Article

Police Training Revisited—Meeting the Demands of Conflict Training in Police with an Alternative Pedagogical Approach

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Abstract While operational actions place high demands on police officers, conflict training aims to prepare them for the demands of deployment and thus forms the central hinge between professional practice and education. However, international data suggest a problem: the transfer of competence between training and deployment must be improved. The following article identifies pedagogical design and practice as the key factors in making this leap. To illustrate this point, the evidence-based constraints-led approach (CLA) is introduced. By dealing with key concepts as well as the practical implications of the CLA for conflict training in police, the article provides an orientation for police trainers and their practice as well as for the further professionalization of police training.

Introduction

Operational actions place high demands on police officers. For example, identity checks during mass public disorder require targeted communication, sound tactical behaviour and emotional intelligence. Within fractions of a second, situational demands can change, overlap and possibly lead to the use force. Empirical data on violent conflicts indicate that physical attacks on police officers emerge suddenly and are often unexpected, accompanied by a high degree of aggressiveness and situational dynamics (Jager *et al.*, 2013; Renden *et al.*, 2015). Police training[1] aims at preparing law enforcement officers for the demands of deployment (Koedijk *et al.*, 2019) and thus forms the key *integrative mechanism* between education and professional practice. However, international data (Jager *et al.*, 2013; Renden *et al.*,

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[1] Since a consensual internationally definition and term for training settings within the police domain dealing with citizen contacts, especially (but not only) in conflict situations, operational situations and acts of aggression against police officers, is lacking, in the following article the term police training is used. The objective of police training is to develop and to optimize the competence of police officers to act professionally in such situational settings.

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2015) point to problems: the transfer of competence between training and the field is lacking.

More recent studies argue (Cushion, 2018) that, next to contextual factors such as time and human resources, the pedagogical aspects of training play a decisive role in a law enforcement officer's skill development. Based on empirical data and framed by a professional coaching model for conflict management training in the context of police work (Staller, 2020), the following article identifies the pedagogy of training as a key factor for the acquisition and transfer of competencies. In this regard, the internationally known constraints-led approach, or CLA (Renshaw and Chow, 2019) applied in sports science and sports is introduced. By discussing key concepts and principles, current empirical findings as well as the practical implications of CLA for police training, the article provides orientation for police trainers and their practice as well as for the further professionalization of their training.

The pedagogical issue

Police training aims at imparting competences that can be stably retrieved when their application is needed in the field. Yet the extent to which training meets the demands of the operational environment and performs as the expected integrative mechanism has hardly been investigated. Nevertheless, existing data (Jager *et al.*, 2013; Renden *et al.*, 2015, 2017) indicate a lack of transfer between police training and the field. In a recent pilot study focusing on real-life conflicts experienced in deployment, 20 out of 21 German federal police officers stated that police training had not adequately prepared them for the types of conflict dynamics that have occurred (Koerner and Staller, 2019a).

The reasons for difficulty in the transfer between training and deployment are numerous. Perceived from the perspective of individual police officers, for example, a lack of training time prevents the automatization of operational techniques (Jager *et al.*, 2013; Koerner and Staller, 2019a). Besides insufficient time, the content taught in training sessions must also be questioned (Jager *et al.*, 2013; Renden *et al.*, 2015, 2017). Starting points for optimizing the relationship between training and deployment would therefore be to increase the time allotted for training and/or to revise the content taught towards a more reality-based approach (Renden *et al.*, 2015; Cushion, 2018).

However, empirical data clearly indicate that time and curriculum cannot be considered independently of the chosen teaching method and its underlying pedagogy. For example, in a case study with regard to officer safety training (OST) in the UK, Cushion (2018) found that officers spent 54% of the training time learning passively, and when they were active, they were occupied with content that was neither linked nor transferred to real-life scenarios. As he points out, this training has been served 'in a piecemeal and disjointed fashion' (p. 7), participating police officers were only expected to listen, absorb, and imitate the trainer. A recent time-on-task analysis of 16 consecutive hours of self-defence and arrest training with German police recruits revealed that only 23% was spent on active learning; that is, 77% of the training time was not spent on activities preparing them for deployment (Staller and Koerner, 2019). In this case, the training was characterized by a linear, trainer-centred teaching method and pedagogy. Taken together, the empirical data suggest that a single revision of content or increasing the amount of time is neither sufficient nor appropriate. Instead, we argue that an economic use of time resources and a functional integration of training content that is geared to the requirements of the operational environment are largely dependent on the chosen teaching method and pedagogy.

