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ADAPTIVE PSYCHOLINGUISTIC STRATEGIES IN MILITARY INTERPRETING

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Military interpreting is performed in environments characterized by extreme stress, operational urgency, and high cognitive and psychological demands. This article investigates the cognitive load faced by military interpreters operating in high-risk contexts and examines the adaptive psycholinguistic strategies that support interpreting performance under such conditions. Drawing on psycholinguistic theory, cognitive linguistics, and translation studies, the research employs an analytical methodology based on documented military interpreting cases, samples of military discourse, and findings from empirical research on cognitive load and stress-related language processing. The analysis reveals that extreme situational stressors – including threat, time pressure, environmental noise, fatigue, and ethical-emotional dissonance – significantly disrupt core cognitive processes such as attention control, working memory, semantic processing, and decision-making. In response, military interpreters activate a set of adaptive psycholinguistic strategies, including selective attention, automatized linguistic processing, strategic omission, cognitive chunking, emotional regulation, and rapid decision-making heuristics. While these strategies enable functional communication under pressure, they also increase susceptibility to error and pragmatic loss. The article argues that military interpreting should be conceptualized as a form of high-risk cognitive activity rather than solely linguistic mediation. The findings provide a foundation for developing methodological recommendations aimed at strengthening interpreter training, cognitive resilience, and operational reliability in extreme military environments.

АДАПТИВНІ ПСИХОЛІНГВІСТИЧНІ СТРАТЕГІЇ УСНОГО ВІЙСЬКОВОГО ПЕРЕКЛАДУ

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психолінгвістика, когнітивна лінгвістика, перекладознавство, когнітивне навантаження, мовне посередництво.

Усний військовий переклад здійснюється в умовах екстремального стресу, оперативної терміновості і високих когнітивних та емоційних навантажень. У статті досліджується когнітивне навантаження, з яким стикаються військові перекладачі в умовах підвищеного ризику, а також аналізуються адаптивні психолінгвістичні стратегії, що забезпечують ефективність їхньої перекладацької діяльності за таких обставин. Спираючись на положення психолінгвістики, когнітивної лінгвістики та перекладознавства, у дослідженні застосовано аналітичну методологію, що ґрунтується на аналізі задокументованих випадків військового перекладу, зразків військового дискурсу та результатів емпіричних досліджень когнітивного навантаження і мовної обробки в умовах стресу. Результати аналізу засвідчують, що екстремальні ситуації, зокрема загроза, часовий тиск, шумове середовище, втома й етично-емоційний дисонанс, істотно порушують базові когнітивні процеси, такі як контроль уваги, робочу пам'ять, семантичну обробку та прийняття рішень. У відповідь на ці чинники військові перекладачі активують комплекс адаптивних психолінгвістичних стратегій, серед яких селективна увага, автоматизована мовна обробка, стратегічне вилучення, когнітивне групування, емоційна регуляція та евристика швидкого прийняття рішень. Хоча ці стратегії забезпечують функціональну комунікацію в умовах тиску, вони водночас підвищують ризик помилок і втрати прагматичних смислів. У статті обґрунтовується доцільність розгляду усного військового перекладу як різновиду високоризикової когнітивної діяльності, а не лише як мовного посередництва. Отримані результати створюють підґрунтя для розроблення методологічних рекомендацій, спрямованих на вдосконалення підготовки усних перекладачів, розвиток когнітивної стійкості та підвищення операційної надійності в екстремальних військових умовах.

Introduction. Military interpreting is a highly specialized and cognitively demanding field in which linguistic accuracy is inseparable from operational urgency, psychological strain, and high-stakes decision-making. In armed conflict settings, interpreters act not only as linguistic mediators but also as cognitive operators whose performance is shaped by extreme stressors such as threat, fatigue, time pressure, sensory overload, and emotional shock. These factors directly affect core psycholinguistic processes, including perception, attention, working memory, semantic processing, and decision-making; therefore, examining these processes is essential for evaluating the reliability of military interpreting.

