

UNCONVENTIONAL RESILIENCE

An Ongoing Series

Unconventional Resilience

A Holistic, Humanistic Infrastructure of Integrated Performance

Erika “Ann” Jeschke, PhD^{1*}; Jennifer Patton, MSN²; Jared Wyma-Bradley, MD³;
Jay Baker, MDiv⁴; John Dorsch, DO⁵; Sarah Lynn Huffman, PhD⁶

ABSTRACT

Building off our findings discussed at the strategic, operational, and tactical levels of unconventional resilience, we conclude this series by developing a holistic, humanistic infrastructure of integrated performance in Special Operation Forces (SOF) medicine. This infrastructure will explicitly acknowledge the human motivational context of practical performance and provide credibility to the medical-martial profession by acknowledging cultural values, norms, skills, and standards entailed in an emerging professional code of the Warrior Medic.

KEYWORDS: *unconventional resilience; SOF medic; integrated performance; flow; art*

Introduction

We conclude this exegesis of findings from our ethnographic study titled, “The Impact of Catastrophic Injury Exposure on Resilience in Special Operations Surgical Teams (SOST).” This final paper provides a holistic, humanistic infrastructure that will integrate the major aspects of our performance theory, which provides a cultural representation of unconventional resilience after catastrophic injury exposure. Infrastructures shape the way human phenomenon are evaluated, interpreted, and understood.¹ As such, infrastructures are substantive because they pattern the solutions offered to explain and respond to real-world human challenges.

Combining the main attributes of unconventional resilience, our comprehensive performance theory will introduce holistic humanism as an infrastructure well suited to organize and provide meaning to the Special Operation Forces (SOF) medic’s, team’s, and organization’s experience of catastrophic injury exposure. To achieve our goals, we: 1) re-animate the connection between conventional and unconventional resilience;

2) elucidate Aristotelean constructs that influence our notion of integrated performance and human motivation within the medical-martial profession; 3) allegorize the SOF medic’s practical performance in relationship to a dancer to highlight medical-martial artistry—not mechanism—as the essence of peak performance. We conclude by gesturing to the pragmatic value of our holistic, humanistic infrastructure.

The Air Force Research Laboratory’s Institutional Review Board approved the study as an exempt protocol. To capture intricacies within the cultural ethos of SOSTs, data were collected through individual, open-ended interviews with six participants from each of the four clinical specialties represented in a SOST.² Additionally, focus groups and field observations were performed across the two SOST detachments to capture team and organizational dynamics. All identifying names, genders, locations, medical specialties, and military ranks were removed. To further protect privacy and maintain confidentiality, themes described herein do not reflect individual commentaries. All quotes are constructed from various SOST medic narratives that code under the theme discussed. As such, quotes are an aggregate analysis, which not only draws a holistic blueprint of the entire data set but also represents the co-ed composition of the organization. While data in this paper focus specifically on SOSTs, these findings are likely relevant to all SOF medics because the study focused on the phenomenon of catastrophic injury exposure in austere environments.²

Our approach to *infrastructure development* may be disruptive because it evaluates the SOF medic’s practical skills as the most important aspect of change agency by which performance possibilities are transformed in real time. As such, pragmatic power to change the performance space amid SOF missions lies with those who utilize everyday pressures to attune and respond to organic beat structures across the deployment

*Correspondence to stlamazonia@gmail.com

¹Dr. Erika “Ann” Jeschke is affiliated with the SURVICE Engineering, Bechamp, MD. ²MAJ Jennifer Patton, Air Force Institute of Technology, Wright-Patterson AFB, OH. ³Jared Wyma-Bradley is the Director of Spiritual Care at Northern Virginia Mental Health Institute, Washington, DC. ⁴COL Jay Baker is affiliated with the U.S. Army Corps, Joint Base Lewis-McChord, WA. ⁵Col (Ret) John Dorsch is affiliated with the University of North Carolina Southeastern, Lumberton, NC. ⁶Lt Col Sarah L. Huffman is affiliated with the U.S. Air Force School of Aerospace Medicine-Air Force Research Lab, Wright-Patterson Air Force Base, OH.

cycle.³ These beat structures pre-reflectively contain, energize, mobilize, and initiate unconventional resilience allowing SOF medics to develop an increasingly intricate ability to rhythmically pattern and direct the force of movement toward peak performance experiences.^{4,5}

