Frontiers in Arts, Humanities
& Social Sciences

Ritual, Commodity, and Incubator of Pseudoscience: A Sociological Critique on the Proliferation of the Functional Movement Screen (FMS)

FANGHAO LI[1)†], YIWEN HUANG[2)], MANHUA ZHOU[3)], YUE CUI[4)]

1）.Faculty of Sport Science and Coaching, Universiti Pendidikan Sultan Idris, Tanjong Malim, Perak Malaysia；2）.Department of Sport Rehabilitation Training, Hoseo University, Asan-si, Chungcheongnam-do, S. Korea；3）.Ninety Nice Fitness Center, Shanghai, China；4).Senior Independent Fitness Trainer, China

Abstract Initially conceptualized as a protocol for assessing fundamental movement patterns, the Functional Movement Screen (FMS) was historically lauded as the "gold standard" in injury prevention. Yet, contemporary high-quality, evidence-based sports science has rigorously exposed its profound lack of empirical validity in injury prediction and precision training, revealing distinct hallmarks of pseudoscience. Eschewing mere technical reductionism, this paper employs a sociological lens to interrogate the paradox of how a framework fundamentally lacking rigorous empirical backing could achieve such pervasive, transnational diffusion throughout modern athletics, clinical rehabilitation, and the broader fitness industry. Our findings suggest that the global hegemony of the FMS is a synergistic byproduct of monopolistic corporate structures, the commercial over-packaging by proxy agencies, late modernity's blind fetishization of scientism, and the institutionalized adoption of defensive risk-avoidance strategies by practitioners.

Keywords FMS；Functional Movement Screen；Pseudoscience；Sociology of Sports；Certification Economy；Society of the Spectacle

Received: July 2, 2026
Revised: July 21, 2026
Accepted: July 24, 2026
Published: July25, 2026

DOI：10.67148/fahss-2026-242

1. Introduction: The Gap Between the Myth of Science and Reality

Concomitant with the rapid advancement of modern technology, human physical activity levels have progressively declined relative to historical baselines, thereby elevating the structural significance of exercise in the twenty-first century. Beyond the domain of competitive athletics, diverse modalities of physical exercise are now widely deployed across three core public health domains: acute disease intervention, chronic disease management, and geriatric fall and injury prevention [1-3]. Within the realm of pre-exercise screening and risk assessment, the Functional Movement Screen (hereafter

†Correspondence Author．All authors contributed equally to this work and should be considered co-first authors.

FMS) has emerged as the most widely recognized and globally disseminated evaluation instrument.

The FMS once constructed a compelling myth: by evaluating seven fundamental movement patterns, it yields a composite score ranging from 0 to 21—or permits discrete movement performance assessments—to predict an individual's susceptibility to sports-related injuries. However, as sports biomechanics and epidemiological research have advanced, this myth has rapidly unraveled. A substantial body of systematic reviews, meta-analyses, and empirical trials demonstrates no statistically significant causal relationship between FMS composite scores and actual injury incidence [4, 5]. In essence, the FMS constitutes a pseudoscientific practice that oversimplifies the complex bio-dynamics of the human organism while remaining conspicuously unsupported by high-certainty evidence.

Yet this empirical disconnect gives rise to a deeply evocative sociological paradox: if an assessment tool is scientifically untenable, why does it remain firmly entrenched across commercial fitness facilities, professional sports franchises, and academic curricula? Manifestly, the enduring vitality of the FMS resides not in laboratory validation, but rather in intricate socio-institutional mechanisms that sustain its legitimacy and diffusion.

2. Symbolic Construction by Commercial Capital: The Certification Economics of FMS

2.1 Manufacturing "Epistemic Anxiety" and Class Stratification

The pervasive dissemination of the Functional Movement Screen is attributable, first and foremost, to the sophisticated commercial marketing strategies deployed by its parent entity, Functional Movement Systems, Inc. Far beyond the mere promotion of an assessment tool, this represents a meticulously engineered "certification economy." Through the analytical lens of Pierre Bourdieu's Field Theory, commercial markets encompassing modern sports, fitness, and clinical rehabilitation constitute a specific field defined by ongoing struggles for power and legitimacy [6, 7]. Within this field, practitioners' discursive authority and professional survival prospects are contingent upon the volume of "cultural capital" they command. FMS Inc. acutely capitalized on this structural dynamic; leveraging a deliberate commercial architecture, it transformed a movement screening tool fundamentally lacking empirical substantiation into a form of "symbolic capital" endowed with a monopolistic status of legitimacy, thereby orchestrating a systematic valorization of capital across the entire industry.

