

UNDERNEATH THE UNCONVENTIONAL: PHILOSOPHIES AND PARADIGMS OF SPECIAL OPERATIONS FORCES CLINICAL SCIENCE

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ABSTRACT

Special Operations Forces (SOF) medical personnel (clinicians) directly impact their patients' outcomes, regardless if the patient is a Soldier, civilian, or indigenous person. Any health practitioner who specializes in trauma, Soldiers' healthcare, or tactical and/or operational healthcare must have a working knowledge of SOF medicine and its philosophical, political, and contextual origins. SOF clinical evidence and knowledge base is extensive and inextricably linked to SOF clinicians' underlying warrior philosophy and worldview. This submission will argue the point that SOF healthcare is a discipline and mature science in its own right, as evidenced by SOF's utilization and/or rejection of other disciplines' (nursing, medicine, conventional military) paradigms, community-wide adoption of its own specific paradigms, disciplinary matrix, and language. Peer-reviewed articles relevant to SOF and military healthcare from 2009-2011 are reviewed to determine possible philosophical frameworks, identify extant methodologies, and demonstrate underlying philosophical constructs.

INTRODUCTION

Special Operations Forces (SOF) medical personnel are high-caliber clinicians who are at their core, warriors. This interesting dynamic influences methods in which they generate evidence and deliver care to their teammates, wounded, and to the indigenous people among whom they work and interact when deployed to areas of military operations. Soldiers' outcomes from combat trauma depend on the training, education, and clinical expertise of military medics. Special Operations clinicians' delivery of tactical combat casualty care and deployed medical care is the best in the known world, an assertion proven by the adoption of SOF medical models of care by the International Committee of the Red Cross, Doctors Without Borders, and other governmental and non-governmental organizations.¹ Delivery of trauma care by SOF clinicians is a topic of importance and interest due to its influence on Soldier survivability and guidelines for trauma practice. Additionally, SOF clinical practices have historically driven changes and advances in civilian trauma science and healthcare delivery, to include tactical emergency medical models, core trauma competencies for healthcare providers, and investigation of phenomena involving traumatic injury and patient outcomes.^{2,3}

SOF PHILOSOPHY & WORLDVIEW

In order to understand the evidence generated by SOF clinicians, we must explore the philosophies and worldviews of this particular brand of clinical practitioner. (Note: "SOF clinician" refers generally to a medic, but can include SOF physician assistants, physicians, veterinarians, surgeons, etc. SOF medicine is inherently interdisciplinary). LTG William Yarborough, one of the "first fathers" of Special Forces (SF), described command oversight of initial SF clinical training this way: "...[SF medical sergeants] were watched closely and continuously to ensure that they had in ample measure the qualities of responsibility, compassion, and dedication which would qualify them to deal with vital functions of other human beings...his first commandment was that he should understand, accept, and practice the Special Forces medical creed..."⁴

The overarching creed (or motto) of Special Forces is the Latin *De Oppresso Liber*, "to free the oppressed". Although they are warriors first, the philosophy of Special Forces has always been to free the oppressed from unjust inequalities they face at the hands

of their government, and not solely to engage directly in combat with them or their oppressors. The two missions are not mutually exclusive. President John F. Kennedy (JFK) is the venerated *pater familias* of Special Forces. During the Viet Nam era, he promoted the creation of SF as the answer to combating obvious aggression and subversion by foreign governments, and authorized the Green Beret as standard uniform headgear. The connection between SF and Kennedy is inextricable: SF Soldiers train and study at the JFK Special Warfare Center and School, and follow Kennedy's doctrine of utilizing a full spectrum of tactics to counteract the enemy's arsenal of subjugation and fear.⁵

JFK's own rhetoric was purposefully of the idealistic and pragmatic philosophies, which was not accidental, given the historical context of sociopolitical situations such as communism and civil rights in that era.⁶ The frameworks for Kennedysian philosophies and promotion of social justice are often attributed to Cicero, Plato, and St. Thomas Aquinas. Plato's theory of social justice is one in which "individually, justice is a 'human virtue' that makes a person self-consistent and good; socially, justice is a social consciousness that makes a society internally harmonious and good".⁷ St. Thomas Aquinas, the Catholic philosopher most often associated with the ethics of social justice and theories of natural law, is often connected with Cicero, as is St. Augustine and his works on the moral community.⁸ It is interesting to note that JFK welcomed new, innovative policies of counter-insurgency; at the time, such ideas were disruptive to the conventional military. The implementations of these novel policies were assigned to SF.⁶ It would follow that SF incorporates these philosophies and avant-garde spirit, to include the discipline of SOF clinical practice, as SF spearheaded Special Operations' evolution.

