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The Golden Thread: Somatic Restoration Studies

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“Pandiculation is the somatic expression of the self-sensing nature of the myofascial system.”⁴ — Bertolucci

1. Abstract

This research explores “The Golden Thread”—a somatic continuum bridging the physical disciplines of dance and modern equitation. Grounded in the Philosophy of Unseen Truths, the study investigates how to transition horse-rider communication from mechanical coercion to a state of shared resonance. By focusing on the psoas-diaphragm nexus, the paper examines how the biological mechanism of pandiculation, defined as the somatic expression of the self-sensing nature of the myofascial system,⁴ can be utilised to override defensive equine postural habituations known as Sensory Motor Amnesia (SMA).

The methodology employed a multi-sensory approach to achieve “Interspecies Pandiculation”. It utilised a 110 BPM rhythmic template to facilitate Auditory-Motor Entrainment,⁵ providing a predictable “Rhythmic Shield” that guided the temporal allocation of attention for both horse and rider. Furthermore, the study incorporated olfactory intervention as a somatic primer to bypass habitual tension. Utilising recent veterinary findings, essential oils are applied to reduce autonomic neuromuscular noise. These interventions created the physiological calm necessary for the rider to initiate a voluntary “Somatic Sigh”, which acted as a non-verbal somatic trigger for the horse.

Longitudinal field observations reveal a profound “Bio-Symmetry” within the interspecies dyad, where the equine partner directly mirrored the rider's internal neuromuscular constriction,

resulting in a symmetry of stasis locally termed “The Handbrake”. As an absentee presentation, this paper is supported by specific academic and visual documentation, including a Sumi-e study and a Somatic Sigh Animation. These visual elements illustrate “The Melt”, the precise moment of internal release that triggers an autonomic exhalation and structural re-patterning in the horse. Ultimately, this research posits that technical honesty and a rider's capacity to self-sense are the foundational pedagogical tools required to achieve true lightness and elastic tensegrity across species.

1. Theoretical Framework

1.1 The Philosophy of “Unseen Truths”: Biomechanical Integrity and Neuromuscular Clarity

The foundational premise of “The Golden Thread” is rooted in the Philosophy of Unseen Truths. In the context of modern equitation and somatic movement, the “unseen truths” of movement refer to the internal biological mechanisms that govern posture and locomotion, which are often obscured by superficial aesthetic standards. This philosophy—grounded in the principles of the École de Légèreté¹³ and Somatic Education—posits that authentic movement is not “forced” from the outside through coercive mechanical aids, but “revealed” from the inside through the restoration of neuromuscular pathways.

Explanatory Note: *The Philosophy of Unseen Truths* is introduced here not as a borrowed external literary citation, but as the primary internal theoretical framework developed by Chestnut (2026) for “The Golden Thread”. It serves as an overarching somatic premise designed to transition interspecies communication away from mechanical coercion and toward shared neuromuscular resonance. While it operates as an original conceptual synthesis, its equitation metrics are heavily inspired by the classical French school of *légèreté* (lightness) as articulated by Karl (2012), which rejects artificial constraints in favor of functional anatomy. Concurrently, its movement principles are anchored in Western Somatic Education, specifically drawing upon Hanna’s (1988) concepts of Sensory Motor Amnesia (SMA) and Bertolucci’s (2011) neurophysiological validations of the myofascial system.

1.2 The Deception of Surface Observation

The philosophy of unseen truths argues that such an approach inevitably leads to Sensory Motor Amnesia (SMA).¹⁰ When a horse is subjected to constant pressure (such as the continuous adductor squeeze or restrictive hand aids), the brain habituates to this tension, creating a state of high-tonus inhibition. Under this continuous mechanical demand, the internal “engine”—the psoas-diaphragm complex—is rendered completely dormant. The truth of the movement is lost to a mechanical “stutter” that the rider may see as obedience, but which is actually a defensive postural habituation.