By establishing a rigid, tightly interconnected multi-tiered certification system—comprising Level 1, Level 2, and various derivative course credentials—FMS Inc. artificially manufactured a hierarchical "epistemic anxiety" within the profession. In its marketing discourse, non-certified trainers were implicitly metaphorized as "unqualified novices groping in the dark," whereas credential holders were invested with a professional aura of "possessing a systematic, holistic perspective." Sociologically, this mechanism functions as an institutionalized monopolization of legitimacy. To avoid marginalization amidst intense intra-industry hyper-competition, practitioners found themselves trapped in a vicious cycle of "compulsory consumption driven by anxiety

alleviation." FMS certification ceased to signify mere skill acquisition; rather, it evolved into a defensive investment essential for professional survival.

Through this filter of step-by-step certification advancement, the FMS successfully established a distinct hierarchical chain of contempt among trainers and therapists. Upstream "professional elites," holding multiple official FMS credentials and fluently deploying jargon such as "kinetic chain," "functionality," and "motor control impairment," commanded dominant discursive power within the field. Downstream "traditional trainers," who relied on empirical experience or conventional strength and conditioning backgrounds, were marginalized under this new discursive regime, reduced to a "subaltern labor force" ostensibly lacking modern scientific literacy.

This intra-industry stratification fundamentally represents a form of symbolic violence inflicted by capital upon the natural ecology of the profession. It compels historically diversified experiential practices to acquiesce to a highly formatted, unscientific commercial standard. When confronting external mass consumers—e.g., gym members and patients—this internal stratification is further amplified. Intricate testing protocols, replete with color-coded plastic dowels, measuring calipers, and counter-intuitive scoring rubrics, constitute what sociologists term sanctifying professional rituals. This ritualistic apparatus artificially widens the information asymmetry between experts and the lay public. When confronting a seamlessly packaged "FMS-certified professional" spouting imported terminology, consumers find their spontaneous, common-sense somatic perceptions completely dispossessed. Consumers are conditioned to believe that only through this elaborate, capital-backed scoring system can they legitimately understand and govern their own bodies. At this juncture, the FMS successfully completes its sociological metamorphosis from a pragmatic assessment tool into a ladder of class monopoly.

2.2 The Standardized "Fast-Food Style" Business Model

Genuine exercise science and modern clinical rehabilitation constitute a complex discipline that fundamentally relies on individualization and inter-individual variability. An accomplished physical therapist or biomechanist, when evaluating human movement, must deploy capital-intensive, high-precision equipment—such as 3D infrared motion capture systems, multi-dimensional force platforms, and electromyography—while synthesizing deep anatomical knowledge with longitudinal clinical observation and dynamic reasoning. However, this high-barrier, asset-heavy, and difficult-to-scale scientific paradigm inherently conflicts with capital's intrinsic drive for expansion and profit maximization.

The commercial brilliance of Functional Movement Systems lies precisely in its ability to extricate itself from the quagmire of rigorous science and seamlessly embrace the core logic of modern capitalism—namely, "The McDonaldization of Society." It dismantles the highly intricate black box of human biodynamics and reassembles it into a low-cost, highly efficient, and easily replicable "fast-food" industrial product.

2.2.1 The Extreme Pursuit of Efficiency and Calculability

In George Ritzer's theoretical framework, the primary characteristics of "McDonaldization" are Efficiency and Calculability. The FMS reduces complex human

movement to a mere seven standardized motor tasks (e.g., Deep Squat, In-Line Lunge, Shoulder Mobility) that can be fully evaluated within a 10- to 15-minute timeframe. Crucially, it crudely compresses highly qualitative phenomena—such as motor control, compensatory mechanisms, and joint restrictions—into four discrete numerical scores (0, 1, 2, and 3), establishing a binary "14-point" critical threshold.

For commercial fitness facilities prioritizing operational efficiency, this "numerical fast food" holds an irresistible appeal: trainers are not required to possess profound expertise in functional anatomy; armed only with mass-produced plastic dowels, a measuring board, and a scoring rubric, they can administer "bodily verdicts" down an assembly line of incoming clients at extraordinary speed.

