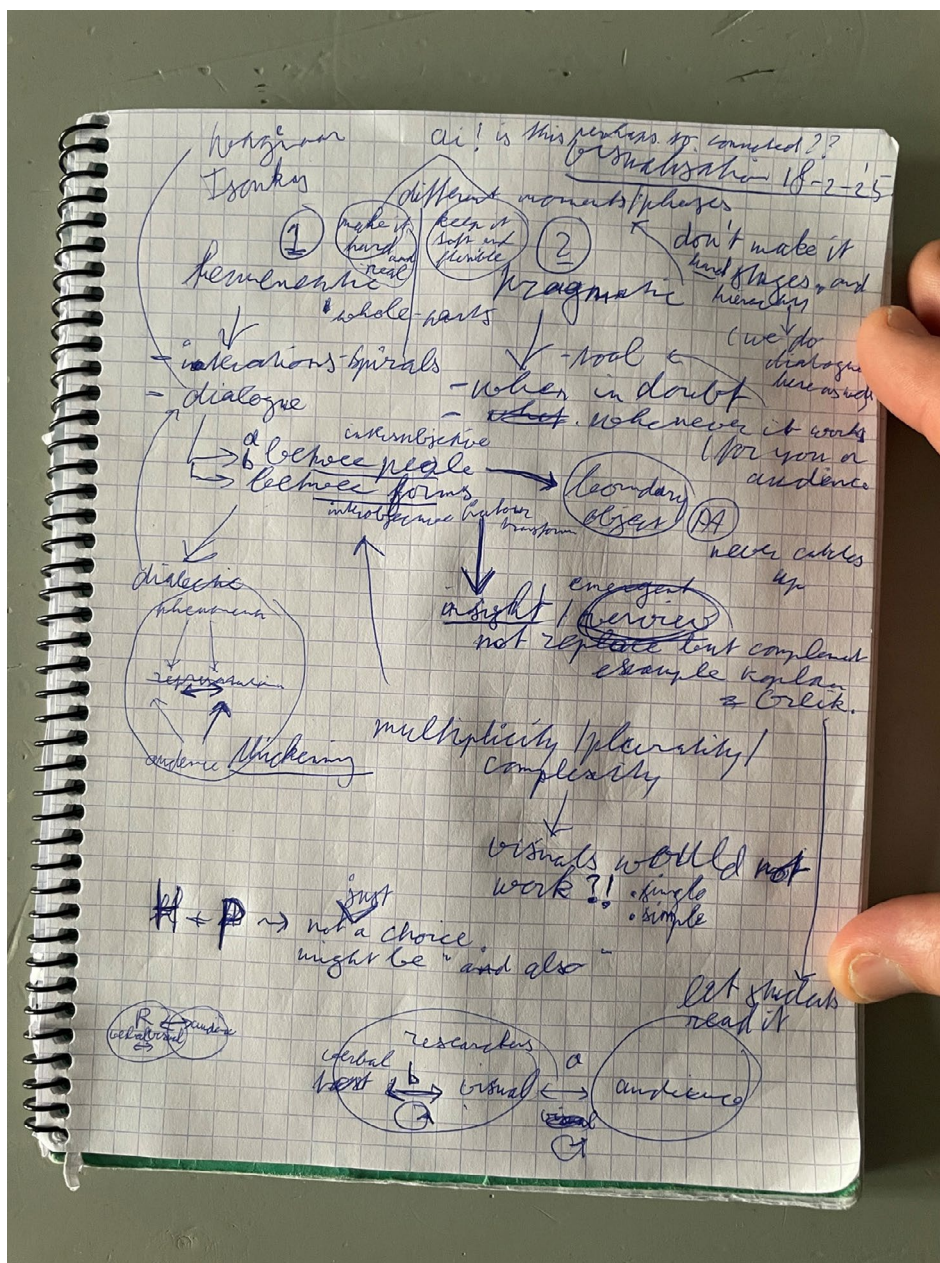
### Concurrent streams of problems, solutions and participants



### *The rounds model*

Series of interacting decisions taken by several actors

**FIGURE 4** | A depiction of three models for the analysis of decision-making processes (Teisman 2000, 939). The original source can be found at <https://onlinelibrary.wiley.com/doi/abs/10.1111/1467-9299.00238>.



