Video Data Analysis as a Tool for Studying Escalation Processes: The Case of Police Use of Force

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Video Data Analysis as a Tool for Studying Escalation Processes: The Case of Police Use of Force

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Abstract: *»Video Data Analysis und die Erforschung von Eskalationsprozessen am Beispiel Polizeigewalt«.* This article explores the use of video data analysis to study escalation processes. Based on an in-depth study of officer-involved shootings in the United States, it first discusses the use of body-worn footage, CCTV camera, mobile phone, and dash cam footage for the analysis of escalation processes and the benefits of triangulating video data and document data for contextualizing situational analyses. The article then examines video data analysis as a fruitful tool to study police use of force and discusses two key aspects in such analyses: validity assessment and focus on specific analytic dimensions and lenses. Both aspects are illustrated by my study of officer use of force. Findings indicate that by triangulating various sources of ready-made videos available online with document data, the role of situational dynamics, as well as biases for officer use of force, can be studied systematically. Officer use of force is a striking and present example for how 21st century video data and video data analysis can allow novel insights into social phenomena. But such data and analysis also increasingly allow for examining other instances of escalation, as well as other types of extraordinary and everyday events.

Keywords: Video data analysis, policing, interactions, officer use of force, violence, body-worn cameras, CCTV, validity, methodology.

1. Introduction

On March 3, 1991, Rodney King was arrested and brutally beaten by a group of Los Angeles Police Department (LAPD) officers after a high-speed chase. A resident filmed the incident from his nearby balcony. As the recording was captured at night and with a Sony Video8 handy cam, the footage is shaky and dark. Still, officers' silhouettes were well visible in front of the cars' headlights, showing how King was punched and kicked more than 50 times. The filming resident decided to send the footage to a local news station that aired

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the horrid beating. The display of police brutality and racism went to shock viewers around the world.

Since the Rodney King video went global in 1991, technological innovations took massive leaps: The first commercial camera phone, a cordless phone that could capture images, was released in Japan in May 1999 (Meyers 2011). In 2003, more camera phones were sold worldwide than stand-alone digital cameras. And today, people use smartphones to document all types of events, from the mundane to the extraordinary – weddings and funerals, playing video games, or spending time with friends (Legewie and Nassauer 2018; Nassauer and Legewie 2022). Parallel to the dissemination of cameras in smartphones, we see an increase in closed-circuit television surveillance cameras (CCTV), body-worn cameras (BWC), drone cameras, and dashboard cameras. In addition, body-worn cameras are on the rise across many countries, especially the United States. For instance, the Los Angeles Police Department alone has recorded over 2.1 million hours of body-worn camera footage since 2014, with a current average of 14,000 recordings each day (Puente 2019). This technological and social development means that ordinary everyday interaction is constantly recorded. But due to the omnipresence of cameras, extraordinary events are also increasingly captured on camera (Nassauer and Legewie 2022).

When looking at officer use of force, we see this trend in many recent examples, but most prominently in the murder of George Floyd on May 25, 2020. When a teenager, who filmed the scene on her mobile phone, shared the footage on Facebook, it sparked a global wave of protests against racism, discrimination, and police brutality. Similar to the video recording of LAPD police officers beating Rodney King to the brink of death, her recording of the killing of George Floyd, and recordings by CCTV, other bystanders, and from the arresting officers' body-worn cameras provide a visceral experience of the realities of police brutality and the consequences of racism in today's world. The recordings helped trigger what is assumed to be the largest social movement in US history (Buchanan, Bui, and Patel 2020) and formed an important part of the trial against officer Chauvin, which took place in Spring 2021. But the videos also allow researchers to compile a detailed reconstruction of how the event unfolded to be able to understand its patterns and develop possible measures for prevention. The rapid increase in video capture around the globe means that researchers do not necessarily need to be at an event and record it to later analyze detailed interactional data on it – chances are other people are already recording the event.

How can social scientists use such videos to meaningfully analyze escalation processes and interpersonal physical violence? And how can scholars ensure that the resulting study generates valid results? In the first part of this article, I will discuss the concept of physical violence, summarize previous research on officer use of force, discuss novel types of data to study the

phenomenon, and introduce video data analysis (VDA; Nassauer and Legewie 2018, 2019, 2020, 2022). I will then discuss how VDA can be used to study officer use of force and will reflect on validity and analytic steps.

