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Rather with than About - Reshaping Qualitative Empirical Research Methods in Times of Physical Distancing

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Abstract

Face-to-face participatory research and interaction is at the heart of empirical social research. The COVID-19 pandemic and the resulting physical distance restrictions had a significant impact on qualitative research. Instantly, conventional qualitative social science methods had to be adapted to 'remote' and digital modes of interaction. The focus of this article is to analyze how and why video-mediated formats such as online conference tools and online whiteboards affect personal interaction, cooperation, collaboration and data acquisition. In a retrospective process, we first inductively defined three characteristics of interaction, namely emplacement, communication and rapport. Conducting research about climate adaptation in coastal regions touches upon a sensitive and emotional topic. Emplacement is a decisive characteristic to understand how identities are built. The combination of verbal and non-verbal communication leads to contextualization, and building rapport is essential for trustful collaboration. To answer the question if video-mediated formats enable a replacement of face-to face formats, we deductively analyze the implications of video-mediated formats used in semi-structured interviews, qualitative social network analysis and focus groups on these characteristics. Our analysis reveals that video-mediated formats are sufficient to gather information but hamper crucial relational and trust-building processes. This implies that, by using video-mediated formats, the content level was hardly exceeded. Compared to face-to-face formats, non-verbal communication, emplacement and rapport are limited using digital formats, with problematic consequences for data generation and its understanding as well as for interaction in terms of trust, lasting relationships, knowledge generation and liability. In brief: Video-mediated formats hold the danger that research is done about participants and not with participants.

Keywords

qualitative methods, emplacement, communication, rapport, COVID-19, video-mediated formats

Introduction

Conventional empirical social research relies on methods and contexts that are based on social investigations and interactions in the field. Personal contact and social relations *with* participants represent major components of empirical data generation, such as semi-structured interviews or focus groups (Barbour & Kitzinger, 1998; Berg, 1989; Ochieng et al., 2018). Since the beginning of empirical social research at the turning of the 19th to 20th century, this approach has been refined and improved while new survey methods and techniques emerged over time and in combination with technological progress.

The strength of traditional, place-based empirical research that relies on face-to-face data acquisition consists

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in the social and emotional bonds established between researcher and participant. This holds especially true for sensitive and controversial issues that involve social negotiation and decision-making processes, such as risk management strategies in times of uncertain climate change. In particularly, people's sense of place, which in our case is the German North Sea coast adjoining the Wadden Sea with their islands on the seaside of and the low-lying areas landward behind the dikes, appears to be special. This coastscape – also called the Wadden Sea Area – extends along the entire German bight coastline. Here, early settlers were exposed to the dangers of storm surges and had to adapt to their coastal environment by constructing dwelling mounds and dikes. This century-long interaction with challenging waters and the ensuing socio-historical settlement process resulted in a perspective on coastal protection and the current coastline that is still characterized by the proverb 'God created the sea, the Frisians the coast'. People's engagement to protecting settlements and (re) claiming land from the sea has gradually turned the coast into a more cultural environment which is threatened by various climate change-related impacts such as extreme weather events, sea level rise, coastal erosion, and storm surges.

The sea has always been a threat to the people living on the North Sea coast, and the fear of the sea is deeply rooted in the regional cultures. People living on the North Sea coast perceive themselves as distinct, "the […] identity [created] is also closely connected to regional or local knowledge, because often enough people in coastal regions have—proudly—lived with the predominant natural conditions for generations. Storm floods here are part of the collective memory" (Holzhausen & Grecksch, 2021, p. 4). Therefore, with respect to research linked to place and local and regional climate adaptation, researcher-participant collaboration requires culturally sensitive, empathic communication and social exchange, trustful cooperation, and processes of building rapport. These aspects are – not only for our cases – preconditions for developing collaboration on eye level and establishing long-term relationships without losing sight of the problems of distance and proximity to the research object, positionality and bias (Ennis & Chen, 2012; He et al., 2016; Keller et al., 2015; Nilsson & Mattes, 2015).

However, during the COVID-19 pandemic in Germany, contact restrictions and three lockdowns between April 2020 and February 2023 have significantly influenced personal interaction and daily life. This also applies to the research context of universities and other research institutions which imposed travel bans to all staff to prevent further spread of the coronavirus and to protect both staff and interviewees. Such regulations, issued by the federal states, were enforced in convergence with the German federal government and the German Ministry of Education and Research, and halted situational research in all areas. Hence, place-based research was considerably affected, interpersonal face-to-face formats in the field were impossible and even prohibited (German Ministry of Health 2023; Hermans et al., 2021; Howlett, 2022). Empirical data collection as well as transdisciplinary collaboration were suspended for months. This adversely affected social interaction and relationships with participants in numerous research projects, compelling researchers to immediately rethink established face-to-face social science methods and to develop ways of qualitative data collection and fieldwork based on Covid-19-safe digital modes (Konken & Howlett, 2023).