**FIGURE 5** | Example of overview of ideas, arguments, and relations (for this paper, 18-02-2025).

Orlikowski 2013, 974–975). Our understanding emerges in the process of going back and forth between extended text and visual. Liberman's (2013) ethnomethodological study of map reading illustrates this dynamic. People navigating a city district with the help of a map do not just use the map to interpret the landscape they are moving through. They also use the landscape to better understand their map. They, for instance, position the map in a way that it mirrors the surrounding environment. Visualizing can be used after researchers have written a first draft of extended verbal text. They ask themselves, can the verbal be turned into visual form? Conversely, writing can be used after researchers have developed a visual from notes or memory. Researchers then spell out the visual.

To be sure, such conversations are not necessarily smooth. Researchers might get stuck when they are not able to turn a verbal narration into a visual or vice versa. Visualizing and writing visuals up can, therefore, not just increase understanding; it can also help researchers and readers to remain critical or skeptical of their emergent findings and ideas. Finally, to take advantage of multimodal interactions, we should realize that different modes and forms of representing are also “placing emphasis on different aspects of a phenomenon and reflecting different lines of thinking” (Ravasi 2017, 242). If a visual is made to capture the researchers' emergent theoretical understanding, they may work back and forth between verbal and visual elements to take advantage of these differences (Miles and Huberman 1994). This can form an ongoing (hermeneutic) cycle. Ideally, then, qualitative researchers do not just move from parts to wholes but also from mode to mode and from (hybrid) form to form, spiraling toward rich multimodal texts.

### 3.2 | Interactions With Audiences

In addition to aiding researchers in organizing and analyzing data, visuals can help to shape interactions with various audiences, influencing how findings are communicated and understood. Visuals “may be the strongest messages we send to our audience” (Pradies et al. 2023, 1250). This is particularly relevant in public administration, where interacting about complex realities with diverse audiences is essential (Isett and Hicks 2018). Again, we can make the distinction between complementing and conversing. First, visuals in presentations and reports for practitioner audiences are typically cast as “science communication” (Trumbo 1999), suggesting that scientists should invest in the accessibility of their work (Miles and Huberman 1994; Isett and Hicks 2018). It has long been suggested, for instance, that extensive narrative case studies might be of limited use to policymakers, as extracting relevant information from them can be challenging (Mulhauser 1975). Academic congresses are other occasions where visuals can complement verbal presentations. Visuals allow researchers to present overview and insight quickly. In addition, visuals can also depict the research process (Miles and Huberman 1994).

In communication of qualitative research after it has been finished, visuals thus complement written and spoken text and can, in principle, improve research impact. When done well, they help audiences understand the findings and build trust in how the results were produced. Poorly designed visuals, however,—too

simplistic or inconsistent with the text, for instance—can undermine the credibility of the research. It is therefore important to consider carefully the set-up of visuals, such as the ordering of dimensions of a table, so that readers are not confused about what information is important and how a visual should be understood (Tufte 1990; Isett and Hicks 2018).

Second, interaction between visualizers and audiences can also take place during and as a part of the research process toward findings and theories (Clarke 2005). Then researchers use visuals in a more conversational manner (Buckley and Waring 2013). Provisional findings and theory can not only be shared quickly when they have a visual form, they can also function very well during meetings between researchers or between researchers and other audiences (Clarke 2005). The visual is placed in the metaphorical middle. Visualizers and their audiences can jointly interpret the visual and the phenomenon it represents. We see this in Strauss' (1987) discussion of analytical sessions with his colleagues and students. Visuals facilitated face-to-face conversations between researchers, and visuals were made on the spot (Strauss 1987, 144, 179, 181).<sup>7</sup> Such conversations can also work throughout research collaborations. Ravasi (2017), for example, recounts how he and his co-author used the windows of his office to “park” drafts of tentative findings, with the windows carrying the visuals and displaying them for months.

In conversation with practice, visualizing can even be the central tool. Bryson et al. (2016), for instance, worked with practitioners to map strategies (visual strategy mapping). They made causal maps, “a statement-and-arrows diagram” (Bryson et al. 2016, 916). They did not aim, at least in the first instance, at a diagram that reflects how things work in practice, but more pragmatically collaboratively developed visuals that helped practitioners move forward (Bryson et al. 2016, 923):

[S]cholars may question the reasoning behind the placement of arrows and their directionality. In response, we would say that the point is not whether the arrows placed by management teams can withstand scholarly scrutiny. The point is whether the conversation leading to the arrows is useful for the teams in developing a reasonable and defensible way forward.