2.2.2 Predictability and Assembly-Line Curriculum Replication

To achieve transnational capitalist expansion, a commercial model must exhibit exceptional Predictability. The FMS has not only standardized the "screening" phase but has also monopolized the subsequent "intervention" phase. If a client receives a score of 1 on any given movement, the system automatically generates a formulaic "Corrective Exercise" protocol.

Sociologically, this closed loop of "movement dysfunction—formulaic correction" dilutes the individual agency of health professionals. It alienates what should be highly dynamic, individualized exercise prescriptions into a McDonaldized "standard recipe." A Level 1 certified trainer in New York and another in Shanghai, when confronted with a client exhibiting a "restricted Active Straight-Leg Raise," will deliver identical rhetoric and exercise interventions. This extreme homogenization effectively removes technical barriers to global franchising and certification expansion.

2.2.3 Control and Alienation via Non-Human Technology

The ultimate consequence of "McDonaldization" is total Control over human beings and scientific practice exerted through non-human technology. Under the institutional discipline of the FMS paradigm, the subjective agency of both trainers and clients to dynamically perceive bodily states is mutually stripped away; mass-produced plastic kits and rigid scoring rubrics usurp the role of supreme arbiter.

In sociological terms, this alienated fetishization of standardized tools represents a quintessential "usurpation of value rationality by instrumental rationality." By subjecting complex scientific practices to a process of "deskilling," capital drastically lowers the entry barrier to the industry—a layperson with merely a few days of workshop training, simply by purchasing this plastic kit, can rhetorically transform into a "functional movement expert" overnight.

This exceptionally low barrier to entry, coupled with a highly formulaic operational model, yields immense replicability that aligns perfectly with the capitalist logic of McDonaldized expansion. It not only minimizes the marginal cost of labor for commercial enterprises but also endows the FMS with extraordinary efficiency to rapidly replicate and aggressively monetize across geographic and cultural boundaries worldwide. By continuously disseminating these low-cost, high-markup standardized plastic kits and certification slots into global markets, the FMS has successfully erected an invincible and highly lucrative empire of "fast-food exercise science" [5, 8].

3. The Catalyst of Agencies and Intermediaries: The Professionalization of Visual Packaging

In the dissemination chain of the Functional Movement Screen, major commercial fitness chains, training agencies, and so-called "industry gurus" serve as pivotal intermediaries. Within agency promotional brochures and social media matrices, the FMS is framed through grand narratives as a "trans-epochal movement black tech" or the "exclusive system of NBA and elite European/American professional teams." By rendering the testing process into visually appealing, highly ritualized video content, these intermediaries successfully package the FMS as a high-end consumer commodity.

3.1 The Hyper-Promotion and Packaging of Visual Symbols

As modern capitalism transitions from a "productivist society" to a "consumer society," the physical attributes and utilitarian value of commodities gradually recede into the background, superseded by their embedded symbolic value. As Jean Baudrillard posits in The Consumer Society, contemporary individuals no longer consume the object itself, but rather the distinctions, identity, and symbols it signifies. Within the transnational dissemination chain of the FMS, commercial fitness chains and regional training agencies act as crucial "symbolic alchemists." Through sophisticated visual rhetoric and media packaging, they successfully transmute the FMS from a flaw-ridden screening tool into a supreme simulacrum representing "advanced, fashionable, and rational" practice within the fields of fitness and rehabilitation.

3.1.1 The "Spectacularization" of Science and the Visual Reconstruction of Bodily Rituals

In marketing the FMS, intermediary agencies shrewdly leverage the logic of the "society of the spectacle" as articulated by Guy Debord [9]. They remain unconcerned with whether the FMS possesses biomechanical plausibility or efficacy in injury prediction; rather, their primary focus centers on whether the assessment procedure exerts a powerful visual impact and dramatic ritualism. Within agency promotional matrices and social media narratives, FMS evaluation is stripped of its raw empirical limitations and endowed with elevated aesthetic value:

Symbolized Apparatus: Brightly colored test dowels and standardized red-and-white measuring boards featuring distinct industrial design visually project a sense of "hardcore high-tech" distinct from conventional gym settings.