Kinetic Consciousness: Re-animating the Connection Between Conventional and Unconventional Resilience

In the first paper of this series, we illustrated that conventional resilience marries human performance to traumatic pathology in the aftermath of catastrophic injury exposure. This coupling is ensconced in a biomechanical, reductive infrastructure that understands all material matter—to include the human body—to be meaningless and inanimate. Human performance is idealized in relationship to an automated engine. Human character is idealized in relationship to clear reasoning.⁶ Consequently, the static “bounce back” theory of conventional resilience separates physical and mental performance into two essentially different categories.² The former understanding of performance is based on physical vectoring, while the latter is based on rational thinking.⁶ Powerfully projecting pure positive thinking toward adversity is thought to produce endurance. When one’s force of will properly functions, endurance allows one to return to a baseline character post adversity.²

Within the biomechanical, reductive infrastructure, physical performance is evaluated as change of location on a static Cartesian grid.⁶ The negative consequences of this mechanical understanding of movement are highlighted in the following quote:

When catastrophic injuries keep coming, people end up plugging into something like a computer grid. It feels like we can move endlessly through tasks, but the medical support becomes robotic. The more we run around, the harder it becomes to unplug from the grid. Even when we stop running, we cannot stop moving. When this happens, people reach a point of saturation, then they stop caring. They get angry. They have no motivation and a huge piece of humanity seems to be absent. They are present, but devoid of human presence.

Assuming the force of movement functions solely as location change *sans* substantive character change produces circular movement that is disconnected from self, other, and world. Simply vectoring in a static performance space does not enable dynamic freedom of maneuver in the face of constant catastrophic injury exposure.

Presenting physical performance as emotionless, mechanical, causality backed by clarity of human reasoning is not a culturally resonant way of explaining the SOF medic’s practical performance:

The first time you have an American in uniform bleeding out it becomes catastrophic combat injuries become a whole different experience. The level of emotional intensity that suddenly goes into trying to save this kid is indescribable. If that kid dies, we have to put a flag on the body and go through the personal items. Finding blood all over a picture of the deceased American’s family . . .

well . . . it is just god-awful. After my first experience of caring for an American that was killed, the next person I had to work on was the enemy who shot the American kid. A part of me was tempted to mistreat the second casualty. Even though I was angry and a part of me wanted revenge, after a tactical pause, I understood the bigger battle was not going to be won by hurting somebody who was catastrophically injured. Nothing will ever be gained from seeking revenge in that scenario. Everything is to be gained from sharing a sense of common dignity and kindness of heart, but it was really hard because every emotion in me wanted to lash out in anger.

The biomechanical, reductive infrastructure grossly oversimplifies the moral, interpersonal, emotional, and political adversity described in this quote. Reducing resilience to an individual’s ability to endure adversity through positive thinking, ignores the inherent animated reality of caring for catastrophic injury.

The biomechanical, reductive infrastructure also tends to narrowly focus training on the biomechanics of movement. Consequently, performance mastery is defined in relationship to industrial productivity.⁷ Motivation is driven by a desire to achieve perfect replication of performance outcomes under every condition. The negative impact of focusing performance training on biomechanical replication of perfect technique is highlighted in the following quote:

Our current medical capacity created an unquestioned expectation that if casualties arrive to us alive—no matter the circumstances—we should be able to save every life. If we’re doing things right in the SOF environment, we can’t mess up or it’s 100% failure. Death is our enemy and should never win. Death is failure. We had one American that didn’t survive. No one thinks about the hundreds we saved. The one situation where an American died really messed with our sense of technical capability. We questioned ourselves over and over. What did we do wrong? What could we do different? We seek to avoid failure by letting death fuel our desire to never make mistakes. Unfortunately, The truth is we can’t save everyone, casualties die even though it is rarely acknowledged. One casualty was shot in the side and arrived to us still awake, sitting up in the gurney, and talking. We knew the injury was un-survivable. We didn’t have a ton of supplies so we immediately said, “No we’re not giving blood. We’re done. This person is dying.” We made the decision to withhold treatment as the person was looking at us and talking. That’s hard . . . (tearful) . . . The expectation that we are all perfect at saving lives, causes us to live with terrible uncertainty. In some cases, teammates end up constantly questioning their medical decision-making which creates horrible paralysis. Other times, teammates simply leave medicine because the weight of thinking that technical perfectionism will combat death in SOF is too overwhelming to manage.

