

# On Combat: The Psychology and Physiology of Deadly Conflict in War and Peace

**Author:** David Grossman and Loren W. Christensen

In his summary of "On Combat", McKinney explains how the many challenges faced by military personnel in combat situations also face peacebuilding personnel operating in insecure locations. McKinney highlights the many lessons peacebuilders might learn by reading this summary -- and this book.

Summary for Peace Workers of

*On Combat: The Psychology and Physiology of Deadly Conflict in War and Peace*

This Book Summary was written by Sam McKinney, School of Conflict Analysis and Resolution (S-CAR), George Mason University, in December 2012.

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Shu Deng acted as a peer reviewer on this piece.

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David Grossman, a former United States Army Ranger and West Point psychology professor, wrote *On Combat: The Psychology and Physiology of Deadly Conflict in War and in Peace* with former police officer Loren Christensen. The book is based on interviews and debriefs of soldiers and police, the authors' own personal experience, and research by others in the field. While Grossman presents the book as a work for military and law enforcement, he does make mention of traditional peace workers in saying, "I hope this book will be of use to the gentle, decent and discerning spirits in the peace movement." The author includes military, police, development, relief, and medical personnel under the umbrella term "peace warriors", and believes that all peace warriors "must study and master combat as the firefighter would study and master fire." It is my hope in writing this summary that I can extract and clearly present the information that is most important for peace warriors in the conflict resolution community.

There is a great deal of information in *On Combat* that pertains more specifically to the training and philosophy of the armed warrior (some of which was not included in this review for brevity's sake), but I believe there is content in the book that can also prove useful to peace workers in a few ways. Modern conflict zones frequently have no front line, and so anyone working in one would do well to understand the consequences of extreme high stress on most humans. Similarly, an understanding of the lasting effects of combat on those who fight can aid in the process of reintegrating soldiers post-conflict, and can help peace workers sympathize with allied military and civilians in combat zones with whom they may be working closely. Additionally, I would argue that a general understanding of emotional trauma is vital for anyone working in any conflict related field.

This summary is organized into sections based on grouping similar themes and subjects together, as well as roughly following the order of presentation by the author.

## **Physiological Responses to Extreme High Stress**

There is a wide range of possible responses and experiences during extreme high stress events. Sharper focus, visual clarity, slow-motion time, temporary paralysis, dissociation, and intrusive thoughts can all occur. When dissociation (a detachment from physical and emotional reality) occurs, it may be a red flag for the onset of post-traumatic stress disorder (PTSD). Loss of bladder and bowel control during moments of intensity is a common occurrence that is rarely discussed. Grossman uses it as an example of the hesitancy people have in discussing natural responses to combat.

Studies of World War II show that there were more psychiatric casualties than physical ones. Among individuals participating in combat for longer than 60 consecutive days, 98 percent of them would begin to breakdown emotionally. This can have long term effects. Evidence from the Russian-German battle of Stalingrad suggests that participants died nearly thirty years younger than same aged males who had not endured the fight.

The range in responses to high stress result from changes in the autonomic nervous system, the part of human physiology responsible for automatic response to stimulus (the sympathetic nervous system) and basic bodily maintenance (the parasympathetic nervous system). When one's "fight or flight" response is triggered, the sympathetic nervous system begins shutting down things like salivation and digestion while increasing the production of epinephrine (adrenaline). Once the action is over it is followed by a parasympathetic backlash, the body attempting to calm down. Responses to this can vary depending on how prolonged the violence or stress has lasted. Soldiers fighting for hours find themselves exhausted and falling asleep because they have burned all their adrenaline. People who have experienced only a brief violent instance may find themselves unable to sleep for some time.

