

ARTICLES

“Free Text Is Essentially the Enemy of What We’re Trying to Achieve”: The Framing of a National Vision for Delivering Digital Police Contact

Helen Wells, Will Andrews, Estelle Clayton, Ben Bradford, Elizabeth V. Aston & Megan O’Neill*

Abstract

Police organizations in England and Wales, as in many other contexts, are increasingly shifting crime reporting and other public-facing contact online. In this article, we explore the beliefs, motivations and objectives of those tasked with “delivering” the “vision” of digital police contact at the strategic national level. We use Goffman’s concept of frames – the set of expectations an actor brings to a situation or process – to understand how participants enacted this “channel shift” (Wells et al), the ends they were seeking to meet and how different interests came to be designed-in to the contact architecture. We suggest that the primary frame centred around notions of efficiency and demand management. Running alongside this is a secondary frame of customer service, where it is assumed that the public also wish for the efficient delivery of this technologically mediated service. This, we suggest, is likely to be only a partial reflection of what people want when contacting police; but the framing of “contact” as a separate deliverable by those delivering this agenda serves to occlude or evade this point. Technology, we argue, imprints itself on the context by appearing to offer a convenient solution to problems of public wants and police needs.

Keywords: police digital reporting, technological mediation, contact frames, procedural justice, Single Online Home.

* Helen Wells, School of Social, Political and Global Studies, Keele University, h.m.wells@keele.ac.uk <https://orcid.org/0000-0003-1149-4539>. Will Andrews, School of Social, Political and Global Studies, Keele University, UK, <https://orcid.org/0000-0003-4102-8061>. Estelle Clayton, School of Applied Sciences, Edinburgh Napier University, UK <https://orcid.org/0000-0001-7653-5878>. Ben Bradford, Department of Security and Crime Science, University College London, UK, <https://orcid.org/0000-0001-5480-5638>. Elizabeth V. Aston, School of Applied Sciences, Edinburgh Napier University, UK, <https://orcid.org/0000-0002-9960-6509>. Megan O’Neill, School of Social Sciences, University of Dundee, UK, <https://orcid.org/0000-0002-2204-0260>.

1 Introduction

When the public make contact with the police to report an incident, that encounter is increasingly likely to include some form of technological mediation, whether through online reporting systems, such as the Single Online Home (SOH) (a centrally designed “shop front” intended to give UK policing a consistent online brand), Live Chat (either with a human or “chat bot”), Digital 101 (an online non-emergency reporting mechanism), or online reporting via social media. Each of these developments offers an alternative to traditional phone contact using the established emergency (999) or non-emergency (101) numbers. The drive for enhanced technological provision in police services reflects both societal shifts towards increasingly technologically enabled public services, which in the UK include *NHS inform*, or the *Government Gateway*, and a policing context that is under pressure to operate more efficiently. The term “channel shift” (Wells et al., 2023) succinctly captures the police agenda to divert public contact to online and technologically mediated modes of interaction.

In this article, we focus on the development of one of these new technologies in policing: specifically, those that are transforming how the public report incidents to the police in England and Wales and, in particular, on the public’s reporting of incidents online via police force websites. With the majority of forces in England and Wales currently utilizing the SOH, and strategic expectations to fully “onboard” all 43 (HMICFRS, 2020), the digital architecture for public contact is increasingly concentrated on SOH. It therefore forms the main focus of this article. At a national level, these initiatives appear to have been driven by assumptions within the NPCC (National Police Chiefs’ Council) that

[p]ublic expectations of how they interact with policing are changing. The public now expect us to have a significant online presence, with a similar level of functionality and ease of use to other services they access on a daily basis. (NPCC, n.d.)

However, there has been limited research into the (assumed) public expectations of technology, *in relation to policing specifically*, which are driving this transformation.

When people report crime to or otherwise contact the police, they seem likely to have two distinct but related sets of concerns. Firstly, they may have broadly instrumental expectations about the ability of police to solve crimes, apprehend offenders, return stolen property, restore order or, at the very least, provide a competent investigation or intervention. Secondly, they may have broadly relational expectations that the police, as representatives of the state and society, will recognize the wrong they have suffered, assert or enact justice, seek to restore collective norms and/or treat them in ways that indicate inclusion in, not exclusion from, these social categories. Recognition of this second set of expectations underpins procedural justice theory, which most UK police organizations now recognize as central to their relationship with the public and, in particular, to public trust and their legitimacy to those they police (Bottoms & Tankebe, 2012; College of Policing, 2021; Tyler, 2003).

Helen Wells, Will Andrews, Estelle Clayton, Ben Bradford, Elizabeth V. Aston & Megan O'Neill

With this in mind, we explore the thinking and research behind the programme of work driving the national implementation of the SOH in England and Wales. We ground our work within the concept of “frames”, progressing from Goffman’s (1974) text “Frame Analysis”, via Tracy’s (1997) theoretical account of the “collision” of different “frames” that the police and public bring to encounters with one another, to Lum et al.’s (2016) description of police-specific technological and organizational frames. We propose that technology imposes itself (in our context) in an even more significant way than that proposed by Lum, as it comes to define “efficiency” and serves to compartmentalize one particular aspect of the broader policing experience – the contact encounter.

In the sections that follow, we will first examine how technology is often presented as the answer to issues of effectiveness, efficiency and cost-saving in policing. We will then move to a review of literature on the use of “frames” in police research as well as a consideration of the expectations that citizens place on encounters with the police. Following this, we will describe our methodology for data collection, before we present and discuss our findings. We conclude with some possible implications of our findings for police and public encounters and relationships. As we will show, the current drive towards technologically mediated contact motivates and involves a tendency to see the contact itself as an outcome, without regard to the policing intervention itself.

2 Technology in Policing

Technological developments in policing are of course not new. The introduction of patrol cars, two-way radios and the 999 (911 in the US) telephone reporting system are themselves examples of technologies introduced to improve the service offered to the public, as well as to advance police practice. Against this backdrop, the introduction of further technologies may, on the surface, seem like an obvious next step for enhancing policing services, particularly during times of declining resources. However, as Koper et al. (2014) argue, research on the effectiveness of police technologies is not well developed. Claims about the ability of technology to transform policing for the benefit of the public as well as police practice can often seem unfounded. Relatedly, Lum et al. (2016) highlight the difference between police efficiency and police effectiveness, particularly in technology contexts. From an internal perspective, efficiency (maximizing outputs at the lowest cost) is often prioritized over effectiveness (the ability of the police to achieve a specific outcome), and the impact of technology on the ground is often limited by the culture, preferences and habits of the officers who are supposed to use it. Moreover, while technologies are often assumed to make police more effective, evidence to support this argument is frequently lacking (Ernst et al., 2021; Koper et al., 2014).