2. Escalation Processes and Video Data

2.1 The Study of Violence

Concepts should facilitate the analysis of a phenomenon as sensibly as possible, should be comprehensible, and should make theoretical and empirical sense (see also Nassauer 2022). It is hence crucial to transparently define what one's concept of violence entails. I define violence here as actions that physically injure or kill another person. Such physical interpersonal violence is one of many facets of violence (see Imbusch 2002 for an overview). Just as any social science concept, how to define violence depends on the research interest, and each facet of violence can allow for relevant and fruitful research. I focus on this facet of violence because empirical research shows that physical violence has a higher threshold than other actions that are sometimes labeled "violence," such as yelling. My interest is what leads people to take an action with such a high threshold, and why physical violence sometimes breaks out, but mostly does not.[1]

Responding to the debate around the definition of violence by Lindeman et al. (in this issue), I argue that if violence is not clearly defined in a focused way, it remains unclear whether researchers and studies refer to the same phenomenon when discussing "violence." Moreover, operationalizable concepts are important to move from philosophical debates to empirical studies of violence, which in turn can lead to theoretical advancements. The debate around how to define violence has occupied parts of the German social sciences for decades (see, among many others, Lindemann et al. in this issue, as well as Kron and Verneuer 2020; Bonacker 2002; Hitzler 1999). Often this discussion yields rather obvious results: If my concept definition and thereby the outcome I am interested in differs from another study, my results will differ as well. For instance, if my interest is to understand how the media define violence a posteriori (see Lindemann et al. this issue), my outcome and findings will be very different than when I study physical violence between people. This is true and obvious, as these are two different facets of violence and two different outcomes. Both may be equally interesting, but they will inevitably entail very different causes and theoretical approaches. In my view, a more fruitful avenue is to acknowledge the multifaceted nature of

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[1] Thus, contrary to the claim by Lindemann et al. (in this issue), I am taking an actor's perspective: How and why do people act violently?

violence, define clearly what facet is the focus in a given research, and engage with the relevant literature of that focus area to then systematically study this facet of violence empirically. In time, this strategy will yield more comprehensive knowledge on violence than engaging in endless debates on what the true way to define violence may be.[2]

2.2   Officer Use of Force

In this study, I am interested in a specific type of physical violence: officer use of force against people of color. I study this type of violence in one of its most drastic forms: lethal officer-involved shootings. Not only does officer use of force against people of color concern fundamental societal issues such as race, violence, and policing, it is also considered one of the most divisive issues of the 21st century (Fryer 2018). Studies repeatedly find racial bias in officer decision-making. Relying on quantitative analysis and computer simulations of lethal use of force by US officers, scholars find officers are more likely to mistakenly shoot a black suspect than a white suspect (e.g., Plant and Peruche 2005; Ross 2015). While African-American citizens represent only 12.3 percent of the US population, they represent about one-third of those shot (Strother, Menifield, and Shin 2018). Black men between 15 and 39 years old are between 9 and 16 times more likely than other residents to be killed by police (Correll et al. 2007; Khazan 2018). Additionally, not only do officers shoot armed black citizens more quickly and more frequently than armed whites, they also decide more quickly against shooting the suspect if the person is white (Correll et al. 2007; Mekawi and Bresin 2015; but see Worrall et al. 2018). Officer use of force is thus not only a topic of great social relevance and public interest, but it also concerns more fundamental sociological questions about state power, policing, racism, and violence.

Further, two sociological puzzles emerge from previous studies on the phenomenon: While studies show biases impact policing (e.g., Eberhardt et al. 2004; Goff 2016), officer use of force is an outlier in officer-citizen behavior. So why are biases activated in this specific interaction that ends in force, but

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[2]   Further, contrary to the claim of Lindemann et al. 2022 (in this issue), using a specific definition of violence does not entail a moral judgment. If a study identifies situational patterns that lead to physical violence, these patterns can be used to prevent or provoke violence. But since research on protests shows neither police and protesters, nor journalists and bystanders like being physically assaulted at protests and therefore protesters may even stay away when expecting physical violence (e.g., Simpson, Willer, and Feinberg 2018), researchers studying crowd violence often make suggestions for how to prevent physical violence from breaking out. Since people of color not wanting to lose their lives in police stops has, among many other forms of discrimination, led to one of the largest social movements in history (Buchanan, Bui, and Patel 2020), findings on officer use of force are often used to develop measures to prevent officer-involved shootings. The fact that studying physical violence can often yield meaningful practical implications that can benefit society does not make the concept of violence morally charged (compare Lindemann et al., in this issue).

not most other interactions the officer has with the group the officer may be biased against? We lack an in-depth understanding of whether and, if so, how biases actually play out in encounters. Other scholars claim this finding can be explained by motivations, biases, and other context factors not being vital to the outbreak of violence. Instead, they claim that what is vital are situational dynamics (e.g., Collins 2008, 2009; Klusemann 2012). But if situational factors are key to officer use of force, why do we find a clear overrepresentation of victims of color?