Heart rate increase in response to fear is correlated with a deterioration of motor skills and senses like vision and hearing. Eventually cognitive abilities degrade to a point Grossman calls condition black (based off of work done by Bruce Siddle and Jeff Cooper). He gives conditions white, yellow, red, gray, and black, with white being unconcerned and black being overwhelmed. He believes high pressure situations call for condition yellow in which motor and cognitive skills are functioning at peak performance. Condition black is said to be when the heart rate gets above 175 beats per minute because of the influx of adrenaline from stress. At this point vasoconstriction, the tightening of the blood vessels, allows less oxygen to the brain. The mid-brain, the part we share with animals like dogs and bears, takes over. Rational thought goes out the window.

During combat situations there are a variety of perceptual distortions caused by biomechanical changes in the body. "Auditory exclusion" is when sounds like gunfire stop being heard or are muted. "Tunnel vision" is when the field of view is narrowed down, cutting out the periphery. Depending on the environment the body may focus its attention almost entirely on either audio or visual stimulus, as is the case when hearing becomes sharper in low light situations. Sensory exclusion also occurs when adrenaline masks the pain of an injury until after the stress has passed.

Other experiences can present themselves, such as loss of memory and "tactical fixation", during which a person may attempt the same thing over and over expecting a different result each time. There are also memory distortions. People who have participated in extreme high stress situations may remember events incorrectly, believing them to be more negative than they actually were. There can also be an "autopilot effect" during which a person may do things without thought. Distance and depth perception can also distort.

A natural response to prolonged stress is the desire to eat, though at times of high stress, when one is in

condition red or higher, the desire to eat is extremely unlikely. Similarly, stress may cause either a pronounced increase or decrease in sexual desires. It is also possible that women will stop menstruating after a particularly stressful incident.

## **Combat Psychology**

Killing is normally a difficult thing to bring someone to do. By and large people do not like killing, however joy can come from the act. Grossman presents the stages a person will go through after they have killed someone in a combat situation. The first stage is "survivor euphoria", which comes about as a result of the realization that the life taker is still alive. This is followed by a sense of remorse (and possible vomiting). The happiness the survivor feels at being alive is difficult to separate from the death of the other party. This can lead to questions of morality and mental health ("I just killed and I am happy about it. Does that mean I like killing?"). The final stage is the prolonged process of rationalization, which becomes necessary when actions (in this case killing) do not match personal belief systems ("killing is wrong"). Grossman's belief is that when this process fails post-traumatic stress disorder can be the result. Killers can have different reactions depending on their levels of emotional preparedness and the context of the situation.

Resistance to killing inside one's own species is present in many animals. Grossman holds the belief that no other species kills its own with the frequency of humanity because humans have spent centuries developing better methods to train killers and better killing implements. Weapons have been developed, based on human beings' inherent physical weaknesses, to increase the force, mobility, distance, and protection of the combatant.

Physical distance and mobility enable killing. However, killing from a distance also lessens the psychological impact on the target, thus the compliance of an enemy is most difficult to gain through long range assaults like air strikes or artillery, though it should be noted that, according to Grossman, research has shown the accuracy of a weapon directly influences its psychological potency. Crew served weapons, like machine guns and cannons, and proximate leaders also enable killing by serving to diffuse the responsibility for the death through the social group.

Posturing is another component of combat. The ornamentation, battle cries, and weapons of a military all serve in an effort to convince the other side that confrontation is foolish. Guns are noted as being particularly effective due to the loud sound produced versus a bow and arrow. This posturing is meant to destabilize the opponent emotionally, possibly ending the fight before it begins. However, historically much of the killing that happens on the battlefield occurs as one side is fleeing. Grossman believes this for two reasons: first the victims humanity is lessened when their eyes and face are not visible, and second that there is a deep seated urge (like dogs) to pursue when a target flees.

## **Post-Traumatic Stress Disorder**

People have different responses to extreme high stress events. What might be traumatic to one person may not affect another. The susceptibility to trauma can be influenced by other prior factors like physical health (having an illness that day) or interpersonal relationships (having a fight with a spouse the night before). Post-traumatic Stress disorder can occur after experiencing a perceived life or death event that caused feelings of fear and helplessness. The symptoms are recurrent (lasting at least a month), and can include anger, anxiety, avoidance, withdrawal, sleeplessness, increased arousal, hallucinations, and hypervigilance among others.