Reflecting on such interactions with audiences makes us aware of the various ways visuals can work. If we assume that visuals simply transfer knowledge already present in the text to practitioners (Carlile 2002), then little interaction beyond the visual and the accompanying text would be necessary. However, practitioners interpret visuals from their own perspective. Because visuals are easily shared without context and can appear to tell a story on their own, those who encounter them may understand them in ways that differ significantly from the researchers' original intent. Alternatively, if researchers use the interaction to improve both their understanding of practice and practitioners' understanding of findings and ideas, visualization would be (like it can be between researchers) a conversation starter and a shared object to work with. Providing visuals with sufficient openness can, in turn, enhance the conversation between researchers and practitioners. This exchange can improve

understanding on both sides and lead to a more shared understanding (Carlile 2002).<sup>8</sup> Rather than merely conveying findings or theory, visuals can facilitate collaborative sense-making, helping both sides refine their interpretations. Crucially, this process is not limited to the final stages of research but can enrich engagement at multiple moments.

## 4 | Two Approaches

As a final step in our exploration, we now turn to the relationship between visualization and the research process itself. In qualitative research in public administration and elsewhere, two main approaches have been distinguished: an inductive and an abductive one (Ashworth et al. 2019; van Hulst and Visser 2025). In short, induction is about developing theoretical patterns from data, while abduction starts from a surprising finding that begs for novel theorizing.<sup>9</sup> How do they relate to visualization?

### 4.1 | Iterative-Progression Approach (Inductive)

With the different kinds of work outlined and a review into the interaction with various audiences, one can envision a process that leads, with the help of several rounds of fieldwork and analysis, from data toward a model catching the essence of the phenomenon under study. The kinds of work visualizing does, and the interactions that accompany it, can “shade into one another as they move us across the bridge between data and compelling conceptual product” (Langley and Ravasi 2019, 176). The order in which these different kinds of work and interactions unfold appears to follow a phase-driven sequence, starting with mapping and ending with communicating the final results to an audience. This amounts to an *iterative-progression approach* to visualizing that is inductive in character.

Visualization is often considered a process that iteratively progresses toward the best possible understanding of the phenomenon. That means it takes several rounds of improvement. In the classic literature on visuals and visualization in the social sciences, this approach can be seen as dominant. We recognize this approach in the work of several seminal thinkers on visualization, in particular Miles and Huberman (1994) and Strauss (1987; Strauss and Corbin 1990). The perspectives on visualization presented by these scholars share important similarities, as they distinguish between the types of work that can be done through visualizing at various stages of a research project.

Miles and Huberman (1994) make a distinction between exploration and description (first stages) and explanation (last stage). They use the metaphor of a ladder of abstraction that needs to be climbed (Miles and Huberman 1994, 91) and refer to Rein and Schön (1977), arguing for a progression from story to map to model in policy making. In Strauss' research (Strauss 1987; Strauss and Corbin 1990), visualizing is an important part of developing a grounded theory (see also Buckley and Waring 2013). Strauss (1987, 184–185, 212; Strauss and Corbin 1990) talks about drafting “operational” visuals to see better what is going on and make more complex “integrative” visuals as you go. For him, the practice is directed at making a conceptually dense, grounded theory. An iterative-progression approach, then, is cumulative

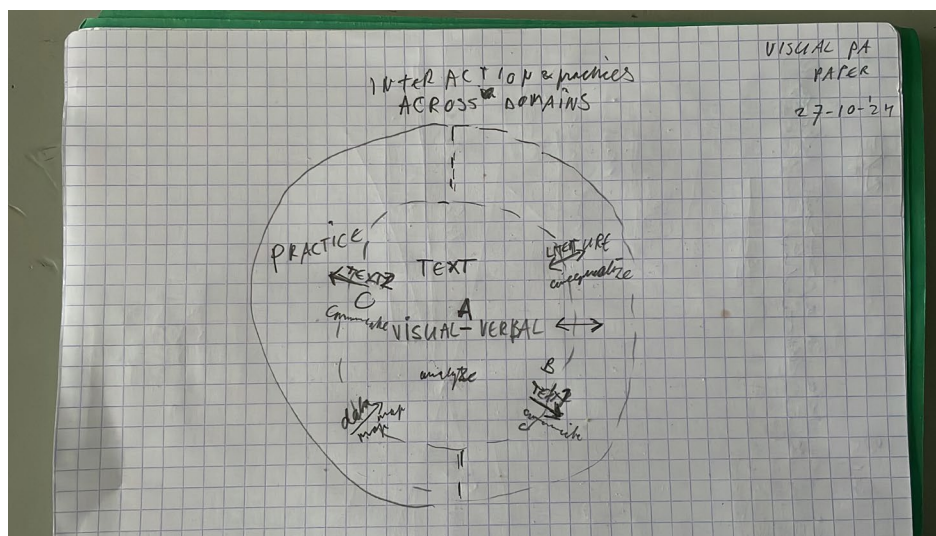
(Strauss 1987, 185, 213, 279), “cycling forward” (Miles and Huberman 1994, 93) through a series of small cycles that produce multiple intermediate versions. Together, these cycles form a progressing trajectory from first overviews to deep insight.