As warriors, SOF clinicians consistently demonstrate the ancient philosophy and ethics of Stoicism. The philosophy of the military mind is explored in Nancy Sherman's 2005 book, "Stoic Warriors," and Sherman frequently cites post-Socratic thinkers and their relevance to Stoicism in today's warriors. The proliferative works of the freed Greek slave Epictetus urge warriors to use Stoicism to "...continue to meet challenges, take risks, and stretch the limits of our mastery".⁹ It is ironic that Epictetus himself was freed from oppression as slave. The Stoic warrior is concerned primarily not with self, but with specific exceptional and virtuous human characteristics:

sagacity, righteousness, bravery, self-control, and similar humanistic traits.⁸

SOF clinicians inherently embody and display the attributes of Stoicism in their clinical practice, and also possess the best qualities of which Hellenistic and Roman Imperial philosophers like Seneca, Marcus Aurelius and Cicero speak. Seneca teaches that “the first thing philosophy undertakes to do is to give fellow feeling with all men- in other words, humanity and sociability.”⁹ Inherent in the SOF medical and tactical missions to free the oppressed is the work of Seneca and of Hierocles: a need to empathize with foreign and different people, become accustomed to their ways and habits, and see them as persons in their own right, worthy of dignitary respect.⁹

SOF clinicians are thus reasonably influenced by the philosophy of their own warrior ethos, and have either consciously or unconsciously designed their systems of healthcare delivery, education, and practice to reflect those centrally-held tenets. The United States (US) military has historically viewed elite (read: “Special”) units with disdain,⁴ and the conventional military did not wholeheartedly embrace the SOF medical mission set, or the typically-SF concept of social justice for indigenous people.⁴ In regard to Stoic warriors’ consistent rejection of conventional paradigms, Evans posits that strategic innovators will find themselves at odds with the military in general, and they must resist intrusion of stifling, mediocre and bureaucratic entities.¹⁰ The irregular nature of special warfare requires unconventional clinicians and paradigms for generating evidence and designing systems of care delivery.

Rice & Jones argue the efficacy and worth of medical operations in Iraq in relation to conventional military counterinsurgency (COIN) operations.¹¹ Their assessment and evaluation is solid, factual, and important to commanders considering similar initiatives. Despite this, their framework is of the conventional military philosophy: they speak of high-level (brigade and command) issues, the decisions from which are typically communicated downward to medics delivering medical care. Conversely, SOF clinicians’ medical operations are often forward-deployed and unit-based; the decision to care for indigenous people depends on individual clinician and team assessments of inherent risks and possible benefits, and then communicating those valuations up to higher commands. The differences in the paradigms of top-down versus ground-up demonstrates the inherent philosophical differences in conventional and unconventional military medicine, and the frameworks from which SOF design and deliver healthcare.

The Nature of SOF Clinical Evidence

On the whole, SOF clinical literature is phenomenological and of the interpretive paradigm. Meaning and salience is grounded in their experiences in war, knowledge is gleaned from experience, and their shared knowledge base is of lived reality. Their observations are inherently value-laden, given that their core military philosophies and values permeate the care they deliver as warrior clinicians. Their cognition, perception, and experiences are interrelated and interwoven. The methodologies are mostly contextual and observational, which is appropriate for their specialty. No other clinical specialty – military or civilian – operates within their assigned environments. Granted, the interpretive paradigm in science has criticisms and pitfalls, such as

poor theory construction, lack of rigor, and limited ability for replication of evidence in clinical trials. Yet, the very criticism of the interpretive paradigm is what makes this methodology so attractive and applicable to SOF clinical science.