Ritualized Body: Under the gaze and meticulous recording of the trainer, clients complete seven specific movement tasks reminiscent of precision instrument calibration. This highly ritualized interaction—amplified through polished filters, short-video edits, and grand narratives such as "trusted by NBA stars and Olympic athletes"—continuously broadcasts to the public, fostering the illusion that participants are engaging in a pioneering practice at the vanguard of human movement science.

3.1.2 Symbolic Self-Referentiality and the Evacuation of Scientific Truth

Baudrillard's theory of simulacra dictates that when a symbol reaches its highest stage, it severs all ties with reality and evolves into pure self-referentiality. Intermediary hyper-promotion of the FMS perfectly aligns with this trajectory. Within their

advertising discourse, the "FMS score" is equated with "physical health status," while the "completion of corrective exercises" is conflated with "unlocking athletic potential."

Sociologically, this subtle manipulation of symbols represents a "substitution of truth": because high-quality, evidence-based medical literature remains overly obscure and abstract for the lay public and grassroots practitioners alike [5], agencies substitute it with an intuitive, high-fidelity visual spectacle. Public enthusiasm for the FMS ultimately devolves into a fetishization of the "illusion of scientism" it constructs. When individuals purchase, record, and share FMS test results, they are fundamentally consuming a meticulously packaged status symbol of the healthy middle class.

3.1.3 Interest Collusion and Rhetorical Inflation among Intermediaries

As direct beneficiaries of capital valorization, training agencies continuously drive "rhetorical inflation" during promotion. In pursuit of higher average order values and steady recertification rates, they aggressively expand the application boundaries of the FMS, forcibly extending its use from elite competitive athletics to nearly all domains of bodily intervention—including general fat loss, adolescent posture correction, and postpartum rehabilitation. Through this aggressive symbolic colonization, agencies successfully construct a massive, closed loop of industry-internal rhetoric: when a movement screening tool is no longer held accountable for its "predictive accuracy," but merely for its "visual expressiveness," it attains absolute commercial immunity, thereby becoming a perfect vessel for capital manipulation and consumer mindshare harvesting.

3.2 Institutionalized Collusion and Decoupling of Compliance within the Industry

In modern organizational sociology, an organization's or industry's behavioral choices rarely depend entirely on technical "optimal solutions," but rather on the legitimacy pursued within its institutional environment. According to Paul DiMaggio and Walter Powell's theory of institutional isomorphism, modern organizations facing uncertain external environments align their structures and behaviors with industry-recognized "standard models" under coercive, mimetic, or normative pressures [10].

In the transnational diffusion of the FMS, commercial fitness chains and rehabilitation agencies are not naive victims, but active co-conspirators in this "compliance game." They deploy the FMS as a defensive management tool and liability shield, thereby catalyzing profound institutional isomorphism across the sector.

3.2.1 Mimetic Isomorphism and Defensive Strategies for Operational Risk Mitigation

In a fiercely competitive commercial fitness market lacking unified scientific standards, proving professional competence to clients and mitigating legal risks associated with training-induced injuries represent the core pain points for commercial entities. When industry giants or leading agencies incorporate the FMS into their marketing and achieve commercial success, other anxious small-to-medium enterprises rapidly trigger mechanisms of mimetic isomorphism [10].

For organizational managers, adopting the FMS is not meant to validate its scientific efficacy, but rather to establish a standardized risk-hedging procedure—a strategy

sociologically termed ritual compliance. Should a client suffer a muscle strain or joint injury during subsequent high-intensity training, the facility and trainer can present the baseline FMS screening report as an absolute shield. By claiming, "We strictly performed international-standard FMS risk screening and prescribed corrective protocols," the facility successfully transfers and dissolves its unlimited legal and moral liability into the FMS's standardized technological procedure. This risk-management necessity triggers a widespread, herd-like conformity across the entire industry.

3.2.2 Institutionalized Formatting of Sales Discourse and Deprofessionalization

For sales-driven intermediaries and fitness chains, the FMS serves as an exceptional sales funnel. In scientific reality, sports injuries stem from an extraordinarily complex, dynamic, and non-linear system encompassing fatigue, psychological factors, environmental conditions, and multi-joint anatomical variations. However, such high-dimensional scientific reality cannot be translated into practical sales discourse by grassroots trainers.