This argument can be supported and developed by a coaching model developed by Muir *et al.* (2011), originally related to sport and recently modified for combative and police contexts (Staller, 2020). Within this model, police training

can be characterized as a complex decision-making process that places high demands on the individual trainer and organizational coach development. In essence, police trainers have to meet (1) the factual requirements of the criterion environment (*what-dimension*), (2) the individual prerequisites of the learners (*who-dimension*) as well as (3) the demand of designing methodologically and pedagogically sound learning environments (*how-dimension*). It is important to note that coaching competence requires police trainers not only to make well-founded decisions in each individual content area, but also to coordinate relevant decisions in all single dimensions and place them in a meaningful overall context. For instance, when resembling ambiguity, increased pressure and chaotic circumstances in police training (*what-dimension*), the learners physical, tactical, and social capabilities have to be considered (*who-dimension*) and the delivery methods (*how-dimension*) must be adjusted accordingly.

As the current Coronavirus Disease 2019 (COVID-19) pandemic has made clear, police training does not occur in a vacuum, but is strongly linked to, and influenced by, its sociocultural surroundings (*context-dimension*). COVID-19 has massively altered the context of contemporary police training and led to a lockdown of normal training procedures. The extent to which trainers cognitively open themselves to the situation and see the crisis as an opportunity to learn depends on their personal attitudes and mindset (*self-dimension*). If police trainers have treated the crisis as a chance for individual development and created solutions for continuing training under the conditions of physical distance, pedagogical knowledge and expertise are required above all (Figure 1, Koerner and Staller, 2020b).

While the COVID-19 crisis points to challenges that clearly require efforts that go far beyond the normal level, police training is first and foremost an institutionalized learning process (Basham, 2014; Cushion, 2018). As such, it requires a high degree of pedagogical competence on the part of the trainer. However, data from a German case study show that pedagogy is structurally neglected in the education of law enforcement trainers and comprises only a small part of the educational curriculum, while at the same time trainers emphasize the great practical importance of pedagogy for performance in their profession (Koerner *et al.*, 2019).

In addition, a recent study on career paths of German police trainers (Koerner and Staller, 2019b) points to a further structural deficit, which mainly touches the aspects of pedagogical competencies. The trainers interviewed in this study stated that they were selected for the profession because of their specific biographical background as martial artists and/or sports marksmen and/or because of their experience in special units. In connection with the meagre pedagogical content within the educational curriculum of police trainers, it can be assumed that the training design most often employed is a result of the trainers' past experiences as learners in their respective settings (Hoy and Murphy, 2001). Decisions within the *how-dimension* of police training are less the result of professional trainer education than an (uncontrolled) effect of socialization (Koerner and Staller, 2019b). However, observational data from police training in the UK (Cushion, 2018) and Germany (Staller and Koerner, 2019) indicate a developmental potential with regard to the *how-dimension* of police training and thus for the professionalization of the career path for police trainers (Wood and Tong, 2009).

The widely cited CLA, successfully applied in sports science and sports, offers an innovative pedagogical approach that could be introduced into the law enforcement domain. CLA offers a stimulating framework for training practice as well as content decisions within the educational curriculum of police trainers, since CLA pursues the goal narrowing the gap between the training and application context through the 'integration between theory, science and knowledge from high-quality, applied practice' (Renshaw *et al.*,