To date, most studies on officer use of force rely on analyzing document data on encounters, such as police accounts, reports and logs, or interviews with officers (Nix et al. 2017; Sherman 1980). Yet, research has shown that people who used violence tend to justify their behavior and may therefore not accurately represent what happened (e.g., Heitmeyer and Soeffner 2004). Further, studies show that even if respondents have high incentives to accurately represent an encounter, their memory is usually distorted and they will not be able to remember situational details correctly (Bernard et al. 1984; Vrij, Hope, and Fisher 2014). For instance, in the officer-involved shooting of Michael Brown, an investigation into 500 pages of eyewitness accounts showed that half of the eyewitnesses remember crucial situational details completely different: Among other details, eyewitnesses were almost split on whether Brown was running away from the officer when being shot or not (Santhanam, Dennis, and Daub 2014).

Other scholars have studied police biases in laboratory experiments (Correll et al. 2007; Eberhardt et al. 2004). Experiments allow clean experimental designs, but they do not capture situational dynamics in a setting they normally occur in. This raises questions of ecological validity, i.e., whether findings actually apply outside the specific context the study was conducted in (Baumeister, Vohs, and Funder 2007; Harrigan 2008). Moreover, the highly controlled environment may preclude observing certain dynamics that occur when people interact "in the wild."

In short, we lack information on how real-life officer-citizen encounters unfold to determine the role biases and situational dynamics (interaction, interpretation, and emotion) play for officer use of force. To date, the encounters themselves remain a black box whose inner workings are barely understood.

2.3   Ready-Made Video Data

Today, video data can provide novel insights and have a number of unique affordances to study how real-life situational dynamics unfold. First, they comprise direct and detailed observations of driving dynamics at the micro-level during real-life social processes and events. This means embellishments and distortions are avoided – if data show natural behavior and allow for optimal capture (see below). Further, they are easy to re-watch and share with

colleagues and readers. This allows checking for inter-coder reliability of codes and improving the reliability of a study. Further, as long as ethical aspects are considered (see below), being able to share the raw data in research articles, allows reviewers and readers to trace the analysis, which favors transparency and open science (Nassauer and Legewie 2022).

In this article, I will focus on the use of ready-made video data as an especially promising recent field to study escalation processes and officer use of force. Ready-made videos are videos that have *not* been collected for research purposes, and are repurposed for social research (Nassauer and Legewie 2022). This includes people's footage from smartphones, digital and drone cameras, CCTV, and body-worn camera recordings, and recreational or professional livestream footage. For instance, in the George Floyd murder, available data is ready-made, as it includes recordings by bystanders, CCTV cameras, and BWC cameras. These were not recorded for research. Yet, they allow researchers to get information on a variety of real-life social processes they did not have detailed – or even any – insights into before.

Characteristic of this type of data is that it is often abundant and relatively easy to access. There are staggering amounts of videos freely accessible online, while CCTV and BWC footage can also be accessed from institutions such as municipalities, law enforcement agencies, and public transit providers. Such ready-made data can then be used for VDA to study the unfolding of all types of social processes (see Anisin and Ayan Musil 2021; Friis et al. 2020; Hoeben et al. 2021; Philpot and Levine 2021; Stickle et al. 2020).

However, ready-made videos also have a draw-back in common. Because they were not made purposely by a researcher, they may well be lacking in some way, for instance in not showing the entire event or situation a researcher is interested in, or using a camera angle that does not allow seeing all relevant people or interactions. These implications may impact validity (whether data allows to study what the researcher intends to study) and should be considered when relying on ready-made data for analysis. Aspects of validity in studying officer use of force with ready-made data are discussed in detail below.

2.4   Video Data Analysis

Video data analysis (VDA; Nassauer and Legewie 2018, 2019, 2022) is an analytic framework for studying situational dynamics caught, for example, on mobile phones, drones, body cameras, and CCTV (i.e., "ready-made" video data), or self-recorded videos (what can be called "custom-made" video data; Nassauer and Legewie 2022). Employing VDA means analyzing what the visual captures about real-life social processes, social events, and social life. VDA aims at meticulous reconstructions of interactional dynamics, while affording great importance to complementary document data, especially for

assessing potential context factors to social situations. Generally, the analytic strategy entails reconstructing the situational sequence in detail, including the context in which it arose, before analyzing if a situation shows intrinsic dynamics that contribute to the occurrence of an outcome or its absence.