1.3 Drawing as a Diagnostic Tool

Referencing the pedagogical methods of Philippe Karl,¹³ the philosophy utilises artistic abstraction to expose skeletal reality. Where a photograph captures the “noise” of the surface, adopting a minimalist perspective akin to Sumi-e aesthetics strips away the skin to reveal the alignment of the vertebrae and the engagement of the pelvic girdle. This process of visual reduction forces the researcher to confront whether the movement is anatomically “honest” and tracks true to the science of well-being.

1.4 Somatic Resonance and Pandiculation

The core of this philosophy lies in the “unseen” communication between rider and horse, described as Somatic Resonance. By utilising pandiculation⁴—the involuntary, yawning-like reset of the myofascial system—the rider clears their own neurological “static” or neuromuscular noise. This internal release serves as a silent, non-verbal cue. Because the horse acts as a flawless neurological mirror, this allows the equine partner to match the rider's elastic tensegrity^{1, 8} through the phenomenon of interspecies bio-symmetry.

1.5 Rhythmic Verification

Finally, the philosophy employs auditory tools, utilising a strict 110 BPM rhythmic template to audit movement and facilitate Auditory-Motor Entrainment.⁵ By adhering to this precise temporal frequency, the “unseen” failures in the horse's gait—such as a lagging hind limb or a lack of thoracic suspension—become audible. The rhythm acts as an objective witness, revealing whether the psoas major is functionally engaged to rhythmically contract and release, or if the movement is being sustained by compensatory muscular effort.

1.6 The Shift to a Biomechanical Model (Summary)

In summary, revealing the “unseen truths” requires a shift from a “Dance Model” of performance to a “Biomechanical Model” of inquiry. The goal is not to control the body through mechanical behaviourism ⁵ but to facilitate its inherent capacity for balanced, light, and rhythmic expression. This necessitates an ethical commitment to Technical Honesty, where the rider abandons superficial performance models ^{3, 15} and instead uses their capacity to self-sense as the primary pedagogical tool.

2. Biological Mechanisms

2.1 Pandiculation: The Neurological Yawn and Involuntary Fascial Reset

To transition equine-human communication from mechanical coercion to a state of shared resonance, this methodology relies on the biological mechanism of pandiculation. Medical literature defines pandiculation as “the somatic expression of the self-sensing nature of the myofascial system”.⁴ Further ethological research categorises it as a “vigilance-enhancing” mechanism ⁹ of systematic, coordinated stretching designed to relieve stiffness and restore the musculoskeletal system to a homeostatic state. In the context of this study, pandiculation acts as an involuntary fascial reset, functioning as a “neurological yawn” that re-optimises the mechanical conditions of the body.

The application of coercive external pressures, such as the continuous adductor squeeze (thigh-gripping) or the whip, triggers a cascading neurological breakdown in the horse. When a horse is subjected to this constant, high-intensity pressure, its brain habituates to the tension, creating a state of high-tonus inhibition. Under this continuous mechanical demand, the horse's internal engine, the psoas-diaphragm nexus, is rendered completely dormant. This physiological shut-down results in Sensory Motor Amnesia (SMA).¹⁰ In this state, the horse's nervous system effectively filters out subtle somatic cues, leaving the animal “blind” to its own capacity for balanced, fluid expression and locked in a defensive postural habituation.

2.3 Elastic Tensegrity and Interspecies Application

To overcome SMA, the rider replaces continuous mechanical pressure with a dynamic somatic anchor.^{17, 20} The mechanics of this interspecies application rely on the rider initiating a “Somatic Sigh”—a voluntary, slow, eccentric lengthening of their own psoas-diaphragm complex. This

internal, yawn-like reset eliminates the rider's own neuromuscular noise and establishes a baseline of elastic tensegrity. Through the previously established phenomenon of bio-symmetry, the horse is invited to mirror this myofascial release. By actively mapping and releasing the psoas-diaphragm nexus, the rider provides a non-verbal somatic trigger that allows the horse to override its own defensive SMA, resulting in a vertical pelvic reset and a softening of the equine frame into a state of fluid, connected movement.