Data acquisition building on technologies and digital media is not a new research approach, i.e., telephone interviews, video calls, and instant messaging software or group discussions using video conference software, chat rooms or bulletin boards (e.g. Carter, 2011; Deakin & Wakefield, 2014; Hine, 2005; Howlett, 2022; Jenner & Myers, 2019; Sullivan, 2012). The technological progress increasingly enabled the utilization of new internet-mediated methods in empirical social research (Deakin & Wakefield, 2014). Theory-based discussions on the use of audio communication began in the 1990s (Dubrovsky et al., 1991). More recently, the focus progressively shifted towards video-mediated techniques. Although the body of scientific literature on this topic is rapidly growing, online research practices still experience a steep learning curve. Benefits associated with the use of this type of video-mediated communication are flexibility in time and location as well as with regard to economic issues (Abrams & Gaiser, 2016; Archibald et al., 2019; Kite & Phongsavan, 2017; Woodyatt et al., 2016). Besides the benefit of avoiding frequent and time-consuming journeys, the region of investigation can be easily enlarged, or international communication increased by using remote research modes while including a wider range of participants (Archibald et al., 2019; Gray et al., 2020; Oltmann, 2016). Remote interaction can have a positive effect in medical contexts as it enables individuals with limited mobility to interact and stay in touch with others in a relatively straightforward and barrier-free manner (Peat et al., 2023); and referring to the pandemic, anxiety to meet people has considerably been reduced (Ratcliffe et al., 2022). However, implications of these ways for data and information acquisition on data quality should also be considered.

The physical disconnectedness appears to have significant influence on social interaction taking place between researchers and participants and results in less interactive, less in-depth, less socially-driven, less empathetic and less comprehensive data (Sattler et al., 2022). Virtual ways of gathering data by moving from face-to-face to remote and synchronous computer-mediated data generation lead to difficulties in terms of following conversations and understanding discussions from a content-based perspective (Straus & McGrath, 1994; Weller, 2017). Compared to face-to-face situations, the data collected can thus be less rich or loose meaning for interpretation and therefore less reliable and robust (Sattler et al., 2022).

Against the backdrop of these multifaceted issues, we empirically investigate in this paper how synchronous video-mediated formats affect personal interaction and to what extent these formats are able to replace face-to-face formats in qualitative research. We analyse and assess implications of video-mediated formats with an emphasis on emplacement, communication and rapport as observed in three digitally adapted qualitative social science methods (semi-structured interviews, qualitative network analysis and focus groups). This necessitated an iterative process to reflexively compare the process of interaction between researchers and participants. The results gathered in this analysis will be contrasted with feedback from participants to unravel the impacts experienced and implications articulated in the video-mediated formats applied, and to elaborate on the enhancing and limiting consequences for successful future qualitative research in comparable situations.

Conceptualizing Characteristics of Interaction

During the COVID-19 Pandemic, the need to adapt to contact restrictions imposed by the federal government forced us to shift our empirical methods on climate change-related issues on the North German coast to video-mediated formats to not stop research completely. This was at first sight thought of as a practical and straightforward task to be carried out, but the experiences made in the course of transferring and applying the various methods used in online interviewing led us to reflect upon and re-assess the implications of this change. We felt that something was missing and this gut feeling led us to reconsider the unarticulated assumptions using our methods: Do we want to generate data about what our participants know on a certain topic or problem-setting or do we want to understand how they engage with it? Hence, the question of objectifying participants versus a relational notion of interviewing them emerged (e.g. Ingold, 2018) and caused a certain degree of unease. This motivated us to reflexively review the methods applied, and critically ponder on what the shift to video-mediated formats meant to them, to us, how it affected the research process and the data evolving from this form of interaction. This was crucial as the purpose of empirical data collection is to gather, link and analyse contextual information from and with interviewees. The guiding understanding of this paper is that video-mediated formats have implications on data acquisition and quality in qualitative research. Based on the experiences gained and theoretical discussions conducted among us, and drawing on various insight provided by the relevant literature, we understand communication and building rapport as two intersecting key factors of and for successful interaction.

In the context of our empirical work on climate change adaptation in communities at the North Sea coast, we additionally identified emplacement as third relevant factor, as adaptation to climate change takes place at the local level in a concrete space and place with its prevailing socio-ecological context. We hence acknowledge that a place-based understanding of the participants within their living and non-living environment is essential (Döring & Ratter, 2018), particularly to grasp subjective values and meanings, senses of place, and culture as salient local influences on the way of adapting to climate change (Amundsen, 2015). For the research process, considering 'where' the research encounter and the interview are located has a significant impact on experiencing the participant's lifeworld and understanding the full range of practices and information, social identities and power relations, all of which are important aspects that mutually influence place-based research. In this way, the inductively gained characteristics of interaction (emplacement, communication and rapport) as well as their associated consecutive elements appeared to us as relevant aspects for exploring implications of digitally adapted qualitative social fieldwork. In brief, these three characteristics of and for interaction were applied as an analytical framework for our video-mediated formats.