Video-based research in sociology, historically, has relied mostly on custom-made video data (see among many others Knoblauch, Tuma, and Schnettler 2014; Pauwels and Mannay 2020; Reichertz and Englert 2011; Tuma, Schnettler, and Knoblauch 2013). But the past decade has seen an increase in ready-made video-based research. Recent studies use such data for the analysis of crime, such as robberies (Lindegaard, Bernasco, and Jacques 2015; Mosselman, Weenink, and Lindegaard 2018; Nassauer 2018), ticket-fining events (Friis et al. 2020), or unattended package theft (Stickle et al. 2020). Other scholars use ready-made video data to study physical violence, such as violent and near-violent situations (Collins 2008), massacres (Klusemann 2009), or street fights (Levine, Taylor, and Best 2011; Philpot et al. 2019). Analyzing crowd behavior, scholars have used VDA to study escalation processes in larger groups (Bramsen 2018; Nassauer 2019), and in law studies, scholars have used video data to, among other things, better understand successful interrogation techniques (Alison et al. 2013). The relevance of situational dynamics in real-life interaction is also highlighted in organizational (LeBaron et al. 2018) and medical care research (Asan and Montague 2014; Lingard et al. 2004), as well as learning sciences, education, and developmental psychology research (Alibali and Nathan 2007; Derry et al. 2010; Elsner and Wertz 2019; Golann, Mirakhur, and Espenshade 2019; Kanngiesser 2019). And yet another field that has been strongly impacted by the availability of ready-made data is research on policing (McCluskey et al. 2019; Sytsma, Chillar, and Piza 2021): Videos can capture how real-life police-citizen encounters unfold and thereby contribute to our understanding of policework as part of social order, the state monopoly of force, procedural justice, and police use of force. For instance, Sytsma and colleagues (2021) use a systematic social observation VDA to study police body-worn camera footage and identify force escalation scripts and ways for de-escalation in officer-civilian encounters.

Thus, contrary to the assumption of Lindemann et al. (in this issue), video data analysis as a methodological framework is not based on violence research, but was developed based on recent research across the social sciences that uses 21st century video data to study the situational unfolding of social phenomena (Nassauer and Legewie 2022; Legewie and Nassauer 2018). VDA is hence a multidisciplinary methodological framework (for a detailed discussion, see Nassauer and Legewie 2022). Just as other frameworks, such as grounded theory or regression analysis, VDA can be applied to any field and

concept definition. It is ideally suited if the researcher is interested in situational driving dynamics of social processes and events.[3]

In the following, I will discuss the use of VDA with a focus on three crucial aspects: Validity, analytic dimensions and lenses, and ethical concerns. I will illustrate each point based on the analysis of officer use of force.

3.   Validity in Video Data Analysis of Officer Use of Force

When using VDA to study escalation processes, researchers must ensure data validity regarding three criteria (Nassauer and Legewie 2019). First, researchers should strive for optimal capture of an event of interest so no essential details potentially determining the outcome are missing. Second, researchers must assess whether videos show natural behavior. Third, researchers should prefer neutral or balanced sources, meaning sources that do not have a stake in the representation of events. Triangulation of sources and data types can be especially useful to confirm or disconfirm what happened (Nassauer and Legewie 2022; Legewie and Nassauer 2018).

How can these criteria be applied to study escalation processes between individuals? In my study of officer involved shootings, I was interested in the interactions between officers and civilians, as well as officers' interpretations and expressions of biases before or during the encounter. To ensure optimal capture, I therefore needed to select cases in which it was possible to trace the officers' and victim's actions from the beginning of their encounter until force is used – or in comparative cases until the interaction ends with one or all interacting parties leaving the scene. To identify cases that may offer optimal capture, I compiled a list of 21 prominent and thus well-documented officer-involved shootings of black residents in the United States compiled by the *New York Times* and *ABC News* (AFP / Reuters 2015; Lee and Park 2017). In total, 3 of these 21 cases meet the criterion of optimal capture (meaning I could seamlessly reconstruct the entire encounter) and were therefore selected. I compare these three cases to a shooting of a white resident that also meets the optimal capture criterion as well as to a negative case that did not end in a shooting.

I then analyzed all video and document data available on each event, stopping data collection when saturation (Strauss and Corbin 1998) is met (on average, 5 videos and 20 documents per case). Videos were captured by police body cameras, police dash cams, CCTV, and mobile phones. Figure 1 illustrates the scene and camera angles for one of the analyzed cases. Here, the scene is captured by four BWCs, two dash cameras and one bystander mobile

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[3]   For questions around how people define violence, other analytic approaches may be more useful.

phone, each providing a unique camera angle to visually cover the scene. Having multiple camera angles allows for observing the same scene from multiple perspectives.