The FMS addresses this by offering commercial fitness facilities a highly formatted closed loop of "Crisis Creation—Solution Upselling—Liability Evasion":

Crisis Creation: By exploiting the low fault tolerance of the screen, the system easily assigns a score below 14 (the so-called "high injury risk") to the vast majority of ordinary individuals, precisely engineering anxiety regarding potential injury.

Solution Upselling: The system logically introduces bundled, high-ticket specialty training packages. Trainers can legitimately and formulaically up-sell "corrective exercise courses" or "sports rehabilitation courses" based on scores under 14. This Standard Operating Procedure (SOP) forcibly reduces and alienates professional delivery—which should fundamentally depend on deep clinical experience—into a mechanized sales pathway, inducing widespread deprofessionalization across the industry.

Liability Evasion: The FMS functions as an institutional liability waiver. If a member sustains an injury during training, the facility can argue, "We strictly followed FMS screening standards," thereby offloading legal and moral risks onto the system itself. This mechanism drives institutional isomorphism across the industry, wherein all actors adopt the tool regardless of its intrinsic efficacy, solely to achieve formal compliance.

3.2.3 The "Institutional Decoupling" of Technical Practice and Scientific Rationality

Sociologist John Meyer articulated the concept of decoupling, wherein organizations completely sever superficial, formal external ritual structures from actual, core technical practices. The current operational reality of the FMS within agencies and commercial gyms perfectly exemplifies this theory: at reception desks, on marketing posters, and in sales slide decks, the FMS is prominently featured to showcase the facility's modern scientific rationality; yet in everyday private training operations, trainers frequently abandon identified movement deficits and prescribed "corrective exercises" to cater to clients' short-term desires for rapid fatigue, fat loss, or muscle hypertrophy.

This formalistic decoupling unveils the ultimate secret of the FMS's widespread diffusion: it does not need to perform actual injury-predictive functions in core technical practice; it merely needs to excel as a "symbolic bodyguard" and "customer acquisition

engine" at the interface between the organization and the consumer. Thus, intermediary agencies, commercial entities, and the FMS achieve deep interest collusion within this nearly flawless, highly profitable ritual of compliance [10].

4. Sociological Drivers Within the Horizon of Modernity: Data Fetishism and Scientism

Beyond the collusion between capitalist logic and commercial marketing, the deeper impetus underlying the rapid, global institutionalization and pervasive diffusion of the Functional Movement Screen lies in its alignment with the cultural psychology and structural dynamics of late modernity [11]. Intertwined at the intersection of the "risk society" [12] and hyper-rationality, the FMS is consumed not merely as an objective technical assessment tool, but is embedded into everyday life as an "objectified salvation mechanism" designed to mitigate contemporary somatic anxiety. The underlying pathways are illustrated in Figure 1:

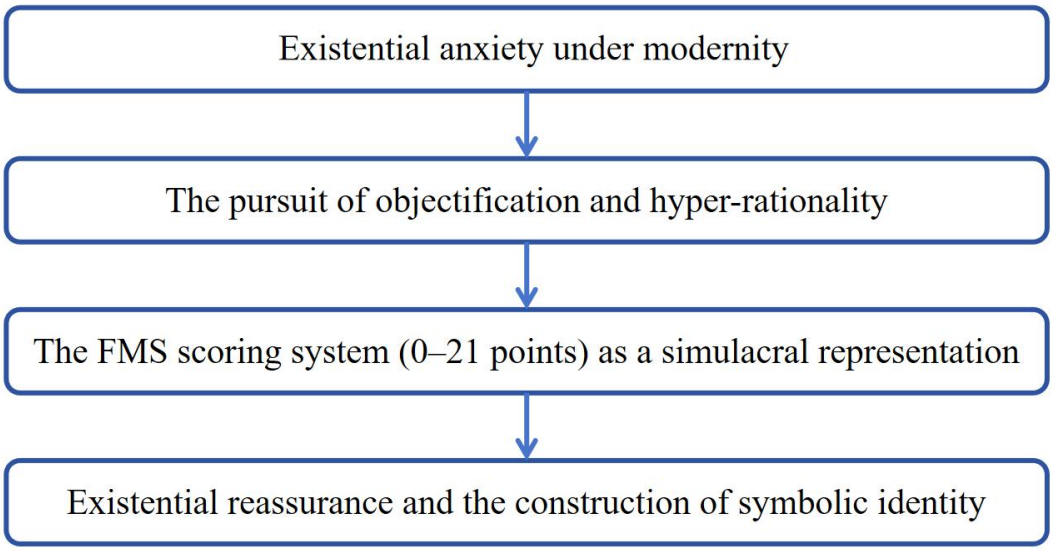

Figure 1 Pathways.

