

MORAL INJURY IN COMBAT DRONE (REMOTELY PILOTED AIRCRAFT) OPERATORS VERSUS CLASSIC PTSD: A DISTINCTIVE SYMPTOM PROFILE AND ITS IMPLICATIONS FOR PSYCHOLOGICAL SELECTION AND SUPPORT

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Original Scientific Article

Received: 22.01.2026. Revised: 18.04.2026. Approved: 19.05.2026.

DOI: <https://doi.org/10.65932/military-studies-2026-1-4> UDC: 159.944.4:355.232.6

Abstract: Operators of remotely piloted aircraft kill and watch from thousands of kilometres away and then drive home to their families, an occupational reality that fits poorly with a diagnostic model of combat trauma built around personal life-threat. The mental-health literature on these crews has documented real distress, yet it has largely measured that distress with fear-based post-traumatic stress disorder instruments, and it has not articulated why the operators' suffering should take a different form. This article develops that argument. Its original contribution is the Agentic-Exposure differential model, which locates remotely piloted aircraft operators in a two-dimensional traumatic-load space defined by fear-based load on one axis and moral-emotional injury on the other, and predicts that this population occupies a distinctive region: high moral injury and attenuated fear, a profile qualitatively different from the fear-circuitry-dominant post-traumatic stress disorder of physically deployed combatants. The model identifies two exposure pathways that drive the moral load, an agentic pathway of precision killing and battle-damage assessment and a witnessing pathway of prolonged intimate surveillance without the power to intervene, and it derives a predicted symptom profile dominated by guilt, shame, loss of meaning, anhedonia, and social alienation rather than by hyperarousal, re-experiencing, and external avoidance. The model is built by integrative theoretical synthesis of the moral-injury and the operator mental-health literatures and is expressed through two conceptual diagrams and two comparative tables. Its central practical claims follow directly: that standard fear-based screening systematically under-detects clinically significant distress in this population and should be supplemented by validated moral-injury instruments; that selection should weight moral-emotional resilience and cognitive and moral-schema flexibility rather than only fear-reactivity; and that first-line support should be meaning- and values-based rather than fear-extinction-based. The model is conceptual and its predicted profiles are illustrative, generating testable hypotheses that the article specifies for empirical validation.

Keywords: *moral injury, post-traumatic stress disorder, remotely piloted aircraft, drone operators, military psychology, psychological selection, screening.*

INTRODUCTION

The combat that produces moral injury need not look like combat at all. An operator of a remotely piloted aircraft sits in a climate-controlled ground-control station in the

continental interior, watches a target through a high-resolution sensor for hours or days, releases a weapon, conducts the battle-damage assessment that confirms the human consequences in unflinching detail, and then ends a shift and commutes home to ordinary

domestic life. The operator is never in physical danger, yet the available evidence shows that this population suffers measurable psychological harm, including post-traumatic stress symptoms, depression, burnout, and elevated distress (Chappelle et al., 2019; Bryant-Lees et al., 2021b; Nelson et al., 2022). The puzzle that motivates this article is the mismatch between the harm and the model used to detect it, because the diagnostic architecture of combat trauma was built around the fear conditioning that follows a threat to one's own life, and the remotely piloted aircraft operator's exposure has almost everything except that threat.

The concept that resolves the puzzle is moral injury, defined in the foundational account as the lasting psychological, behavioural, spiritual, and social harm that follows perpetrating, failing to prevent, or witnessing acts that transgress one's deeply held moral beliefs (Litz et al., 2009). A now-substantial literature has refined the construct, distinguished it from post-traumatic stress disorder, and shown that its core is not fear but the moral emotions of guilt and shame and the erosion of meaning (Griffin et al., 2019; Litz & Kerig, 2019; Litz & Walker, 2025). The remotely piloted aircraft operator is, on its face, an almost paradigmatic candidate for moral rather than fear-based injury: the role removes the life-threat that drives fear conditioning while maximising the agentic and witnessing exposure that drives moral injury. Yet the operator literature and the moral-injury literature have developed largely in isolation, and no integrated model specifies how the operator's distinctive exposure should translate into a distinctive symptom profile, or what that profile implies for how these crews are selected and supported.