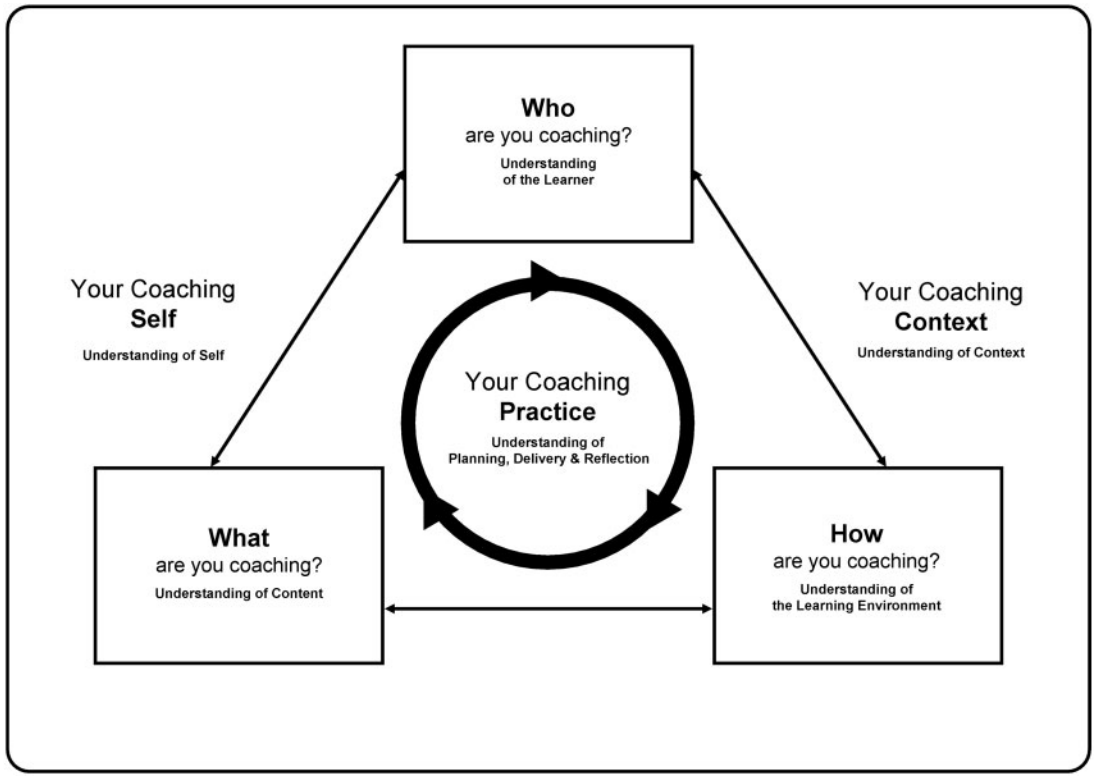

Figure 1: Professional coaching model for conflict management training in the context of police.

2019, p. 2). In the following, the guiding assumptions and key principles of the CLA are presented, followed by a brief review of empirical findings as well as a discussion of its possible application on police training.

CLA

Defined as a 'principled approach to skills learning in all sports and in all educational fields' (Renshaw and Chow, 2019, p. 104), the CLA developed in the mid-1990s is open to easy transfer into the police training framework, which can essentially be characterized as a teaching and learning setting. For police trainers who want to use the CLA effectively in designing educational processes, an understanding of its guiding assumptions and key principles is helpful.

Key principles

The argumentative premise of the CLA is formulated by the name: human behaviour is constraints-led, that is conditioned by the interplay of individual and environmental factors, which act as constraints. For example, during an identity check in the context of mass disorder, the individual approached by the police will likely be emotionally outraged. The intervening police officer expresses his or her understanding and promises that the check will be completed quickly while maintaining eye contact.

In the perception of the individual, constraints serve as behaviourally relevant information that, depending on their nature and condition, restricts certain behavioural options and opens up others (Torrents *et al.*, 2020). In our example: The person to be controlled expresses his incomprehension in a loud voice and approaches the intervening police

officer while placing one hand on his back. The officer due to his or her awareness keeps distance by moving slightly backwards, asking the person to stop and guiding the hand to his or her means of force. Through the deliberate manipulation of constraints within a simulation of a mass disorder in police training, a different behaviour can be realized. Based on our example: The trainer places numerous conspicuous persons and allows them to react differently to the police officers request for control: cooperation is just as possible here as a sudden knife attack. Depending on the chosen behaviour of the simulator, the behavioural requirement and solutions presented by the officers must also change. In this type of exercise, the competent use of behavioural degrees of freedom leading to a functional variability in problem solving can emerge through the deliberate manipulation of constraints.