4.1 Contemporary "Data Fetishism" and Somatic Quantification: From "Lived Experience" to the "Datafied Body"

Against the backdrop of the "Quantified Self" phenomenon and the pervasive diffusion of body monitoring technologies [13], contemporary society exhibits an extreme pursuit of Weberian calculative rationality [14]. Subjective bodily perception is undergoing an ontological shift—transitioning from introspective lived experience to an externalized datafied body [13].

4.1.1 Dimension I: The Illusion of Certainty and the Compensation for Control

Late modernity has ushered in unprecedented ontological insecurity [11]. The human body is no longer viewed as a static object endowed by nature, but is instead reframed as a risk-laden "project" urgently requiring intervention and governance.

By reducing complex, non-linear, and highly individualized biodynamic capabilities

into an intuitive discrete score (on a 0–21 point scale), the FMS provides anxious contemporary individuals with a highly persuasive "representation of certainty." This concrete numerical metric drastically lowers the cognitive barrier and strips away the inherent ambiguity of corporeal experience, thereby instilling in subjects an illusory sense of psychological security regarding the "precise control" over their physical risks.

4.1.2 Dimension II: Somatic Discipline and the Reconstruction of Symbolic Order

Within the theoretical framework of Michel Foucault's biopolitics, the quantification process of the FMS constitutes a novel disciplinary technique exerted upon the body. The maximum 21-point design functions not merely as an evaluative benchmark, but as a structural reconstruction of order driven by normalizing judgment:

Low Scorers (Impaired/Compensating): Stigmatized with labels of "functional deficiency" or "latent injury liability," subjects succumb to newfound health anxieties.

High Scorers (Optimized/Compliant): Subjects acquire an "objectively certified" form of physical capital, which seamlessly converts into symbolic recognition within social contexts.

Through this mechanism, quantification completes a closed loop of self-discipline—subjects voluntarily submit to the scrutiny of the screening apparatus, entirely relinquishing authoritative agency over their somatic health to quantified metrics.

4.2 The Parasitism of Pseudoscience upon "Scientism": Rhetorical Engineering, Linguistic Professionalism, and Discursive Obfuscation

The prevalence of pseudoscience in contemporary society rarely manifests in an anti-scientific guise; rather, it primarily gains legitimacy by parasitizing the discursive apparatus of scientism [15]. Scientism elevates scientific methodology as the sole arbiter of truth, and the FMS precisely exploits this collective social psychology to execute a highly sophisticated process of rhetorical engineering.

4.2.1 Dimension I: Symbolic Obfuscation via "Linguistic Professionalism"

The FMS constructs a highly specialized, medicalized metaphorical discourse. By co-opting hard terminology derived from biomechanics and physical therapy—such as "movement pattern kinematics," "kinetic chain compensation," and "regional interdependence"—the FMS rapidly projects an illusion of authoritative knowledge in the minds of the general public and novice practitioners alike. This linguistic professionalism [16] constructs a barrier of expertise that places a public lacking critical thinking skills at a discursive disadvantage. Intimidated by this symbolic power, the public passively complies, relinquishing any inquiry into the underlying logic.

4.2.2 Dimension II: Performative Rigor versus Epidemiological Validity

The pseudoscientific parasitism of the FMS is further evidenced by its performative rigor [17]: customized measurement kits, highly stringent scoring criteria for deduction (e.g., standard definitions for knee valgus and compensatory movements), and seemingly rigorous operational guidelines collectively assemble a highly ritualized

"scientific scene."

However, this high degree of formal precision conceals a fatal flaw in statistical and epidemiological research. A vast body of evidence-based medical literature and meta-analyses demonstrates that the correlation between FMS scores and sports injury prediction is negligible (AUC ≈ 0.5), indicating that its predictive validity is virtually equivalent to random chance [4, 5].