Emplacement

Emplacement describes the rootedness and belonging of people in a common setting and is especially important for place-based research. Its component is a place, or rather a landscape, where social processes and interactions are embedded and living conditions are set (Vigh & Bjarnesen, 2016). Following Casey (2001, p. 684), who states that "there is no place without self and no self without place", an individual's identity is both shaping and being shaped by its environment. To put it into Preston's (2010, p. XVI) words: "[…] the physical spaces around us are deeply woven into the fabric of who we are". Sin (2003, p. 311) notes that knowledge is not only created by the participants, but is emplaced within "a dialectic relationship with the 'place' of the interview." The acknowledgement of this physical, embodied, social, cultural and mental relation between participant and the surrounding environments in the research process is assumed to have a significant influence on the way knowledge is generated and articulated (Preston, 1999). In our research endeavours, all participants are personally and genealogically rooted in the research area. Facets of personal identity rely on and are bound up in place, leading to commitment, interest and motivation to participate in the research conducted (e.g. Gerkensmeier & Ratter, 2018; Verbrugge et al., 2019). Hence, constitutive elements of emplacement include spatial, social and emotional dimensions of places.

Communication

Communication takes place as an interplay of verbal and non-verbal components to share information, ideas and relate socially (Baym et al., 2004). Verbal elements are seen as the exchange of cognitive information, "embodying the semantics

of the message language generates" (Tan, 1992, p. 268) and thus belong to the content level. As described in Carter (2003) and Phutela (2015), constitutive elements are intonation (including para-verbal elements such as melody, stress, fluency, volume), verbiage (technical/colloquial), length of contribution, and phatic communication. Non-verbal elements encompass tactility, proximity (closeness), posture (body language), pathognomy (gesture), gaze, and sensory perception. They considerably contribute to regulating relationships and complement, substitute or assist verbal communication (Phutela, 2015). Non-verbal communication can undermine and distract from the understanding of verbal elements or, in absence, even hinder its understanding (Eaves & Leathers, 2017; Folger & Woodall, 1982; Tan, 1992). Further, non-verbal elements are understood as contextualising verbal communication by reflecting subjective emotional attitudes and shaping the relational aspect of a communication (Tan, 1992; Watzlawick et al., 1996). Thus, the interplay of verbal and non-verbal communication is essential for the social exchange of information in interactive qualitative methods: they keep the interactive flow going while developing empathy and trust at the same time (Eaves & Leathers, 2017).

Rapport

Finally, rapport can be understood as fundament for trustful relationships and is described in research as the mutually shared or experienced relationship between the researcher and participant in terms of trust-building, grounded on commitment and appreciation on the one hand; and ease, comfortable and pleasant interaction on the other (Guillemin & Heggen, 2009; Jorgenson, 1992). Hence, rapport is widely considered as a prerequisite for minimizing social distance and conceived as an important element to create human closeness. Efforts made by the researcher to create proximity are relevant for unfolding reciprocal experience, the contextual richness of stories told by participants and the depth these data convey (Duncombe & Jessop, 2002; Jorgenson, 1992; Kvale & Brinkmann, 2009; Tremblay et al., 2021). Following Collins and Carthy (2019) and Guillemin and Heggen (2009), rapport includes constitutive elements of coordination (feeling of being in harmony with one another by agreement, credibility, responsiveness/adjustment to the interlocutor), attention (back-channel responses, identification of emotions), and positivity (empathy, friendliness, humour). It strongly relies on emplacement and non-verbal communication. The intentional aim of the interviewer hence consists in establishing a good rapport to enable the crafting of far-reaching and comprehensive data, and to create respect, trust, closeness and – if possible – a long-term relationship for further enquiries.

Material and Methods

For our analysis we use three digitally adapted qualitative social science methods: semi-structured interviews, qualitative network analysis and focus group discussion. These methods have been applied in the context of three different transdisciplinary research projects along the German North Sea coast. All projects scientifically cover a specific focus on increasing coastal resilience facing impacts of climate change, which is a sensitive issue due to the existential context of risk management in the coastal landscape we investigated. A place-based understanding and related approach to reveal local knowledge and practices as well as underling values (Döring & Ratter, 2018) is particularly relevant here as the analytical inclusion of place and space help to gain a comprehensive perspective. The preparation, that is development of researchers' background knowledge and recruitment of participants, followed methodological schemes independent from pandemic influence. To execute the semi-structured interviews, qualitative network analysis and focus groups were shifted to different video-mediated formats and then applied them. In particularly, the qualitative network analysis and focus groups required a shift in collaboration from 'hands on' to digital whiteboards (Table 1).