The core idea of CLA is to enable learners to execute and learn functional solutions for problems at hand by the deliberate manipulation of constraints (Renshaw *et al.*, 2019). The concept of constraints is taken from Karl Newell (1986) and distinguished in three types: (1) *Organismic constraints* refer to individual prerequisites of the learner. On the one hand, organismic constraints are of a structural nature, such as body size, weight, that is relatively constant and less variable. On the other hand, they include situational initial states such as the motivations, intentions, or emotional state, that is, factors that can change from moment to moment in humans. Also divided into variable and constant factors is (2) the area of *environmental constraints*. These include changing ambient conditions such as temperature, the spatial situation, the nature of the ground, the presence of people, and objects or light conditions as well as the earth's gravity as a (relatively) constant factor. (3) *Task constraints* refer to the specific factual and operational structure of the task to be performed centrally, which is reflected in service regulations and guidelines, for example, for identity checks. In other operational domains, for example, those of special forces, the goal-directed, and functional behaviour is constrained differently by corresponding task specifications.

Individual constraints form the decisive frame of reference for the use of information from task- and environment-related constraints (Orth *et al.*, 2017). Environmental conditions or requirements of the task must be perceived concretely by the individual and answered by his or her action capabilities, otherwise they do not form constraints. If, for example, the police officer performing the controlling part is not situationally aware of the subject's slight hand movement, then immediate danger can be posed. The relevance of environmental constraints, on the other hand, is relative to the task at hand: Tailwind is not an important factor for defending a knife attack, while light conditions are. The conditions are different in other contexts, such as the long jump event in track and field, where tailwind influences one's performance and even minimal changes in air resistance and gravity have a potential influence, as Araújo and Davids (2018) argue, using the example of Bob Beamon's world record jump at the 1968 Summer Olympics in Mexico City due to the 'thinner' air and reduced gravitational force caused by the altitude.

In the view of CLA, human behaviour appears as an emergent coupling of individual components of the neuro-biological system, resulting from the dynamic interaction of task-, individual- and environment-related constraints (Chow *et al.*, 2011). According to the key concepts of *ecological dynamics* (Seifert and Davids, 2016), CLA supposes a mutuality of individual and environment, meaning that individuals perceive the environment and create the environment at the same time (Gibson, 1979). Within that process, individual, task, and environmental *constraints* do not prescribe solutions but deliver individuals' affordances (opportunities for action) and allow them to attune to information, which specify and guide their behaviour (Renshaw and Chow, 2019). The peculiarity of constraints in view of ecological

dynamics lies in the fact that they constitute both limitations and possibilities of behaviour at the same time (Torrents *et al.*, 2020).

Following assumptions of nonlinear pedagogy, cause and effect in biological (individual) and social systems (teams) are characterized by non-proportionality of variables (Renshaw and Chow, 2019). A particular cause can lead to different effects. For instance, within social conflict dynamics involving police, the non-linearity of cause and effect is expressed in the fact that a knife attack can be carried out in very different ways and can lead to different functional defence solutions. Consistency in the result does not require consistency in the course of action (Barris *et al.*, 2014). The CLA refers to the principle of biological degeneracy (Edelman and Gally, 2001). Degeneracy describes how functionally equivalent actions and action goals can be achieved through the coordination of structurally different components of the movement system (Edelman and Gally, 2001). In this way, the CLA rejects the functionality of an individual- and situation-independent ideal technique, which still enjoys pride of place in contemporary police training. In CLA, ideal techniques are replaced by the principle of action variability within (1) different performers, (2) one and the same performer, and (3) different contexts of performance (Passos *et al.*, 2013; Barris *et al.*, 2014; Orth *et al.*, 2017).

The concept of constraints emphasizes the role of the individual (*who-dimension*) and thus the need for individualization within the training process as well as the consideration of requirements from the application environment (*what-dimension*). Applied to police training, the major implication is to support skill acquisition and transfer in training by including precisely those constraints that are characteristic of performance in the field.

Empirical evidence

The CLA has a well-developed theoretical foundation (Orth *et al.*, 2019; Pinder and Renshaw, 2019; Renshaw and Chow, 2019) and sound conceptual proposals for implementation (Atencio *et al.*, 2014). In the field of sports, there are numerous studies that have specifically investigated the effect of targeted manipulations of individual constraints on the motor behaviour of learners (for an overview: Buszard *et al.*, 2016). Even though most of these findings concern sport, they illustrate (1) the procedure of CLA-based interventions. Training in sport aims at a more representative connection between training and competition context, insofar facing comparable challenges than police training, which aims at equipping police officers with skills needed for deployment.