If medical productivity is saving all lives, then death destroys the SOF medic’s performance, because perfect biomechanical technique breaks down in the face of constant catastrophic injury exposure. Taken together, the biomechanical, reductive infrastructure sets up conditions that eventually lead to fatal performance degradation in SOF medicine.

By evaluating cultural conditions that led SOST medics to accept or reject new experiential opportunities, we were able to see how movement at an organizational, team, and individual levels impacted the ability to express dynamic freedom of maneuver in ambiguity (i.e., unconventional resilience).⁸ Our findings have consistently shown SOF medic practical performance to be grounded in a transformative process that integrates daily experiences of adversity across the deployment cycle when interacting with self, other, and the world. In being faithful to our findings, we suggest the need for a holistic, humanistic infrastructure that substantiates the importance of these findings and draws forward meaningful lessons learned from the development of conventional resilience.

Since our analysis focused on the force of movement, we turn to a holistic, humanistic infrastructure that is grounded in a classical Greek understanding of *kinesis*. According to this understanding of movement, all organic matter has inherent vitality, which acts as an integrative force that animates relational interdependence.^{9–11} The force of movement catalyzes and directs change agency in a kinesthetic social arena we call a *kinesphere*, wherein human practical performance is rooted in a tactile, hands-on exploration of a world alive with possibility.^{9,10,12} The following quote substantiates SOF medic practical performance as an integrated experience of moving within a kinesphere of animated relationality:

When we get a mass casualty it is like being in the center ring of a three-ring circus. There are so many different things happening all around us and everyone is going from this thing, to that thing, and then back again. We are paying attention to what is right in front of us and taking in the other realities that are happening all around. It all feels completely coordinated, even though it might seem like chaos to the outsider. Someone says, "This patient needs a chest tube!" Then instantly the right person moves to take care of that concern. Simultaneously, another team member realizes a different casualty needs an IV and 2 units of blood. Almost magically, the right people move that casualty into the operating room, without getting in the way of other team members who are triaging incoming casualties. We enlist the help of the SOF team when possible. Of course, there can be family members of local nationals that show up or partner forces concerned about their comrade-in-arms who have been injured. So, we are dealing with everyone's emotions, concerns and questions all while tending to the immediate needs of the catastrophically injured. There is a lot of movement involved, but we all seem to flow as one organism amidst a mass casualty. It's like we are instinctually attuned to our individual roles. From all of our training, we've also learned to intuit every team member's innate movement portfolio. We know how to sync up as a 6-person team with defined roles, but we can also switch in and out of roles because we cross-train so much. We constantly practice feeling our way through each other's bags and become intimately familiar with all the equipment. There is a high level of unity and inter-dependence that allows us to ingest the mood of the entire situation. As we move into the chaos, we experience the broader context while at the same time we are able to tune out unnecessary distraction. It's a very unique experience where time seems to slow down and we melt into the moment. Even though everything is happening all at once and it's

very intense, there is also a clarity of action. Almost like live jazz music where all the different musicians perceive a deeper rhythm and play off of one another's unique musical capabilities to perform a completely new piece in the moment.

As SOST medics move through a kinesphere dominated by catastrophic injury, they experience an immediate, inextricable co-presence of thinking and acting in real-time practical performance, which emerges as a synthetic process of appropriately responding to the value of animated relationships. We call this understanding of integrated practical performance *kinetic consciousness*.

To evaluate the force of movement, a static backdrop is necessary. Instead of using a static Cartesian grid, our holistic, humanistic infrastructure claims death as the static point of practical performance because death brings about the cessation of kinetic consciousness.¹³ As such, we are able to maintain a rich understanding of animation and interconnectedness when analyzing how the force of movement qualitatively influenced change agency. Our holistic, humanistic infrastructure does not deny the importance of clear reasoning grounded in rational thinking. We embrace this element of conventional resilience because an individual's ability to critically observe, analyze, and map opportunities is vital to the ultimate expression of dynamic freedom of maneuver, just not in real-time performance. Conventional resilience, therefore, provides a meaningful skill that is necessary for pre-performance planning and post-performance assessment.