Methodological Steps

Each method used interconnected sequences of methodological steps. The semi-structured interviews aimed at gaining a place-based understanding of how to deal with impacts of climate change required (i) a systematic in-depth reading and content-analysis of academic and non-academic sources and (ii) execution of video-based semi-structures interviews using an interview guide to understand the participant's sense of place. The qualitative social network analysis (Schiffer & Hauck, 2010; Winkler & Hauck, 2019) to reveal coastal governance structures was based on (i) video-based semi-structured interviews, and (ii) a mapping-exercise to visualize the actor-network in terms of decision-making processes using a digital whiteboard. The focus groups in the context of identifying regional compound events (i) were introduced in detail by the researcher, (ii) stimulated by a self-edited five-minutes video visualizing a real-world compound event, and (iii) applied a digital whiteboard to collaboratively identify co-occurring hazards and their cascading effects. All three video-mediated formats have been recorded digitally. Semi-structured interviews and focus groups were transcribed verbatim while the results written on the digital whiteboards were documented by screenshots and adjoining notes made during and after the meetings.

To analyse the implications of using video-mediated formats on researcher-participant interaction in terms of emplacement, communication and building rapport, we used transcripts and documentations as well as our documented perception of the video-mediated formats. The constitutive elements defined were used to reflect upon and compare the experiences made during the video-mediated formats and to answer the question: to what extent face-to-face formats can be replaced by video-mediated formats? Additionally, and to

Table 1. Description and scope of the three adapted qualitative social science methods.

	Semi-structured interviews	Qualitative network analysis	Focus group discussion
Aims for research	Gathering a place-based understanding of how the topic of climate change is framed and actors engage with it. Immersing into the various ways in which climate change interacts in places. Dealing with place-based problems of climate change adaptation.	Gathering actor-networks to understand the structures of the governance system. Immersing into the personal networks and perspectives to understand formal and informal relationships. Dealing with conflicts and synergies related to decision-making in climate adaptation.	Gathering possible regional compound events that are understood as a combination of multiple drivers and/or hazards occurring simultaneously or in close succession, resulting in cascading effects (Zscheischler et al., 2020). Immersing into the actors' perceptions of extreme events and their sense of compound events. Dealing with local knowledge about vulnerabilities and coping strategies.
Recruitment of participants	Stakeholder analysis: Analysis of official documents, websites and reports. Development of an agreed-upon list of interview partners. Contact via email and telephone.	Stakeholder analysis: Analysis of official documents, websites and reports. Survey in the framework of research context. Contact via email and telephone.	Stakeholder analysis: Analysis of official documents, websites and reports. Survey in the framework of research context. Contact via email and telephone.
Identified participants	36 regional actors, administrative staff and scientists in the field of coastal protection and fisheries in north and east Frisia, Germany.	38 regional actors in the field of coastal protection, water management and freshwater supply in east Frisia, Germany.	24 regional actors in the field of coastal protection, water management and freshwater supply in east Frisia, Germany. Six focus groups, number of participants varied between 2 and 6.
Technological setting	Videoconference tool (zoom, skype or Webex) Extensive pre-tests	Videoconference tool (BigBlueButton) Digital whiteboard (MURAL) Extensive pre-tests	Videoconference tool (Zoom) Digital whiteboard (Zoom) Extensive pre-tests
Timeframe	Interview series from Mar 2020 until Jun 2021 Interview duration: 45–90 minutes	Interview series from Feb until Apr 2021 Interview duration: 60–135 minutes	Focus group series from Mar until Apr 2021 Focus group duration: 90–165 minutes
Empirical basis	Quotations from expert interviews SI1 to SI8	Quotations from expert interviews NW1 to NW5	(*Not applicable here*)

avoid the problem of self-referentiality and danger of circular reasoning, we reflexively analysed those parts of the interviews and focus groups in which we explicitly asked our participants to assess and evaluate the video-mediated formats or to argue about their advantages or disadvantages. The aim of this procedure consisted in comparing the analysis of our own experiences with those made by the participants.

Results and Discussion: Characteristics of Interaction - Emplacement, Communication and Rapport

The adaptation of face-to-face social science methodologies to video-mediated formats had one decisive benefit: Video-mediated formats offered the advantage of allowing busy participants or participants with limited accessibility to participate and contribute (i.e. fishermen during fishing periods or participants living in remote areas). However, the drawbacks were outweighed and we found limitations to the interactions between researchers and participants as communication is much more than the pure exchange of words and meanings. In face-to-face interaction, verbal and non-verbal communication literally *takes place* (Seamon, 2018) and thus, emplacement and rapport are directly entangled (Figure 1). This insight led us to finding that in video-mediated formats verbal interaction addresses the content-level and is the most relevant part leaving emplacement apart while also hampering the building of rapport. During video-mediated interaction, non-verbal communication and emplacement are almost completely omitted, since visual or atmospheric elements can only be insufficiently transmitted via camera, while all other sensory dimensions such as smells and sounds are excluded. This focus and limitation on the visual sense during the interaction is tricky as it is indispensable to build rapport and establish a trustful bond between the researcher and participant.