As the iterative-progression approach was introduced decades ago, we looked into its current use. In organization studies, a template has developed that streamlines grounded theorizing and that exemplifies this same iterative, progressive logic clearly. The Gioia method, “a holistic approach to inductive concept development” (Gioia et al. 2013, 17), offers four steps toward writing a research report: from developing a compendium of first order terms (1), to a list of second order themes (2), to a shorter list of overarching theoretical dimensions (3), and ending with a dynamic visual model (4). The visual output serves as “graphic representation of how we progressed from raw data to terms and themes in conducting the analyses—a key component of demonstrating rigor in qualitative research” (Gioia et al. 2013, 20). There has been quite some criticism of the use of the Gioia method and similar templates lately (Gioia et al. 2022; Pratt et al. 2022). While proponents argue that routine and structure can offer plenty of space for creative exploration, others caution that such frameworks may inhibit creativity. A procedure that is straightforward might work as a straitjacket (Miles and Huberman 1994, 98). We see, however, also an alternative approach to visualization that we call the *pragmatic bricolage approach*. Since this approach has not, as far as we know, been outlined, we will explore it in more detail.

### 4.2 | Pragmatic-Bricolage Approach (Abductive)

A pragmatic-bricolage approach to visualization contrasts with the progression understanding of the process of visualizing.<sup>10</sup> It emphasizes the utility of visuals for the research process instead of the aim to accurately represent field realities. In this approach, visuals are perceived as tools to think with and part of a larger toolbox for analysis and theorizing. For pragmatists, who typically work abductively (van Hulst and Visser 2025), using visuals and visualizing creatively throughout the research process can help to work through surprises, tensions, and doubt. Making visuals allows us to grasp, abductively, how existing theories or other prior knowledges relate to surprising data. Researchers may also spontaneously engage in visualizing when a new idea emerges or when they doubt and want to regain grip. A good example is the visualization made to organize our thought for this paper, presented before (Figure 5). It is a visual made at a moment when we were rethinking the paper's focus and the framing of our arguments. Visualizing served to support the research process as a tool for thinking, not as a product that might find its way into a publication. Another example of visualizing for this paper is Figure 6. The polished version of the visual did not make it to the paper, yet this version was part of our analytical process as an effort to develop our understanding.

Visualizing can then be seen as a form of and part of “methodological bricolage” (Klag and Langley 2013; Pratt et al. 2022; van Hulst and Visser 2025). The metaphor of bricolage points at a craft-like nature of qualitative research and involves “an active choice of moves from a broad set of methods, which provides the



**FIGURE 6** | Visualizing interactions in visualizing (for this paper, 27-10-2024).

basis for an active explanation of moves taken” (Pratt et al. 2022, 217). Bricolage is make-do with the materials at hand. In bricolage, visualization is part of a set of tools that we use whenever they are helpful to accomplish a certain task. In the toolbox of the bricoleur, we find “many items collected over time (e.g., ideas, theories, methods, life experiences, skills, social connections), sometimes acquired with a view to their potential usefulness, but often accumulated in a more undirected way” (Klag and Langley 2013, 161). Visualization, in combination with other activities and items that Klag and Langley mention, can help accomplish the theoretical understanding researchers strive for. Indeed, Ravasi (2017, 243), who talks about “scribbling, sketching and drawing” to make sense of data, suggests just how entangled visualization might be with practices like reading, going to conferences, taking long walks, and so on.

