



TAC SIM

TACTICAL SIMULATIONS

Incorporating Hebb's Law in the Training of Armed HECPO's

Studies and research on speed and the biomechanics of assaults and ambushes must be used when we are training close protection operatives in the use of firearms.

Armed attacks on VIP's are well planned, very fast and are executed without warning.

When we look at a number of historic successful close range attacks, those close protection operatives in the position of providing armed protection have not had time to draw their weapon before their charge is assassinated and/or themselves being shot.

Basic traditional firearm training puts a lot of emphasis on "static line" shooting which is mostly conducted in what is called "a closed motor action" environment. These closed motor skills are performed where the environment is fixed and predictable, i.e., a shooting range lane with at the most a turning target. This type of training may well condition close protection operatives to perform the opposite response to what is needed in a real-world attack.

**STUDIES, RESEARCH,
MODERN TECHNOLOGY
AND HISTORIC EVENTS IN
ORDER TO EFFECTIVELY
TRAIN OPERATIVES**

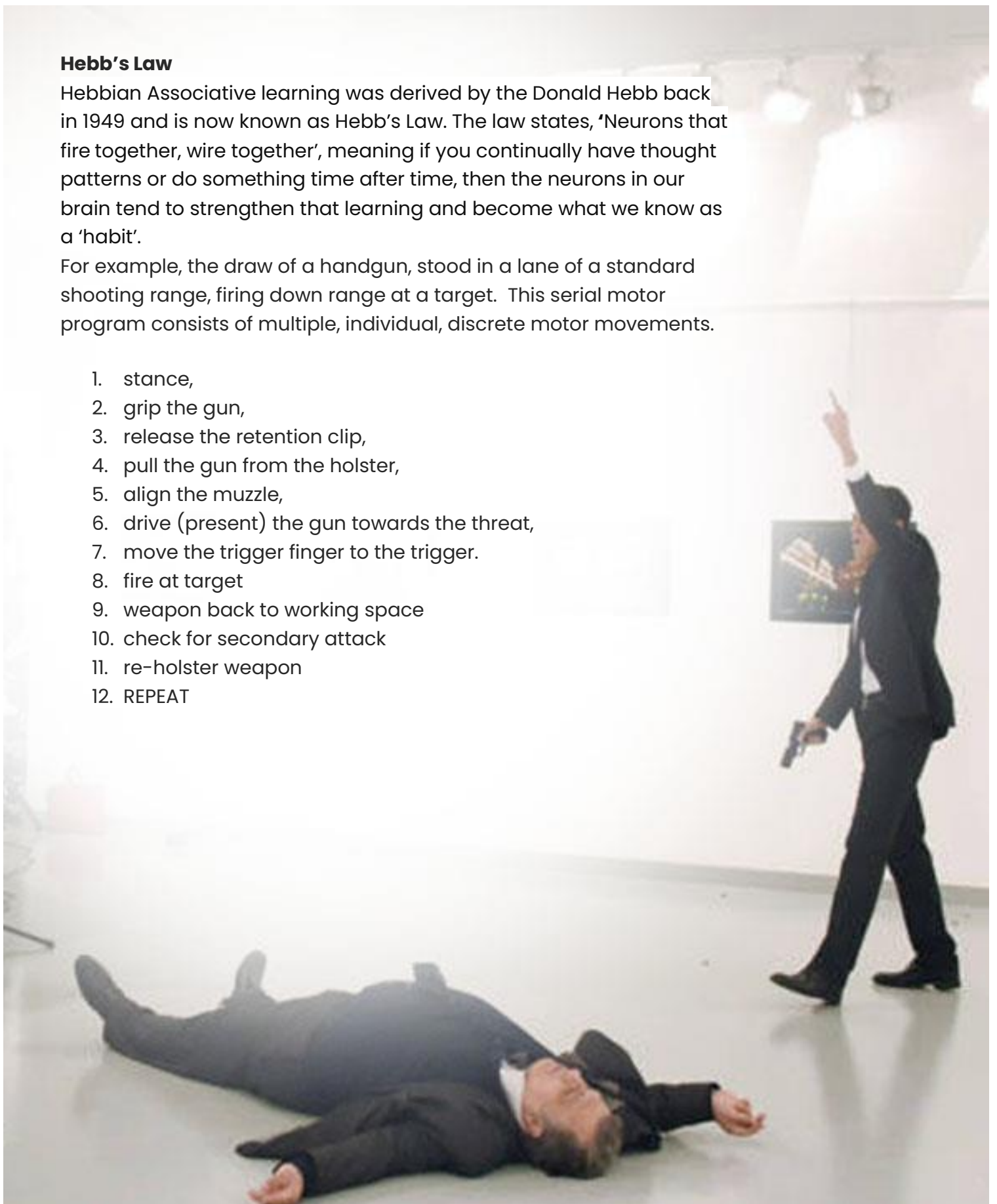
Acknowledgements:
Donald Hebb
Force Science Institute