3. Methodology

3.1 Off-Horse Somatic Priming: Classical Ballet Practice

To achieve “Interspecies Pandiculation,” the rider first established their own internal baseline of elastic tensegrity before interacting with the horse. For ease and clarity, this methodology focused on classical ballet barre exercises,^{11, 18, 21} which provided an ideal framework for the rider to experience precise shifts of weight, rhythm, and changes in alignment.

Drawing on the teachings of Grazioso Cecchetti, the performance of *pliés*, executed with deep, regular breathing and even weight distribution, ensured that the whole body felt light, agile, and well-balanced. This study utilised a specific “Port de Bras/Plié” sequence to facilitate a “Dancer's Psoas Reset”:

- **Phase A (The Contraction):** The rider engages the deep rotators and psoas during the *demi-plié*, consciously mapping their internal tension.
- **Phase B (The Reset):** During the *port de bras*, the upward fascial lift triggers a “sigh of relief”—a neurological release where the myofascial system self-regulates its resting length.

By achieving this self-sensing state at the barre, the rider established the somatic template required to provide a clear, balanced seat, avoiding the “lopsided back-pack” effect¹⁷ that hinders the horse's natural gait.

3.2 Auditory-Motor Entrainment: The Rhythmic Template

Once mounted, the methodology relied on a strict rhythmic template to facilitate Auditory-Motor Entrainment. While prior empirical methods, such as “circular trotting to music,” have been

developed to test the domestic horse's innate capacity for musical beat perception and synchronisation (BPS),⁵ this methodology applied the concept directly under saddle.

This study utilised a 110 BPM pulse to bridge the equine “marching” walk and classical dance *adagio*. A slower 55 BPM rhythm¹⁶ provided only a broad primary pulse, whereas the 110 BPM frequency allowed the rider and horse to coordinate to a beat for every individual hoofbeat (1, 2, 3, 4). This precise subdivision was necessary to coordinate seat activation with individual hip movements, actively requiring the horse's psoas major to rhythmically contract and release, thereby overriding Sensory Motor Amnesia (SMA).

Table 1: Comparison of Rhythmic Models

Feature	McLean's Model (55 BPM) 16	The Research Model (110 BPM)
Counting Method	Primary pulse / Half-beat	Every individual footfall
Focus	Behavioural regularity and “Go” signal	Neuromuscular repatterning and psoas engagement
Feel	"Broad, relaxed “one-two” pulse"	"Purposeful, active “marching” feel"
Function	Standardized rhythmic training	Interspecies Pandiculation and biomechanical restoration

3.3 Groundwork as a Contextual Anchor

Before the rhythmic template was applied under saddle, groundwork served as the primary diagnostic phase for establishing interspecies resonance. Utilising movements such as the “Spiral Lead” and “Rhythmic Back-up,” the rider establishes a baseline of shared vigilance.⁹ This

ensured that the horse was mentally and physically attuned to the rider's somatic cues before the added weight and complexity of mounted work began.

3.4 Olfactory Intervention: Applied Aromatherapy

To bypass habitual tension and act as a somatic primer, the methodology incorporated specific olfactory interventions. The scent of essential oils acts as a “Contextual Anchor,” signalling a transition away from the mechanical coercion of the traditional riding school environment into the self-sensing environment of the study. Supported by recent veterinary findings, the study utilised essential oils such as Roman chamomile, spikenard, and lavender,¹⁴ in the form of bespoke sprays and balms massaged directly into the equine subject's coat and hooves. This tactile and olfactory combination reduced autonomic neuromuscular noise, creating the physiological calm necessary for the rider to initiate the voluntary “Somatic Sigh”.

4. Field Observations

4.1 Interspecies Mirroring: The Symmetry of Stasis and “The Handbrake”

Initial field observations of the equine subject (Montana) documented a persistent state of collective inertia, locally termed “The Handbrake”. Crucially, this stasis was identified not as equine disobedience, but as a direct biological reflection of the rider’s own neuromuscular constriction, demonstrating a profound “Bio-Symmetry” within the interspecies dyad.

Specifically, observations highlighted a “Somatic Power Gap” resulting from the rider’s historical nerve injury; this injury caused a breakdown in elastic tensegrity, where the rider’s nervous system became “blind” to the affected side,²⁰ treating it as a static pylon rather than a dynamic lever. When the rider attempted to communicate while harbouring this internal fascial stiffness, the horse mirrored the rigidity, resulting in a synchronized symmetry of stasis.