One might suppose that potentially existing technical challenges are of major interest when thinking about transforming face-to-face into video-mediated formats. Contrary to our assumption, technical challenges were low throughout all video-mediated formats used due to a widespread and growing experience of researchers and participants in using

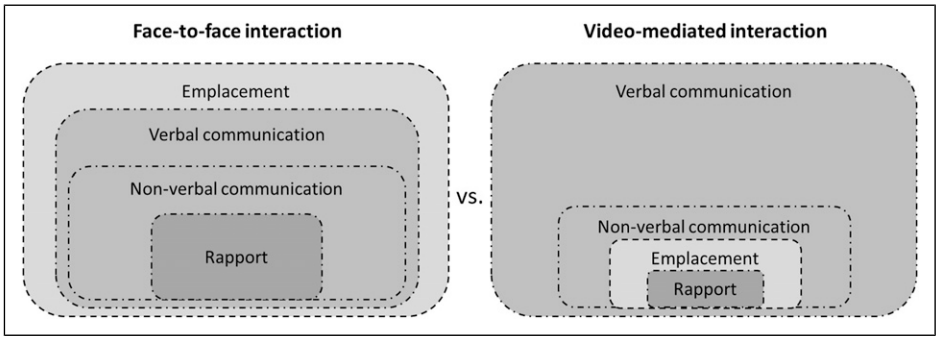

Figure 1. Scheme of interaction between researcher and participants comprising the three characteristics emplacement, communication, and building rapport. The size of the boxes reflects the perceived proportion and influence of the layers on the interaction process. Left: Face-to-face social science methodologies, right: Video-mediated social science methodologies.

web-conference services for meetings and collaboration during the pandemic, as it is illustrated in the following quote:

> "In the past, I would have said you're shipwrecked by that, but by now, I think all people are kind of used to that, working on, I'll say, virtual whiteboards et cetera." (Water management, NW1)

Apparently, technical aspects do not play a central role in this study. In the following, we describe and reflect on the implications of video-mediated formats on the defined characteristics of interaction and present their dimensions in the context of our findings.

Emplacement in Video-Mediated Formats

Emplacement in terms of spatial, social and emotional places shape identity. Face-to-face communication entangles place and the experience of locality (Riley, 2010) including the social, emotional, physical, and situational contexts (e.g. Edwards & Holland, 2013; Gubrium et al., 2012; Kvale & Brinkmann, 2009; Roulston, 2010). This, though implicitly, enables the researcher to explore wider social aspects which contribute to understand the relational dimensions of the participants with their socio-cultural environments. The video-mediated formats offered a limited 'placial' setting in which only the point in time and digital space were shared by participant and researcher, but they did not provide the opportunity to interactively share the same place in terms of a mutual emplacement. Without a shared place it became obvious that contextualization of content, knowledge building, and personal interaction in terms of amenities were considerably restricted. The reduced confinement in a digital, neutral space or non-place (Augé, 1992) lead to a certain degree of decontextualization, bearing negative impact on the data generated. The following quotes underline the missing emplacement in video-mediated formats.

> "For me, that's rather nothing, using the screen. We just do that, but we don't really meet and don't really get to know each other. It's only for a short time, such an interview, but I would have favored if we could have met properly." (Coastal protection, SI1)

> "Good question... . So we don't really know where we are now, do we? Somewhere on this internet, but I am not with you and you are not with me. I would have liked to give you some more material, really on paper. Besides, we could have knocked right next door and they could have made the next interview appointment right away." (Fisheries, SI2)

> "It's kind of a shame, because I could have shown you some of the things we do, after our conversation. Would certainly have been exciting. And having coffee and cookies does not work as usual as well." (Coastal protection, SI3)

What we see here is the problematic aspect of placelessness (Relph, 2008). This aspect was elaborated in terms of some practicalities touching upon aspects of mutual sociality, getting into contact with other people in a community, getting access to the participant's lifeworld and sharing information. In contrast, emplacement in the sense of being in the same place, facilitates spontaneous interaction and improves collaboration because the many things not articulated but materially experienced are considered (Pauleen & Yoong, 2001). To be at least emotionally in one place at the same time appeared to be an important aspect for researchers and participants. That is, during the focus groups conducted the self-edited video impulse about a specific compound event served as means to socially and emotionally draw participants into a shared imagined or envisioned place. As participants did not have the opportunity to meet in person, the video stimulus created a way to meet in and experience, at least virtually, the same situation generating feeling of togetherness. This social identification provided an important, although technology-aided, entry point for a place-related understanding of dealing with impacts of climate change and extreme events.

In our research areas, aspects of the landscape, the social environment in terms of family ties and the emotional bonding to place merged and created the participant's identities, as the following quotes reveal.