This triangulation of videos captures the entire interaction, from when the officers and resident start interacting until the use of force (or, in the cases without a shooting, until the police-resident interaction stopped). This is especially relevant since officer body-worn cameras often exclusively focus on the civilian's behavior and do not capture other officers' actions, which may significantly impact the interaction dynamic. For instance, in the case example in Figure 1, only one officer's BWC angle showed the position the civilian was in when tasered and a different officer's BWC captured that one of his colleagues punched the civilian in the leg. Given how fast and dynamic most of these instances are, it is unlikely that a participant observer would have caught these details, visible only from very particular angles in the melee. Especially if BWCs are used as a main data source, which often only have a limited perspective, a rule of thumb should be the more camera angles, the better for obtaining optimal capture. If a mobile bystander records with a mobile phone camera, and especially if well-positioned dash cameras or CCTV cameras capture the event, one camera alone may be able to record the event in a way that allows for optimal capture.

Figure 1 Case Scene and Camera Angles
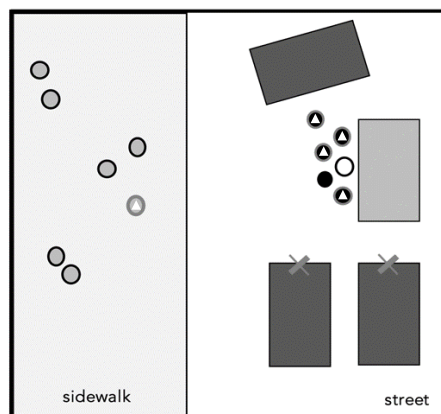
Note: Dots represent people: Black dots represent officers, the white dot represents the civilian, and light grey dots represent bystanders. Squares represent cars: Dark grey squares are police cars, the lighter grey square is the civilian's car. The crosses and white triangles denote cameras: the white triangles are four officers whose BWC's were analyzed and a bystander who filmed with their[4] mobile phone. The crosses mark the two dashboard cameras.

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[4] I use the gender-neutral pronouns "they/them" throughout the text to refer to female, male, and non-binary people.

To ensure optimal capture, I also needed sufficient document data (police reports, court documents, and media reports as well as media and police interviews with the officer and/or bystanders, etc.) to trace what happened prior to the encounter, including how police were called, what information they had upon arrival, what the victim did prior to the police stop, how friends and relatives describe the victim, and officers' disciplinary records. This information was relevant for my research question since I was interested if and how biases impact such encounters. However, if VDA studies are merely interested in whether a gun was drawn prior to officer use of force or if the resident tried to flee, document data may be less important and (triangulated) video data may hold all information necessary to answer such a question.

For each of the police-citizen interactions I analyzed, data were puzzled together to reconstruct the entire interaction sequence. Figure 2 illustrates this for the just discussed case (in Figure 1) where four BWC perspectives exist (sources A-D), two dash cam perspectives (sources E, F) and one mobile phone recording (source G). It shows one of the officers (source D) and the bystander (source F) arrived on the scene after the interaction began and one officer left the scene earlier (source C). In addition, I employ document data (sources i-viii) to study the role of background factors, including racial biases, leading to the police-civilian encounter or shaping it while it was underway. I constructed such second-by-second timelines of each event. Such case analyses can then be used for in-depth studies of single cases, for cross-case comparison examining patterns across officer use of force, or for quantitative analyses (Nassauer and Legewie 2020, 2022).

Figure 2 Reconstructing Officer-Civilian Encounters
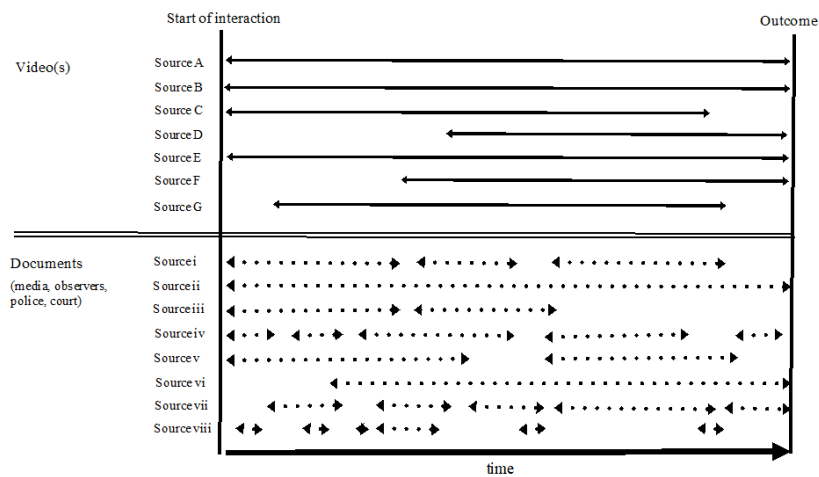
A second key criteria to validity in VDA is natural behavior (Legewie and Nassauer 2018). Natural behavior means people react the same way they normally would in the situation and do not show reactivity to the camera. An analysis of real-life social processes and events would be distorted if people reacted to the presence of the camera and changed their behavior. Reactivity can be ruled out if people did not notice they were being filmed (as often the case for CCTV footage), if the camera was a natural part of the interaction (e.g., news team cameras at protests, or BWC cameras in most US police operations), and if the interaction is too important for people to adapt their actions to being filmed (often the case in violent and extraordinary situations). Reactivity to police BWC in the US is thus unlikely, but to ensure natural behavior I checked if people reacted to the cameras or if officers turned them off or turned away. This was not the case in any of the analyzed encounters.