The relevance of studying psycholinguistic foundations of military interpreting is reinforced by the increasing complexity and multilingual nature of modern warfare, where interpreters' decisions may influence mission outcomes and civilian safety. Although recent research has expanded understanding of cognitive and psychological factors in wartime communication, systematic studies of stress-related cognitive load, processing biases, and memory resilience in military interpreting remain limited, underscoring the scientific and practical urgency of this line of inquiry.

Existing research on wartime communication approaches the problem of military interpreting from complementary yet methodologically distinct perspectives. Psycholinguistic studies (Kovalchuk and Litkovych, 2022; Krylova-Grek, 2018) emphasize the role of psychological intensity, threat perception, and cognitive framing in shaping linguistic behaviour, demonstrating how affective and conceptual categories influence meaning

construction and comprehension in conflict contexts. These findings provide a cognitive basis for understanding how interpreters process war-related discourse under psychological pressure.

In contrast, discourse-oriented and translation-focused studies (Dolynskyi, 2021; Yemelyanova and Shkurko, 2024) foreground the structural and pragmatic complexity of military texts, highlighting terminological density, compressed syntax, and implicit tactical meanings as primary sources of cognitive load in translation and interpreting.

Cultural and strategic dimensions are further addressed in studies by Slipetska et al. (2023) and Kompantseva (2020), which show how historically and culturally embedded patterns of aggression, as well as persuasive and manipulative mechanisms in psychological operations, shape wartime communication and require heightened interpretive awareness.

These applied perspectives, grounded in classical psycholinguistic theory by Ch. E. Osgood (Psycholinguistics, 1954) and M. J. Traxler (Gernsbacher, 2006), are supported by empirical research on cognitive load and language performance under time pressure (Parilla et al., 2004). Taken together, the reviewed studies demonstrate that military interpreting is shaped by the interaction of psychological, cognitive, linguistic, and cultural factors; however, they also reveal a persistent gap in integrative research specifically addressing cognitive resilience and adaptive psycholinguistic mechanisms in extreme operational conditions.

The aim of this work is to identify adaptive psycholinguistic strategies relevant for interpreter managing cognitive load and language performance in extreme military environments.

Material and Methods. This study employs a qualitative analytical approach grounded in psycholinguistics, cognitive linguistics, and translation studies to identify key cognitive risk factors and adaptive psycholinguistic mechanisms in military interpreting under extreme conditions. Due to ethical, security, and practical constraints on experimental research in combat environments, the methodology integrates theoretical modelling with cognitive-discursive analysis and the synthesis of secondary empirical findings.

The analysis is based on three data sources: (1) documented cases and professional testimonies of military interpreters in conflict settings, examined to identify recurrent cognitive risks and adaptive psycholinguistic strategies; (2) samples of military discourse from operational and negotiation contexts, analysed to determine linguistic features that intensify cognitive load; and (3) psycholinguistic research on stress, attention, working memory, and language processing, interpreted with reference to interpreting performance under pressure.

Analytical procedures focus on mapping extreme situational stressors – such as threat, time pressure, sensory overload, and emotional shock – onto core psycholinguistic processes, including perception, attention, working memory, semantic processing, and decision-making. This mapping enables the identification of stress-sensitive processing points, performance risks, and compensatory mechanisms relevant to interpreter training and cognitive resilience.

Results and Discussion. Military interpreters operate in environments characterized by high risk, unpredictability, and intense psychological pressure, which fundamentally distinguish military interpreting from other forms of interpreting. These conditions significantly disrupt core psycholinguistic and cognitive processes underlying interpreting, including speech perception, attentional control, working memory allocation, semantic integration, and real-time decision-making. Unlike routine interpreting settings, military contexts impose extreme temporal constraints, sensory overload, and psychological stress that challenge both cognitive capacity and psychological stability, creating a complex set of interrelated difficulties that directly affect the quality, accuracy, and reliability of interpreting.