An important reason why we consider the pragmatic approach to visualizing sensibly is that analytical and theoretical ideas do not require data as a starting point. Visualizing can help develop and convey ideas that are not directly derived from empirical data (Fisher et al. 2023). Tables and simple models, for instance, are often used to give an overview of theories or concepts (e.g., Yanow 1996; Teisman 2000; Meijer et al. 2021). Moreover, as Figure 1 suggests, we can move between verbal text and pictures in both directions. There is no definite starting point or fixed order in visualizing. It does not need to be used in specific moments of the research process or in predetermined ways. There is no reason to delay its use until we generate or access our initial data.<sup>11</sup> We might draw a preliminary model right at the beginning as we start forming initial ideas about the phenomenon we are researching. We can quickly draw multiple versions of a visual to compare alternative ways of understanding the phenomenon, or make visuals to tease out the workings of a specific part of it. We might also develop a visual because we encounter a visual in the literature that inspires us and that we want to build upon. Conversely, we might think a visual we encounter does not do justice to the reality it depicts, prompting us to develop an alternative that does better. In addition, by connecting these ideas to interaction with audiences, we can also share visuals at any moment to get their feedback and refine our thinking.

Visuals and visualizing can thus become a vehicle in analyzing and theorizing throughout the research process.

Furthermore, this way of thinking challenges the conventional view, often implicit in methods literature, that research must be primarily understood in terms of a research project. Ideas and theory that have taken on visual forms can travel along with researchers for more extended periods (Latour 1987). By implication, researchers might draw on inspiring visuals they are reminded of throughout the research process. Freed from a fixed order, visualization can help researchers make conceptual leaps forward toward theoretical insight (Klag and Langley 2013). The point is that we risk seeing visualization too tightly in connection to predefined stages or steps within research projects. We do not want to think and work within rigid templates or impose strict templates for visualization itself. In the pragmatic approach, using visuals and visualizing is used to spur creativity, experimentation, and newness in interpreting phenomena, but it may itself also be used creatively, experimentally, and in new ways. We could look critically at the idea that qualitative researchers should strive for a (final, abstract) model, with other forms as waystations toward it (Clarke 2005). Process (visualizing) is as important as product (visual). Certainly, not “anything goes” in visualizing as pragmatic bricolage, but much more goes on than most of us probably realize, in terms of what, when, why, and how to visualize.

It is not easy, however, to think outside the box (and-arrow) (Feldman 2017). Perhaps this is because there are numerous possibilities if we move beyond it, coupled with uncertainty about what will be accepted as part of good research practice. If we look at the matter as pragmatists, though, we might rather look for good examples and see how they might work for us in our research. The literature in public administration and related disciplines, such as organization studies and sociology, serves as a rich source of inspiration for pragmatic bricolage practices of visualization. Weick’s (1979) early work is an excellent example of the way creative visuals and imaginative visualization support not just data analysis but theorizing more broadly. It is filled with dozens of visuals of different sorts that allow the reader

to better grasp what he is talking about. Another researcher we should mention here is pragmatist Schön (1983). Talking about reflective practitioners, he showed how they engage in a “conversation-with-the-materials” in the situations they try to make sense of surprises and tensions. This can apply to visualizing in qualitative research as well and could be most fruitful when a researcher is able to make this conversation multimodal, as we argue above. Even closer to our disciplinary home, finally, Yanow (1996) offered a range of theoretical visualizations of the relationships between policy and implementation, organizational charts, tables comparing data, and pictures of settings studied.<sup>12</sup>

## 5 | Discussion and Conclusion

Although qualitative researchers in public administration and related disciplines may believe that any attempt to capture reality on paper will inevitably fall short (Knorr Cetina 2001), they are very engaged in conversations about the shapes and workings of the phenomena they study, like public organization, management, governance, and planning. They continue to expand the shared conceptual apparatus, making finer distinctions and taking into account the ever-changing nature of these phenomena (Tsoukas 2017). In this paper, we discussed how visualizing can contribute to those efforts, beyond communicating findings to audiences.

Our contributions are the following. First, to clarify the general process of visualizing, we discussed basic concepts and the work of visuals. We distinguished the verbal and the visual modes and pointed at three hybrid forms: maps, tables, and models. The work of visuals is about developing overview and insight through these different forms. Second, we explored the way visualization can enrich the research process through the interaction between (a) verbal text and visuals and between visuals, and (b) visualizers and their audiences. It is important to realize that the text we create is often multimodal and that different modes and forms can complement and converse. For public administration, the interaction with different audiences is of particular interest. Here, we should stress the importance of ongoing, two-way interaction, and not a mere communication of findings. Third, connecting visualization to methodological understandings and traditions, we outlined two distinct approaches to visualizing as part of the research process: the iterative-progression approach and the pragmatic-bricolage approach. Whereas the first focuses more on the incremental refinement toward a final visual representation, the second embraces visualization as a creative and flexible tool to think with. In the discussion that follows, we will further the third contribution by connecting visualization to thick description. We will end our paper with limitations and ideas for further research.