Ernst et al. (2021) assessed the available literature on the implementation of new technologies in policing and the common factors that can influence their effectiveness. These ranged from perceptions of the technology among employees, leadership, supporting services (in relation to implementation), training, integration of the technology into organizational structures, knowledge of the

technology, alignment of the technology with organizational goals and collaboration between relevant parties (such as technology manufacturers, the police and the public). Yee et al. (2023), in their study of a web-based citizen-police report system, focused on gains in efficiency and effectiveness (including a reduced need for police stations) which were assumed to appeal to police and public alike. The focus has thus primarily been on effectiveness as defined and constructed by for the police, rather than (necessarily) on the outcomes desired by the public. As Zhang et al. (2023) note, in their research into different types of technology in a community policing context, “police and citizens had different viewpoints and expectations of police-citizen interactions, which leads to requirement conflicts between different stakeholders” (2023, p. 15). Furthermore, as Koper and Lum argue, while new technologies may offer scope to improve police accountability and, in turn, legitimacy, these are only “best guesses and hopes” (2019, p. 218). Systems that may seem to be an obvious “win” in terms of improving police working practices may not achieve “good” outcomes due to a range of complex factors. Lum et al. (2016) contextualize this process by drawing on the concept of “frames” and how the application of a particular frame (such as police efficiency) influences definitions of success as well as shaping public experiences. It is to a more detailed examination of frames and their relevance for police contact technologies that we now turn.

3 Framing Police-Public Interaction

Much use of frame analysis and related approaches stems from Erving Goffman’s (1974) classic text, “Frame Analysis” and, over the last five decades, “the concept of frame has [had] considerable currency in the social sciences ... for both descriptive and analytic purpose[s]” (Benford & Snow, 2000, p. 611). Goffman’s perspective rests on the notion that “the meaning of [an] interaction depends on its situational context” (Pietrass, 2009, p. 136). For Goffman, “framing” then, is the transformation of values and principles held by a particular group that become focused in a particular interaction or encounter. A sensitivity to frames refocuses our attention in an interaction onto the implicit values and meanings which are held by different actors in the exchange. As Tracy (1997, p. 316) explains, “to identify a particular frame is to give a name to what is usually unnamed and implicit.” We can also read into the ways in which frames shape encounters before they even occur, as frames provide “a [contextual] set of expectations about an occasion” (ibid.).

Tracy (1997) identified what she saw as two distinct frames operating in interactions between the public and 911 call-takers in 1990s America – the public service frame and the customer service frame. In the public service frame, the police expect members of the public to provide information to help the organization meet the various goals defined by the police actors involved in the process (e.g. dispatch, attending officers) and who require specific, detailed information to be passed onto them to help achieve these goals. By contrast, the customer service frame, which the caller brings to the conversation, consists of a set of expectations about the level of detail they need to provide and how quickly they can expect an outcome. The customer service frame rests on the assumption by the caller that a

Helen Wells, Will Andrews, Estelle Clayton, Ben Bradford, Elizabeth V. Aston & Megan O'Neill

description of what they want the police to do is enough, leading to confusion and annoyance when probed by the call-taker for further information (ibid: 324-5). This, however, rests on a definition of seriousness made by the member of the public regarding their incident. If this is defined as a crisis or emergency, then the expectation is of an immediate response; however, for the call-handler, “the definition of ‘emergency’ is shaped by what is taken as routine and normal” (ibid: 328), and, thus, the speed of response may differ from what the caller expects.

More recently, Lum et al. (2016) proposed the use of technology frames, drawing on findings that show that structures within police organizations influence their approach to technology (ibid.; see also Dewald, 2023; Manning, 2008), in particular focusing on a drive for more efficiency. Drawing on Manning (2008, p. 251), Lum and colleagues argue that the structures underlying technology frames in policing contexts stem from long-established elements of police culture that position policing as reactive, “characterised and fostered by an incident-based, response-oriented, and procedures-dominated approach” (Lum et al., 2016, p. 138). As such, the standard model of policing, alongside a need for ever-increasing efficiency, influences the types of technology used by the police and their potential outcomes (Manning, 2008). Lum et al. also draw on Ioimo and Aronson (2004) to posit that a technology frame in policing can also be read in terms of task-technology fit theory. New technologies are slotted into existing tasks and frameworks, which limit their effectiveness beyond certain defined tasks. Finally, Lum et al. also note that, when it came to technology use, officers often equated effectiveness with efficiency (2016, p. 155). Police framing around technology may involve an assumption that the public expect efficiency when contacting the police and that they too conflate this with effectiveness.

3.1 *What Frame Do the Public Use?*

It is constructive to briefly consider the frame – “the set of expectations about an occasion” (Tracy, 1997, p. 316) – that the public are likely to employ in an encounter with the police. We can do this fairly easily as much known about what the public want from the police during and after interactions. Work on procedural justice theory and related areas has shown that those who interact with the police want to be treated fairly (Ansems et al., 2020; Mazerolle et al., 2012; Thibaut & Walker, 1975; Tyler, 2006; Tyler & Huo, 2002; Tyler & Wakslak, 2004). They look for, and respond positively to, being treated with respect and dignity; being allowed a voice in the interaction, clear and transparent communication; and a sense that decisions are being made in a neutral, unbiased, fashion and that officers have trustworthy motives.

Naturally, victims and others who contact the police may also have more instrumental goals in mind. There is no hard-and-fast distinction here – early work on procedural justice (Thibaut & Walker, 1975) stressed the idea that the provision of voice, and the sense of control it engenders, is important to people because it provides reassurance that the (subjectively) correct decision will be made by the authorities – and in criminal justice contexts people want decisions and outcomes they feel are right for them.

What does this suggest for the frames the public bring to their interactions with police? Perhaps most importantly, it seems likely that many will see the initial interaction not as a one-off event but as part of a process which they envisage will continue into the future (and which may well be rooted in past experiences). We know from the importance that people place on procedural justice that they are looking for information both about how police will continue to behave in relation to their crime or experience and about their relationship with police and indeed wider society – a relationship that extends beyond the bounds of the immediate interaction (Radburn et al., 2022; Savigar-Shaw & Wells, 2023).

In sum, much current evidence indicates that those who contact the police for help and assistance will have expectations that do not neatly align with either a customer or a public service or a technologically driven “efficiency” frame. They tend to expect a response that meets instrumental and relational expectations, and the speed as well as the nature of that response tends to be important for them, too. Furthermore, they tend to see interactions with police not as one-off “moments in time” but as parts of a process. Of course, some may tend towards a customer-focused frame or seek simple efficiency from their encounter (wanting only a crime reference number for an insurance claim, for example). But, even here, there is little to suggest that procedural justice is unimportant or indeed that there is not some residual expectation, or desire, that the reason for contacting the police is because they should do “something” about the situation.