The limited generalizability of the interpretive paradigm and the accusation that it is, according to Burns & Grove (1997), “an interesting set of stories,” is exactly why it works for SOF clinicians.¹² Their system of care is not generalizable to even the conventional military, because of the SOF community’s unconventional mission set and their inherent ethos and philosophy of being is so far removed from the norm. It could be argued that SOF may only fully understand SOF narratives, and then be able to apply those lived experiences to the care they provide as SOF clinicians. The benefits of knowledge generation and transmission through narrative and oral traditions is beyond the scope of this submission, but it is worth mentioning that nursing science literature contains volumes in regard to the value of experiential storytelling as evidence and methods in which knowledge is passed to learners and knowers.¹³

SOF Operators and clinicians have historically rejected established norms and conventional paradigms, and have consistently been disruptively innovative. When SOF encounters a conceptual crisis, SOF clinicians rapidly adapt and change to be innovators or early-adopters to deliver care, as described by Rogers’ theory of diffusion of innovations.¹⁴ “SOF protects and nurtures unconventional capabilities and a culture of flexibility and innovation that cannot be easily replicated in the conventional military.”¹⁵

LITERATURE REVIEW

Review of SOF-specific clinical and medical literature from 2009-2011 reveals reoccurring themes throughout, which appears to stem from their underlying philosophies, history, and motto. Along with social justice and freeing the oppressed, Clayton Christiansen’s theory of disruptive innovation and Thomas Kuhn’s work on disciplinary matrices and the evolution of knowledge appear in the methodologies of almost all articles related to SOF clinical care. Kuhn asserts that new paradigms and theories are created more by crises and problems found during scientific endeavors than by a steady, progressive advance in science.¹⁶ Christiansen asserts that disruptive innovators typically shirk the bureaucratic processes of management and develop innovative methods and products that eliminate waste and redundancy.¹⁷

Kuhn’s description of a disciplinary matrix is found often in SOF medical literature. Inherent in the SOF clinical matrix are: laws, symbols, beliefs and values; exemplars enabling the discipline to independently problem-solve, and ontological, epistemological, and methodological frameworks. SOF clinicians may not use the same verbiage, but those frameworks, such as exemplars, are essentially “lessons learned” for best practice. Ontology is concerned with describing the nature and structure of phenomena, and can also mean terminology used to define phenomena;¹⁸ epistemology describes knowledge and understanding that can be gained via various types of inquiry and alternative methods of investigation.¹⁹ SOF clinical literature appears to be primarily epistemological, as their methods of inquiry are contextual and experiential, related to the history of practice in war and the exemplars gained by mission success and mission failure.

KEY ATTRIBUTES

SOF clinicians live and work in garrison and deployed environments that require them to possess certain key attributes. The very nature of special warfare dictates that SOF medical providers are inventive, ingenious, and adaptive in order to deliver care and best utilize the resources (or lack thereof) available to them. “The very basis of SF operations is the ability to make something out of nothing”.⁴ Other key attributes include autonomy and self-determination, as evidenced by SOF clinicians’ ability to practice independently under fire and in remote, austere environments. The clinical literature reflects these key attributes, as the majority of the evidence generated by SOF clinicians maintains their philosophical identities as innovators and mentions their exceptional nature.

Clinicians in the SOF community are vetted and selected through the most rigorous processes the U.S. military has to offer. Not only are they in the top echelon of warriors, but the Soldiers who choose to train further as medics and advanced tactical practitioners (ATPs) surpass even their peers: “The [SF] medical specialists were perhaps the most unique and best-trained team members”.⁴ In a study of the physiological and psychological characteristics of successful SOF candidates, a clear example of an emic perspective in qualitative research emerges. The experiment was mixed in methodology: along with attempting to understand ideal traits in their participants, the investigators evaluated batteries of physical and psychometric tests, and found that on average, these candidates had scores akin to elite-level athletes. Furthermore, successful candidates demonstrated the philosophy of SOF; they were inventive, self-motivated, and resilient. Stated the investigators: “...these individuals are able to complete the task even under difficult conditions, finding different ways to motivate themselves from within...”.²⁰

The researchers were unsurprised to prove quantifiably that successful Operators possess personal characteristics that produce better coping mechanisms, courage, strategic thinking, enhanced performance, leadership, and growth. These qualities also mirror the traits of Stoic philosophy. Despite a quantitative approach, the authors also attempted to understand the attributes and qualities of the participants in relation to their own worldview, a very interpretive methodology.