Grossman gives his description of the typical response to a post-traumatic event:

"Immediately afterward, you might experience trembling, sweating, chills, nausea, hyperventilation, dizziness, thirstiness, an urge to urinate, diarrhea, upset stomach, and jumpiness. Later that night, you might experience sleep disturbances and nightmares. Some people do not suffer any of these symptoms, some experience several of them, some experience all of them. In the days following the event, you might be preoccupied with what happened as you relive it over and over in your mind... You might be angry, sad, irritable, hypersensitive, vulnerable, anxious, scared, self-conscious, paranoid, and afraid of being judged by others. You might feel numb, robot-like, unnaturally calm, and alienated from those who 'haven't been there'. Your thinking might be confused, you might experience difficulty concentrating, and you might have impaired memory." (*On Combat*, pg. 393)

The sympathetic nervous system bears responsibility for symptoms of PTSD. It is normal for sufferers to try and avoid the stimulus that causes them anxiety, but Grossman believes that it can be important not to run from the stimulus, assuming it is no longer presenting a situation of possible death. He uses the backfire of a car being mistaken for a gunshot as an example. If the backfire causes anxiety, the subject should listen to many more backfires to de-condition themselves of the negative response. This can have the effect of de-linking emotion and memory.

## Debriefing

In order to fight the possible onset of PTSD, "Critical Incident Debriefings" should be conducted after traumatic events. Grossman cites Dr. Greg Belenky at the Walter Reed Army Institute of Research as being a leader of the field of PTSD and debriefing, and the critical incident debriefing bears a strong resemblance to the military's "After Action Reports". There are two fundamental reasons for these debriefings. The first reason is to go over the incident and analyze what went wrong and what worked. The second reason is to attempt to deal with the possible memory loss and cognitive distortion that participants and witnesses might have experienced. Grossman's two principles of debriefing are: pain shared is pain divided, and joy shared is joy multiplied (attributed to science fiction writer E.E. "Doc" Smith).

A summary of Grossman's guidelines for critical incident debriefings follows:

- No one should be forced to participate.
- It should be communicated that stress is the primary problem, and that while not everyone will have a problem with the stress, those who are mentally healthy can help those with problems recover.
- The debriefings should take place as soon as possible and be conducted by someone from a similar background, or even better, someone who has been with the group before.
- The debriefing should be included as part of a larger program of recovery.
- Focus should be put on de-linking emotions from memories, not simply exposing emotional trauma.

Debriefing should be done soon after the incident, though allowing participants to sleep before may help their long term memory. "Memory contamination" can result from exposure to new stimulus prior to debriefing. "Memory reconstruction" can happen when groups debrief together; one participant may use information provided by another participant to fill in the blanks in their own memory.

Breathing is presented as a way to control the autonomic nervous system during times of increased stress. This can be used during debriefs to de-link memories and emotions, and during traumatic incidents to lessen the impact of the fight or flight response and decrease heart rate. Grossman advocates for autogenic breathing, which is also known as combat or tactical breathing. This process entails inhaling through the nose for four seconds, holding the breath for four seconds, exhaling for four seconds, and once again holding for four seconds. This is repeated until the heart rate begins to

decrease.

It is important to be ready to respond to a survivor of a high stress incident, including soldiers returning to a domestic setting. Grossman presents the ideas of a U.S. Marine Corps colonel, as well as authors Judith Acosta and Judith Simon Prager (from their book *The Worst is Over: What to Say When Every Moment Counts*). Understanding, affirmation, and especially statements of support and caring are crucial to a trauma victim's recovery. Grossman also takes from Dr. Artwohl the recommendations to initiate contact and offer support to the victim without demanding information about the event, listen non-judgmentally (being careful of facial expressions), stay away from alcohol or coffee and avoid making jokes about the incident, and provide encouragement as they try to return to normal life.