How though, as contact technologies are designed and rolled out, do those in charge of shaping the architecture of new forms of police-public contact frame these interactions? Which, if any, of these frames do they tend to use? It is to this question – flagged briefly in our introduction – that we now return.

4 Methodology

In this article, we draw on data from six key informant interviews (Marshall, 1996; Taylor & Blake, 2015) conducted with individuals operating at a national level in respect of developments in online police-public contact for reporting purposes. This exclusively interview-based phase formed part of a much wider research project (ESRC grant number ES/V00283X/1 – ‘INTERACT’) that used a mixed-methods approach to explore and understand other aspects of the use of technology in police-public interactions.

Participants were located via a purposive sampling method appropriate to their privileged position as strategic decision makers and implementors of national initiatives. Their roles were variously within national programmes delivering on the NPCC visions set out above, or with technology suppliers enlisted to deliver on the emerging strategies for “channel shift” and included managers, technical specialists and policing subject matter experts. We acknowledge the limited number of interviews from which our data were collected. However, these individuals are key strategic actors, and there are very few individuals who would be able to speak from these positions. Thus, the population from which we could draw participants was small.

Helen Wells, Will Andrews, Estelle Clayton, Ben Bradford, Elizabeth V. Aston & Megan O'Neill

Ethical approval was sought from Napier University and subsequently agreed by the other partner universities with access to these data. Interviews were conducted by one team member using Microsoft Teams and lasted 60 to 90 minutes. A semi-structured interview schedule was utilized, with the aim being to conduct a “conversation with a purpose” (Burgess, 1984) on topics including: methodologies employed for design and delivery at a national level; understandings of the wants and needs of both the public and the police for contact encounters; and hopes and expectations in respect of technological developments. Interviews were automatically transcribed before being sense-checked manually by the project team. Transcripts were analysed using an inductive approach to thematic coding (Payne & Payne, 2004). Firstly, an initial (open) coding frame based on the topics of the interview questions was developed and agreed between five members of the research team. This initial coding frame (held in a cloud-based document) was available to all five researchers. Detailed reading of the transcripts then took place, with team members augmenting the coding frame as we moved to thematic and then to analytical codes. The team members held regular coding meetings to refine the code list and deepen it (analytic coding) and to avoid duplication of codes. Each transcript was annotated with the relevant codes, ensuring consistency of the code terminology and complexity.

5 Findings

We now turn to presenting our findings and analysis of views of modernizing police-public contact and reporting among those in strategic and design roles, together with discussing our findings in light of international literature. Firstly, we explore the police vision, and the perceptions of appropriate expertise for its design and delivery, as understood by those charged with implementing it. We then assess perceptions of the digital architecture of the contact experience and, finally (and crucially), bring a consideration of the contact experience itself as a deliverable for policing. We reflect on the relevance of Tracy's (1997) and Lum et al.'s (2016) use of frames, before considering what additional insight our data bring.

5.1 *The Police Vision for Modernizing Contact*

According to senior delivery team members like Jack (below), who had been tasked with implementing digital contact in policing, the idea behind online reporting systems arose during informal “canteen” conversations – rather than via a high-level strategic vision of what policing could or should look like or indeed what policing is. The impetus behind the initiative appears to have been the presumed potential of developments in technology to enable the public to efficiently “self-serve” online, instead of needing to attend a police station, and (as discussed above) an unquestioned understanding of what benefits technology could bring:

The kind of original idea came from a group of people, I think, sat in the canteen at New Scotland Yard, then “wouldn't it be really good if we had a website that did...” – and the way they described it was – “...everything you

could do if you walked into a police station?” So originally, we had a list of – it’s about 60-odd transactions – and it was everything from right up there reporting some really serious crime to perhaps handing in a piece of lost property and kind of everything in between. So that was the original idea. (Jack, National Project Team Member)

Coinciding with ongoing pressure to make significant cuts to police budgets, a “website” was seen as a “good” way of replacing more resource-intensive (i.e. more human-dependent) forms of service delivery. “Good” was, seemingly, defined by the understood needs of the police and the known availability of technology at that time. The drive for “self-service” that appears to have been behind modernizing contact seems efficiency driven and instrumental – reminiscent of Lum et al.’s (2016) findings of the dominance of the efficiency frame – rather than foregrounding more relational concerns. Interactions were understood as, literally, transactions – as the functional exchange of something between two parties. The fact that the member of the public no longer physically “walked-in” to a police station was dispensed with without reflection. The focus was clearly on the exchange (largely of information), not on the conditions and circumstances in which it took place or the entities involved (Terpstra et al., 2019).

Whether or not the conditions or context of an encounter matter (e.g. in terms of wider public trust and police legitimacy) does not seem to have been a preoccupation of the design process, where consultation with the public before the programme began seems to have been limited. All interviewees were asked a direct question about the extent of public consultation underpinning the direction of their work:

So, it’s come from a bit of a bit of anecdotal, a bit of general view of “what are the contact centres and the phone handlers dealing with? What is coming through on the live chat in terms of requests?” ... so I think yeah, bit of everything, bit of market research bit of grown-up understanding of the space, and a bit of “the technology can do it so let’s enable it” really. (Richard, National Project Team Member)

Although “market research” is mentioned, it is equivalent to other forms of knowledge including “grown-up” (i.e. police) knowledge and a familiar enthusiasm for getting the most out of technology. Underpinning the perceived need to change is a focus on police demand – “what are the contact centres and phone handlers dealing with?” – and the challenges of demand were very clearly strong motivators for moving towards more technologically mediated contact options that could offer “deflection” of what, in the police view, was unnecessary and irrelevant demand:

We first put in deflection, using SOH, so that it went to a “Contact Us” page that presented the range of options that weren’t policing, to try to cut down on people that came to the force to say “I’ve got an abandoned vehicle that’s outside my house,” “I’ve got a noise nuisance,” “when’s my bins?” so like all

Helen Wells, Will Andrews, Estelle Clayton, Ben Bradford, Elizabeth V. Aston & Megan O'Neill

those kinds of things – out – we just deflected them. (Bill, National Subject Matter Expert)

Here, then, police impose their own needs, such as workload management, on to what counts as a “service”. Technological developments, such as online reporting, are viewed as valuable as they enable the police to filter – to “design out” – what they view as non-police matters at the point of first contact and to remedy the issue of unwarranted calls on police resource. It appears that the rationale of a “customer service” frame, providing (arguably quicker) access to online information and reporting services, is being used to justify fulfilling the need of the police organization to deflect “non-police” demand. However, as Tracy’s (1997) work demonstrated, disagreement over what does and does not constitute a “policeable moment” can cause tensions in contact encounters between humans operating with different frames.