### 5.1 | Visualizing and Thick Description

Visualization practices can raise the quality of qualitative research in our field, supporting analysis, theorizing, and communication of findings and ideas. Like other technologies (Kaplan 2011), however, visuals are not inherently good or bad. It depends on what you do with them. That is why we

want to point out a potential risk to which especially qualitative researchers might be sensitive. Visuals simplify complex phenomena (Star 1983). When they take the form of abstract theoretical models, they take a large leap from empirical phenomena studied in a field site to abstract concepts. Visuals can offer overviews that do not do enough justice to the realities depicted. Recently, for example, we saw how this works in visualizations of transdisciplinary research (van Hulst et al. 2025). While some researchers would see simplification as a primary objective of research, qualitative researchers might caution against radical abstraction from the context studied (Tsoukas 2017). Visualizers risk turning complex practices and processes into boxes and arrows that might suggest mechanistic repetition or linearity (Langley 1999; Feldman 2017). The more parsimonious visuals are, the more decontextualized they become.

For qualitative researchers, visualizing might therefore appear to conflict with providing a thick description of the phenomena being studied. Thick description, the way of doing interpretive research as Geertz (1973) proposed for ethnography, became one of the main evaluative criteria for good qualitative research in public administration (Brower et al. 2000; Ospina et al. 2018; Ashworth et al. 2019; Nowell and Albrecht 2019).<sup>13</sup> As Geertz (1973) argued, it is the reconstruction of the levels of meaning operating in a specific research site. In Miles and Huberman's (1994, 10, italics in original) words: “Another feature of qualitative data is their richness and holism, with strong potential for revealing complexity; such data provide ‘thick descriptions’ that are vivid, nested in a real context, and have a ring of truth that has strong impact on the reader.” Talking about rendering complex organizational processes, Cloutier and Langley (2020, 19) argue that researchers can use “mediums of expression [...] such as narrative, metaphors or poetics [...] which have emerged historically for the specific purpose of capturing complex and entangled emotions, sensations and experiences.” Thick description, then, is a way to get at the complexity of public administration realities.<sup>14</sup>

If thick description is approached as a means for comprehending the complexity of public administration, then visuals that merely simplify would fall short. However, keeping in mind that visuals are a form of (re)presentation and can interact multimodally with verbal text, we can start to think about how visuals can also be helpful to thicken qualitative research (van Hulst et al. 2025). Although visualization through models runs from complex (reality) to simple (representation), turning reality into verbal text moves in the same direction. The challenge for both is “moving from a shapeless data spaghetti toward some kind of theoretical understanding that does not betray the richness, dynamism, and complexity of the data but that is understandable and potentially useful to others” (Langley 1999, 694). Data and categories in tables or maps can thicken description, serving as additional, complementary evidence and links between data and theory (Mele et al. 2020; Ospina et al. 2018), adding what Geertz (1973) would call layers of meaning.<sup>15</sup>

Importantly then, to thicken our descriptions through visualizing, we should not strive for parsimonious causal models with linearly unfolding phases and methodological understandings that go with it (Langley 1999).<sup>16</sup> To complement meaning made

through the verbal and in this way do more justice to complexity, qualitative researchers in public administration should develop more layered, richer visualizations and multiple visualizations (Strauss 1987; Pradies et al. 2023). Showing complexity might also be done better if we visualize beyond the common language of boxes and arrows, creating alternative ways to visualize the same phenomena (Feldman 2017; Cloutier and Langley 2020). A stream of work to mention here is Clarke's (2005) pragmatist grounded theory. She developed a form of grounded theory that involves three forms of maps that she sees as working toward thick description (2005, xxi–xxii): situational maps, social world maps, and positional maps. Feldman (2017) has also written persuasively about alternative ways to visualize, foregrounding actor networks, action nets, and narrative networks. Such proposals, however, are not meant to be used as templates or turned into software that gives strict guidance to the visualization process. They are proposed as pragmatic tools to be used when qualitative researchers find them useful (Klag and Langley 2013).

