Broadening Situational Awareness - An ecological dynamics approach on officer safety and officer safety training

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Abstract

Dealing professionally with the potential for violence that exists in the police profession is part of the everyday tasks of police officers. Geared towards the German situation, the concept of officer safety, which is anchored in training and practice, provides the central orientation for this.

The paper argues for a comprehensive understanding of officer safety from the perspective of ecological dynamics, which directly affects the scope of situational awareness and associated training. We argue that the key means of officer safety is professional communication in a broad sense, with the use of means being highly context dependent. As such, violent communication respectively the use of coercive force as communication can be just as necessary as verbal and non-verbal de-escalation, physical proximity be appropriate as well as distance. Navigating professionally through this context-dependent complexity requires a broad understanding of situational awareness that extends the recognition of possible danger cues. We conclude by outlining several practical implications for police officers, police training and police organizations.

Keywords: *officer safety; police training; professional communication; police use-of-force; ecological dynamics*

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Introduction

Everyday police situations can alter from one moment to the next. A document control at the airport, for example, can be amicable, but it can also escalate in a split of a second. The situation can return to normal, but it can also turn out violent and endanger the physical integrity of the police officers. Front-line policing has a structural potential for normality *and* violence (Bennell et al., 2021; Ellrich et al., 2011; Ellrich & Baier, 2014b; Jager et al., 2013; Koerner & Staller, 2022; Renden et al., 2015). Within these police-citizen interactions police officers play a decisive role in shaping and determining the actual course of events (Reuter, 2014). The professional management of interactions is part of their everyday work.

Within this task, the concept of *officer safety* is regularly focused upon within German (Füllgrabe, 2017) and international policing (Abrahamsen & Strype, 2010; Thornton & Pepper, 2020). We argue in our article – that at least for the German context – officer safety based on situational awareness (Füllgrabe, 2017; Lorei, 2021; Ungerer & Ungerer, 2008) is too narrowly conceptualized, funneling behavioral options for police officers way to far towards the use of physical means. We present our argument by first discussing the concept of officer safety and laying out the theoretical framework of ecological dynamics, which broadens the perspective on situational awareness in the context of officer safety. We then go on to discuss how this broad conceptualization of officer safety effects the training of situational awareness in police training. We conclude with practical implications on several levels for police institutions.

Officer safety

The guiding principle of officer safety for the professional and training practice of police officers in Germany is reflected in *Police Service Regulation 100* (PDV 100) and in *Guideline 371 - Self-Protection in Police Service* (Guideline 371*)*. PDV 100 defines officer safety as the "tactically correct behavior in operations to prevent or reduce danger to forces" (PDV 100, 2012). In the sense of this conceptualization, officer safety is to be thought of comprehensively. As a central behavior related to the preventive or acute avoidance or reduction of self-harm by police officers, officer safety is a permanent aspect of professional police conduct. Thus, self-protection includes *all* behaviors and options for action of police officers that contribute to preventing or reducing hazards toward the officer during operations. This broad understanding has far-reaching consequences, as it opens up the view that officer safety includes the legitimate use of force as well as communicative de-escalation.

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Professional communication as key means

In training and further education of police officers, officer safety is often related and reduced to the use of forceful options, at least in Germany. It is then about the use of command and operational means as well as physical defense and restraint techniques. The dominant conceptual and practical identification of officer safety with use-of-force options becomes evident, among other things, at the organizational and structural levels. In Germany, officer safety and de-escalation measures are usually offered separately within police training (Ellrich et al., 2011). The organizational separation of these two relevant behavioral options suggests – at best – an additive understanding of competence development at their deployment: on the one side, professional communication, on the other side, the legally warranted use of force (Lorei, 2021). Such a division, however, has little to do with the reality of operational demands. In front-line policing, "communication" and "violence" are complementary and move along a sliding continuum of behavioral options, which can practically overlap and replace each other in everyday work (Reuter, 2014). An isolated focus on separate behavioral options runs the risk of overlooking the integrated character of these options in functionally fulfilling operational demands.