From a psycholinguistic perspective, military interpreting requires the rapid coordination of simultaneous listening, comprehension, reformulation, and production under conditions of heightened arousal and limited cognitive resources. Cognitive load is further intensified by the need to process fragmented speech, non-standard syntax, specialized terminology, and implicit tactical meanings, often in the presence of environmental noise and competing stimuli. To better understand these challenges, this study classifies the key psychological and cognitive obstacles encountered by military interpreters in extreme operational contexts, with particular attention to stress-induced attentional narrowing, working memory overload, processing biases, and adaptive psycholinguistic mechanisms that shape interpreting performance under pressure.

Stress and emotional arousal in extreme environments trigger heightened physiological responses that, while adaptive for survival, impair sustained attention, disrupt sensory perception, slow lexical retrieval, and narrow attentional focus, thereby reducing global situational awareness essential for effective military communication.

Time pressure and rapid decision-making in military contexts require interpreters to operate under severe temporal constraints, particularly during negotiations, tactical briefings, and real-time battlefield communication. Limited opportunity for

reflection or correction accelerates cognitive processing, increases reliance on automatic linguistic responses, and heightens the risk of omissions, approximations, and misinterpretations.

Environmental noise and multitasking in operational settings expose interpreters to multimodal distractions – sirens, explosions, gunfire, and overlapping speech – that reduce comprehension accuracy and overload working memory. Simultaneously monitoring surroundings, processing messages, and anticipating tactical shifts further strains cognitive resources and compromises information retention and reproduction.

Fatigue and sleep deprivation resulting from extended missions and irregular sleep patterns impair attention control, slow reaction times, and reduce the precision of semantic and pragmatic decision-making. Under fatigue, interpreters show diminished error detection and increased susceptibility to lexical substitutions, incoherent phrasing, and misalignment with speaker intent.

Ethical and emotional dissonance arises when military interpreters deal with ethically complex or emotionally charged content, such as casualty-related orders, interrogations, or distressing testimonies. Resulting internal conflict, empathy overload, or secondary trauma can disrupt cognitive processing, compromise neutrality, and bias interpreting choices, particularly when professional objectivity conflicts with personal values or moral judgement.

All these stressors generate substantial cognitive overload, forcing interpreters to rely on automatized linguistic patterns, selective attention, predictive processing, and strategic omissions. While these adaptive strategies may sustain performance under pressure, they also increase vulnerability to error, highlighting the need for specialized training and enhanced psychological resilience. Under extreme operational conditions, military interpreting therefore activates accelerated psycholinguistic mechanisms that reorganize processing priorities in response to cognitive overload and psychological strain, enabling functional performance in high-risk environments.

Understanding these mechanisms provides a basis for formulating targeted **adaptive psycholinguistic strategies** aimed at strengthening cognitive resilience, optimizing interpreter training, and enhancing operational reliability.

Selective attention is an adaptive psycholinguistic strategy that enables interpreters to prioritize mission-critical information by deliberately narrowing their attentional focus under extreme stress. It operates through top-down attentional control, whereby incoming auditory and visual input is filtered so that high-priority linguistic elements – such as commands, numerical data, locations, and action verbs – are processed, while background noise, emotional cues, and peripheral stimuli are actively suppressed. In practical terms, interpreters focus on extracting and transmitting structurally salient message components, including imperative constructions (Evacuate immediately, Hold position), numerical information (three wounded, ETA five minutes), spatial references (sector Bravo, north of the bridge), and action-oriented verbs (advance, withdraw, secure). This focused processing enhances speed and accuracy, reduces cognitive overload, and allows for the reliable transmission of essential information in time-critical operational situations. For example, during a battlefield evacuation, an interpreter may concentrate exclusively on extracting and conveying coordinates, casualty numbers, and support requests from a radio message despite surrounding explosions, shouting, and medical alarms. By suppressing psychological intensity and environmental distractions, the interpreter ensures rapid and accurate communication of vital details. However, this strategy also carries risks, as the narrowed attentional focus may reduce sensitivity to subtle pragmatic or interpersonal cues – such as hesitation or uncertainty in the speaker's voice – which could hold secondary tactical significance.