The central research question is therefore both descriptive and applied: does the occupational exposure of the remotely piloted aircraft operator produce a symptom profile that diverges systematically from classic fear-circuitry post-traumatic stress disorder, and if so, what does that divergence imply for

psychological selection, screening, and support? The question matters because the answer determines whether the instruments currently used to protect these crews are fit for purpose, and the suspicion that motivates the article is that they are not.

Three hypotheses structure the inquiry. The first holds that remotely piloted aircraft operators exhibit a moral-injury-dominant and fear-attenuated trauma profile, distinct from the fear-circuitry-dominant profile of physically deployed combatants, because their exposure maximises agentic and witnessing moral exposure while minimising personal life-threat. The second holds that fear-based screening, anchored in the threat-to-life requirement of the post-traumatic stress disorder diagnosis, systematically under-detects clinically significant distress in this population, because the operators' dominant symptoms load weakly on fear-based items. The third holds that effective selection and support for this population should target moral-emotional resilience and meaning-based intervention rather than fear-reactivity and fear-extinction, amounting to a shift from a fear-trauma to a moral-injury paradigm for remote combatants.

The original contribution of this article is the model these hypotheses presuppose, which I term the Agentic-Exposure differential model. It introduces, for the first time to my knowledge in an integrated and diagrammed form, a two-dimensional account of remote-combat trauma in which fear-based load and moral-emotional load are treated as relatively independent axes, in which the remotely piloted aircraft operator is located in the high-moral, low-fear region, and from which a specific differential symptom profile and a specific set of selection and support implications are derived. The model joins the moral-injury and the operator mental-health literatures that have addressed the problem separately, it explains why a person never exposed to danger can be gravely harmed by combat, and it yields concrete, testable predictions about screening

sensitivity and intervention fit. Its analytic core is the claim that the source of the operator's injury is moral and agentic rather than fearful, and that this difference in kind, not merely in degree, should reshape the psychology of the force.

The article proceeds as follows. The next section reviews the moral-injury and operator literatures and states the method. A results section presents the model, its two diagrams, and two comparative tables, and specifies the predicted profile. Four analytical sections then develop the argument, treating the operator's exposure pathways, the reasons the profile diverges from fear-circuitry post-traumatic stress disorder, the implications for selection, and the implications for screening and support. A conclusion returns to the three hypotheses, states the model's limitations, and specifies the empirical tests it now requires.

LITERATURE REVIEW AND METHODOLOGY

Literature Review

Two literatures bear on the problem, and the contribution lies in joining them. The first is the science of moral injury. The foundational model defined moral injury as the harm that follows transgression of deeply held moral beliefs, whether through one's own acts of commission, through failures to act, or through bearing witness, and located its phenomenology in guilt, shame, withdrawal, and the loss of meaning rather than in fear (Litz et al., 2009). The construct has since been consolidated through integrative reviews and conceptual overviews that distinguish it carefully from post-traumatic stress disorder while acknowledging their overlap (Griffin et al., 2019; Litz & Kerig, 2019; Litz & Walker, 2025), and through a sustained effort to define and measure the syndrome, including the international Moral Injury Outcome Scale consortium (Yeterian et al., 2019; Litz et al., 2022). A parallel measurement literature has produced and validated a family

of instruments, the Moral Injury Events Scale, the Expressions of Moral Injury Scale, the Moral Injury Symptom Scale, and the Moral Injury and Distress Scale, each capturing the moral-emotional core that fear-based measures miss (Richardson et al., 2020; Carrier et al., 2020; Chesnut et al., 2022; Norman et al., 2024). The clinical significance of the construct is established by evidence linking moral injury to depression, functional impairment, and suicidal behaviour over and above post-traumatic stress disorder (Hall et al., 2022; Fani et al., 2021; Nichter et al., 2021; Levi-Belz et al., 2023), and by work on its symptom structure and on the differential roles of guilt, shame, rumination, and cognitive flexibility (Benfer et al., 2023; Cenkner et al., 2023). Notably for the present argument, the treatment literature has developed meaning- and values-based interventions, including acceptance and commitment approaches and spiritually integrated care, that target the moral rather than the fear dimension (Walser et al., 2024; Winkeljohn Black & Klinger, 2022).