For example, in the context of sports, Arias and colleagues showed in various studies with the same cohort of 9- to 11-year-old children in basketball that a reduction in ball weight resulted in an increase in passes and dribbling (Arias *et al.*, 2012a), in throwing attempts and successes (Arias *et al.*, 2012b) and in one-to-one situations in the game (Arias *et al.*, 2012c). In a similar vein, Timmerman *et al.* (2015) manipulated key constraints in children tennis by lowering the net edge, which resulted in a more aggressive game play.

In sporting contexts related to physical conflict management, Hristovski *et al.* were able to demonstrate in boxing that the perception of changing distances to the target (environmental constraint) causes abrupt alternations in the coordination of motor components and led to new movement patterns (Hristovski *et al.*, 2006), while the manipulation of the frequency of incoming jabs (task constraint) leads to new, adaptive defence movements (Hristovski *et al.*, 2009).

The great importance of representative learning designs, which not only allows learners to deal with the motor requirements of the application environment during training, but also to experience behaviourally influencing cognitions and affects, has been demonstrated by Maloney *et al.* (2018) in a recent study on Taekwondo fighting. The fighting behaviour and experience of 10 Australian national fighters in full-contact Taekwondo was examined under two conditions:

firstly, in a typical training fight and secondly, in a friendly competition against international opponents with the participation of the audience and professional judges (environmental constraints). In both settings, victory was the goal. As a result, the athletes practicing normal training fight showed significantly less in-fight emotions (fear, excitement, etc.), lower physiological activation (heart rate), and attacked less and from a greater distance than under real competition conditions (Maloney *et al.*, 2018). The study concludes that for complex performances in taekwondo competition, the characteristic affective and cognitive demands in addition to perceptual–motor demands must be met in training. Finally, the results of the study indicate that perception, emotion, cognition, and movement are mutually generated under the influence of constraints (Maloney *et al.*, 2018). From a pedagogical perspective, this results in a global demand for more integration of representative constraints in practice as opposed to the isolation of individual training elements.

Findings of a recent study by Koerner *et al.* (2020) comparing the knife defence performance of two groups of German police recruits, one been taught in a traditional linear approach and the other according to key concepts of the CLA, indicates that the nonlinear training group has a sustainably higher problem-solving competence for the type of attack with the highest degree of realism, the knife attack carried out surprisingly and with a high degree of aggressiveness and dynamism. The CLA group got hit less, solved the knife attack faster, and more often than the participants in the linear group (Koerner *et al.*, 2020). As the first study comparing the impact of a CLA-based pedagogical approach and a linear teaching approach on learning and performance in knife defence, its findings provide valuable empirical orientations for evidence-based planning of and reflection of police training (Mitchell and Lewis, 2017).

The available research on CLA-based interventions clearly indicates the potential of this approach for police training. Thorough principle-based manipulation of constraints, the CLA enables the representativeness of police training to be increased, thereby promoting targeted skills development in line with the requirements of the field. Even in the course of the global COVID-19 pandemic, the CLA offers solutions on how self-defence training within the civilian and police domain can be continued in a representative manner under the conditions of social distancing (Koerner *et al.*, 2020). Moreover, a recent empirical study on learning and motivational effects in teaching mathematics in school suggests that the CLA can be applied beneficially in other educational fields beyond sports and motor learning as well (Karsch, 2020). Concerning conflict management in policing, the available research is limited, simultaneously providing the potential for expansion and targeted studies. Although more work is needed, the data currently available suggest that the CLA can be seen as a useful element within the pedagogical toolkit of professional police trainers. So how might it be applied here?

Design of police training according to CLA

In CLA, application environment and police training are linked to each other through the construct of representativeness (Pinder *et al.* 2012; Renden *et al.*, 2017). Police training is representative if the characteristics and requirements of the application environment of police deployment are made available to the learners as action-specific information (functionality) in a way that allows them to act in training as they have to in the field (action fidelity) (Staller *et al.*, 2017). For example, a knife defence drill in which the attack is known by the officer, provides only limited action fidelity. In real knife attacks, the type of approach, the moment of attack as well as the line of attack are seldom known in advance.