Predictive processing is an adaptive psycholinguistic strategy based on anticipatory linguistic and situational expectations that facilitate rapid comprehension under severe time pressure. It operates by enabling interpreters to generate predictions about upcoming message content using contextual cues, operational scripts, and domain-specific knowledge, which allows partial pre-processing of linguistic input before it is fully perceived. This anticipatory mechanism accelerates comprehension, reduces working memory demands, and supports fluency in fast-paced military communication. For example, during a tactical briefing, an interpreter may anticipate references to unit movement, timing, or engagement zones based on the operational context, enabling quicker interpretation of incoming instructions, e.g., At 0600 hours…, Alpha unit will advance…, or Contact expected near…. As a result, incoming instructions like move to sector Charlie by dawn or establish perimeter within five minutes can be interpreted more rapidly and with reduced cognitive effort. However, predictive processing also entails risks, as inaccurate expectations may result in premature interpretation, semantic distortion, or confirmation bias, particularly when situational developments diverge from anticipated patterns.

Automatized linguistic processing is an adaptive psycholinguistic strategy that involves reliance on routinized lexical, syntactic, and terminological patterns under conditions of high cognitive

load. It functions through the automatic retrieval of frequently used military terminology, standardized phraseology, and recurrent syntactic structures, thereby bypassing effortful conscious analysis. This automation increases processing speed, reduces cognitive effort, and helps stabilize interpreting performance under stress and fatigue. For example, in routine command-and-control communication, interpreters can rapidly render standardized instructions such as hold position, stand by for orders, secure the perimeter, or cease fire without allocating additional cognitive resources. Similarly, procedural phrases like mission accomplished, area cleared, or request immediate support are often processed and reproduced as ready-made units, enabling efficient interpretation in time-critical situations. However, excessive reliance on automatization carries risks, as it may lead to rigid formulations, reduced contextual sensitivity, or inappropriate lexical choices when communicative situations deviate from established patterns.

Strategic omission is an adaptive psycholinguistic strategy that involves a controlled reduction of informational load through the selective omission of non-essential or redundant elements. It operates by prioritizing core semantic content while deliberately excluding peripheral modifiers, repetitions, or secondary contextual details when processing capacity is constrained. This strategy preserves communicative efficiency and helps prevent cognitive overload in extreme operational conditions, allowing interpreters to focus on transmitting mission-critical information. For example, during rapid battlefield communication, an interpreter may omit descriptive qualifiers or repeated phrases to ensure the timely delivery of key commands or situational updates. A source message such as We are currently under very heavy fire from multiple directions and urgently need immediate medical assistance may be rendered as Under fire, multiple directions, request immediate medical support. Similarly, repetitive or self-correcting speech We're moving east – no, correction, slightly northeast, toward the ridge may be strategically reduced to Moving northeast toward the ridge. Such controlled omissions facilitate timely and operationally relevant communication in situations where even brief delays may have serious consequences. However, excessive or poorly calibrated omission entails risks, as it may distort meaning, weaken pragmatic nuance, or result in the loss of situational detail that could be relevant for informed tactical decision-making.

Cognitive chunking is a memory-based adaptive psycholinguistic strategy that enables interpreters to organize incoming information into manageable semantic units. It functions by grouping elements of discourse into meaningful chunks – such as location–action–target or time–unit–objective – thereby reducing working memory demands and facilitating recall and reproduction. This strategy improves retention, coherence, and accuracy when processing high-density information streams typical of military communication. For example, during a tactical report, an interpreter may structure the message into discrete operational segments rather than processing each detail separately. A complex message such as At 0430 hours, Alpha unit encountered resistance near the eastern checkpoint, sustained two casualties, and requested immediate air support can be cognitively organized into functional chunks: time (0430) – unit (Alpha) – event (contact) – location (eastern checkpoint) – outcome (two casualties) – request (air support). This segmentation enables the interpreter to maintain clarity, coherence, and accuracy even under severe time pressure. However, inappropriate or overly rigid chunking carries risks, as it may oversimplify complex messages, obscure causal relationships, or lead to the loss of nuanced information critical for operational decision-making.