The second literature is the mental health of remotely piloted aircraft crews, and it is empirically rich but conceptually fear-anchored. Studies of United States Air Force and Army operators have documented post-traumatic stress symptoms, distress, and the operational and combat risk factors that predict them (Chappelle et al., 2019; Nelson et al., 2022), the sources of occupational stress and their links to psychological health across career fields and commands (Bryant-Lees et al., 2021a), and the burnout, work-role strain, and emotional exhaustion that the relentless operational tempo produces (Martinez et al., 2023a; Tett et al., 2025; Mulhearn et al., 2024). The literature has examined suicide ideation and its protective factors in these crews (Bryant-Lees et al., 2021b), the spiritual and existential dimensions of well-being in remote combat (Bufford et al., 2023), and the access barriers and embedded-support models that shape help-seeking (Martinez et al., 2023b; McInerney et al., 2024). A more

interpretive strand, drawn from critical military and international-relations scholarship, has analysed the operator's distinctive exposure directly, including the role of distance, risk, and intimate surveillance in producing a specifically moral form of harm (Enemark, 2019; Johnston Huntington & Eckert, 2022; Holz, 2023; Hijazi et al., 2019), the stigmatisation of that harm within a warrior culture sceptical of trauma without danger (Moltenkamp et al., 2025), and the ethical and identity strain reported by operators themselves (Imre-Millei, 2025).

Read together, the two literatures supply complementary halves of an argument that neither completes. The moral-injury science establishes that a non-fear, morally driven syndrome exists, is measurable, is clinically serious, and is treatable by meaning-based means, but it has not been applied systematically to remote combatants. The operator literature establishes that these crews are harmed and identifies their distinctive exposure, but it has largely measured the harm with fear-based instruments and has not specified why the resulting profile should differ from classic post-traumatic stress disorder. The interpretive strand names the moral character of the exposure but does not connect it to the clinical measurement and selection apparatus. The Agentic-Exposure model is offered to close that gap, by translating the operator's documented exposure into a predicted moral-injury profile and deriving the measurement and selection consequences.

Research Methodology

This article is a conceptual, theory-building study that proceeds by integrative synthesis, and I should state plainly what that means and what it does not claim. It does not present new empirical data; it builds a model from the convergence of two existing evidence bases and specifies the hypotheses by which the model can be tested. The method has three steps. First, the relevant literature was identified through structured searches of Scopus, Web of Science, PubMed, and

Crossref, combining a moral-injury set of terms with a remotely-piloted-aircraft and drone-operator set, restricted to peer-reviewed work from 2019 onward except for the single foundational definition of moral injury, and screened for relevance to the symptom-profile and selection questions. Second, the documented occupational exposures of the operator were mapped onto the established dimensions of moral injury and of fear-based post-traumatic stress disorder, yielding the two-axis model. Third, the model was used to derive a predicted differential symptom profile and a set of selection, screening, and support implications, each tied to specific instruments and interventions from the reviewed literature.

The model is expressed through two diagrams and two tables. Figure 1 places the operator in a two-dimensional traumatic-load space and identifies the two exposure pathways; Figure 2 presents the predicted differential symptom profile against classic post-traumatic stress disorder; Table 1 contrasts the two profiles across etiology, affect, diagnostic fit, symptom emphasis, screening, and intervention; and Table 2 maps the operator's distinctive stressors to their exposure pathway and predicted moral emotion. I want to be candid that the symptom-prominence values in Figure 2 and the positions in Figure 1 are conceptual estimates derived from the qualitative convergence of the literature, not measured quantities, and they are presented to make the model's predictions explicit and falsifiable rather than to assert precision. Four limitations follow and are stated here. First, the model is conceptual and awaits the head-to-head empirical comparison, using both fear-based and moral-injury instruments in the same operator sample, that would confirm or refute it. Second, the operator evidence base is dominated by United States Air Force and Army samples, so cultural and national generalisation is asserted rather than shown. Third, moral injury and post-traumatic stress disorder genuinely co-occur, so the sharp contrast the model draws is an

analytic idealisation of overlapping realities (Hall et al., 2022; Fani et al., 2021). Fourth, the model treats the operator role as relatively homogeneous, whereas pilots, sensor operators, and intelligence analysts differ in exposure in ways the model only begins to capture.