By reanimating conventional resilience within a holistic, humanistic infrastructure, our findings illustrate that conventional medical experiences—in garrison and deployment—foster the development of unconventional resilience in the face of catastrophic injury exposure. The important animating connection between conventional and unconventional resilience is highlighted in the following quote:

Many experiences on the conventional side of the Air Force helped me understand SOST's role in SOF missions. Walter Reed was super busy going into 2011. One of the first wounded warriors I took care of was an Army ranger. He lost both of his legs and was turbo sick. Unfortunately, he did not make it . . . Experiencing death helped me appreciate life and the consequences of war. One Marine lost both legs and had a massive infection. No one could figure out if he had an anoxic brain injury or would wake up again. The clinical team proposed to dis-articulate his hips to give him a fighting chance. I remember this Marine's mom saying that there were fates worse than death. She chose to forego potentially life-sustaining surgery. We ended up withdrawing life-support and the Marine passed away in the ICU at Walter Reed. These experiences helped develop my ability to discern when death was immanent and whether withholding or withdrawing life-saving treatment was the best mode of caring for casualties. During a SOST deployment, we went on the first mission and one of the operators got shot. Even with all-hands-on-deck, we couldn't get blood into him fast enough. We had to ask: "What's the probability that this operator is going to survive?" I distinctly remember my teammate saying, "We don't need to warm anymore blood."

Conventional medical experiences increase the range of the SOF medic's capability in the face of catastrophic injury exposure and enhance their effectiveness during SOF missions. The practical implication of this finding suggests the importance of ongoing collaborations between conventional and SOF medics to properly prepare for SOF deployments. The theoretical implication of this finding suggests that an animated partnership between conventional and unconventional resilience enconced in a holistic, humanistic infrastructure will support operational effectiveness during SOF missions.

Medical-Martial Professionalism: Playing with Aristotle and the Auto-telic

Our philosophically versed readers will quickly note that we have been exploring practical performance within Aristotle's teleological worldview. However, teleology is potentially foreign to a portion of our audience. Therefore, we now explicate how particular elements of Aristotle's worldview inform our holistic, humanistic infrastructure. Aristotle, unlike the static bounce back theory,² assumes human character is always being formed in the process of integrating human experience in the kinesphere of social interactions.^{11,14}

The biomechanical, reductive infrastructure theorizes that mind and matter are essentially two different substances. In contrast, Aristotle theorizes that everything in the natural world—to include human beings—is an integration of vital form and matter, which contains the potential to change, mature, and develop.⁶ Every aspect of nature has an essential quality that moves toward an ultimate purpose, which Aristotle calls a *telos*. *Telos* has often been translated as the “end goal” of practical performance when describing human action in the world. However, it is better understood as the perfective aim that shapes human motivation and action. Human beings do not achieve their *telos*, they express their character by acting in accordance with their *telos*.¹⁵

Character maturation and development occur as individuals integrate life experiences while moving toward their perfective aim. The *telos* serves as the “true north” of practical performance,¹⁵ which is explained by the following quote:

Succeeding at SOF medicine means being the right individual. Maybe it's arrogant, but not everyone can come in, do the job, and be successful. Individuals who thrive in this environment have a number of commonalities. They are: calm in pressure, enjoy taking risk, love being in nature, work well in teams, drawn to caring for people in their worst hour, enjoy fast-pace of activities, and are creative problem solvers who do not have to rely on endless technology or need to be in a sterile environment to feel comfortable providing medical treatment. Most of us agree that there is a lot of joy and satisfaction to be gained from taking care of individuals in dangerous, austere, less than optimal conditions. Operational medicine is a very unique calling; especially, the things we did in SOST. Some would be horrified by the conditions in which we practiced our trade, but we got back to the essence of medicine—taking care of human beings in pain. The simplicity of this mission is substantive, it really helped us grow and develop personal and professional wisdom. Being drawn to caring for those in intense pain and formed to support a dangerous, dark, and dirty mission is not

easy, but the experiences enabled by this calling allowed us to develop discernment and wisdom.

Every participant in this research clearly articulated a “calling” to what they referred to as *dirt medicine*. Therefore, data strongly suggests the perfective aim of SOF medicine is caring for the catastrophically injured within the complex SOF *kinesphere*. This *telos* not only orients practical performance in SOF medicine but also gives rise to particular experiences that shape the character of SOF medics.