On a closer examination and according to the understanding of social systems theory (Luhmann, 1995), the distinction between "communication" and "violence" is also blurred. The use of violence is *communication with physical means*, among others; talking is *communication in the medium of language*; the use of facial expressions and gestures is non-verbal *communication with the means of body language*. In all cases, it is about the expression of information that finds a social connection, i.e. is taken up and reciprocated in this or that form and in this or that medium. Thus, violent behavior is communication by definition, too (Luhmann, 1995). Through the lenses of social systems theory, communication can therefore be seen as the basic medium of police officer safety. Violence as communication and communicative de-escalation are its manifestations in practice.

Ecological dynamics

A conceptual framework that is both useful for theorizing officer safety and capacitates empirical analyses of it too, is provided by *ecological dynamics* (Araújo & Davids, 2011). According to this perspective, successfully applied in contemporary psychological and sports performance research, individual behavior results from the continuous perception- and experience-based interaction with the environment, which is thereby changed and reshaped (Gibson, 1979). For example, in the context of a large-scale demonstration the action of a police officer, who empathetically shows understanding for the emotional state of indignation in the behavior of an outraged citizen during a document control, works to enforce the measure and in doing so carries out preventive officer safety: Recognizing the affect, based on situational awareness for the emotional state of the person, and interacting empathetically changes the situation at hand, which in turn influences the next citizen's behavior (e.g. perceiving the police officer not as opponent). Police be-

havior and context of behavior are situationally coupled, they co-produce each other. In this context, officer safety is a facet of operational action for the purpose of avoiding danger, based on being situational aware in a broad sense.

The concept of constraints (Newell, 2020), which simultaneously enables and limits behavior (Torrents et al., 2020), specifies the relationship between perception, behavior and context. A distinction is made between the constraints of the environment, the task, and the individual:

1. The behavior of the citizen forms a constraint in the police officer's environment, against which his or her own behavior is in-formed, i.e. literally put into shape. The constraints of the environment also include colleagues and third parties involved, but also ambient factors such as light and weather conditions or spatial structures. Approving or disapproving gestures, noise, or the sudden appearance of third parties, e.g. filming on their mobile phones etc., form environmental constraints and provide potentially relevant information on which the police officer's actions and officer safety must be based.
2. The fact that the police action takes place in the context of a social mandate for preventive danger aversion, which, in this case, takes the form of establishing personal details, builds a task constraint. Constraints of the task provide a framework that defines the scope of police action. These constraints, which fundamentally and situationally form action, also fundamentally include the normative-legal guidelines of police work.
3. Whether and how the constraints of the environment and the task resonate in the police officer's action and, if necessary, nuance it in the direction of self-protection, depends on the constraints of the individual. Current attention, energetic resources, motivational and emotional state, former experiences, motor, tactical and communicative skills, knowledge and attitude form the central individual frame of reference for the perception and evaluation of environment- and task-related constraints and subsequent behavioral options (e.g. officer safety).

Thus, from the perspective of ecological dynamics, officer safety in the context of policing consists of an adaptive, functional *relationship* between the police officer, their environment and the task (Araújo & Davids, 2011), which must be permanently reassessed by the police officer and is actively shaped by constraints. Empirical data indicates that functional officer safety is context-dependent and domain-specific, resulting from a broad perception and flexible handling of situational requirements (Boulton & Cole, 2016; Körner et al., 2022; Preddy et al., 2019; Rajakaruna et al., 2017). Which line for action and which tool is right or wrong can, therefore, only be determined in the concrete application context and the unique situation (see Figure 1).

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Distance, for example, is not per se the recipe for preventive officer safety. If a police officer on duty perceives signs of desperation in a citizen's behavior in a conflict situation – e.g. facial expressions, body language, and words - the right solution could be to gently establish proximity. The basic recommendation for the greatest possible distance (Metzler, 2015; Schmalzl, 2012), which is often formulated for officer safety in dealing with people in psycho-social crises, cannot be agreed with as a general rule. Proximity, including physical touch, can have a stabilizing function in such personal crisis situations (Szymenderski, 2012).