This is not to say that the public’s needs were seen as irrelevant, but rather that assumptions about them were shaped and influenced by the imposition of an efficiency frame and the decision architecture it generates. In some cases, the public’s wants and needs *were* referenced, as in the following rhetorical questions posed by Bill, and the scenario imagined by Peter:

Do they like efficiency? ... you know some of the metrics we see from live chat you know, that started off with the premise in terms of that satisfaction, but actually, do people want that? Do people think that’s maybe proportionate for what they might be reporting? If it’s just a suspicious incident, do you want to cause an officer to drive to your house and talk to you about what you may have seen? So that’s the problem, whereas I can just quickly go on, say what I needed to say, you get a message to say that we’ve received it. (Bill, National Programme Subject Matter Expert)

So, if I’m travelling to work and I see something that doesn’t look right out in the street, or, you know, I’m visiting an area or whatever, do you think I’m gonna sit on 101 for 25-45-55 minutes and tell you something, or even with the call back facility, you know, you phone me back tomorrow? ... We’ve got a really great alternative here where you can actually say “we won’t ask for your inside leg measurement and how long you lived in your address and your mobile phone number, just ‘cause you want to tell us something happened out in the street” (Peter, National Programme Subject Matter Expert)

In Peter’s words, one of the attractions of new forms of reporting was that (as well as relieving the police of some expectations) it placed “a low burden on the citizen” who was assumed to desire quick, simple and convenient interactions with policing. Here, a customer service framing (Tracy, 1997), which assumes a public desire to provide as little detail as is necessary, is combined with a technological frame and its assumptions of efficiency (Lum et al., 2016).

Notably, it was not uncommon for participants to refer to a presumption that “these days” the public wanted the police to act in ways that mimic the private sector, and participants often drew on personal anecdote to make the point:

I’ve taken out a mortgage online, didn’t have to walk into a bank. I can do all of my shopping online. There’s not many things now, and policing was quite far behind not that long ago ... actually let’s give people other options and the idea [was] there’s a lot of people out there who don’t want to walk into a police station. That could be for a huge number of reasons, or they don’t like talking on the phone. You know I’d much rather text someone than speak half the time. (Jack, National Project Team Member)

The police assumption (and it is not necessarily incorrect, of course) that the public want simple, “no-fuss” interactions was, naturally, supported by the companies involved in delivering the technology. The following two quotes demonstrate that mutual assumption that technology is both the necessary and welcome solution:

You know, generally, the UK public are becoming more digitally savvy, if not all, then the younger generation, already far surpassing that requirement, [although] it probably dips and troughs across the age groups. But I think there’s a requirement to service digitally because it’s cost-effective. (Sandra, Contact Technology Company)

I would imagine it was police driving it from a finance point more than anything else. But I think things have changed a lot, even in the last three years, and I would say now it’s a public expectation. (Elise, National Programme Subject Matter Expert)

This view also lends itself to a perception that it is standardized, consistent experiences – the sort that technology can offer – that meet both the needs of the public *and* the police in the 21st century:

It then kind of grew into a concept of actually can we start to standardize some police services? Get some efficiencies? And not only for the public in terms of the way that they can report, but also in the way that – we’ve got 43 odd different website teams all looking at how we can report theft online or all looking at what piece of advice and information we get out. And also, a desire to make sure that services were actually transactional online. (Jack, National Project Team Member)

And that consistency for the public, if we can get all 43 police forces on board, the efficiencies we can realize through that, the greater we are as a whole. When that happens, and we’ve got more forces to utilize them, and helping influence what we do and where we go. That would be incredibly powerful. (Bill, National Programme Subject Matter Expert)

Helen Wells, Will Andrews, Estelle Clayton, Ben Bradford, Elizabeth V. Aston & Megan O'Neill

Consistency for the public and efficiency for the police are thus conflated,¹ with technology offering the “silver bullet” solution for both perceived challenges.

Peter offered a more critical view, however, suggesting that the focus on efficiency might be at odds with the public service purpose of policing. Indeed, he refers to the inherent challenges of operating in ways associated with “private industry”, cautioning against oversimplified comparisons between (for example) banking or the Amazon business model, and policing. Furthermore, he suggests that a police service that forgets its public service purpose risks *also* failing to deliver good customer service and may fail regardless of the framing it chooses:

It's like private industry already does this, but it's actually, you know, they say they put their customer as the heart of everything they do. We say we do that with victims, but do we? I think it's a vision for us but it's not, we're not there. You know, I speak to Contact Leads all the time and they will talk about “Am I going to get channel shift? Am I gonna save money? Is this gonna do it? Are you going to help me with the business plan?” and they are very, very valid things, but that is the wrong lens. (Peter, National Programme Subject Matter Expert)

This force-level preoccupation with policing as a business seems to prompt a frame concerned with “what the customer wants” and the provision of a service that is convenient, quick and simple. Online reporting forms and short-form messaging are the preferred method of gathering information in ways that are efficient for the imagined “customer” – that is, member of the public – and, crucially, create the kind of data that police want and need in order to be more efficient and more measurable. According to delivery team members such as Richard, below, this will also meet the increasingly diverse needs of the customer:

You know the member of the public does not have to sit on hold for hours, they don't have to speak even speak to someone, and I know that causes some people quite a lot of anxiety speaking on the phone and so you know these are all huge benefits to the member of the public from improving the digital technology. (Richard, National Project Team Member)

In turn, the technology companies involved encouraged the perception that policing is like any other service industry (and like any other service industry that the technology companies serve):

One thing that policing really struggles to understand is that it doesn't work much differently to contact centres such as [*name of major retailer*], transport contact centres etc., in the way that the contact comes in, needs triaging and needs an action. Now the *risk* is completely different, and the follow-on consequences are completely different, but the control room is a contact centre

1 This view of scale and consistency as a driver held by the national strategic sample interviewed here appears to be distinct from the viewpoint at a force level, which will be explored elsewhere.

and I think that is probably lost in translation, sometimes, with policing, when it looks at other organizations that I don't think it would ever compare itself, to like a customer service centre, but it absolutely is what it is. (Sandra, Technology Company)

While participants were likely to draw on anecdote and assumptions (as well as their own experiences as members of the public) when asked about the research that predated the introduction of digital contact, more empirical evidence tended to be offered about public acceptance once those forms of contact had been introduced. Customer satisfaction surveys were referenced to show that, of those people who engaged with online chat or SOH reporting, a majority would be happy to do so again:

And we're seeing the same from live chat, you know, people are really happy to use that, I think it's like 80-86% of people would use it again. We've got a post-chat survey, you know, the vast, vast proportion of people using that would use it again. (Bill, National Programme Subject Matter Expert)

Of course, this kind of "customer service satisfaction" approach gives us no insight into the people who did not choose to engage digitally, or who tried to but failed. It covers only those who saw it as a viable option and persisted with it to the point where a customer satisfaction survey was made available. Elise, working in a similar role to Bill, also referred to the satisfaction surveys that forces tended to run, but had concerns about the value of what was being asked:

Whatever service they are using, they have got it in there – some indicators as to how the initial contact with the police, what method that was, and they are finding that their satisfaction levels are lower when people have gone online, versus anything else, and they are trying to find out, are trying to find, to work that out ... So you go on the site, we've got like "are you happy?" "are you not?" type of thing ... But I don't think we really know too much really about what the members of the public feel. I think what he's finding hard is that it's very difficult to extricate whether it's that initial contact or whether it's the outcome that's colouring people's views. (Elise, National Programme Subject Matter Expert)

Notably, Elise suggested that the framing of the questionnaire, and situating it at the end of the contact experience but still *during* the end-user's policing journey, may have encouraged respondents to think that it was a survey about their views of the webpage itself, for example, whether the links provided were all working, rather than about their broader experiences of policing, which had not yet ended. Below we suggest that presenting a satisfaction survey at the end of a contact encounter (which is in many cases only the first step in a longer journey of police-public interaction around a specific incident) is significant in other, more fundamental ways.

Helen Wells, Will Andrews, Estelle Clayton, Ben Bradford, Elizabeth V. Aston & Megan O'Neill

5.2 "Expert" Knowledge

The assumptions underpinning the national vision shaped the kinds of knowledge and expertise invoked to deliver it, which were then transposed to the services and models created. In other words, these values and principles structure the frames that are invoked. As part of the operationalization of the national vision described at the start of this article, a range of experiences were incorporated at a strategic national level, including former call-takers, contact centre managers, communications specialists and, of course, the expertise of the technology companies that were offering the portals and platforms. One of the national team members described his role as below:

I support their development of the services, provide that interaction between forces and the translation of requirements ... add flavour to where the content designers and the design service, to make sure they've got everything they need to understand it from a police context. (Bill, National Programme Subject Matter Expert)

This expertise was specifically drawn from police *contact* contexts rather than, seemingly, from operational policing. Jack, whose role was to "bring policing knowledge into the team" via his background in control rooms and contact centres, describes how the national approach is working:

So we work in quite a blended way with people like content designers, user experience experts, some of the much more technical guys than I am in terms of the nuts and bolts behind stuff ... There's kind of half of us on the team of this subject matter experts, half of us broadly our business analysts and we tend to work in pairs to kind of make sure that we cover off all of those aspects. (Jack, National Project Team Member)

The public are, therefore, by and large, represented through the assumptions of those brought in from particular types of contact roles in forces. Bill, below, describes how a "friendly force" was involved in developing new reporting platforms, while Richard describes the methodology adopted more broadly:

We were there for the workshops, we helped shape that within the team, we pointed them in the right direction. Well, partially myself from my assessing of what the user might want, and obviously domestic abuse specialists in force that came along with me and helped work it through. But it was a really, really close relationship there. (Bill, National Programme Subject Matter Expert)

I don't know that they do focus groups with members of the public but I know they go out into forces. I think this is a certain level of compliance work that they do as well to understand what questions need to be asked, how that can be sensitively asked. (Richard, National Project Team Member)

The design and delivery of new portals and systems, therefore, was heavily influenced by police perspectives, needs and understandings of the world. These involved assumptions about public expectations as well as the ability of technology to deliver efficiency savings and manage demand. The overarching frame of the discourse is one of delivering the best customer service possible in the 21st century, with parallels drawn with the private sector (parallels promoted by the technology companies). It is to a closer consideration of these prevailing frames that we now turn.

5.3 Technology, Customer Service and the Digital Architecture of Contact >

As discussed, there seems to be an assumption that the public expect transactional utility in their interactions with the police, allowing them to receive a cost-effective, timely and efficient outcome. This implies a more outcome-focused evaluation of police service delivery than the research evidence (discussed above) suggests underpins public's judgements of a "good" police service. This is, as implied earlier in this article, likely to be at odds with a parallel policing interest in procedural justice.

Our participants discussed how technology could be utilized to ensure that communications with the public were sculpted to better deliver what police needed from them:

We give our best effort to ask you the relevant questions in terms of the report, because one of the other things we found is during a conversation – when you're on the phone and it's kind of a 10-minute conversation on 101 or 999, perhaps it's that back and forth, getting lots of information. When you just present that sort of web page to people and you say "here's a list of 20 questions to fill out", that in itself can be off-putting because it's not that conversational style. So, we try and keep things as short as we can, again, cognizant that what we don't want to do is not ask enough questions and then when it lands in a control where it gets triaged out because we haven't really got the right information there, something's missed. [If we got that wrong] we'd have to instantly pick up the phone and annoy you by saying or "can we just ask you this question because we didn't put it on the form?" (Jack, National Project Team Member)

Drop-down menus, tick-boxes and character-limited text boxes steer the public to communicate in ways that make it as easy and efficient as possible for contact data to be rendered into policeable information, limiting narratives which introduce inefficiency by requiring interpretation and processing:

Free text is essentially the enemy of what we're trying to achieve. Just so, for example, and this is a perfect example, you might describe my height as "tall" you might describe my height as "between 5 foot 8 and 6 foot 2" or you might describe my height as "5 foot 10" with the word foot and inches written out or an apostrophe or an error. (Richard, National project Team Member)

Helen Wells, Will Andrews, Estelle Clayton, Ben Bradford, Elizabeth V. Aston & Megan O'Neill

We were wanting “it happened on Monday about 10:00 o'clock,” “it happened two years ago” or an exact date and time. What we found people were doing is saying “this is everything I know about when it happened.” So, we’ve actually rephrased it because we’re like, we want a date and a time in that box because that ticks [a box for us that means] “ah OK we know when this happened.” (Jack, National Project Team Member)

Significantly, in each case, a problem is identified with the way the public engage with the contact architecture. From the perspective of a technology frame, unstructured narrative is something to be designed-out to maximize efficiency. The solution is, in each case, to refine and redesign the experience so that these “errors” cannot occur. The boxes are refined, the routing is changed, the style is refreshed, but the technologically mediated approach itself is not questioned.