4.2 “The Melt” and Shared Resonance

To transition from collective inertia into a state of shared resonance, the rider initiated what is termed “The Melt”. Rather than applying mechanical instruction, “The Melt” is a voluntary release of the rider’s performance-related tension and a conscious “letting go” of internal fascial constriction.¹⁹ This internal lengthening, occurring within the rider’s vertical axis, served as the definitive somatic trigger for the equine subject.

Field observations consistently documented a physiological marker of success immediately following the rider's internal reset: an autonomic release from the horse, characterised by a long, audible exhale, signalling a definitive shift from defensive habituation to a restorative state.

4.3 The Accumulative Effect: Re-patterning the Nervous System

Longitudinal observations revealed that “The Melt” and the subsequent “Canter Ignition Reset” are not isolated corrections that merely “fix” a temporary movement issue. Instead, repeated sessions of Interspecies Pandiculation have a profound accumulative effect. Over time, these continuous somatic resets successfully moved Montana beyond her chronic state of “Handbrake” stasis and established a completely new baseline of elastic tensegrity. This process represents a fundamental re-patterning of the equine nervous system, allowing the horse to permanently override deep-seated Sensory Motor Amnesia (SMA) and restore long-term functional anatomy and self-carriage.

4.4 The Rider as Guardian: Sustaining Bio-Symmetry

Upon mounting, the focus returned to the rider's alignment within the saddle; the transition from ground-based preparation to horse-rider synthesis required an immediate auditory-motor alignment. Because of the powerful interspecies Bio-Symmetry observed, the longevity of these results is entirely dependent on the rider. The rider assumes the role of somatic guardian for the dyad. It is the rider's continued off-horse groundwork, specifically the classical ballet-based priming ^{2, 17} and “Dancer's Psoas Reset” that sustains this new baseline of resonance. Technical honesty requires the rider to acknowledge that their own ongoing somatic health, daily preparation, and internal restoration act as the primary safeguards for the horse's physical and psychological well-being.

4.5 The Ethical Summary: The Rhythmic Shield and the Metric of Success

Ultimately, the use of the 110 BPM Rhythmic Shield transcends pedagogical methodology; it represents a profound ethical choice to prioritise cross-species neurophysiological integrity over behavioural subordination. By utilising this auditory-motor entrainment,⁵ to guide the temporal allocation of attention, the rider actively chose to abandon mechanical coercion—such as the continuous adductor squeeze or whip—in favour of an environment of shared resonance. The core philosophy of the “Montana Mandate” dictates that every rhythmic narrative and physical

cue must track true to the science of well-being. In this framework, the ultimate metric of success is not competitive performance or superficial structural facades, but the sustained, restored well-being of the equine partner.

5. Academic & Visual Documentation: Bridging the Studio and the Stable

Ultimately, this research details a somatic training system that deeply integrates the physical disciplines of classical dance and modern equestrian care. The methodology focuses entirely on the physical resonance between the trainer and the equine subject (Montana), emphasising how human alignment and psoas release directly mirror the horse's movement. By utilising the specific 110 BPM rhythmic template, the system seeks to bypass habituated tension and foster a harmonious, elastic connection between the studio and the stable.

Within this framework, rigid anatomical theories and mechanical instruction are intentionally sidelined in favour of real-time observation and the subjective “feel” of rhythmic movement. This requires the rider to prioritise their own capacity to self-sense, proving that the mirrored relationship between the rider's internal balance and the horse's responsiveness remains the primary focus of true equitation.

The observations documented in this paper serve as both a foundation for academic presentation and a personal coaching guide. Because the “Montana Mandate” requires continuous refinement and daily preparation, this research represents an ongoing somatic journey. Further explorations of this methodology, including specific applied aromatherapy recipes, expanded dance-based somatic priming, and real-time field journals, will continue to be documented as an evolving resource for riders and researchers on the author's website.