Proximity embodies emotional access and sends the signal "I am with you, I am helping you", "I am protecting you" (this is the main task of policing activity). The message can be reinforced through empathic communication and the application of active listening skills, based on being situational aware of the citizen´s extraordinary state and related nuances. However, this should not be viewed as a standard recipe. The assessment can be flawed, environmental factors or inner psychological states can have a stronger influence on the behavior alone or within the interaction. If the citizen lashes out, officer safety requires a quick switch, possibly the effective and legitimate use of coercive means, like restraining. Under alternative contextual and situational conditions, the very opposite to proximity can be the right procedure for establishing officer safety. If the citizen shows signs of fear, distance and gaining time are among the options for action. Increased physical proximity accompanied by aggressive demands and the initiation of coercive measures could well escalate the situation further.

Figure 1. Context-dependency of officer safety
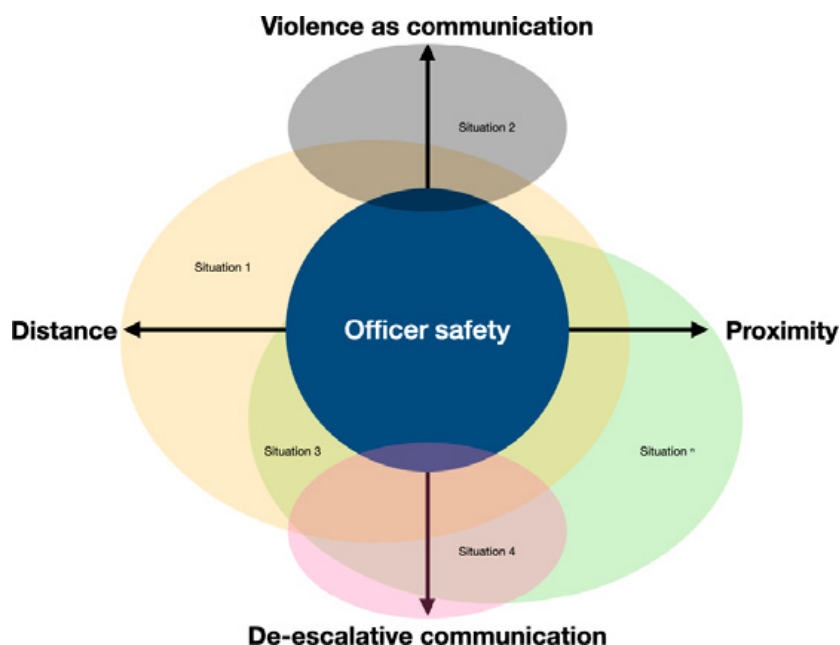
For officer safety, all generalizations should be treated with caution. Operational interactions between the police and the citizens are characterized by a complexity (Cojean et al., 2020) that defies simple linear behavioral algorithms (Staller & Koerner, 2020). Officer safety involves a broad perception and understanding of the complexity of the respective operational situation and requires the ability to adapt to the situation. Thus, officer safety is context-specific. Not only varies it according to the situation, but also according to the area of deployment. Officer safety presents different demands to regular officers and officers in special units (Koerner & Staller, 2021). The latter must, therefore, be trained and (re)learned in a domain-specific manner.

Mindset

De-escalative communication and violence as communication are possible situational tools of officer safety. The individual mindset of a police officer is the central constraint of these action possibilities (Boxer et al., 2021). In the light of the ecological dynamics, the way police officers act in specific situations depends on their personal mindset. In addition to the general personal attitude towards the people, the society, the professional understanding of the role of police officers is a key component for officer safety. This mindset includes the specific attitudes that have to do with the professional role and the related typical tasks and fields of action of police work. Within international research on cop culture, the debate on the warrior versus guardian mindset picks up the basic mindset of police officers (Stoughton, 2015, 2016).

While the warrior mindset encompasses a warrior-like attitude, in which the world and people are viewed primarily from a danger perspective, the guardian mindset represents a protector-oriented attitude that emphasizes the service of, and a positive relationship with, the citizens (Staller et al., 2019). The mindset of police officers can also encompass both mentalities in varying degrees (McLean et al., 2021). In this context, research shows that the warrior mindset is associated with a higher potential for conflict and use of force and a lower priority for de-escalating communication (Reuter, 2014).