SOF medicine is part of the nascent medical-martial profession. Within Aristotle's teleological worldview, practical performance skills, also known as virtues, are associated with the *telos* of a particular professional community.¹⁵ Our analysis of the cultural values, norms, skills, and standards gave rise to nine agility traits, which we take to be potential virtues of the medical-martial profession. Virtues become stable patterns of thinking, feeling, and acting when training orients practical performance enhancement toward its explicated professional *telos*. If validated through further research, these agility traits could become core virtues in an emerging professional code of the Warrior Medic. The five social determinants function like an interstate system connecting real-world experiences that occur within the kinesphere of the medical-martial profession across the deployment cycle.

Within our holistic, humanistic infrastructure, unconventional resilience is not a character trait of the individual SOF medic, team, or organization. It is the state of *peak* performance, in which a particular way of being, thinking, or feeling—called an *auto-telic* experience—motivates the expression of dynamic freedom of maneuver in ambiguity. Csikszentmihalyi's theory of play defined the *auto-telic* experience as a state of flow in which practical performance is intrinsically motivated when contextual conditions support the individual's, team's, and organization's ability to strive toward their perfective aims. Creating an optimal balance between capability and challenge allows the individual, team, or organization to enter a hyper-focused performance state¹⁶:

We love dirt medicine. We thrive in an environment where we can organize and pattern chaos. When we respond to a mass casualty we automatically lock into a work-flow that allows us to zoom-in on critical details and simultaneously zoom-out on the global situation, which maximizes our ability to manage large numbers of catastrophic casualties. Most of us feed off this job and would constantly deploy if we could.

Professional satisfaction and enhancement are motivated by being in a flow state, which is experienced as a performance feedback loop that increases immersion with the task at hand, satisfaction in the immediate experience, and adaptivity in complex ambiguous environments.¹⁶

SOF Medic as Medical-Martial Artist

Our analysis highlights that the SOF medic, team, and organization are formed within a community of artisans who pursue performance mastery of their unique craft. The etymological definition of art is a person who is skilled at a craft. When practical performance is oriented toward the advancement of medical-martial artistry, technique supports authentic freedom of

expression. As such, our holistic, humanistic infrastructure does not ignore the value of technique, but it does not make technical perfection the evaluative criteria of practical performance.

Having placed the SOF medic's human experience—not mechanistic learning—center stage, our findings illustrate that medical-martial skills can be understood as a dancer¹⁷ that relies on fluid kinesthetic reasoning to interpret, problem-solve, and respond amid real-time practical performance.ⁱ Comparing the SOF medic's practical performance to the artistry of a dancer, helps elucidate the main aspect of our theory development; namely, that movement is the essence of all human performance.¹³ Moreover, dancers, like SOF medics, constantly refine their technical ability to express dynamic freedom of movement, which—in its purest performance state—is experienced as a revitalizing manifestation of flow in real-time performance.¹⁸ Since we based our theory development on movement, unconventional resilience, like dance, has the “potential to open up physical ways of creation, forms of action, and options for transformation.”^{18(p60)}

Classifying medical-martial skills as the foundation of artistic performance in a social kinesphere also elucidates a critical hypothesis that has emerged from this study. Dancers structure their dynamic freedom of maneuver around nuanced attunement to and interpretation of beat structures and rhythmic patterns in music. This ability to express dynamic freedom of maneuver through a refinement of musicality provides a structure that allows ambiguity to foster connection to oneself, other dancers, and an audience.¹⁹ As such, we hypothesize that organic beat structures ground, orient, activate, attune, and synergize real-time performance in SOF medicine across all levels of unconventional resilience.⁵ If this hypothesis is accurate, then training the ability to rhythmically pattern beat structures involved in medical-martial skills will be essential to developing, maintaining, and enhancing unconventional resilience.

Tactical Function of Art

During data collection, the research team noticed that the vast majority of participants maintained at least one intimate relationship with a professional artist. So, we began to ask the question: “What form of art do you like?” The responses were both unexpected and overwhelming:

I love art. Is that weird that I love art? It could be music, painting, or prose. It could be science, cooking, or woodworking. Art is an individual's way to express their personal interpretation of an environment. I remember being saturated with painting, after painting, after painting walking through museums in Europe. The beauty was so therapeutic. Recently, I saw a Van Gogh exhibition and realized he was a lot like me. The story was all in his paintings. Gosh, I don't even know why I went down that path of conversation, other than I just started thinking about art and how much I love art.