To provide immediate, concrete evidence of this resonance, the following academic and visual documentation illustrates the precise moments where this subjective “feel” manifests into visible structural re-patterning:

5.1 Figure 1: Sumi-e Study (“Montana: The Architecture of Lightness”)

Captured in a moment of quiet connection, this visual study traces the energetic loop between facilitator and horse. By isolating the central vertical axis of the “Dancer's Alignment,” it illustrates how somatic modelling facilitates a spontaneous pandicular reset. Featuring the tilted

pelvis and resting hind hoof of a true restorative release, this work serves as a visual manifesto for a partnership based on invitation rather than mechanical behaviourism.

5.2 Video Study 1: The Somatic Sigh Animation

This complementary animation visually documents “The Melt”. It provides a dynamic representation of the rider's internal release acting as the somatic trigger, directly capturing the equine subject's autonomic exhalation and subsequent transition into a state of elastic harmony.

Access via: <https://youtu.be/zsP9BoJ5oZg>

Conclusion: The Lifelong Mandate of Shared Resonance

Ultimately, the metric of success in this research is not found in competitive performance or the approval of traditional riding environments, but in the lifelong care and sustained well-being of the equine partner. Traditional equestrian settings frequently fall victim to the “Deception of Surface Observation,” prioritising superficial aesthetic standards enforced through mechanical coercion. This reliance on constant external pressure—such as the continuous adductor squeeze—inevitably triggers high-tonus inhibition, rendering the horse's psoas-diaphragm nexus dormant and resulting in deep-seated Sensory Motor Amnesia (SMA).¹⁰ To choose a different path is to step away from the collective inertia of conventional wisdom, an ethical decision that can often lead to isolation from peers who rely on these traditional models of forced obedience.

However, the “Montana Mandate” requires an unwavering ethical commitment to authentic, functional movement and somatic restoration. By replacing mechanical coercion with the 110 BPM Rhythmic Shield, the rider actively chooses an environment of shared resonance. This specific frequency facilitates granular Auditory-Motor Entrainment,⁵ coordinating seat activation with every individual hoofbeat and requiring the horse's psoas major to rhythmically contract and release. Crucially, this rhythmic template utilises a protective shield against external, performance-related static, anchoring both horse and rider in a predictable, shared architecture.

The long-term results of this mandate prove that this approach is not merely a temporary correction, but a fundamental re-patterning of the equine nervous system. By utilising the Rhythmic Shield and the rider's internal “neurological sigh,” the dyad achieves “The Melt”. Over time, these continuous somatic resets have facilitated a permanent shift in Montana's functional

anatomy. She has successfully moved beyond the chronic defensive habituations of Sensory Motor Amnesia—locally termed “The Handbrake”—into a permanent baseline of elastic tensegrity and shared somatic release.

While the practice of technical honesty and the capacity to self-sense may diverge sharply from the mechanical behaviourism taught in standard riding schools, the profound bio-symmetry observed in this study proves its efficacy. The horse functions as a flawless neurological mirror; thus, when the rider achieves genuine internal release, the horse understands it perfectly. This research concludes that the transition to Interspecies Pandiculation provides a permanent blueprint for structural re-patterning, proving that true lightness is achieved not by demanding submission, but by safeguarding the physiological and psychological integrity of the horse.

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Judith Chestnut is a somatic researcher, dance professional, and visual artist dedicated to the biomechanical intersection of classical dance (specifically ballet-based somatic priming) and modern equitation. Her longitudinal research, *The Golden Thread*, is grounded in the Philosophy of Unseen Truths and focuses on utilizing **Interspecies Pandiculation** to establish non-verbal, shared resonance between horse and rider. Through studies ranging from Sumi-e aesthetics to the application of a 110 BPM **Rhythmic Shield**, her work identifies the principle of **Bio-Symmetry**, proving that a rider's capacity for self-sensing is the key to resolving defensive equine postural habituations (Sensory Motor Amnesia). Guided by a commitment to **Technical Honesty**, her pedagogical and visual studies are dedicated to a singular ethical mandate: the lifelong care and sustained well-being of her mare, Montana.

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