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Article

The 'Weaponisation of Fireworks' and 'Hollowed-Out Command': A Systematic Risk Analysis of Non-Combatant Military Forces—A Comparative Institutional Study Centred on Authentic Battlefield Pressure Screening and 'Rank Credibility Capital'

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Abstract

Non-combat environments do not inherently diminish military capabilities, but they systematically alter an organisation's feedback structures and promotion signals, thereby inducing two highly correlated risk states: Firstly, the 'weaponry becoming mere pyrotechnics' phenomenon, wherein equipment development and training outputs progressively shift from adversarial validation towards demonstrative proof, with organisations substituting invisible yet critical battlefield effectiveness with visible, reportable metrics; Secondly, 'command hollowing', wherein commanders' capabilities for judgement, coordination, and error correction deteriorate under conditions of high friction, deception, losses, and uncertainty, manifesting as increased reliance on scripted procedures and diminished systemic adaptability. This paper proposes a falsifiable, quantifiable, and reproducible institutional-behaviour-effectiveness framework: with non-combat endurance periods and promotion system performance weights as exogenous conditions, display orientation and script dependency as mediating mechanisms, and command adaptability and combat readiness performance under stress as outcome variables. It introduces the concept of 'rank credibility capital,' translating the notion that 'rank is earned through blood' into a rigorous institutional proposition: For senior ranks to constitute credible signals of command competence, they must correspond to verifiable performance and accountability loops under genuinely high-stakes pressure. When organisations chronically lack such pressure-based selection, rank may undergo symbolic inflation, distorting promotion signals and accelerating hollowing-out. Methodologically, this study explicitly rejects simulation or modelling as substitutes for genuine cost structures. Instead, it employs historical warfare samples, natural experiments, and observational data for comparative identification, ensuring conclusions rest upon the irreplaceable foundation of authentic combat experience. This paper further declares its ethical boundaries: it neither debates the legitimacy of waging war nor advocates any bellicose actions. Its sole purpose is to elucidate capability generation mechanisms and institutional risks within military organisations under varying pressure structures.

Keywords: authentic battlefield experience; rank-based credibility capital; organisational bureaucratisation; military innovation risk; comparative institutional analysis

1. Introduction

The military's singularity lies in its capabilities being proven under adversarial and uncertain conditions, rather than imagined through procedural compliance or resource allocation. Training may enhance skills, yet it does not automatically confer the command qualification to 'make correct

decisions amid friction and bear the consequences'; equipment may augment capabilities, yet it does not inherently generate the operational resilience to 'maintain system coherence amidst deception and loss injection'. The most common deviation in peacetime military development is not a 'lack of construction,' but rather an excessive focus on visible outputs: showcaseable equipment highlights, communicable training narratives, and auditable compliance processes. This gradually crowds out the hard feedback provided by adversarial validation and failure exposure. Consequently, organisations appear more modernised and meet metrics more comprehensively, yet prove more vulnerable under genuine stress conditions—this constitutes the coupled risk of 'weapon pyrotechnics' and 'command hollowness' discussed herein.

This issue is significant because it touches upon the military's most fundamental institutional logic: how to ensure promotion and authority serve as signals of genuine capability, rather than symbols of administrative performance. This paper employs the concept of 'Rank Credibility Capital (RCC)' to academically reinterpret the notion that 'rank is a blood-stained badge of honour': its essence lies not in rhetoric, but in the underlying signalling theory—the credibility of senior ranks possesses high-cost signalling attributes. Only when verifiable accountability loops form under genuinely high-stakes pressure can rank reliably indicate command competence. Should such high-cost screening persistently fail, the symbolic authority of rank may expand while its credibility capital lags behind. This leads to distorted promotion signals within the organisation, elevating those adept at passing inspections and crafting narratives to critical positions while marginalising those capable of correcting errors under pressure. At this juncture, hollowing out ceases to be an individual's isolated misstep and becomes a systemic structural peril.

It must be emphasised that this paper methodologically rejects the substitution of real cost structures with simulations or modelling, as simulations may generate complexity but struggle to replicate the irreversible consequences and psychological-organisational constraints arising from genuine accountability allocation. Consequently, this study's design will be grounded in authentic historical warfare and real-world shock events, employing auditable public materials, historical archives, and quantifiable battlefield outcome variables to identify the irreplaceable role of 'real warfare experience' in the formation of commanders and organisational efficacy. The ethical boundaries of this work are equally clear: examining the mechanisms of warfare experience does not equate to advocating warfare; this study solely discusses how 'past realities' shape organisational capabilities and makes no case for initiating any conflict. (Clausewitz, 1832/1976; Spence, 1973) (Spence, 1973; Berthelsen, 2025)