As Richard describes, in the pursuit of efficiency, the job of translating, or re-rendering, the free narrative is moved from the trained operator to the member of the public, who is required to operate within the boundaries set by the policing organization and enacted through the technology:

The essential step is the interaction between the member of the public and the police, let’s say, crime management systems or command and control systems. So what that does essentially, is that it directly inputs and almost takes direct quotes from the member of the public and fills them directly into the records management system so that takes out essentially a big step in what was essentially misallocated time where a trained resource was receiving an email from Single Online Home that the member of the public had filled in and would then input it into their record management system. (Richard, National Project Team Member)

The public end-user now inputs their experiences directly into police systems in ways that are, thanks to the framing imposed by the digital architecture, stripped of irrelevant, unhelpful or potentially ambiguous information (as defined by the police), packaged up ready to be used by the organization. Of course (as Bill notes, below) this also shifts the obligation to the public to get things “right”. Interestingly, the accuracy errors here are understood, first and foremost, as impediments to policing efficiency:

Hopefully with copying and pasting there’s not too many data errors creeping in ... I mean, this is one of those [things] when you’re using a system relying on a member of the public actually inputting it correctly in the first place. (Bill, National Programme Subject Matter Expert)

So it’s almost as if you’ve got the member of the public filling in the policeman’s notebook, in old time’s speak, but what that does it is it almost essentially it does build the trust because it takes it as verbatim you know – if it’s on the Online Home form as a question then it will end up in the record management

system as the answer was intended to be delivered. (Richard, National Project Team Member)

According to Richard, the feeling that you are communicating directly with the police, without any potential for anything to get lost in translation, should build public trust. This trust is built via the removal of human agents who are portrayed as fallible, whereas technology is faithful to the intended meaning communicated by the member of the public. Interestingly, however, the interaction is no longer between two people (between victim/witness, and police officer/call-handler) but between the member of the public and the “record management system”.

In the latter example, above, the important word is “if”. The decision regarding “if” a question is asked by the SOH is, of course, one made by the police organization and not by the member of the public. As such, the public can indeed be quoted verbatim – on the topics that the police have previously determined to be important and allowed into the digital architecture. The technological frame thus shapes what the public can say and what the police therefore know.

Employing the frames identified by Tracy (1997) and Lum et al. (2016) here, we see that the technology remedies the “issue” of superfluous narrative (so viewed from a police organizational frame) by transforming discourse into easily digestible, efficient, data. Technology ensures the imposition of a police shaping of “customer service” that is defined by police needs and knowledge. It is a police organizational frame (Lum et al., 2016) that is serviced by a technology frame which focuses on efficiency, data management and cost-effectiveness. However, it is possible that the very thing that the technology designs out is what the reporter needs: a space for narrative and an opportunity to be heard. As discussed previously, there appears to have been little research on what it is that the *public expect* when they encounter technologically mediated police interaction. In some senses, the ultimate end-user or “customer” envisaged at a national level and implied in these interviews was actually the police forces (who were consulted, who provided expertise and who needed to be persuaded to accept a level of nationally imposed consistency).

5.4 Framing “Contact” as the Deliverable

Considering the frames actors use helps to reveal what is perhaps unspoken or not explicitly considered (Tracy, 1997, p. 316). Viewed through the eyes of those charged with delivering digital contact, the experience of contacting the police, perhaps to report a crime, is seen in many ways as a self-contained experience, disconnected from a broader public service understanding of what policing is there to deliver – or what the contact is made *for*. For instance, Richard speaks of the initial “contact” as a product and a deliverable in and of itself, separate to what may happen beyond this contact experience:

We’re trying to create a feel – and this is a real transformative step for policing – where actually our programme will be creating data that drives policing. And so, we are creating online crime reporting standards, which mean that the

Helen Wells, Will Andrews, Estelle Clayton, Ben Bradford, Elizabeth V. Aston & Megan O'Neill

experience up to, from the member of the public on the left up to the minute it touches that record management system on the right, is identical for everybody. (Richard, National Project Team Member)

Perhaps understandably, police contact is compartmentalized by those employed with a specific remit to deliver modernized or digital police contact. As Elise notes below, efforts were made to avoid “silo thinking” – but this meant that a range of different ways of thinking *about contact as a service* were brought into the national approach:

And we are being encouraged as a programme to stop thinking [in] these silos we are in ... so there would be a services team, there would be a transition team, there'd be a portal team. The aspiration is from, well this financial year, is that every time we're looking at a new service we're looking at *all* those technologies in that service. (Elise, National Programme Subject Matter Expert)

As a result, online systems are assessed at the end of the initial reporting, which is viewed as an endpoint of contact, or “deliverable” – something which can be measured and evaluated:

You know, I'm trying to get forces to do a survey at the end of their contacts ... it includes the, obviously, “how did you find the service?” but which, you know, “how would you have contacted us if this wasn't available?” all that stuff. Add it on the end, you've got really rich data.... So that's good for our legitimacy and we're moving people away from a telephone call, which saves us money and it's more convenient. So tick, tick, tick. (Peter, National Programme Subject Matter Expert)

We've got an onsite feedback survey. So, on the end of some of our services, only really where we've deemed it appropriate, we will ask a little bit of a “how did you think this was?”. That gives us some quite useful insight in terms of if there's any glitches with the forms that type of stuff. (Jack, National Project Team Member)

The world beyond contact was, it seems, viewed as a separate aspect of the business, outside the programme's remit. The initial making-of-contact has been packaged, measured and evaluated as though it were the sum total of the process of an encounter, cauterized from the broader interaction in which that experience may ultimately fit. However, this narrow view of what the contact is, and is for, does not reflect that public experiences of police contact are shaped, and reshaped, by the *ongoing* process of interactions with criminal justice actors, and not at an artificially chosen point in the larger interaction (Radburn et al., 2022; Savigar-Shaw & Wells, 2023). The initial reporting to the police may form only the first point in a broader interaction that may continue beyond the initial point of contact, through to an in-person police encounter, to a statement, then a case, before making its way

through the intricacies of the criminal justice process. Whether or not the reporter is thinking in instrumental or relational terms, the end of the first contact is unlikely to be viewed as the end of the matter.

6 Conclusion

From the perspective of individuals working in strategic national roles, the main driver of modernizing police contact appears to be a quest for efficiency. Combined with an assumption that the public are demanding more self-service, online options for contacting the police, technology has a logical appeal. Its application enables policing to control the situation, for example, through the development of police-friendly forms, with the onus being on the public to provide the right information to prove that they have a “policeable moment” that should receive a response. Narrative is surplus to requirements and is designed-out in pursuit of contacts that are billed as easier, faster and more convenient for all parties.