SOF DISCIPLINARY MATRICES

A discipline accepts multiple inquiries or methods to gain knowledge, to include reaching consensus on different sources of knowledge, i.e. via reasoned discourse and focused dialogue. These sources of evidence can be found in practice or from theoretical and conceptual models.²¹ SOF clinical science accepts multiple inquiries and methods of knowledge derivation, even accepting practice-based evidence, as they typically refine and revise their methods of care delivery based on the environment to which they deploy and the “lessons learned” by other SOF clinicians.

Nursing knowledge, along with medical acumen, is critical to the SOF clinician, as described by two SOF medical practitioners’ model of care for damage-control resuscitation in trauma. Their treatment guidelines are based on current evidence, but in the spirit of Stoicism, Kuhn’s conceptual crises and disruptive innovation, the authors reject traditionally-held models of pre-hospital trauma care as accepted by established bureaucratic entities and tailor their practice guideline to the most simplistic- not simple- and effective methods and levels. The conceptual crisis was and usually

is the need to adapt to environment, resources, and threats inherent in the battle space to best care for patients and drive positive outcomes.

Nursing paradigms are important to SOF clinicians in critical care; without them, damage-control resuscitation may not be as successful. Nursing competencies in clinical, pharmacological, and holistic care is essential to the success of patients’ resuscitation by the SOF clinician: so critical, in fact, that Hetzler & Risk state- not once but twice, in two separate articles- that prolonged care of traumatic patients by deployed SOF medics require nursing paradigms.^{22,1} The authors assert that their “prolonged-care theory” provides efficient care with minimal available assets, and that their model enables SOF clinicians to provide proactive and goal-oriented care delivery to maximize patient outcomes after combat trauma.

Other authors also emphasize the need for a nursing framework to advance the science, efficacy, and scope of SOF clinical practice. In reviewing the North Atlantic Treaty Organization’s (NATO) doctrine for SOF medical care provided in deployed settings, Wallace (2009) identifies the lack of nursing paradigms for care in the curriculum of SOF clinicians and its relationship to bettering patient outcomes. Wallace also cites the leading cause of death for SOF Operators: non-compressible hemorrhage, which could possibly be better mitigated by including nursing frameworks into SOF clinical curriculum. Again, the core SF philosophy of *De Oppresso Liber* is mentioned in the literature: Wallace describes medical care for indigenous people as a strong weapon, bringing the universal message of liberation.²³ These claims exemplify moral relativism, in which the need for nursing influence in SOF clinical care is identified through a philosophical, political and contextual lens. Identifying the need for nursing in SOF care delivery is based in specific moments and in a particular context, namely in war and based on the assessed needs in caring for SOF warriors.

McCown, Grzeszak, and Rada Morales (2009) set forth clear recommendations in a prevalence study about zoonotic disease surveillance in deployed SOF personnel. Their research was sound and results were valid. What is interesting is the authors’ adherence to the interpretive paradigm, even though their methodology was empirically quantitative and incidence rates were appropriately calculated- not the usual mainstays of a qualitative study. As SOF clinicians, they uniformly “told a story” so the reader would grasp the gestalt of the findings, specifically via a vignette about an SF team that became ill, vulnerable, and operationally ineffective due to drinking unsafe water while deployed. The article concludes by reaffirming the SF philosophy: “[To] improve the human condition in these areas and ensure the safety of U.S. personnel... This is the SOF commitment, to liberate the oppressed”.²⁴