2. Theoretical Background: Alternative Mechanisms from Visible Performance to Genuine Effectiveness

The fundamental challenge for peacetime organisations lies in feedback scarcity: when external adversarial feedback diminishes, organisations increasingly rely on internal assessment systems to allocate resources and promotion opportunities. Such systems inherently favour visible, quantifiable, and auditable metrics. This 'prevalence of visible performance' is not a moral failing but the natural outcome of institutional incentives in low-external-feedback environments. The problem lies in the fact that the military's most critical capability—maintaining mission accomplishment amid deception, friction, losses, and information gaps—is precisely the hardest to observe directly during peacetime. Consequently, equipment displays, training exercise outcomes, compliance processes, and narrative successes more readily become surrogate evidence of capability, driving a shift in the organisation's objective function. Military innovation research further indicates that innovation does not invariably yield gains. Without validation through genuine adversarial testing, innovations may trigger hazardous shifts by altering organisational structures, training methodologies, or resource allocation. This can render 'apparently advanced' systems vulnerable to efficacy degradation and accumulated fragility when subjected to real-world stressors. Thus, the phenomenon of 'fireworks displays' is not merely about 'more equipment,' but rather a capability signal mismatch stemming from 'weakened verification mechanisms for equipment and tactics.'

Within this logic, ‘command hollowness’ can be understood as a progressively accumulated organisational outcome: as training becomes increasingly scripted, success increasingly reliant on predetermined conditions, and failure increasingly smoothed over by narrative, the command echelon’s tolerance for uncertainty diminishes, its speed of correction for unexpected disruptions slows, and cross-domain coordination becomes more susceptible to chain-reaction collapse during the first high-intensity impact. Most critically lies the promotion signal: if high-risk postings, combat experience, and adversarial performance lose weighting in the promotion system, the credibility capital of rank becomes difficult to generate. Military rank risks becoming a symbol of authority rather than a credible capability signal. As this disconnect widens, the organisation systematically selects those who ‘can write, speak, and pass assessments’ over those who ‘can endure, decide, and correct errors,’ thereby institutionalising this hollowing-out. (Drake, 2025) (Kuo, 2022; Berthelsen, 2025)

3. Research Framework and Testable Hypothesis: The Irreplaceability of Authentic Combat Experience

The mechanism chain proposed herein may be summarised as follows: when periods of non-combat operations are prolonged and adversarial external feedback becomes scarce, organisational evaluations become more prone to shifting towards a performance-oriented bias. This performance orientation reinforces script dependency in training and command, influencing the generation of rank-based credibility capital through the weighting of operational achievements in promotion systems. When rank-based credibility capital cannot accumulate through genuine pressure screening, promotion signals become increasingly distorted, ultimately manifesting as diminished command adaptability and degraded combat readiness under stress. Unlike simulation-based approaches, this study posits ‘authentic warfare experience’ as a core condition for generating rank-based credibility capital: real warfare not only provides skill training but also delivers irreplaceable structures of responsibility, cost structures, and selection pressures. This renders rank a high-cost signal rather than a low-cost symbol.

This gives rise to testable research questions: Firstly, does prolonged non-combat deployment significantly increase the weighting of organisational narratives and display metrics, while reducing the proportion of adversarial validation elements in public texts and institutional provisions? Secondly, do shifts in the weighting of combat experience versus adversarial performance within promotion systems lead to diminished rank credibility capital, further reducing command adaptability? Third, does genuine warfare experience make a statistically independent contribution to command effectiveness, remaining significant even after controlling for equipment levels, budget scale, and training intensity? Empirical data may refute these questions: if high CAS and ORUS persist stably without combat experience, it indicates the existence of substitute mechanisms. However, such substitutes must be validated during actual impact events, not merely through peacetime metrics. (Spence, 1973; Berthelsen, 2025)

Table 1. Summary of Variable and Indicator Operationalisation.

Variable	English abbreviation	Type	Operationalisation/Explanation (Abstract)
Non-combat sustained period	NCD	exogenous conditions	Years of continuous absence of high-intensity conflict, or the inverse engagement index (based on publicly recorded war/impact events).

Promotion Performance Weighting	PMW	exogenous conditions	The weighting of “practical experience/competitive performance/high-risk positions/responsibility closure” within the promotion system (comprehensive standardisation integrating textual provisions’ hard thresholds with practical verification).
Display Orientation Index	SOI	Intermediary mechanism	The differential/ratio between demonstrative elements and relatively adversarial verification elements in public narratives versus institutional texts (lexical-structural features + clause content coding).
Script Dependency Index	SRI	Intermediary mechanism	The degree of reliance on established procedures and predefined plans in command and training actions during actual warfare/shock scenarios (as evidenced by post-conflict records, debriefing materials, and structured coding of observable response patterns).
Military Rank Credit Capital	RCC	Key explanatory variables	Military rank as a form of credibility capital signalling command competence: a composite of proxy indicators including combat experience density, records of pressure under critical operational roles, post-conflict accountability review loops, and peer/subordinate trust assessments.
Command Adaptability Score	CAS	Outcome variable	Adaptive, corrective and collaborative performance under real-world impact scenarios: Agents: On-the-spot decision-

			making outcomes, misjudgement costs, frequency of collaborative breakdowns, recovery times, etc.
Combat readiness performance under stress	ORUS	Outcome variable	Continuous combat capability indicators under high-impact conditions: disintegration point, sustained achievement rate curve, number of supply-command chain disruptions and recovery slope, etc.