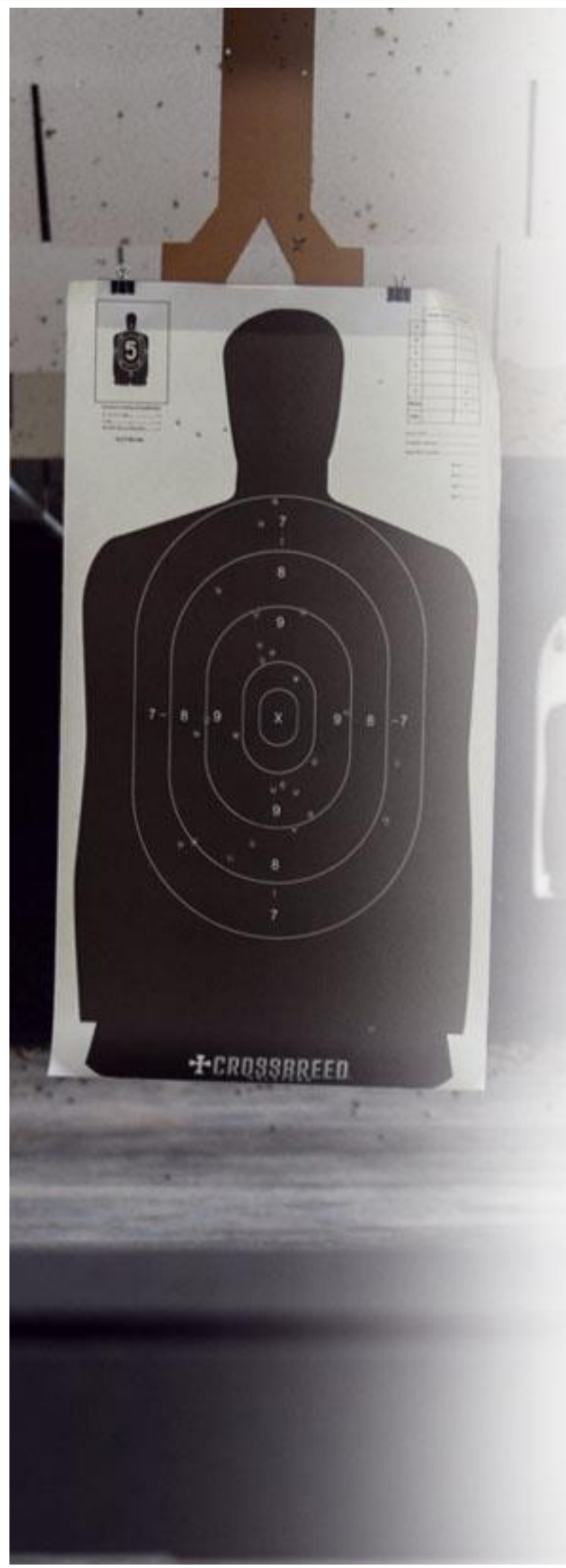
Hebb's Law

Hebbian Associative learning was derived by the Donald Hebb back in 1949 and is now known as Hebb's Law. The law states, 'Neurons that fire together, wire together', meaning if you continually have thought patterns or do something time after time, then the neurons in our brain tend to strengthen that learning and become what we know as a 'habit'.

For example, the draw of a handgun, stood in a lane of a standard shooting range, firing down range at a target. This serial motor program consists of multiple, individual, discrete motor movements.