> "I am very connected with the sea. My whole family were captains and sailors in the past for centuries. Nature is incredibly close to my heart. I feel very comfortable on the island with the somewhat vast and barren landscape, I like that very much. And I also find the life on the island actually quite intense and beautiful." (Nature Conservation, NW2)

> "I am a true (!) East Frisian and have lived in the community of Dornum since I was born." (Policy and Administration, NW3)

Compared to face-to-face formats, authentic emanation or the creation of an interpersonal atmosphere were lacking. The emerging de-contextualization of researcher-participant interaction during the pandemic developed into additional difficulties, especially when researchers were unfamiliar with the study region and simply lack a reflexive positionality within the locality to be explored. Places, as social passage points, are theoretically framed as an integral component of the lifeworld. Their study should take their binding relationality methodologically into consideration because each articulation in an interview setting literally 'takes place' (Hermans et al., 2021).

Another important aspect from a researcher's perspective is the return from the study region back into his or her life. This rite de passage provides a valuable moment of reflection, introspection and contextual understanding. The contrast experienced between there and here including the manifold impressions and insights gathered are deliberated, which is simply not given in video-mediated formats. Based on our experiences made, video-mediated formats imply only a directed and "misplaced" form to conduct qualitative research. A "misplaced" process (Thurlow et al., 2004), hence, runs the danger of methodologically excluding the multi-modal and multi-functional process of building identity and relationships which are constitutive of communication and building rapport.

Verbal and Non-verbal Communication in Video-Mediated Formats

Basically, communication is the product of a dynamic, situated and interactive process tying both verbal and non-verbal articulations together. It enables mutual understanding content-wise and in semantic and relational terms, but at the same time holds a phatic dimension in terms of negotiating of relationships. This can also be described as the process of building socio-cognitive representations of oneself, others, and the relationships between them (see Gelbmann, 2001). We found that video-mediated formats created an artificial situation for the naturally occurring dynamic and interactive process. This was perceived as a disabling condition and provided uncertainty in relation to communicative conventions and behaviour (verbal and non-verbal) on researcher's and participant's sides, as the following quote indicates.

> "Yes, the situation, the interview now, feels quite artificial. We're all looking at the screen and I'm somehow missing something communicative and humanly, if you know what I mean? So that we can see each other properly and I also know how tall you are and so on." (Coastal protection, SI4)

The video-mediated formats lead to challenges for the flow of communication in the interview itself and the correct interpretation of the gathered data. In particular, the verbal components of communication depended in our respective settings on sound and video transmission quality. Distractions, such as poor audio quality or an occasional freezing of video, disrupted the communication flow. Interrupted conversations demanded a lot of concentration, attention, patience and communication management from the researcher and participants. It is noteworthy that some verbal elements differ from face-to-face interaction in the video-based communication formats, for example, the slow pace of conversation, turn taking and the resulting lower frequency of verbal interaction. Such aspects appear in the following quote and the main distinction is made between organic and non-organic communication where smoothness and the conversational flow are conceived important for natural interaction:

> "Well, we've been at each other's throats quite a bit, because the transmission didn't work out so well. That's annoying and I'm sure that everything could have been a bit smoother or we could have talked more fluently. It's also hard to have a conversation like that via the screen. It's not organic somehow." (Coastal protection, SI5)

To deal with these problems and to give the data gathered a more natural structure, it was useful to include adequate and creative ways that assist in generating data (e.g. Watson et al., 2021). Here, the 'visuality' and action-oriented digital whiteboards used in the social network analysis and focus groups proved to be helpful in providing structural and practical elements to support the flow and interaction of verbal communication. They were the door opener and boundary object for shared communication and collaboration. By executing the qualitative network analysis, the visualisation on the whiteboard enabled a structured dialogue and provided a common point of reference to get back into the conversation after disruptions or technical problems. As can be seen in the following quote, orientation appears to be the major issue here:

> "Yes, that's nice, (laughs) good. It's always good to have something like that visually in front of you, right? Then you have an orientation line, a path you can use to orient yourself at any time." (Water management, NW4)

In the focus groups conducted a different picture emerged. The condition that two researchers took part in the group discussions had the advantage of sharing the roles of editing and moderating while technical and other interruptions were rather rare. The participants perceived the discussion as fluid

and evaluated the input-discussion ratio as balanced and sufficiently diverse. The interaction between researchers and participants was dynamic and vivid and, therefore, could nearly be conceived as quite close to face-to-face interaction.