RESEARCH RESULTS

The results are presented in three parts: the model and its traumatic-load space, the predicted differential symptom profile, and the resulting implications for measurement and selection. Interpretation is developed in the analytical sections that follow.

The model represents remote-combat trauma in a two-dimensional space, shown in Figure 1, whose axes are the fear-based traumatic load arising from threat to one's own life and the moral-emotional injury load arising from agentic and witnessing exposure.

The two axes are treated as relatively independent because their underlying mechanisms differ: fear-based load drives the fear-conditioning and threat-appraisal processes that the post-traumatic stress disorder diagnosis was built to capture, while moral-emotional load drives the guilt, shame, and meaning-disruption processes that define moral injury (Litz et al., 2009; Griffin et al., 2019). Plotting military populations in this space locates physically deployed ground combatants in the high-fear, high-moral region, rear and support personnel in the low-low region, and remotely piloted aircraft operators in the distinctive high-moral, low-fear region that is the model's focus. The figure also identifies the two pathways by which the operator's moral load accrues, an agentic pathway of commission and a witnessing pathway of omission, which the analytical sections develop.

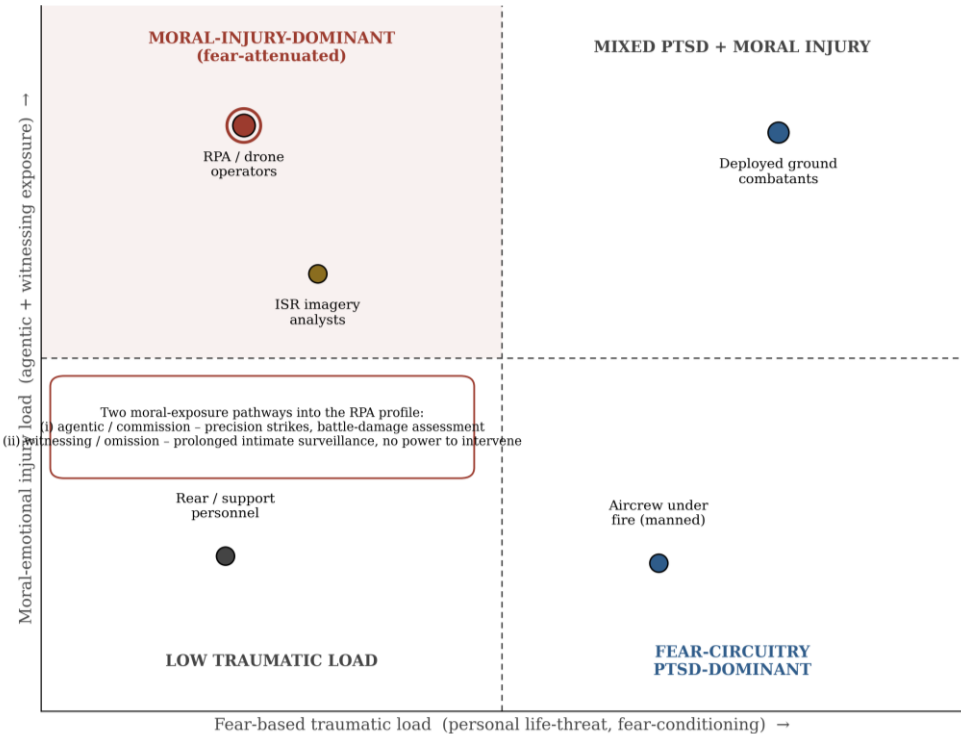


Figure 1. The Agentic-Exposure differential model. Military populations are located in a two-dimensional traumatic-load space; remotely piloted aircraft operators occupy a distinctive moral-injury-dominant, fear-attenuated region reached by two moral-exposure pathways (agentic/commission and witnessing/omission). Positions are conceptual. Source: author.