Third, to ensure validity a last key aspect is that sources are neutral, meaning they are not biased. This aspect is important in all VDA studies (Legewie and Nassauer 2018), but even more so in officer use of force instances: Police may want to justify behavior for legal reasons and when deadly force is used and victims are deceased, police quickly become a key source of information for media reporting, which can taint media reports of what happened. To balance and compare accounts, it is therefore vital to actively seek descriptions from the victims' relatives and friends, as well as other witnesses – a technique I employed across all cases.

4. Analytic Steps to Study Escalation Processes

4.1 Analytic Dimensions in Studying Officer Use of Force

Video data of social events usually contain complex, multimodal information (Derry et al. 2010, 6; Norris 2004, 12), making their analysis extremely time-consuming. It can therefore be useful to focus the analysis on specific elements visible in a video. Nassauer and Legewie (2022; Legewie and Nassauer 2018) suggest the same video can be analyzed in many different ways, focusing on facets from the three analytical dimensions: (a) face and body, (b) interactions, and (c) context. Facial expressions and body postures are any nonverbal information that a person's face and body convey. Interactions refer to anything people do or say that is geared toward or affects their environment or people within and may include their interpretations of the situation. Context means information on the physical and social setting of a situation. Physical context includes the layout and organization of space (e.g., closed, open, obstacles) and physical conditions (e.g., temperature, lightning). The social context concerns characteristics of actors (e.g., intoxication), composition of actors (e.g., age, attire), and prior social relations between actors

(e.g., whether they are friends or strangers). These dimensions can be used to look at specific aspects of a situation in a granular way, or they can be used in context and connection, to analyze situational dynamics, such as sequences or rhythms, and how people make sense of situations (see below).

Studying officer use of force, it can quickly be overwhelming to focus on everything people do in each second, as well as their body postures, facial expressions, and speech. This difficulty is multiplied if up to seven different camera angles exist that need to be coded. One option to make the analysis more manageable is to focus on pre-defined aspects in the data based on prior research in the field. For instance, studying officer use of force, a researcher could only code if the resident showed any threatening actions, such as drawing a gun, which research assumes to be a key factor for use of force. If the analysis is more inductive and exploratory, one can code (almost) everything that happens but focus on a smaller number of cases. Another option is to openly code the first few cases to then conceptualize aspects of relevant dimensions and only focus on these in the analyses of subsequent cases (this can even be done by translating codes for computational analyses, see Nassauer and Legewie 2020, 2022).

In my study of officer use of force, I focused on an in-depth analysis of five cases and on interactions by the resident and all officers at the scene, as well as physical and social context. I did not code bystander behavior since it was not relevant for my research question. Examining interactions, I coded actors solo behavior (actions which do not involve others directly), actors physically engaging others (e.g., by touching, hitting, or otherwise directly engaging people or objects physically), proxemics (meaning movement and positioning of people and objects in space), verbal communication (meaning content, intonation, and tone of voice), and interpretations and meaning-making (meaning expressed interpretations of the situation, person's roles, or actions, which often requires additional, non-video data). These were relevant for my research question since I was interested in how officers and residents interact and if and how this interaction was shaped by potential biases. Regarding physical and social context, I examined the layout of the physical space (see also Figure 1), which information officers had prior to arriving at the scene, and what they communicated to others prior to engaging with the resident. Body posture and speed of movements (relaxed, hectic) were analyzed, but detailed information on facial expressions or gaze was usually not available and was not a focus of my study. All videos and document data were coded with atlas.ti. The focus on specific analytic dimensions structured my analysis around my research question. After studying these analytic dimensions, I applied several analytic lenses to identify patterns in the data.

4.2   Analytic Lenses in Studying Officer Use of Force

To move from labeling the data to identifying and interpreting patterns or driving dynamics, Nassauer and Legewie (2022) suggest several analytic lenses: counts and quantifications, timing and sequence, rhythm and turn-taking, actors, networks and relations, and spacing. These lenses can help during analysis, regardless of whether the aim is for a description of patterns at the micro-level or whether the aim is to study causal links within situations or events. The six lenses all build on the coding of the data, and they are all interconnected. For instance, a researcher can produce counts and quantifications based on video data that help study social relations and networks. In other words, the six lenses should not be understood as discrete analytic steps or mutually exclusive ways to analyze video data. Rather, they are a non-exhaustive toolbox from which researchers can pick any combination of tools that work well for what they try to accomplish in their VDA.