## 5.2 | Conclusion

While researchers who generate quantitative data spend significant time translating visual displays and numbers into stories, those working with qualitative data move frequently in the other direction, transforming words into visual forms. The potential benefits of this practice are significant. In this paper, we have discussed how visualization can support research, how visuals interact with texts, and how this can enhance the depth and quality of qualitative inquiry. Importantly, as society becomes increasingly visual, we anticipate that research itself will become increasingly visually oriented (Kress and van Leeuwen 2021). Yet, current practices of visualization in qualitative public administration have remained underexplored. We do it, but we hardly talk about it. Most examples in public administration journals are polished end products, offering little insight into the process of crafting, experimenting, and bricolage that generated these visuals or supported the research process (which is why we used examples of visualizing for this paper in this paper). At the same time, visualizing data, findings, and ideas carries risks. Although simple visuals can be very useful to start or support a conversation, simplifying complex realities in the end obscures parts of public administrative phenomena, potentially failing to do them justice. In addition, overreliance on templates and software support constrains our understanding and limits our creativity. This underscores the importance of being deliberate and reflective about what, when, why, and how we visualize.

This paper only gives limited insight into the use of visuals and visualization in our field. To gain a deeper understanding of it, it is essential to examine the practice in our field, including the challenges encountered. This would also allow us to better see how different approaches to visualization accomplish similar and different understandings. It would, in addition, enable us to see differences within our field and develop an understanding of the use of visualizing for particular topics. A good way to further our understanding of visualizing as part of theorizing in our field might be to investigate metaphors used in visualizing. Metaphors in visuals, implicitly or explicitly, suggest particular theoretical understandings.<sup>17</sup> We should also better understand how software for analysis and visualization functions in actual

research practices. With our paper and such future research, we can improve the hermeneutic cycles that connect concrete and abstract, textual and visual, researcher, academic and practitioner, and attempt to spiral or even leap forward to increased and refined understanding. Let's figure it out together!

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## Conflicts of Interest

The authors declare no conflicts of interest.

## Endnotes

<sup>1</sup> The generic forms of visuals for qualitative research we are focusing on are tables, maps and models. These are actually hybrid forms that combine verbal and visual elements (Banks and Zeitlyn 2015). Next to visuals, researchers use the concept of display (Miles and Huberman 1994) or diagram (Strauss 1987; Strauss and Corbin 1990). Miles and Huberman (1994, 11) define a display as an “organized, compressed assembly of information.” Here, visuals encompass displays and diagrams. In addition, visual artifacts made by or with people in the field are also increasingly studied across the social sciences (e.g., photographs, power-points, videos, or drawings) (e.g., Meyer et al. 2013; Metze 2020). Looking at all qualitative articles published in 2024 in four well-known journals in public administration (Public Administration Review, Journal of Public Administration Research and Theory, Public Management Review and Public Administration) (90 articles), we found that the large majority includes at least one visual (90%)—map, table, or model (2.5 visuals per publication on average). Most of the visuals are tables with findings and tables with overviews of methods (data sources, list of interviewees) (in total 1.6 tables per publication on average). Empirical models appear in only 14% of the articles (0.1 models per visual on average). To be sure, not all visuals will end up in publications, but our count does confirm the idea that visuals are produced a lot and suggests there is an unevenness between them. JPART and PMR also included quite some visual materials in online supplements. Mostly tables, no models. The data are available for inspection from the authors.

<sup>2</sup> We are not going to discuss visualization techniques that are available in CAQDAS software programs like NVivo and ATLAS.ti either. Such programs are good support to gain map and further analyze coded data (retrieve information, look for relations between codes, etc.), yet there are elaborate manuals and online videos to help researchers develop visuals through those programs. Moreover, they do not by themselves develop ideas (conceptual or analytical) for qualitative researchers and they do not make creative connections with observations researchers have not entered into the database or with the prior knowledge—personal experiences, readings done, background knowledge—researchers bring to their projects (van Hulst and Visser 2025). Nor are we going to zoom in on specialized techniques that have been developed for specific kinds of research projects. Finally, we do realize that Gen AI offers support for visualizing as well, yet this does not relieve qualitative researchers of the need to feed programs with ideas, evaluate the results and develop them further.

<sup>3</sup> In the next section, we include various visuals that are illustrative of particular topics. They come from recent publications and are not meant to demonstrate best practice.