Ironically, the “customer service” frame discernible here does not appear to have much regard for the relational (only the more instrumental) needs of its customers. Although aspects of Tracy’s public service frame are evident here (e.g. obtaining detailed information to enable an operational response), there is not an obvious focus on public service in the discussions of approaches to national strategy for online police contact. Firstly, the public have not (as far as we are aware) been consulted at the outset to inform the basic idea or the approach taken. Secondly, contact is itself being viewed as a product, rather than focusing on the delivery of public service outcomes, and, thirdly, there is little reference to the public service goals of policing, relational aspects and legitimacy.

This is not to say that enhancing the usability and consistency of technologically mediated contact is not desirable. Indeed, for some who report to the police the contact interaction will be the entirety of their experience (such as when someone simply requests information). However, for many, the initial reporting is only one step through a much larger and longer process of how police contact is ultimately experienced. From a procedural justice perspective, it is public’s experiences of the whole process, not at an arbitrarily imposed checkpoint (at the end of “contact” responsibility and the passing of the issue to another area of business), that shapes trust, confidence and police legitimacy.

In this context, we would also suggest that technology has more agency, and its framing therefore has more purchase, than Lum et al. (2016) found in the context of information technologies and crime analysis systems. *Frontline* police officer expertise did not feature heavily in the descriptions of how strategic decisions about modernizing contact were made, perhaps diminishing the mediating effect of police cultural frames. Technology products then exacerbate these effects by offering to tackle (and render more efficient) a specific aspect or section of a much larger process – a software solution that takes you efficiently from A to B (but no further), or a portal that reifies the act of “asking for help” into the concept of “contact”. The compartmentalization of digital contact we identified

Helen Wells, Will Andrews, Estelle Clayton, Ben Bradford, Elizabeth V. Aston & Megan O'Neill

helps to construct digital contact as a deliverable, an endpoint in itself, where “customer satisfaction” can be assessed and programme success measured.

We consider that it is likely that (in line with Lum et al.) more dominant organizational frames and cultural obstruction might be present in the implementation of technology in frontline operational police environments. But it seems that, at a national level, digital contact has, through the coming-together of a variety of processes, been bracketed-off from crucial subsequent steps in the process of a police-public encounter – and from outcomes the public are particularly likely to be attuned to, that is, “what response did I get from the police?” and “what outcome did I receive at end of the process of engaging?” Our findings evidence, instead, a more instrumental, efficiency-focused frame dominating digital contact, enabled and furthered by the application of technology, but often couched in “customer service” terms.

The efficiency-driven move towards “self-service” online, the emphasis on demand reduction (at police stations and over the phone), and the resultant reduction of person-to-person police-public interaction risk losing the relational aspects of contact and increasing the distance between the police and the public (as per Aston et al., 2022; Bradford et al., 2023; Terpstra et al., 2019) and likely to have serious long-term implications for police-public relations. It is important that this is taken into consideration in future policy decisions relating to police contact (digital and otherwise), particularly given research on community policing and technology that suggests personal contact and in-person engagement are important in building long-term relationships and public confidence (Aston et al., 2023). Equally, given the strength of the evidence for procedural justice effects in police-public interactions, police policy would do well to take more account of the way digital public contact is delivered to and judged by the public than seems to have been in the case presented here. Preliminary research by Henning et al. (2023) suggests that online crime reporting can have negative effects on trust and confidence in the police if not designed carefully. More account should be taken of the relational needs of the public, who may want space – a voice – to provide a narrative, for example. As Hardy (2019) highlights, the decision to (or not to) report a crime is a complex process involving barriers on multiple levels. Offering digital reporting may not, in itself, resolve these. Consideration should also be given to assessments of satisfaction with police contact further along in the process, rather than seeing digital contact as an endpoint. Police decision making around the adoption of technology should be evidence-based (e.g. oversight bodies requiring that business cases provide a review of research evidence) and include meaningful public consultation and engagement (see Aston, 2023).

It seems crucial that academic research should consider technologically mediated police-public contact, such as reporting via social media channels or online “chatbot” functionality, to assess the extent to which technology can indeed offer enhancements to current practice. There has been very little international research on online reporting to police, but some of the articles in this special issue seek to address that gap, for example, Henning et al. (2024) on online reporting and police legitimacy. As Zhang et al. (2023) highlight, interaction between the police and the public is rife with socio-technical challenges. Adding new forms of

technology to these contact moments may enhance this complexity rather than reduce it. As Koper and Lum note, technology “may operate correctly and speed up various policing activities, but it may not actually lead to outcomes sought by the police or the community” (2019, p. 218). Indeed, we have some more work to do in exploring these “outcomes” in more depth and specifically in terms of the interplay of technologically mediated contacts and the concepts of trust, legitimacy and accountability. What this discussion has shown is the need to recognize that a significant amount of digital and technological architecture has already been put in place and is already shaping police-public context encounters.

References

- Ansems, L. F., Van den Bos, K., & Mak, E. (2020). Speaking of justice: A qualitative interview study on perceived procedural justice among defendants in Dutch criminal cases. *Law & Society Review*, 54(3), 643-679. <https://doi.org/10.1111/lasr.12499>.
- Aston, E. (2023). *Independent review – Independent advisory group on new and emerging technologies in policing: Final report*. Scottish Government www.gov.scot.
- Aston, E., Wells, H., Bradford, B., & O'Neill, M. (2022). Technology and police legitimacy. In Verhage, A., Easton, M and De Kimpe, S (Eds) *Policing in smart societies: Reflections on the abstract police* (pp. 43-68). Springer International Publishing.
- Aston, E. V., O'Neill, M., Hail, Y., & Wooff, A. (2023). Information sharing in community policing in Europe: Building public confidence. *European Journal of Criminology*, 20(4), 1349-1368. <https://doi.org/10.1177/14773708211037902>.
- Benford, R. D., & Snow, D. A. (2000). Framing processes and social movements: An overview and assessment. *Annual Review of Sociology*, 26(1), 611-639. <https://doi.org/10.1146/annurev.soc.26.1.611>.
- Bottoms, A., & Tankebe, J. (2012). Beyond procedural justice: A dialogic approach to legitimacy in criminal justice. *Journal of Criminal Law and Criminology*, 102, 120-170.
- Bradford, B., Aston, E., O'Neill, M., & Wells, H. (2023). ‘Virtual Policing’, trust and legitimacy. In J. Terpstra, R. Salet, & N. Fyfe (Eds.), *The abstract police* (pp.213-238). Eleven
- Burgess, R. G. (1984). *In the field: An introduction to field research*. Unwin Hyman.
- College of Policing. (2021). *Promoting the right culture*. Retrieved 28 June 2023, from <https://www.college.police.uk/guidance/neighbourhood-policing/promoting-right-culture>.
- Dewald, S. (2023). Detectives and technological frames: integrating technology and social media into everyday work. *Policing and Society*, 33(1), 111-128. <https://doi.org/10.1080/10439463.2022.2064858>.
- Ernst, S., ter Veen, H., & Kop, N. (2021). Technological innovation in a police organization: Lessons learned from the National Police of the Netherlands’. *Policing: A Journal of Policy and Practice*, 15(3), 1818-1831. <https://doi.org/10.1093/police/paab003>.
- Goffman, E. (1974). *Frame analysis: An essay on the organization of experience*. Harvard University Press
- Hardy, S. J. (2019). Layers of resistance: Understanding decision-making processes in relation to crime reporting. *International Review of Victimology*, 25(3), 302-319. <https://doi.org/10.1177/0269758019827686>.