Grossman points out that PTSD rates may be higher than previous wars because we are catching more sufferers, and that we are doing a better job of treatment. Further, he says that recovering from PTSD can make you stronger as it provides stress inoculation, admitting that he "prefers to emphasize positive expectations. Positive self-fulfilling prophecies."

## **Training and Preparation**

In recounting a few stories of remarkable individual actions in war, Grossman makes the point that a single person can have a disproportionate effect on a situation, and goes on to discuss what it means to be a warrior. To him it comes down to a mentality that is prepared and even eager to confront instances of interpersonal conflict. It is necessary to avoid the denial that bad things do happen, and instead think clearly about what actions should be taken in high intensity situations.

Training as realistically as possible is important. Repeated actions allow the warrior to act without thinking, as though they were on "autopilot". It is actually possible to be scared speechless. Rehearsing the appropriate words can prevent this from happening. Good training can increase confidence and make people less susceptible to the effects of extreme stress and the anxiety that comes with performance. Grossman makes a case for what he calls "pre-battle veterans", meaning individuals who have gone through training that was sufficiently stressful to prepare them for real life engagements. During military and police training an individual should not be allowed to lose. In life or death encounters losing equates to death, so training should not be over until the trainee has completed whatever goals indicate survival in the test.

Someone going into a high stress situation must also be physically prepared. In that regard, sleep is discussed as a primary cause of psychological stress. Grossman cites a study conducted by the US Army in which artillery teams were deprived of sleep for 20 days. One group was allowed seven hours of sleep and managed 98 percent peak efficiency when firing. Another group was allowed only four hours of sleep. Their efficiency was 15 percent.

## **Conclusion**

Dave Grossman describes interpersonal human violence as the "Universal Human Phobia", and points out that the Diagnostic Statistical Manual of Mental Disorders notes that violence from other people is more traumatizing than violence from nature. The physiological and psychological responses a person will have to violence, or an extremely high stress experience, have a wide range of possibilities. One can really be "scared speechless", or have "the crap scared out of them". Cognitive impairments, both immediate and long term, are not uncommon. Witnesses may find themselves unable to act. Survivors may experience guilt.

Psychologically one must not be in denial about horrible possibilities. Physically one must be free from stressors like dehydration, hunger, and especially lack of sleep to be able to function effectively. Repetitive training, stress inoculation, and tactical breathing can help avoid being entirely overtaken by

the stimulus of the moment. After incident debriefings can help survivors, witnesses, and victims process the event and de-link emotions from actions. Exercise can be used to burn off stress hormones. Dave Grossman presents a convincing argument that it is important to be prepared to recognize and act on the psychological and physiological responses to extreme high stress and violence.

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On Combat looks at what happens to the human body under the stresses of deadly battle – the impact on the nervous system, heart, breathing, visual and auditory perception, memory - then discusses new research findings as to what measures warriors can take to prevent such debilitations so they can stay in the fight, survive, and win. A brief, but insightful look at history shows. In this new field Col. Grossman has made revolutionary new contributions to our understanding of killing in war, the psychological costs of war, the root causes of the current "virus" of violent crime that is raging around the world, and the process of healing the victims of violence, in war and peace. He is the author of On Killing, which was nominated for a Pulitzer Prize; has been. Mascoutah, IL: Killology Research Group, LLC, 2012. (Third edition). 403 p. On Combat looks at what happens to the human body under the stresses of deadly battle and the impact on the nervous system, heart, breathing, visual and auditory perception, memory - then discusses new research findings as to what measure warriors can take to prevent such debilitations, so they can stay in the fight, survive, and win. A brief but insightful look at history shows the evolution of combat, the development of the physical and psychological leverage that enables humans to kill other humans, followed by