4. Methodology and Identification Strategy: Rejecting Simulation, Shifting to Authentic Warfare Samples and Natural Experiments

To uphold the methodological stance of ‘authentic warfare rather than simulation,’ this paper adopts a comparative identification approach grounded in historical warfare and real-world shock events. The core research design constructs cross-object, cross-period comparisons: one object category has endured sustained or cyclical real warfare pressures, while another has long lacked high-intensity adversarial stressors. Concurrently, it examines disparities in the weighting of combat performance within their promotion systems. At the data level, SOI and PMW are computationally encoded from publicly available institutional texts and military organisational narratives, prioritising the ratio of demonstrative elements to adversarial validation components. SRI, CAS, and ORUS derive from observable outcome variables and impact performance proxies in actual warfare, including adaptive manoeuvring during campaigns, success rate proxies for ad hoc decision-making, frequency of collaborative breakdown incidents, costs incurred from battlefield misjudgements, and system recovery speed under sudden shocks. RCC measurement centres on the “blood-stained” institutional meaning: emphasising responsibility loops and verifiable performance forged in genuinely high-cost scenarios, rather than peacetime training outcomes. Thus, core RCC proxies may include combat experience density, key operational role experience, institutionalised post-conflict debriefing and accountability, alongside structured coding of observable materials reflecting peer and subordinate trust in command – such as memoirs, interviews, and public evaluations.

In terms of identification strategies, this paper prioritises quasi-experimental approaches over simple correlations: for instance, using sudden shifts in external conflicts as shocks to observe changes in promotion rules and capability metrics within the same organisation before and after war; or leveraging pressure differentials across branches and theatres within the same conflict for internal comparisons; or constructing breakpoint comparisons through phased implementation of policy reforms. Through these strategies, this paper seeks to isolate the impact of ‘real warfare experience’ on capability generation from confounding factors such as equipment levels, budgetary investment, and population size. This approach aims to yield conclusions closer to causal explanations rather than mere narrative assessments. (Kuo, 2022; Drake, 2025)

5. Discussion: Transforming ‘Military Rank is the Glory of Blood’ into an Audit-Ready Institutional Proposition

If we interpret ‘Military rank is the glory of blood’ as an academic proposition, it points not to sentiment but to signalling and selection: military rank functions as an organisational symbol of authority precisely because it reliably signifies command qualifications. This is due to its traditional association with selection and validation under genuinely high-stakes pressure, thereby forming a

form of credibility capital that is difficult to forge. The irreplaceable nature of warfare lies precisely here: it is not merely 'more gruelling training,' but 'consequences that are real and irreversible'; not just 'greater pressure,' but 'a more rigid and non-transferable structure of responsibility'; not simply 'errors being pointed out,' but 'errors being recorded in the form of costs.' When an organisation chronically lacks such a cost structure, rank acquisition increasingly relies on seniority and procedure. While symbolic authority may persist, credibility capital gradually erodes, leading to symbolic inflation of rank. The peril of symbolic inflation lies not in ceremonialism, but in its erosion of promotion signals' alignment with genuine capability. This renders organisations incapable of identifying, during peacetime, those who can make correct decisions under real friction. When shocks arrive, the organisation discovers its credibility capital cannot be conjured at precisely when it is most needed, exposing its hollowness through systemic collapse.

Thus, this argument does not assert that 'war inevitably forges a strong military,' but rather that 'organisations lacking genuine pressure for selection are more prone to distorted signals of capability.' This argument forms a closed loop with the "weaponisation of fireworks": when demonstrative outputs become core performance metrics, equipment and exercises risk becoming tools for narrative validation and inspection rather than for verification under conditions of confrontation and loss. As verification mechanisms weaken, organisations struggle to identify genuine vulnerabilities within command systems, ultimately paying the price during real shocks. The significance of genuine warfare experience lies in its institutional provision of a high-cost anchor for capability signals: it compels organisations to confront failure, document failure, and address failure, thereby enabling credibility capital to accumulate within the rank structure. (Spence, 1973; Clausewitz, 1832/1976)

6. Conclusions and Implications for Governance

The framework proposed herein explains why non-combat environments may induce systemic risks characterised by "fireworks-like proliferation and hollowing-out", while providing testable empirical pathways for identification. The core conclusion is not that 'war should be waged', but rather a more discernible and responsible institutional imperative: if an organisation lacks sustained exposure to genuine, high-stakes pressure screening, it must acknowledge that the generation of rank-based credibility capital will face structural difficulties. Promotion signals become more prone to distortion, and the risk of command hollowing accumulates more readily. Consequently, any institutional reform concerning officer promotion and capability development should recalibrate promotion weightings and accountability review mechanisms based on evidence from real-world impact events and historical warfare samples. This aims to re-align the symbolic authority of rank with credibility capital as closely as possible. This paper maintains ethical neutrality and restraint: examining the institutional value of war experience does not equate to advocating warfare; linking rank credibility to high-cost selection does not imply encouraging unnecessary bloodshed, but rather emphasises that systems require constraints through genuine cost structures to prevent symbolic inflation and the distortion of capability signals.

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