Situational awareness

From the perspective of ecological dynamics, functional officer safety derives from the individual perception and use of relevant information at the operational situation in question which is based on individual experience. As a skill to be learned, it consists of the flexible coupling of behavior with the situational context and the requirements of the task. The interface for this is the perception of relevant information, which forms the basis for functional, context-adapted self-protective actions (Koerner & Staller, 2020b).

For police officer safety, the role of situational awareness is emphasized regularly (Schmalzl, 2012; Körber, 2008; Füllgrabe 2017). Situational awareness is a crucial resource for officer safety in the context of complex operational situations (Nota & Nota, 2019; Boulton & Cole,

2016; Preddy et al., 2019a). The range of sources of information that are possibly relevant from the point of view of situational awareness is wide, like facial expressions, gestures, gaze behavior, statements of the citizens, hand position, distance, environmental factors.

In the literature on situational awareness, the topic is mainly scrutinised in the context of the assumption of an omnipresent potential of danger, threat and violence emanating from citizens (Füllgrabe, 2017; Ungerer & Ungerer, 2008). In order to survive in the dangerous world of police work, it is argued that a kind of "danger radar" (dt. „Gefahrenradar") is required (Füllgrabe, 2017). Situational awareness, thus, consists primarily of the reception and processing of visual and auditory information, which, in the service of "survivability" (Füllgrabe, 2017), allows the gaze to oscillate tactically, in anticipation of omnipresent danger, between the citizen's hands, the body position, the interaction distance, and the environment (Ungerer & Ungerer, 2008).

In view of recent research on conflict and violence dynamics in policing (Ellrich & Baier, 2014a) as well as findings on the connection between police attitudes, perceptions, and actions (McLean et al., 2019; Wolfe et al., 2020), the functions and consequences of constructs such as "danger radar" and "survivability", which have been prevalent within German police training and education, should be critically reviewed in order to enhance a more reflective approach to officer safety. The sources of information utilized in an operational situation, what is perceived as information and how it is evaluated, is moderated by the individual mindset. The mindset of police officers is a powerful distortion and filter that enables and limits officer safety (Koerner & Staller, 2020a).

The construct "officer safety" is multidimensional. It includes adaptive behavior and flexible solutions that are controlled by situational awareness as the perception of the action-guiding information relevant to the situation. However, officer safety starts with one's own attitude, which influences the attentional focus and the selection of cues within a given situation. In this respect, an important task for police officers is to become aware of these connections, to reflect on their own perceptual and action-guiding assumptions and values and, thus, to revise their own understanding of themselves, the world and their role. This refers to the important role and responsibility of officer safety training.

Enhancing situational awareness skills in police training

Officer safety "requires regular training" (Guideline 371, p. 10; see also Jager et al., 2013). Although training measures are popular among emergency forces (Ellrich et al., 2011), they are not sufficiently included in further training and sometimes only represent the requirements of operational practice to a limited extent (Jager et al., 2013). Especially the

aspect of representation is crucial. In order to support the police officers in the further development of their self-protection skills, the training must gradually encompass situations, tasks, features and stimuli "like in the field" (Staller et al., 2017). Only then it will be possible for the trainees to perceive and act in the training in ways that are necessary and possible in the field for the purpose of self-protection.

The crux of the matter is therefore the question of the real requirements in the field. However, there is lack of reliable quantitative and, above all, qualitative data on concrete interaction processes and characteristics of the conflict-situations in policing (Reuter, 2014). This knowledge deficit is problematic, since it effects the construct of officer safety as well as the related training. For instance, empirical data from Germany (Ellrich et al., 2011) reveal that police officers who have participated in training for officer safety have a higher victimization rate in the area of serious violence than the non-participants. Contrary to expectations and intentions, the training presumably does not reduce the risk of victimization and increase the self-protection and safety of police officers, but has the opposite effect.