As known from studies, physical attacks in police operations often occur suddenly and unexpectedly, accompanied by a high degree of aggressiveness, brutality, and situational dynamics

(Jager *et al.*, 2013; Renden *et al.*, 2017; Koerner and Staller, 2019a). For police officers who are likely to deal with violence on a regular basis, special demands result from the social dynamics of violence. What is required is a high level of situational awareness, rapid decision-making, avoidance and de-escalation and, if necessary, the rapid, hard, and powerful use of means of force (Staller, 2020) with simultaneous regulation of the individual's feelings of fear and stress and accompanying physiological phenomena (Jensen and Wrisberg, 2014). The actions thus performed in training should be similar to those required in deployment; that is, they should be carried out under the condition of pressure and physiological arousal that are usual there. Representativeness allows for action fidelity (Pinder *et al.*, 2011), which is a key for the transfer of skills from training to the field (Figure 2).

Within the law enforcement community, scenario training has established itself as a method (Renden *et al.*, 2015; Nota and Huhta 2019; Preddy *et al.*, 2019) of narrowing the gap between training and professional practice. However, scenario training usually still follows a linear teaching approach and takes the final phase of the training—after the previous treatment of basics. In contrast, in CLA-based police training, the representative scenario is the normal case throughout. By manipulating leading constraints, the learning environment is always representative of the application environment in a lower or higher complexity. The training is guided by the desire to produce the most high-quality interaction per unit of time (Staller and Koerner, 2019), that is, to enable functional solutions for representative tasks as often as possible in one session.

Nevertheless, representative learning environments do not reflect the field in terms of a point-to-point relationship (Staller *et al.*, 2017). Instead, the implementation of distinct variables is done as if at a mixing desk (Koerner and Staller, 2018). For instance, the moment of surprise can be *constrained* in training by allowing the person in control (the simulator) to take on the role of the attacker at any time during a simulated identity check, and to attack the controlling police officer alone or with spontaneously determined allies, while freely choosing the type of attack. In this type of simulation in training, police officers are asked to make their own decisions. They have (1) to recognize and decide *what* the problem is and (2) *how* the problem at hand can be resolved. In

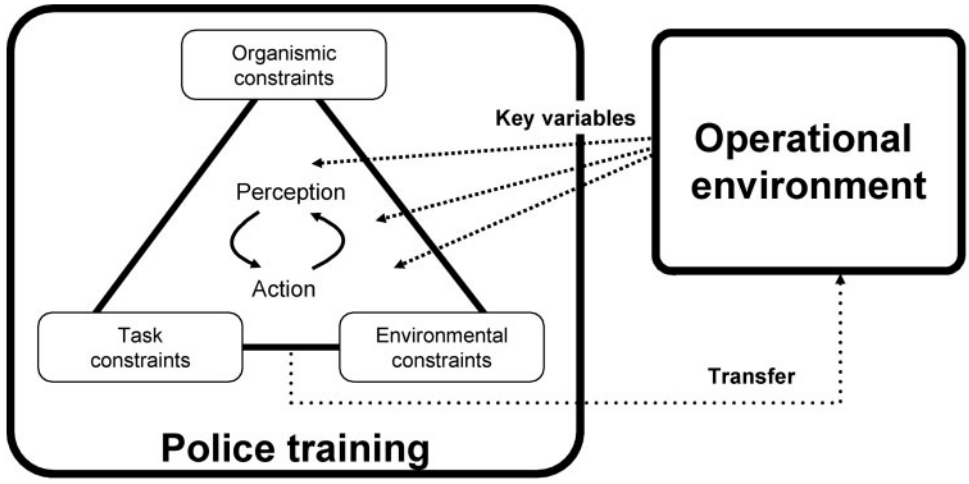

Figure 2: Organismic, task and environmental constraints allowing for appropriate responses to operational demands.

contrary, within the knife defence drill in which the attack is known by the officer, only the how-decision needs to be made (how the known attack in the known line can be defended best).

A more complex decision-making process becomes constrained if the training design allows for encounters that may involve normal interpersonal interactions in addition to the possibility of attack, such as cooperative behaviour. Furthermore, if the spatial design of the learning environment includes areas, angles, and corners that are not directly visible (e.g. to be realized by curtains hanging from the ceiling), the situational awareness of police officers is constrained, since environmental properties influence the perception of the acting officers, may increase their stress level and thus change the frame of reference for processing task-specific information (Table 1).