The FMS successfully employs the "cloak of scientism" to execute its discursive construction, accomplishing a legitimated parasitism within the blurred boundary between pseudoscience and hard science. Ultimately, it packages a logically self-consistent yet empirically unsupported assessment procedure into a dominant dogma governing the domains of fitness and competitive sports.

5. Conclusion: Shattering the "Myth of Numbers" and the Return of Critical Scientific Literacy

5.1 Re-Integrating Theoretical Mechanisms: A "Sociological Myth" Under Multidimensional Collusion

In summary, the phenomenon wherein the Functional Movement Screen continues to flourish and remain virtually indestructible—despite its progressive falsification within evidence-based medicine and epidemiology [4, 5]—stems by no means from any technical superiority in clinical assessment or injury prediction. Instead, it constitutes a "sociological myth" co-constructed through the complex intertwining of capitalist monopoly, spectacular packaging, occupational risk hedging, and late-modern anxieties.

As illustrated in Figure 2, the institutionalization and mythologization of the FMS are fundamentally the product of four intertwined sociological mechanisms:

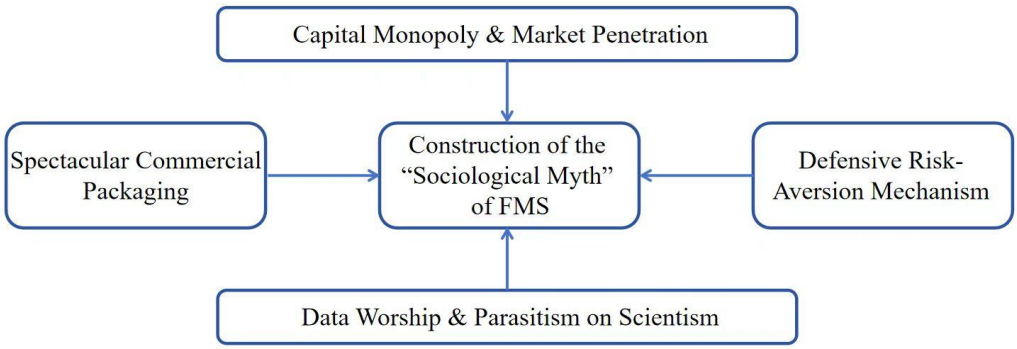

Figure 2 The Four-Dimensional Sociological Mechanism Underlying the "Sociological Myth" of the Functional Movement Screen (FMS).

Capital Monopoly & Market Penetration: Leveraging its first-mover advantage and commercial empire operations, the FMS has achieved an epistemic monopoly and rule-making authority over fitness and sports rehabilitation education systems;

Spectacular Commercial Packaging: By means of symbolic consumption and ritualized construction, it simplifies complex somatic assessment into a "standardized commodity" capable of mass production and commercial exchange;

Industry Defensive Risk-Aversion Mechanism: Practitioners deploy the FMS as an

"institutional talisman" for liability shifting and legal risk hedging, sacrificing clinical critical thinking in exchange for a false sense of security within their professional practice;

Data Worship & Parasitism on Scientism: Catering to late modernity's need to appease anxiety surrounding the "datafied body" [13], it parasitizes the discursive apparatus of scientism through "linguistic professionalism" [16], thereby achieving a simulacral representation of the public's anxiety over somatic control.

5.2 Theoretical Reflections: The Commercial Domestication of Science and the Deconstruction of the "Pseudoscientific Spectacle"

The global diffusion of the FMS represents a quintessential case of commercial capital successfully domesticating, reshaping, and consuming "health science." It reveals a profound ontological paradox within contemporary exercise science: when scientific assessment tools sever ties with rigorous evidence-based validity and instead serve capital accumulation and symbolic reproduction, science itself degenerates into a pseudoscientific spectacle of "performative rigor" [17].

This phenomenon—where "simulacra" supersede reality—serves as a stark warning: the contemporary sports rehabilitation and mass fitness industries face a critical crisis of fragmentation driven by "credentialism" and "numerical dogma." Practitioners' blind compliance with commercial certifications not only strips clients of introspective, embodied perception, but also insidiously undermines the empirical efficacy of interventions across both competitive athletics and public health.