- <sup>4</sup> Isett and Hicks (2018, 481) observe: "Although text is read visually, it is processed as auditory by the brain, making text fundamentally different from graphics [...] Visualizations are experienced initially as a whole, and then the pieces are parsed—which is opposite from the way that text is processed by the brain [...]."
- <sup>5</sup> We do note that visuals generated or accessed in the field are also of great interest to public administration research.
- <sup>6</sup> In contrast to what might be thought, a table does not speak entirely for itself like the rest of the verbal text of a publication normally does (Kress and van Leeuwen 2021, 31–33). It depends for its meaning on the surrounding verbal text to make clear what its dimension stand for.
- <sup>7</sup> Strauss (1987, 171), in discussing his work with doctoral students, stressed the fact that he did not know too much about the content of the work under discussion. Visuals allowed for a useful conversation as they abstract away from details that are not constantly needed for the interaction.
- <sup>8</sup> We should note that the usefulness of interactions and iterations across different forms of representation and in teams of different actors has been documented for the practices of several other groups of knowledge workers and creative professionals (e.g., Stigliani and Ravasi 2018).
- <sup>9</sup> Unfortunately, we do not have space here to get deeper into the matter. For a solid understanding of the inductive process, one can consult the grounded theory work of Strauss and Corbin (1990), (Charmaz 2014 argues for a more abductive version of grounded theory). The abductive way of working has recently been discussed in our field by van Hulst and Visser (2025).
- <sup>10</sup> This approach fits with the ontological and methodological principles of Pragmatism. Pragmatists would not strive for visuals that represent the truth, but for representations that work for them and the epistemological communities they are embedded in. To be sure, this is not meant in total opposition to the iterative-progression approach. Miles and Huberman (1994) and Strauss (1987) and many who followed in their footsteps would not protest against treating visualization pragmatically. Although Miles and Huberman (1994, 3–4) saw themselves as realists, they also framed their approach to qualitative research as pragmatic and dubbed their second version a *sourcebook* to indicate that they are into the doing. The connections between pragmatism on the one hand, and Straussian grounded theory (Strauss 1987; Strauss and Corbin 1990) and some of the later versions of grounded theory (situation analysis and constructivist grounded theory) on the other, have been written about extensively (e.g., Charmaz 2014).
- <sup>11</sup> Although Miles and Huberman (1994) write mainly about visualization in analysis, in their lead up to their long, detailed chapters on it, they also suggest to develop conceptual frameworks in graphic form. What is missing in their account, though, is the observation that visualization can be an unplanned, micro-activity. Similarly, Strauss (1987) suggests researchers may benefit from visualizing the theories they read to gain a clearer understanding of them. In that sense, both Miles and Huberman (1994) and Strauss (1987) recognized uses of visualization beyond the stricter iteration and progression approach they mostly advocated.
- <sup>12</sup> Yanow (1996), now 30 years old, is an excellent example of thickening description with the help of visuals. In the introduction, we find not less than eight figures that visualize theory. These guide the reader through the chapter. In the empirical chapters we encounter charts that offer overview on the organization studied, tables with empirical materials that give analytical insight and photos that help the reader envision the field.
- <sup>13</sup> Geertzian interpretive research aims to render lived experience and meaning in action. To do this, one should converse with locals (Geertz 1973, 13) and read their actions hermeneutically, as if they were a text (Geertz 1973, 10, 452; Geertz 1983, 68–70). Experience and meaning are not surface-level phenomena, not something you can observe instantly or directly. A sophisticated interpretivism also implies taking into account the idea that in the field, we deal with multiple views and perspectives (Yanow 1996).
- <sup>14</sup> Which is not to say that it is all about rendering the particulars. It is about balance between the particular and the theoretical. As Geertz (1983, 57) argued, one would not want to be "awash in immediacies, as well as entangled in vernacular" on the one hand and "systematically deaf to the distinctive tonalities of [locals'] existence" on the other.
- <sup>15</sup> Geertz also wrote that "[m]ost ethnography is in fact to be found in books and articles, rather than in films, records, museum displays, or whatever; but even in them there are, of course, photographs, drawings, diagrams, tables, and so on. Self-consciousness about modes of representation (not to speak of experiments with them) has been very lacking in anthropology" (Geertz 1973, 19).
- <sup>16</sup> Cornelissen (2017, 7) warns about the danger of making causal pictures: "That is, a more complex picture of causality may often lead to a confusing and entangled set of causal relations that are not clearly drawn apart and that may give rise to issues of circularity and tautology."
- <sup>17</sup> We thank one of our reviewers for pointing at this interesting topic. Much might be said about this, yet we saw no opportunity to do justice to this here. We do want to refer the interested reader to Biscaro et al.'s (2025) excellent introduction to and update on metaphor theory in organization studies. They build bridges toward visualization.

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