In the implementation of CLA, the police trainer takes the role of a designer (Koerner and Staller 2018). The task is to design training environments through deliberate manipulation of task, environmental, and individual constraints in a way that allows the learner to attune to relevant behavioural information and to explore and perform variable, adaptive, and functional solutions for the problem at hand (Araújo *et al.*, 2006). To this end, the training involves in a structured or messy (Pinder and Renshaw, 2019) sequence and combination of the characteristics and requirements of the application environment, in order to foster police officers' skills for the functional problem solving.

The manipulation of constraints requires the police trainer to do two things: firstly, to identify the key variables of the operational environment. Secondly, the identification of individual prerequisites, which allows and limits the processing and use of task- and environment-specific information in individual cases. Of particular importance, here are 'rate limiters' (Correia *et al.*, 2019), that is, those characteristics of the individual officer that temporarily stand in the way of certain functional solutions. For example, a coordination and strength deficit in the legs limit the functional application of kicking techniques in a self-defence situation. The same applies to situational awareness or rapid decision-making. Depending on the learner's individual level of development, different task solutions are made possible in the first place (see e.g. Boulton and Cole, 2016, for the developmental differences in specialized firearms officers). Individualization as a deliberate design of constraints in training further requires knowledge about which sources of information a learner prefers to refer to or not when accomplishing tasks. Finally, the identification of control parameters plays an important role within a CLA-based police training strategy: control parameters are constraints which, when manipulated, lead to a change in the individual's behaviour (Orth *et al.*,

Table 1: Examples of how police officer's situational awareness during a simulation of a public mass disorder can be encouraged by manipulating constraints (table adopted from Williams and Hodges, 2005)

Constraints on behaviour	What can be manipulated?	Examples	Emergent behaviour
Task	Police mission; demands of interaction	Design of a broad range of simulator scripts: Dealing with cooperative, worried, confused, aggressive citizens up to multiples and knife attackers	Police officers display a high degree of situational awareness allowing for appropriate responses to the situation at hand
Individual	Physical, emotional, cognitive preconditions	High-intensive exercises before and during simulation; Altering cognitive tasks during simulation	
Environment	Access to sensory information; properties of space, light, volume	Creating angles, corners; Shade light	

2019). For example, the moment of surprise within a knife attack can be seen as control parameter, since it provokes the exploration of new coordination patterns when performing a defending task (Koerner *et al.*, 2020).

Conclusion

The development of operational skills among police officers in training requires above all pedagogical expertise on the part of their instructor. The article has argued that the CLA approach, hitherto unknown in the police context, offers a useful tool for training design. The core idea of the CLA is to enable the exploration and learning of functional solutions in given performance contexts by deliberate manipulation of constraints, corresponding to the expectation of professional police training. Training here is by definition expected to be training for the job (Koedijk *et al.*, 2019).

Despite its importance, few empirical studies have concerned themselves with issues of police training, while at the same time, more recent literature clearly indicates increasing demands for the work of police trainers, for example, by pointing to the relevance of adopting current findings on complex movement skills (Nota and Huhta, 2019) or social interaction skills (Wolfe *et al.*, 2020). Also, the current international public debate on police violence indirectly refers to police education and raises critical questions regarding the training of law enforcement officers (Helander and McNeill Brown, 2020).

CLA can support police trainers in coordinating appropriate decisions in the who-, how-, and what-dimensions by placing these variables in a meaningful overall context. Through the deliberate manipulation of constraints, representatively designed learning environments are rich in information that allows police officers to generate and explore functional solutions for the problem at hand. To what extent the application of the CLA in police training may result in similar positive effects that have already been seen in sports remains to be investigated in future. However, at least initial empirical findings indicate that applying CLA in police training meets the need of equipping police officers with functional skills for the field (Koerner *et al.*, 2020). From the perspective of modern training pedagogy, coaching should be understood as an evidence-based (Koerner and Staller, 2020a) and reflective practice. For this, the CLA offers a promising approach allowing police trainers to make theoretically and empirically informed decisions supporting the further professionalization of police training.

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