These analytic lenses can be used to study one case in great detail, and for instance look for patterns in this case, or for smoking-gun observations, occurrences that are linked by a clear dynamic or mechanism. They can also be used to compare cases to potentially identify any common patterns or vital processes in space, relation, rhythm, or whatever the focus of the VDA study, and the outcome of interest. Further, these analytic lenses can constitute the outcome of interest. These lenses offer several ways to draw conclusions and which lenses to use is usually very specific to the project, its central interest, and used theories.

In my analysis of officer use of force, I first analyzed actors individually, coding everything an actor did in the video. I then separated actions that were directed at others (e.g., approaching someone) and solo actions (e.g., pulling up one's pants). In a next step, I examined how actors moved in space: How much space actors had at their disposal and how spatial constraints or objects impacted interactions. In a further analysis round, I studied counts and quantifications. For instance, how many officers were on the scene before shots were fired, how many minutes went by before shots were fired, how often was the resident told something (e.g., to put their hands up) before shots were fired? Lastly, I studied actors in relation to each other and their timing: How did the actions by the resident shape the reactions by the officer and vice versa? How did both seem to make sense of the situation and interpret the other person's actions, indicated in their speech, actions, and body postures?

Having studied the cases through these analytic lenses, I then compared the five cases to each other. This comparison showed patterns that differed strongly in the cases with civilians who are white versus Black, Indigenous, (and) People of Color (BIPOC). They differed for instance in the timing of events, as most BIPOC civilians were shot within less than a minute, while police interactions with the white civilians lasted four and eleven minutes.

They also differed in how officers interpreted the actions of BIPOC residents and respondent in terms of body posture, as BIPOC residents are seen as more threatening across cases, although in contrast to the white residents they did not resist arrest. But cases also showed similarities in the use of space and officer positioning when they shot citizens: all residents (white and BIPOC) were shot when not face-to-face with officers (see Nassauer 2020).

What do such data, analytic dimensions, and analytic lenses help us uncover? In my study of officer use of force, I identified distinct patterns to force and specified the role of biases versus situational dynamics in leading to force. My study (for details, see Nassauer 2020) suggests that in the shootings of BIPOC residents, race functions as a common master status determining characteristic: the resident is primarily perceived through race when approached, while other information on their person is dropped. In contrast, the white resident's race is not mentioned or discussed. Findings suggest that the person of color is then repeatedly perceived through the concept of the "iconic ghetto" (Anderson 2012, 2015): as an armed and dangerous black man who is a threat not just to the officers' life, but also to those around him. This perception prevails although none of the BIPOC residents resisted and is visible in officers body postures, in their verbal expressions during the interaction and in their later interviews. My case comparisons also shows that officers only filter information relevant to the already existing frame of "a threatening black man" and overinterpret new information according to it: In this frame, innocuous behavior by BIPOC residents is interpreted as even more threatening and officers become even more tense. Even when evidence is presented that speaks against this interpretational frame (e.g., the resident is accompanied by his girlfriend and daughter), the officer does not perceive a schemata failure, but doubles down on the existing schemata (e.g., assuming the child may be in danger, for details see Nassauer 2020). In line with the micro-sociology of violent confrontation (Collins 2008), the case comparison shows fear is thus a much more prevalent emotion before violence than anger. This fear of the "black man," and subsequent interactions with him, are shaped by symbolic racism. I argue that symbolic racism thereby works as a historically built, deeply socially rooted, culturally available schema that is activated and kept in interpretation frames during the interaction. Although my comparison showed none of the BIPOC residents resisted, all were perceived as highly threatening. Officers ducked behind cars, yelled, their shoulders tense, hands on their firearms, or verbally expressed their fear that the resident may attack them. In contrast, in the comparative case of a resident who is not shot, this resident, a white woman, vehemently resists arrest and physically fights officers but never seems to be perceived as threatening. Rather officers seem to see her as a nuisance: They calmly talk to her, often in an exhausted or annoyed tone, and even laugh at her at some point during the interaction.

Next to these stark discrepancies in interactions, interpretations and emotions, my findings identified a further pattern: All victims (white and BIPOC) were shot when they were not face-to-face with officers. If the resident was face-to-face with the officer, officers did not fire – even in instances where officers would have had ample reason to assume the resident would draw a gun. Prior research (Collins 2008; Nassauer 2016) suggests not being face-to-face with the victim decreases human intersubjectivity and thereby lowers the inhibition towards violence.