Regarding the non-verbal dimensions of communication, we found that video-mediated formats lead to a limited degree of cognitive awareness, synchronization and social adaptation. Some constitutive elements of non-verbal communication were not addressed, such as tactility, proximity, or sensory perception, while the artificial situation of the video-mediated formats affected for instance sense of posture, pathognomy, and gaze. In particular, technical aspects such as the camera setting were decisive and influenced by perspective, format, framing, or use of screens. The quality of the communication and the perception of information conveyed were determined by the visual orchestration in terms of self-presentation or the inclusion or exclusion of backgrounds (e.g. Held, 2019). This made the interpretation of body language and gestures almost impossible and impaired the possibility to read non-verbal cues as compared to face-to-face situations. Thus, the non-verbal relational aspects of communication were underrepresented. In the situation where interaction took place, the focus was only directed towards the digital picture and not on its physicality. One participant for example expressed this aspect and concluded that a lack of physicality leads to not being able to properly assess the counterpart:

> "I prefer face-to-face meetings. Then I know more precisely who I'm dealing with, and I can see what he or she is like. I think that's better than using the internet." (Fisheries, SI6)

There was an explicit need to articulate emotions to align real and virtual communication. Researcher and participant needed to be more expressive in terms of posture and pathognomy to overcome the technically set limitations of communication, determined by the personalities of the participants and individually felt comfort level. After one year of pandemic, researchers and participants began to accept video-mediated formats with the described limitations, as the following quote shows.

> "I only have such meetings. But it's okay, because otherwise we can't meet at all and here we see each other at least, see our facial expressions and gestures a little. Of course, it's a semi-artificial situation. But it's okay, there's no other way now and it has to go on somehow." (Coastal protection, SI7)

Developing Rapport in Video-Mediated Formats

Building rapport and strengthening mutual understanding, connectedness and trust between researcher and participants required careful and sensitive interaction. Creating a long-term relationship, topical co-ownership, learning and knowledge exchange as well as openness is already challenging in face-to-face meetings and becomes even more challenging in using video-mediated formats (Castleden et al., 2012; Sattler et al., 2022). Thus, building of rapport during the pandemic and with video mediated formats was hampered due to the generally emerging social distance and the inability to mutually share narratives, develop empathy and create trust. All constitutive elements of building rapport (coordination, attention and positivity) were less effective and discernible as compared to face-to-face formats and complemented by missing emplacement and non-verbal components of communication.

Key-aspects of building rapport can be described by 'the first impression' and, during the interaction, informal or meta-discursive elements. Informal talks before and after data gathering, adequate forms of welcome and farewell as well as coffee breaks, and spontaneous interactions are important success factors for building rapport (Ennis & Chen, 2012; Keegan, 2009; Pauleen & Yoong, 2001). Hence during the video-mediated formats, a small talk about recent weather events as a common denominator relating to the research topic in the participant's region served as introduction to the conversation, and, in some cases, as an icebreaker. Whereas bilateral interviews offered the opportunity to focus much more on the participants as compared to the focus groups, that provided more space for small talk while waiting for all participants to enter the online meeting room. Nevertheless, informal conversations which served to become more accustomed to each other and build trust could hardly be held. Ongoing conversations were abruptly interrupted (i.e. due to technical problems) and in many cases the person who executed the interview or focus group addressed primarily technical aspects (good quality audio and video broadcasting) and its structural aspects (the structure and purpose of the meeting) instead of creating a comfortable communicative atmosphere. The fact that video-mediated formats genuinely create artificial places based on social distance also had an impact on the time allocated, resulting in many cases in abrupt closures without a socially appropriate farewell. The feeling of a one-time event emerged and proved to inhabit long-term trust-building and social proximity. To overcome such hurdles, it seems a necessary step to develop social liability and commitment to ensure long-term participatory processes and, thus, to secure data quality (Denzin & Lincoln, 2011; Ennis & Chen, 2012; Jenner & Myers, 2019; Tremblay et al., 2021).

However, the commitment and liability of the participants was lower compared to face-to-face meetings, as evidenced by higher attrition rates and rescheduled meetings (see also Adams-Hutcheson & Longhurst, 2017; Deakin & Wakefield, 2014). Regarding the interviews, one in six participants did not show up in the digital conference room on time and in almost every focus group session there was at least one participant who did not attend, while other participants left the meeting early, sometimes without giving a reason. This lack of commitment was least expressed by the participants who did not turn up and apologized for not attending at short notice before or after the appointment. During the video-mediated

formats, the researchers in particular minimized social distance by interpersonally adjusting to the participant as good as possible and by emphasizing their responsiveness. The methods adapted using technical approaches such as whiteboards also enabled to develop the interest and curiosity in participants. Work on whiteboards or other collective devices was described as interesting, entertaining and felt as an intensification of the whole process. One participant even said "*It almost has an addictiveness to it.*" (Water Management, NW5)

Again, expressive gestures were applied to overcome the researcher's constrained stance toward the participants to increase the building of rapport. Thus, the constitutive elements – including their articulation – of shared encounters, positivity, enjoyment, closeness and engagement were increased which enabled the 'free flow' of interaction and thus information (see also Jorgenson, 1992). The personal positivity influenced a successful conversation in terms of increased empathy, friendliness and humour. This is outlined in the following Quote, in which a participant describes the positive effect of expressing emotions in the digital format for experiencing a pleasant and authentic interaction:

> "I didn't think it would work so well technically and between us, and I think it's nice that you laughed so often. It's important in this form of communication, because otherwise it quickly gets lost, I mean the commitment and interest that you don't really notice as you would in real life." (Fisheries, SI8)

To summarise, the application of video-mediated formats in qualitative social research is not a substitute for social interaction and data generation based on face-to-face interaction and investigations in the field. Video-mediated formats are sufficient for the verbal exchange of information and content but make it difficult to establish trustful relationships between researcher and participants. This holds the danger to execute research *about* participants and *not with* participants.