This finding suggests that the personal reception of art also plays a tactical role in supporting practical performance. Reception of art seems to allow the SOF medic to connect to and unleash deeply held energies that emerged from the exposure

to catastrophic injury. In other words, the reception of art enables the recovery of unconventional resilience after the human experience of war.

Conclusion: The Pragmatic Value of a Holistic, Humanistic Infrastructure

The pragmatic value of our holistic, humanistic infrastructure is that it enables cohesive integration of our theory development at all levels of unconventional resilience. As the medical-martial profession matures, this infrastructure will support the development of an *energetically nimble* culture. This agility trait organizes the kinesthetic and proprioceptive elements of everyday experience around the ability to attune, interpret, and appropriately respond to the nuanced rhythmic patterns entailed in SOF missions. An *energetically nimble professional community* predicated on the SOF medic's practical wisdom, born from catastrophic injury exposure, will also enable fluid integration of SOF medicine into the SOF mission.

Author Contributions

EAJ conceived of this study and wrote the protocol. SLH obtained funding and IRB. JD acted as liaison to the Air Force Special Operations community in specific the 24 Special Operations Wing and Special Operations Surgical Teams. JD also orchestrated all approvals for field observations. EAJ recruited participants, collected and analyzed interview, data, and drafted the initial taxonomy of themes. JD served as AFSOC medical expert during data analysis process. EAJ and JP wrote the first draft of this paper. JWB provided substantive feedback to second draft. JB served as military medical expert in redacting findings. All authors read and approved the final manuscript.

Disclosures

Jay Baker, Jennifer Patton, Jared Wyma-Bradley, John Dorsch, and Sarah L. Huffman have no financial relationship to this study. Erika Ann Jeschke served as the Senior Lead Research Scientist on this project and was paid through the following contracting companies: Parsons Corporation, ABSS Solutions, Inc. / 1st American Systems and Services, LLC, Innovative Employee Solutions (IES), SURVICE Engineering.

Disclaimer

The Public Affairs Office, United States Air Force 60th Medical Group at Travis, AFB has approved this publication for universal distribution. The AFRL's Institutional Review Board approved the study as an exempt protocol (# FWR20200104) in August 2020. The information, content and/or conclusions do not necessarily represent the official position or policy of AFRL-USAFSAM, the Department of Defense, or the U.S. Government.

Funding

This research is sponsored by funding (# FU 20-042) from the Air Force Research Lab-U.S. Air Force School of Aerospace Medicine (AFRL-USAFSAM) through the Studies and Analysis Program.

References

1. Lepecki A. *Of the Presence of the Body: Essays on Dance and Performance Theory*. Wesleyan University Press; 2004. Accessed August 8, 2024. <https://books.google.com/books?hl=en&lr=&id=>

i. We believe this holistic, humanistic metaphor better describes the practical performance of the SOF medic, team, and organization than the biomechanical, reductive metaphor that describes practical performance in relationship to a robot that relies on rigid algorithmic reasoning to interpret, problem-solve, and respond amid real-time performance.