There is a stated difference between literature written by SOF clinicians and traditional military medical elements. In a cross-sectional correlative study about the relationship between resilience and post-traumatic stress disorder (PTSD) in veterans, Pietrzak et al (2009) posited that unit support structures and individual adaptive aspects determine the overall resilience of a Soldier in thwarting PTSD.²⁵ However, the researchers failed to control for the characteristics of their study demographics- the survey respondents were older Reserve and National Guard Soldiers, and were therefore probably atypical of active-duty Soldiers, not to mention dia-

metrically different from SOF. This is a strong example of the positivist paradigm producing poor science, as more advanced empiricists control for the inseparableness of underlying characteristics and context in generating knowledge by utilizing different methodologies.²⁶

Pietrzak's conclusions were quickly countermanded by LTC Craig Myatt, the command psychologist for the U.S. Special Operations Command, namely that the PTSD study lacked control for sample variances, normative data, cohort variables and had limited generalizability.²⁷ Where Pietrzak had concluded that poor unit cohesion, lack of social support, and individual adaptive abilities are likely determinants of PTSD incidence, LTC Myatt counters that SOF Operators and clinicians are unusually cohesive as units, demonstrate superior scores in resilience research, and their very missions are "predicated on the ability to identify individuals who adaptively respond to high-intensity stressors," referring to the rigorous selection and assessment process SOF undergoes prior to becoming operational.²⁷ These counterarguments demonstrate the overall rejection of the positivist philosophy of science in SOF clinical literature: evidence is not separate from inherent environmental and contextual characteristics of the variables.²⁶

Randomized clinical trials (RCTs) have been cited as one of the highest forms of evidence.²⁸ Despite this claim, several ethical issues are inherent in that methodology in times of war. It is unethical to deny Soldiers or civilians affected by combat trauma potentially life-saving interventions in the interest of maintaining a control group in which no treatment is implemented. In evaluating the use of tourniquets in Iraq, the investigators' methods were similar to much of the SOF clinical literature: retrospective review which generated recommendations for best practices in the future.²⁹ Specifically, the authors mention that indications for tourniquet use are poorly studied, and decisions for use usually rest solely on the shoulders of the clinicians and their judgment. War is contextual and political; the preferred method of investigation into best-practices is clinical experience, essentially utilizing practice-based evidence and experiential judgment in those contexts.

Practice-based evidence is not a foreign concept to SOF clinicians. Practice-based paradigms drive knowledge development through the experiences of practicing clinicians to add to knowledge production.²¹ Brandon & Hill (2011) advise SOF clinicians to increase their recognition of differential diagnoses for altered mental status in their article about a similar practice issue they encountered with an SF Soldier.³⁰ The authors, one an SF medic, the other a SOF physician, utilize an interdisciplinary paradigm of collaboration to augment the evidence, and make it salient to all audiences by experiential case report. This type of evidence should not be marginalized, even during an era in which RCTs are the benchmark for evidence validity.

CONCLUSION: THE SCIENCE OF SOF CLINICIANS

Is SOF clinical practice a mature science? One could argue that it is a subset of medicine, given the overall tones of medicine and "medic" in its lexicon. Yet, SOF clinicians meet all of Kuhn's requirements of possessing their own specific discipline of science. First, the SOF clinical community accepts their own paradigm, which includes shared storytelling, experiential learning, case-study examples, and practice-based evidence. Second, the community solves conceptual crises using this paradigm, and actively innovates

and adapts to meet and solve scientific and conceptual crises in practice and execution. Third, the SOF clinical community publishes their knowledge as research in specific, scientific, peer-reviewed journals. Last, and perhaps most interesting, is that the particular dialect of SOF clinical practice meets Kuhn's criteria that disciplinary language be "unintelligible to the uninitiated".³¹ Without a glossary of acronyms, after-action reviews from 1952-present, and books on Special Operations Forces history, explaining SOF clinical practice to an uninitiated civilian is an exercise in futility. Exclusive empiricism does not recognize nor would it give enough credit to the experience of practicing SOF medics. Empiricism is too positivistic and attempts to break theories down too far into the parts of the sum. SOF clinicians practice from a perspective also touted by Laudan, whose philosophy gives credit to sciences that solve multitudes of problems, rather than counting the amount of theories generated and verified.³¹ SOF clinicians innately identify issues in clinical practice and utilize their own adopted paradigms to innovatively solve problems and advance their science.

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