Emotional regulation is a self-regulatory adaptive psycholinguistic strategy aimed at controlling affective responses during psychologically charged communication in military contexts. It operates through the conscious suppression of emotional reactions, empathy overload, and moral distress in order to maintain professional neutrality and cognitive stability. By regulating affective engagement, interpreters are able to sustain attention, preserve decision-making accuracy, and maintain psychological endurance under prolonged stress. For example, when interpreting distressing testimonies or casualty-related orders, emotional regulation enables interpreters to continue performing effectively without cognitive disruption. In situations involving civilian casualties, detainee interrogations, or reports of fatalities, this strategy allows emotionally charged utterances, such as We lost two civilians during the strike or The detainee reports severe injuries to be rendered in a controlled and neutral manner, without amplification, mitigation, or distortion of meaning. Similarly, when interpreting casualty-related commands Confirm KIA and proceed with evacuation, psychological regulation prevents affective reactions from interfering with linguistic accuracy or professional conduct. However, prolonged or excessive psychological suppression entails risks, as it may contribute to delayed stress responses, psychological exhaustion, burnout, or secondary trauma.

Rapid decision-making heuristics is an adaptive psycholinguistic strategy that constitutes a set of simplified cognitive rules enabling

interpreters to make fast linguistic decisions under conditions of uncertainty and extreme time pressure. This strategy operates by relying on experience-based heuristics, allowing interpreters to select lexical and syntactic solutions without engaging in exhaustive analytical processing. As a result, it enables timely and operationally effective responses in situations where delays are unacceptable, such as real-time battlefield communication or urgent negotiations. For example, when confronted with fragmented or incomplete utterances like Contact… east… possible ambush, an interpreter may immediately render the message as Possible ambush from the east without waiting for syntactic completion. Similarly, during high-pressure exchanges, standard heuristic choices allow interpreters to rapidly select functional equivalents for commands such as fall back, hold fire, or move now, ensuring immediate comprehension and action. However, reliance on heuristic decision-making also carries risks, as simplified judgments may increase susceptibility to cognitive bias, premature conclusions, or systematic error, particularly in complex or ambiguous communicative contexts.

Conclusions. This study demonstrates that military interpreting under extreme operational conditions constitutes a form of high-risk cognitive activity shaped by the interaction of intense stressors, cognitive overload, and psychological pressure. The findings confirm that factors such as threat, time pressure, sensory overload, fatigue, and ethical-emotional dissonance systematically disrupt core psycholinguistic processes, including attention control, working memory functioning, semantic integration, and real-time decision-making. As a result, the quality and reliability of interpreting in military contexts are determined not only by linguistic competence, but also by the interpreter's ability to manage cognitive and psychological strain.

The analysis shows that, in response to these constraints, military interpreters activate a set of adaptive psycholinguistic strategies – selective attention, predictive processing, automatized linguistic processing, strategic omission, cognitive chunking, emotional regulation, and rapid decision-making heuristics. These strategies reorganize processing priorities by privileging speed, efficiency, and mission-critical meaning over completeness and nuance. While such adaptations enable functional communication in high-risk environments, they simultaneously increase vulnerability to systematic errors, pragmatic loss, and cognitive bias.

From a theoretical perspective, the study contributes to psycholinguistic and interpreting research by demonstrating how extreme stress modifies standard language-processing pathways, shifting them toward accelerated, resource-saving modes. It highlights the need to conceptualize military interpreting not merely as linguistic mediation, but as cognitively and psychologically regulated performance carried out under survival-oriented constraints.

From an applied perspective, the findings underscore the necessity of specialized interpreter training that integrates psycholinguistic awareness, cognitive resilience, stress management, and adaptive psycholinguistic strategy calibration alongside linguistic and terminological preparation. Institutional measures, including psychological support and workload regulation are also essential to mitigate long-term cognitive and psychological consequences such as burnout or secondary trauma.

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