5.3 Practical Pathways: Reconstructing Critical Scientific Literacy in Exercise and Sports Science and Rehabilitation

To deconstruct commercial spectacles cloaked in scientific guises, the exercise science community and rehabilitation practitioners urgently need to initiate a paradigm return toward "Critical Scientific Literacy" across both knowledge production and clinical application:

5.3.1 Shifting from the "Fetishization of Commercial Certifications" to "Evidence-Based Medicine"

Professional education must break free from its path dependency on monopolistic training programs offered by commercial entities. It should re-center the three foundational pillars of Evidence-Based Practice (EBP)—the best available research evidence, clinical expertise, and individual client/patient characteristics—rather than enshrining a singular quantified score (such as a 0–21 point scale) as the diagnostic gold standard.

5.3.2 Returning from "Symbolic Data" to "Embodied Experience"

Epistemologies of the body must be reconstructed, rejecting the reduction of the physical body into computable, detachable discrete data. Assessment should refocus on individual variability within complex, non-linear systems, synthesizing objectified instrumental measurements with subjective, embodied perceptions.

Academia should strengthen peer-review mechanisms and epidemiological replication studies targeting commercial fitness products, thereby dismantling the discursive hegemony dominated by commercial capital. Furthermore, it must facilitate the public dissemination of scholarly knowledge to bolster public immunity against "linguistic professionalism" [16].

Only by shattering the blind fetishization of "numerical myths" and the "simulacra of scientism"—and by guiding both the public and practitioners to cultivate a scientific literacy grounded in critical thinking—can exercise science be emancipated from the logic of capital accumulation, ultimately returning to its fundamental mandate of serving human health and somatic well-being.

Conflict of interest: None.
Acknowledge: We gratefully acknowledge the academic guidance and financial support provided by the Chinese TikTok account "Strength and Conditioning Pope".

References

[1] Li, F., Li, Z., Wang, L., & Chen, W. (2026). Redefining Lifelong Fitness: A Practical Framework Combining Exercise Snacks and Neuromuscular Fall Prevention Strategies. Frontiers in Arts, Humanities & Social Sciences, 1(3).

[2] Li, F., & Zeng, Z. (2026, February). Personalized optimization of aerobic exercise for type 2 diabetes mellitus patients based on improved Q-learning and dynamic physiological modeling. In Fifth International Conference on Information Technology and Contemporary Sports (TCS 2025) (Vol. 14115, pp. 156-165). SPIE.

[3] Liu P, Liu N and Li F (2025) Diagnosis and management of splenic tuberculosis: a case report and literature review. Front. Med. 12:1622794. doi: 10.3389/fmed.2025.1622794

[4] Bahr, R. (2016). Why screening tests to predict injury do not work—and probably never will…: a critical review. British journal of sports medicine, 50(13), 776-780.

[5] Moran, R. W., Schneiders, A. G., Mason, J., & Sullivan, S. J. (2017). Do Functional Movement Screen (FMS) composite scores predict subsequent injury? A systematic review with meta-analysis. British journal of sports medicine, 51(23), 1661-1669.

[6] Bourdieu, P. (1984). Distinction: A social critique of the judgement of taste (R. Nice, Trans.). Harvard University Press.

[7] Bourdieu, P. (1991). Language and symbolic power. Harvard University Press.

[8] Possamai, A. (2017). Ritzer (1): From the McDonaldization Thesis to the i-zation of Society. In The i-zation of Society, Religion, and Neoliberal Post-Secularism (pp. 115-132). Singapore: Springer Singapore.

[9] Debord, G. (2024). The society of the spectacle. PM Press.

[10] DiMaggio, P. J., & Powell, W. W. (1983). The iron cage revisited: Institutional isomorphism and collective rationality in organizational fields. American sociological review, 48(2), 147-160.

[11] Giddens, A. (2023). Modernity and self-identity. In Social theory re-wired (pp. 477-484). Routledge.

[12] Leiss, W. (1994). Risk society, towards a new modernity.

[13] Lupton, D. (2016). The quantified self. John Wiley & Sons.

[14] Weber, M. (1978). Economy and society: An outline of interpretive sociology (Vol. 2). University of California press.

[15] Sorell, T. (1991). Scientism: Philosophy and the infatuation with science. Routledge.

[16] Fairclough, N. (2007). Discourse and contemporary social change (Vol. 54). Peter Lang.

[17] Goffman, E. (2023). The presentation of self in everyday life. In Social theory re-wired (pp. 450-459). Routledge.