- WwK-lFzmAhAC&oi=fnd&pg=PP9&dq=on+the+presence+of+the+body&ots=35achQ5iof&sig=L5WcW_X3GhUddngrEXQavBkcrtw
2. **Jeschke EA, Baker JB, Wyma-Bradley J, Dorsch J, Huffman SL.** Conventional resilience and the impact of catastrophic injury exposure on special operations surgical teams. *J Spec Oper Med.* 2023;23(2):102–106. doi:10.55460/FHIP-DWHB
 3. **Ockelford A.** Zygonic theory: introduction, scope, and prospects. *Zeitschrift Der Gesellschaft Für Musiktheorie.* 2009;6(1):91–172.
 4. **Judge J.** ‘Feeling the beat’: multimodal perception and the experience of musical movement. In: Cheyne P, Hamilton A, Paddison M, eds. *The Philosophy of Rhythm: Aesthetics, Music, Poetics.* Oxford University Press; 2019:76.
 5. **Large EW, Roman I, Kim JC, et al.** Dynamic models for musical rhythm perception and coordination. *Front Comput Neurosci.* 2023;17:1151895. doi:10.3389/fncom.2023.1151895
 6. **Losee J.** *A Historical Introduction to the Philosophy of Science.* 4th Ed. Oxford University Press; 2001.
 7. **Quinlan M.** Training neoliberal dancers. In: Huschka S and Gronau B, eds. *Energy and Forces as Aesthetic Interventions: Politics of Bodily Scenarios.* transcript publishing; 2019:137–154.
 8. **Jeschke EA, Baker JB, Wyma-Bradley J, Dorsch J, Huffman SL.** Unconventional resilience: a strategic framework. *J Spec Oper Med.* 2023;23(3):58–62. doi:10.55460/2W3U-2XHB
 9. **Kosman LA.** Aristotle’s definition of motion. *Phronesis.* 1969;14(1):40–62.
 10. **Sheets-Johnstone M.** Thinking in movement: further analyses and validations. In: Stewart J, Gapenne O, Di Paolo ES, eds. *Enaction: Toward a New Paradigm for Cognitive Science.* The MIT Press; 2010. doi:10.7551/mitpress/8629.003.0007
 11. **Sheets-Johnstone M.** *The Phenomenology of Dance.* Arno Press; 1980.
 12. **Gapenne O.** Kinesthesia and the construction of perceptual objects. In: Stewart J, Gapenne O, Di Paolo ES, eds. *Enaction: Toward a new paradigm for cognitive science.* The MIT Press; 2010. doi:10.7551/mitpress/9780262014601.001.0001
 13. **Sheets-Johnstone M.** The ineluctable modality of movement: its everyday and aesthetic presence. *The Journal of Speculative Philosophy.* 2022;36(1):1–33.
 14. **Huschka S, Gronau B, eds.** *Energy and Forces as Aesthetic Interventions: Politics of Bodily Scenarios.* transcript publishing; 2019.
 15. **Johnson MR.** *Aristotle on Teleology.* Clarendon Press; 2005. Accessed August 8, 2024. <https://books.google.com/books?hl=en&lr=&id=3BFREAAQBAJ&oi=fnd&pg=PR7&dq=aristotle+four+causes+teleology&ots=I2RiWyj-Vp&sig=1-EEykqJCPdzmyY9r0T0v5-gMw>
 16. **Csikszentmihalyi M.** *Beyond Boredom and Anxiety: Experiencing Flow in Work and Play, 25th Anniversary Edition.* Jossey-Bass; 2000.
 17. **Bartenieff I, Lewis D.** *Body Movement: Coping with the Environment.* Routledge; 2013. Accessed August 8, 2024. <https://www.taylorfrancis.com/books/mono/10.4324/9781315025445/body-movement-irmgard-bartenieff-dori-lewis>
 18. **Huschka S.** Aesthetic scenarios of energeia: bodies as transformational fields of force. In: Huschka S, Gronau B, eds. *Energy and Forces as Aesthetic Interventions: Politics of Bodily Scenarios.* transcript publishing; 2019. doi:10.14361/9783839447031-004
 19. **Juntunen ML, Hyvönen L.** Embodiment in musical knowing: how body movement facilitates learning within Dalcroze Eurhythmics. *British Journal of Music Education.* 2004;21(2):199–214.

PMID: 40294098; DOI: 10.55460/Q4T9-JT45

The Special Operations Medical Association's Official Journal



JSOM

JOURNAL of SPECIAL OPERATIONS MEDICINE™



Summer 2025
Volume 25, Edition 2

THE JOURNAL FOR OPERATIONAL MEDICINE AND TACTICAL CASUALTY CARE



Inside this Issue:

- › FEATURE ARTICLES: Maintaining, Storing, and Transporting Cold Whole Blood
- › fNIRS-differentiated Marksmanship Performance
- › Double-Trunk Mask for Efficient Oxygen Delivery
- › A Review of JSOM Articles on Ultrasound Use by SOCM
- › End-user Assessment of i-view
- › Arctic or Extreme Cold Casualty Care Considerations
- › IN BRIEF: Tool to Evaluate Tactical Combat Casualty Care in the Cold
- › CASE REPORTS: Intraoral Neuroprosthesis for PTSD-Associated Nocturnal Behavior Disorder
- › Undersea and Hyperbaric Medicine
- › RHD and Valve Placement in an SOF Soldier
- › ONGOING SERIES: Law Enforcement & Tactical Medicine, Prolonged Casualty Care, There I Was, Unconventional Medicine, Unconventional Resilience, Book Review, and more!

*Dedicated to the
Indomitable Spirit,
Lessons Learned &
Sacrifices of the
SOF Medic*

A Peer Reviewed Journal That Brings Together The Global Interests of Special Operations' First Responders