A possible explanation for this could lie in the described undercomplex conception of officer safety within the context of use of force options, which goes hand in hand with a certain idea of the practice of police operations. While there are clear empirical reasons for conceiving officer safety in terms of the potential danger police officers are exposed to, longitudinal data indicate that the assumption of a steady increase in violence against police officers cannot be confirmed, in general (Reuter, 2014; Staller & Körner, 2019; Tammen & Behn, 2018). This means that, as a rule, a high proportion of non-threatening operations in the field can still be assumed. On the other hand, recent research on conflict and violence provides evidence that violence in police operations often arises as a constellation effect. In addition to the citizens involved and the characteristics of the situation, police officers also play a role in the development and the course of violence (Ellrich & Baier, 2021; Ellrich & Baier, 2014b; Reuter, 2014).

In contrast, training that treats the danger in police operations as omnipresent and externally caused, and therefore focuses primarily on violent solutions for officer safety, not only misses the point of everyday reality, but possibly also reproduces the idea of the dominance of omnipresent dangers and, therefore, puts the focus solely on the use of coercive tactics - an idea that, in turn, influences action (Huesmann, 2018a). It is known from aggression research that aggressive behavior is mediated by beliefs and attitudes. Those who assume, that the world is a dangerous place, interact with the world along this belief (Huesmann, 2018b). Studies show that people with such a worldview more often assume bad intentions towards other people and more often resort to violent actions than people with a positive view of the humanity and the world (Dodge et al., 2015). This could be an explanation for the fact that officer safety training measures unintentionally

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increase the participants' exposure to violence and, thus, miss the stated goal. Officer safety, as described above, starts with one's own attitude towards the world and people.

The ecological dynamics approach not only enables a theory-based description of officer safety as a highly variable and context-dependent operational behavior. The approach also provides a concrete orientation for the planning and design of training for officer safety that meets the operational requirements and focuses on the ability to use different solution options in complex situations.

Practical implications

Officer safety is a priority in policing. For this very reason, it is important that the theory and practice of officer safety is continuously aligned with scientific evidence. The evidence from recent violence and conflict research as well as the framework of ecological dynamics offer numerous update potentials at all levels of decision-making and action.

Police organizations are recommended to consistently follow the guiding principle of a reflective approach on officer safety. Reflective officer safety includes a continuous update culture and revision of existing knowledge and concepts derived from current research. Police organizations should recognize the context-dependency and diversity of solutions for self-protecting actions and support them by offering integrative training and further educational initiatives. The basis for this is a domain- and application-specific circularization of training and development oriented towards problem-solving competences.

Police officers understand officer safety as a context-dependent, multidimensional expertise that includes situationally different behavioral options in the context of complex operational situations and that has to be learned domain-specifically according to the respective working context (street police, cyber police, special forces etc.). The perception of relevant contextual information enhances the functional officer safety. This can include means like physical proximity and distance as well as use of force and de-escalative communication.

Officer safety as a functional adaptation to the demands of the situation depends on the individual frame of reference. This requires, among other things, situational awareness. Police officers reflect their self-protection and safety skills and prerequisites. This fundamentally involves being aware of the connections between one's own actions and one's personal understanding of oneself, the world, the people and one's profession.

Finally, *police trainers* are advised taking the comprehensive understanding of the officer safety into account in training practice. The content of training must meet the require-

ments of officer safety through representative task designs covering the broad range of situational solution options available to police officers, especially the principle of the situational and context-dependency of officer safety. The approach of ecological dynamics offers an effective model for analysis and design (Koerner & Staller 2020b). Reflective trainers promote police officers' self-reflection, especially with regard to the connection between officer safety and the personal understanding of their role and role-conduct.

Conclusion

Officer safety is a fundamental aspect of professional police conduct. In this article, we argue for a comprehensive, ecologically informed understanding of officer safety that encompasses all preventive and normatively permissible measures to secure the physical integrity of police officers on duty.

The use of safety tools depends on the situation and context. Officer safety in the context of complex operational situations can require distance as well as closeness, violent communication as well as communicative de-escalation. In addition, the construct of officer safety is multidimensional. It is based on situational awareness in a broad sense, which in turn is conditioned by police officers' understanding of themselves, the world and their roles, which influences their perception and actions like a filter. Officer safety is context-specific and must be (re)learned accordingly. The training of officer safety involves the task of providing police officers with a comprehensive and reflective approach to this facet of professional policing.

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