Conclusion

During the pandemic and beyond, the use of video-mediated formats became a necessary and sometimes inevitable alternative for face-to-face data acquisition. To make a practical virtue out of necessity, we took advantage of the situation and moved towards video-mediated formats. The application of such formats instigated a thought and reflection process which gave us the opportunity and reasons to rethink their impact on traditional qualitative methods and to explore new ways of conducting empirical social research.

One basic insight provided by our investigation consists in the fact that qualitative social research is more than purely collecting information from actors in the field. Data collection and generation are conceived as gathering data from contexts and interviewees who are often framed as knowledgeable actors providing what is commonly conceived as information. Our research has shown how a change in data collection and methods, caused by the COVID-19 pandemic, lead to developing a critical perspective on our own approaches. This led us reframe qualitative methods as striving to cooperatively unlock the participants' context, perspectives, and knowledge as well as attitudes, desires and emotions connected to a topic under investigation. The goal consists in disclosing different forms of knowledge and to scrutinize the positionality of how "researchers understand things […] [that] include [s] the relationship between the researcher (the person who wants to learn) and the people in the field (the people that know the insights of the fields)" (Ruppel, 2020, p. 2).

This is particularly applicable in our research context on climate adaptation in coastal regions, as adaptation to natural hazards has been practiced here for centuries. The contextualized knowledge of our participants is inseparably linked to the location where it was acquired and continuously utilized, thus it cannot be overlooked. Face-to-face formats are understood to still represent a good and applicable standard in empirical social science research as it comes closest to occurring social interaction.

The shift from face-to-face into video-mediated formats for executing qualitative social science research holds, as we have seen, important implications and consequences on the three constituting characteristics emplacement, communication and rapport. Interaction in qualitative methods builds on them and a change in context and medium, as shown by our research, has certain consequences in terms of data quality and – more importantly though – the conceptual perspective taken by the researcher towards the interviewees or groups he or she works with. This finding thus reveals that video-mediated formats hold the problem that their mediality contains the tendency to generate rather data about than together with participants.

The technologies used here appear to be content- and information-driven often bearing an impact on emplacement, communication and rapport. Such effects grant limitations for the social and relational dimensions of the situation while running into the danger of omitting the participant's lifeworld. Thus, video-mediated formats are feasible and sufficient for data collection and maintaining established contact, but, as we have shown, are inadequate for developing a trusting and comprehensive relationship between researcher and participant and a sense of community through emplacement and rapport. In contrast, face-to-face formats are located beyond pure retrieval and exchange of information bids, they require the cooperative exploring of issues under scrutiny ideally leading to the establishment of long-term and trustful interactions.

Furthermore, the distance generated in video-mediated formats leads to less openness, less liability, and less ownership on the side of the participants. Comparatively high attrition rates are common in video-mediated formats (Kite & Phongsavan, 2017; Tuttas, 2015) testifying low commitment due to missing rapport. This holds the danger of negative impacts on research as it can narrow the data material down to selected perspectives and perceptions.

On the positive side, we found that the quality of video-mediated formats in empirical social research can be improved by creative forms of collaboration, such as using video impulses or shared whiteboards that create a common digital place where all participants can home-in. The visuality proved to be helpful in structuring dialogue and thought processes, and motivated participants to collaborate. In addition, attitudes emphasized contributed to a successful conversation and helped to generate a pleasant atmosphere characterised by personal positivity, empathy, friendliness, and humour together with expressive non-verbal gestures. The quality and emotionality of video-mediated formats can therefore positively influence the connection between researcher and participants.

Regarding future pandemics or other restrictive contexts, we would state that digital modes of exchange require thorough preparation and reflection how interaction takes place. The findings in this paper precisely refer to three characteristics of interaction that should be considered because video-based formats primarily work on the content and information level. They could be adapted while creative methods can be used to leverage the potential beyond traditional or subject-specific methods.

All in all, video-mediated formats and digital spaces will not replace what is possible in emplaced face-to-face interaction and on-site qualitative social science research. Decisive aspects of video-mediated formats have to be considered and further investigated on a practical, methodological and conceptual level. Reshaping qualitative empirical research methods in times of physical distancing has opened new ways to reflect on the negative and positive consequences but it will hardly replace the data depth and richness and, in the end, the relevance of a face-to-face rationale for qualitative empirical research. Emplacement, communication and rapport, including all their implications for qualitative research as disclosed here, are foundational for qualitative research.

Their implications bear an impact among which the most important aspect consists in the fact that the researcher has to make sure – irrespective of the technology and methods used – that research is carried out together with participants, and not solely about participants.

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