In line with previous research on escalation processes (Bowman et al. 2015; Collins 2008; Klusemann 2009), my empirical analysis suggests a solution to the above-discussed puzzle that BIPOC residents are disproportionately affected by officer use of force (suggesting biases are key), but officers do not shoot in most situations and only after particular situational dynamics (suggesting the situation is key). Employing VDA, my findings suggest both approaches can be integrated into one explanatory framework. In this framework, racialized stereotypes create risk factors for officer-involved shootings of people of color by increasing officers' fears and threat perceptions of a racialized other. These risk factors increase the likelihood of officer use of force, which can explain higher numbers of BIPOC victims. Yet, situational dynamics lead to shootings across varying motivations, personal predispositions, and context factors, including racial bias by officers. When the face, as a window to the other persons intersubjectivity, is not visible, it allows officers to overcome confrontational tension and fear (Collins 2008). This can explain the empirical pattern that even biased officers do not shoot in most situations (for details on causal links, see Nassauer 2022).

As the study illustrates, VDA of escalation processes can integrate research on situational dynamics, cultural sociology, and research on racialized biases and policing: Using 21st century video and applying VDA enables us to specify if and how biases matter. Findings suggest biases, as other context factors, matter if they influence the actor's interpretation of the situation (Blumer 1986; Goffman 2005; Nassauer 2019). They can work as frame filters for actors to interpret an interaction (DiMaggio 1997). They are thus risk factors to violence, which can increase the likelihood that a specific situational process will occur. However, situational dynamics are key for violence to break out. The same officers did not fatally shoot other residents of color they interacted with prior to the analyzed shooting. They shot in a very specific moment after specific interaction patterns occurred. Findings thereby specify context factors as risk factors and situational dynamics as driving factors to violence through an elaborated symbolic interactionism (for details, see Nassauer 2022). Today, using video data allows us to analyze these patterns and compare them across cases and different instances of violence as well as other social phenomena.

5.   Conclusion

The article discussed the use of ready-made video footage and video data analysis as a tool for studying escalation processes in the social sciences. It introduced novel types of video data and VDA as an approach to study officer involved shootings and reflected on methodological aspects in using different types of ready-made videos together with document data obtained online, to examine officer use of force. Findings from the discussed study highlight how biases and situational dynamics work together in leading to officer use of force. The study identified biases as risk factors to escalation, and situational dynamics as vital to the use of force. These two approaches are often seen as contradictory – one suggesting context is key, the other suggesting situations are key (for a discussion, see also Braun 2020; Hoebel and Knöbl 2019; Koepp and Schattka 2020; Kron and Verneuer 2020). Employing ready-made or custom-made data and VDA, the study suggests an elaborated symbolic interactionism can integrate both context and situation theoretically and can contribute to solving the existing micro-macro dichotomy by specifying their causal relationships to violence (for details, see Nassauer 2022).

The next few years will see a further sharp increase in ready-made video data. As we increasingly capture all types of social events, we also see a steady increase in footage capturing escalation processes. Every minute of our lives, video data is essentially crowd-sourced for researchers (Nassauer and Legewie 2022). While we need to consider ethical aspects (for an overview, see Unger, Narimani, and M'Bayo 2014; for VDA-specific discussion of ethics, see Legewie and Nassauer 2020; Nassauer and Legewie 2018, 2022), these videos provide unique opportunities to better understand how various types of real-life social events and processes unfold and how they are shaped by context factors (e.g., actors' prior motivations, grievances, or social status), versus situational dynamics (e.g., situational interaction, interpretation, and emotion). These amounts of video data are quickly turning into big data, resulting in challenges for data management and analysis. Yet, recent years have shown that computer vision developments can keep up the pace to allow us to automate some of the processes in VDA and to, for instance, help researchers identify relevant data or relevant timeframes in the data (Goldstein et al. unpublished manuscript; Nassauer and Legewie 2020). Officer use of force is a striking and present example for how 21st century video data and video data analysis can allow novel insights into social phenomena. But ready-made data and VDA are also increasingly used across research fields and disciplines to examine a variety of instances of escalation as well as other types of extraordinary and everyday social events.

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Historical Social Research

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All articles published in HSR Special Issue 47 (2022) 1:

Visibilities of Violence: Microscopic Studies of Violent Events and Beyond

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III. Challenging Research: Methodological, Theoretical and Ethical Problems of Analyzing Violence

Thomas Alkemeyer
   The Embodied Subjectivities of Videography.
   doi: 10.12759/hsr.47.2022.11

Gesa Lindemann, Jonas Barth & Johanna Fröhlich
   The Methodological Relevance of a Theory-of-Society Perspective for the Empirical Analysis of Violence.
   doi: 10.12759/hsr.47.2022.12

César Antonio Cisneros Puebla
   Microsociology of Killing in Mexican Video Executions.
   doi: 10.12759/hsr.47.2022.13