1. stance,
2. grip the gun,
3. release the retention clip,
4. pull the gun from the holster,
5. align the muzzle,
6. drive (present) the gun towards the threat,
7. move the trigger finger to the trigger.
8. fire at target
9. weapon back to working space
10. check for secondary attack
11. re-holster weapon
12. REPEAT





Good Habits

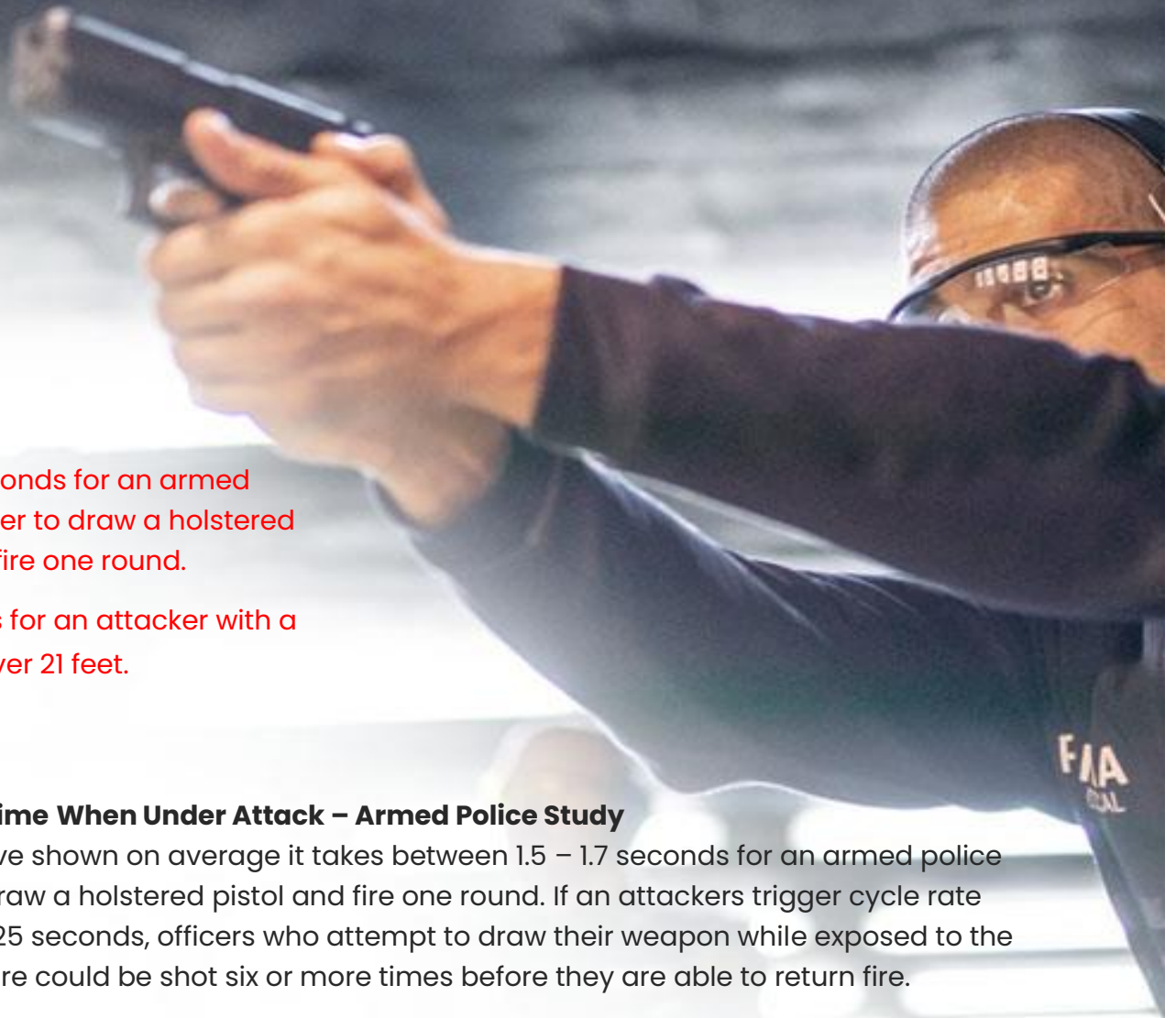
Every time the weapon is drawn, the brain's motor cortex builds stronger motor neural pathways. During this repetitive process, a type of insulation known as myelin forms around the involved neurons. This "myelination" can result in a connection being 10x faster than unmyelinated nerves.