The model's second component is the predicted differential symptom profile, shown in Figure 2. Because the operator's injury is moral and agentic rather than fearful, the model predicts a profile dominated by the moral emotions and meaning-disruption symptoms, guilt and shame, loss of meaning and spiritual struggle, anhedonia and emotional numbing, social withdrawal and alienation, and anger turned toward the self, with comparatively lower prominence of the fear-circuitry symptoms, hypervigilance and

hypervigilance, intrusive re-experiencing tied to a threat to the self, and avoidance of external trauma cues, that characterise classic post-traumatic stress disorder. The contrast is the empirical heart of the model, because it is directly testable: if the model is correct, an operator sample assessed with both instrument families will score high on moral-injury measures and comparatively low on the fear-based items that anchor the post-traumatic stress disorder diagnosis (Currier et al., 2020; Norman et al., 2024).

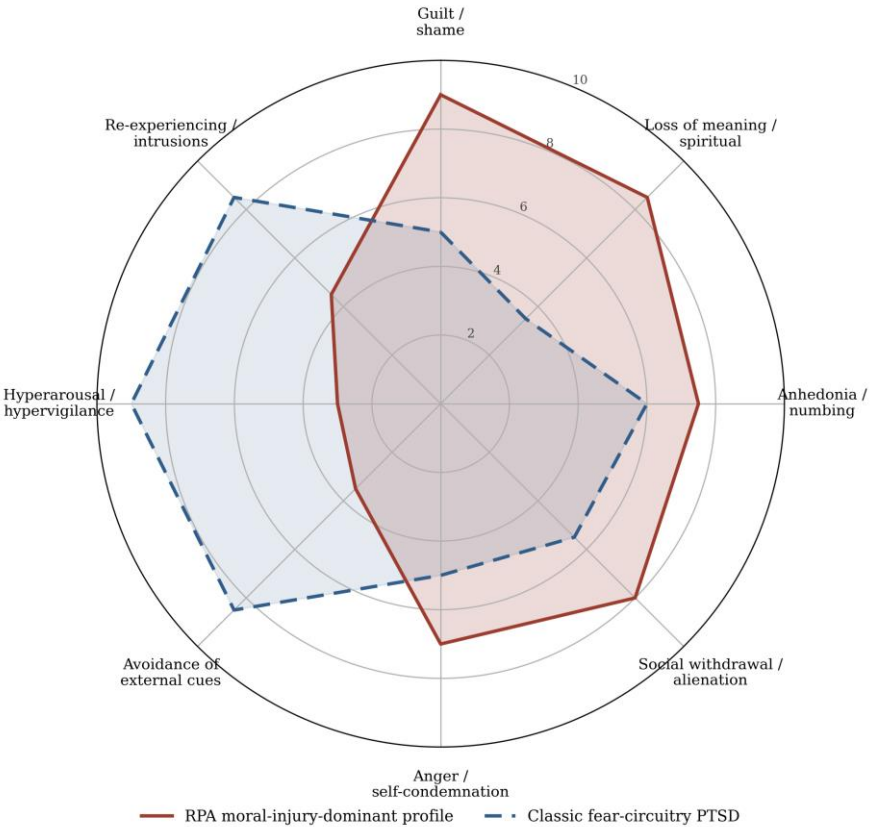


Figure 2. Predicted differential symptom profile of the remotely piloted aircraft moral-injury-dominant presentation (solid) versus classic fear-circuitry post-traumatic stress disorder (dashed), across eight symptom dimensions. Prominence values are conceptual model predictions on a 0–10 scale, presented to make the contrast falsifiable. Source: author.