Helen Wells, Will Andrews, Estelle Clayton, Ben Bradford, Elizabeth V. Aston & Megan O'Neill

- Henning, K., Kahn, K., Peterson, C., & Yakots, S. (2024). Online crime reporting: A new threat to police legitimacy? *European Journal of Policing Studies*, Online first. <https://www.elevenjournals.com/tijdschrift/EJPS/2024/Online%20First/EJPS-D-23-00016>
- Henning, K., Yakots, S., Peterson, C., Khan, K., & Wuschke, K. (2023). The impact of online crime reporting on community trust. *Police Chief Online*, 12 April 2023. <https://www.policechiefmagazine.org/impact-online-crime-reporting-community-trust/>
- HMICFRS. (2020). *A call for help police contact management through call handling and control rooms in 2018/19*. HMICFRS. <https://hmicfrs.justiceinspectorates.gov.uk/publications/peel-spotlight-report-a-call-for-help-police-contact-management-through-call-handling-and-control-rooms/>.
- Ioimo, R. E., & Aronson, J. E. (2004). Police field mobile computing: Applying the theory of task-technology fit. *Police Quarterly*, 7(4), 403-428. <https://doi.org/10.1177/1098611103251113>.
- Koper, C., & Lum, C. (2019). The limits of police technology. In Weisburd, D & Braga, A (Eds) *Police innovation. Contrasting perspectives* (pp. 571-543). Cambridge University Press
- Koper, C., Lum, C., & Willis, J. (2014). Optimizing the use of technology in policing: results and implications from a multi-site study of the social, organizational, and behavioural aspects of implementing police technologies. *Policing: A Journal of Policy and Practice*, 8(2), 212-221. <https://doi.org/10.1093/police/pau015>.
- Lum, C., Koper, C. S., & Willis, J. (2016). Understanding the limits of technology's impact on police effectiveness. *Police Quarterly*, 20(2), 135-163. <https://doi.org/10.1177/1098611116667279>.
- Manning, P. (2008). *The technology of policing*. New York University Press
- Marshall, M. (1996). The key informant technique. *Family Practice*, 13(1), 92-97. <https://doi.org/10.1093/fampra/13.1.92>.
- Mazerolle, L., Bennett, S., Antrobus, E., & Eggins, E. (2012). Procedural justice, routine encounters and citizen perceptions of police: Main findings from the Queensland Community Engagement Trial (QCET). *Journal of experimental criminology*, 8(4), 343-367. <https://doi.org/10.1007/s11292-012-9160-1>.
- NPCC (n.d.). Digital policing. Retrieved 22 June 2020, from <https://www.npcc.police.uk/NPCCBusinessAreas/ReformandTransformation/Digitalpolicing.aspx>.
- Payne, J. & Payne, G. (2004). *Key concepts in social research*. SAGE Publications.
- Pietrass, M. (2009). Digital literacy as 'framing': Suggestions for an interpretive approach based on E. Goffman's frame theory. *Digital Kompetanse*, 4(3-4), 131-142. <https://doi.org/10.2304/rcie.2007.2.1.1>.
- Radburn, M., Savigar-Shaw, L., Stott, C., Tallent, D., & Kyprianides, A. (2022). How do police officers talk about their encounters with 'the public'? Group interaction, procedural justice and officer constructions of policing identities. *Criminology & Criminal Justice*, 22(1), 59-77. <https://doi.org/10.1177/1748895820933912>.
- Savigar-Shaw, L., & Wells, H. (2023). *Policing distracted driving*. London: Palgrave.
- Taylor, G. A., & Blake, B. J. (2015). Key informant interviews and focus groups. In M. De Chesnay (Ed.), *Nursing research using data analysis. Qualitative designs and methods in nursing* (pp. 153-165). Springer.
- Terpstra, J., Fyfe, N. R., & Salet, R. (2019). The abstract police: A conceptual exploration of unintended changes of police organisations. *Police Journal*, 92(4): 339-359. <https://doi.org/10.1177/0032258X188179>.
- Thibaut, J. W., & Walker, L. (1975). *Procedural justice: A psychological analysis*. L. Erlbaum Associates.

- Tracy, K. (1997). Interactional trouble in emergency service requests: A problem of frames, research on language and social interaction. *Research on Language and Social Interaction*, 30(4), 315-343. https://doi.org/10.1207/s15327973rlsi3004_3.
- Tyler, T. R. (2003). Procedural justice, legitimacy, and the effective rule of law. *Crime & Justice*, 30, 283-359. <https://doi.org/10.1086/652233>.
- Tyler, T. R. (2006). *Why people obey the law*. Princeton University Press.
- Tyler, T. R., & Huo, Y. J. (2002). *Trust in the law: Encouraging public cooperation with the police and courts*. Russell Sage Foundation.
- Tyler, T. R., & Wakslak, C. J. (2004). Profiling and police legitimacy: procedural justice, attributions of motive, and acceptance of police authority. *Criminology*, 42(2), 253-282. <https://doi.org/10.1111/j.1745-9125.2004.tb00520.x>.
- Wells, H. M., Aston, E. V., Bradford, B., O'Neill, M., Clayton, E., & Andrews, W. (2023). 'Channel shift': Technologically mediated policing and procedural justice. *International Journal of Police Science and Management*, 25(1), 42-52. <https://doi.org/10.1177/14613557221132962>.
- Yee, S., & Alduais, N. A. M. (2023). Web-based citizen-police report system. *Applied Information Technology and Computer Science*, 4(2), 1999-2018.
- Zhang, M., Bandara, A. K., Philpot, R., Stuart, A., Walkington, Z., Elphick, C., Frumkin, L., Pike, G., Price, B., Levine, M., & Nuseibeh, B. (2023). Towards a socio-technical understanding of police-citizen interactions. In: Abdelnour Nocera, J., Kristín Lárusdóttir, M., Petrie, H., Piccinno, A., Winckler, M. (Eds) *IFIP Conference on Human-Computer Interaction* (pp. 324-345). Springer Nature Switzerland.