If a close protection operative spends hours on a standard shooting range, standing in a lane, and draw their handgun after a signal is given (e.g., turning of a target), they are activating and developing the motor response to draw their gun. The motor program to draw the gun is reinforced. Better reaction time to the turning of the target and better accuracy due to repetitive practice.

Bad Habits

Hebb's Law tells us that we can train to develop efficient and fast motor pathways, but close protection operatives must be mindful of the fact that when working on skills such as the draw to develop speed and accuracy, there are other motor responses and non-responses coming into play.

If a close protection operative spends hundreds of hours on a shooting range, stood in a lane drawing and presenting their weapon to the target without moving around, they are likely to do the same thing if they were to come under a real attack. This is due to the response being dangerously paired to an upright and static stance that can significantly disadvantage a close protection operative that needs to provide body cover to a principal, draw their weapon and shoot back at an attacker that is attempting to carry out a well-planned, assassination attempt.



1.5 – 1.7 seconds for an armed police officer to draw a holstered pistol and fire one round.

1.7 seconds for an attacker with a knife to cover 21 feet.

Reaction Time When Under Attack – Armed Police Study

Studies have shown on average it takes between 1.5 – 1.7 seconds for an armed police officer to draw a holstered pistol and fire one round. If an attacker's trigger cycle rate averages .25 seconds, officers who attempt to draw their weapon while exposed to the attacker's fire could be shot six or more times before they are able to return fire.

Bringing Hebb's Law into Close Protection

An assailant with a well-planned attack pulls out a firearm attempting to assassinate a VIP. The close protection operative's brain recognizes the attack as a cue to execute the automatic or procedural motor response.

If the close protection operative's training was based on repeated static stance procedures, they may predictably remain stationary while attempting to draw their handgun, and if we bring in the reaction times as stated previously the VIP would have been shot 6 times by the time the close protection operative has drawn their weapon.



Law Enforcement Traffic Stop Test

A "Traffic Stop Study" reinforces this response when 93 armed law enforcement officers conducted multiple "unknown risk" traffic stops reaction tests.

***Test One** -The driver (role player) would produce a training handgun and repeatedly fire at the officer.*

***The Results** -Three officers successfully redirected the suspect's firearm with empty hand techniques to avoid being shot. The remaining ninety officers automatically tried to draw their firearm in response to the threat. Too late.*

Time and Distance Knife Attack

It takes 1.7 seconds to draw a weapon and fire one shot.

It takes 1.7 seconds for an attacker with a knife to cover 21 feet from a start.

A close protection operative has less than 2 seconds to decide on a course of action:-

1. draw a weapon and shoot the attacker
2. move the principal out of the danger zone
3. push the principal out of the line of fire, draw and shoot the attacker(s)
4. tackle the attacker

Certainly no time for hesitation...

Evidence-Based Firearms Training

Hebb's Law may explain how static firearms training may be creating paired responses that may leave close protection operatives doing precisely the wrong thing when confronted with a well-planned lethal threat – we default to our repetitive training of being stood in a shooting range lane carrying out the draw and shoot in a static position.

We also need to incorporate ballistic evidence into training, where to the body to shoot an attacker in order to stop them in their tracks through to dealing with multiple attackers.

Use Hebb's Law to Ensure Optimal Performance in Training

Understanding concepts of Hebb's Law is vital for all close protection trainers, not just firearms instructors, in order to deliver effective skills and improve security practices.

It is important to continuously develop, update and enhance our training methods in order to improve the effectiveness in terms of operational efficiency.

Hebb's Law and Simulated Training

Due to resources and safety issues it's not always possible to carry out the training needed when we incorporate Hebb's Law, however, modern technology i.e., simulated training systems and incorporating simulated scenarios into training programs optimises learning.

Simulated training is proven to provide 70% more learner retention as well as improving crucial performance.