Table 1 consolidates the contrast across the dimensions that matter for clinical practice, and Table 2 maps the operator's documented stressors to the exposure pathway and predicted moral emotion that the model

assigns them, drawing the stressor detail from the operator literature (Chappelle et al., 2019; Bryant-Lees et al., 2021a; Bufford et al., 2023; Johnston Huntington & Eckert, 2022).

Dimension	Classic fear-circuitry PTSD	RPA moral-injury-dominant profile
Etiological exposure	Threat to one's own life; fear conditioning	Agentic killing + witnessing without life-threat
Core affect	Fear, terror, helplessness	Guilt, shame, moral disgust, loss of meaning
DSM-5 Criterion-A fit	Strong (life-threat)	Weak/ambiguous (no threat to self)
Symptom emphasis	Re-experiencing, hyperarousal, avoidance	Anhedonia, withdrawal, self-condemnation, anomie
Recommended screening	Fear-based (e.g., PCL-5)	Add moral-injury measures (MIES/EMIS/MISS/MIOS)
First-line intervention	Exposure / fear-extinction therapies	Meaning/values-based (ACT, adaptive disclosure, BSS)

Table 1. Contrast between classic fear-circuitry PTSD and the predicted RPA moral-injury-dominant profile.

Stressor	Exposure pathway	Predicted moral emotion
Weapon release / precision strike	Agentic (commission)	Guilt, responsibility
Battle-damage assessment of human effects	Agentic + witnessing	Shame, moral disgust
Prolonged intimate surveillance of targets	Witnessing	Attachment, anticipatory guilt
Watching atrocity unable to intervene	Witnessing (omission)	Helpless guilt, betrayal
Home-station 'warrior at home' role switching	Contextual amplifier	Alienation, dissonance
Cultural stigma of 'danger-free' trauma	Contextual amplifier	Shame, concealment

Table 2. Distinctive RPA operator stressors mapped to exposure pathway and predicted dominant moral emotion (model assignment).

The results, taken together, specify a model that is descriptive in its profile and prescriptive in its consequences. Descriptively, it predicts a moral-injury-dominant, fear-attenuated presentation that diverges systematically from classic post-traumatic stress disorder. Prescriptively, it implies that fear-based screening will miss much of this presentation, that selection should weight moral-emotional resilience, and that support should be meaning-based. The analytical sections justify each claim.

THE OCCUPATIONAL EXPOSURE OF THE RPA OPERATOR: AGENTIC AND WITNESSING PATHWAYS

The model's foundation is the claim that the operator's exposure is morally maximal and physically minimal, and the operator literature supports both halves. The physical-minimality half is straightforward: the operator is never in bodily danger, so the threat-to-life exposure that the post-traumatic stress disorder diagnosis treats as paradigmatic is simply absent from the role, a point the critical literature has pressed as the defining peculiarity of remote war (Enemark, 2019;

Hijazi et al., 2019). The moral-maximality half is the substantive claim, and the model specifies it through two distinct pathways. The first is agentic, the pathway of commission, in which the operator is the proximate cause of death: the operator releases the weapon, and unlike the artillery crew or the high-altitude bomber, the operator then watches the result at high resolution, conducting the battle-damage assessment that converts an abstract strike into the concrete fact of human bodies (Chappelle et al., 2019; Johnston Huntington & Eckert, 2022). The agentic pathway concentrates responsibility and forecloses the psychological distance that has historically buffered killers at range.

The second pathway is witnessing, the pathway of omission and of bearing witness, and it is the one most specific to the remotely piloted aircraft role. The operator surveils targets and populations for hours, days, or weeks, developing a paradoxical intimacy with people the operator may later kill or may watch die at others' hands, and the literature records the distinctive harm of watching atrocity or suffering unfold while powerless to intervene (Johnston Huntington & Eckert, 2022; Holz, 2023). This is precisely the witnessing and failure-to-prevent exposure that the foundational moral-injury model identified as injurious independent of any threat to the witness (Litz et al., 2009), and the spiritual and existential strain that operators report in the well-being literature is its expected signature (Bufford et al., 2023). The witnessing pathway explains why an operator who never releases a weapon, such as an intelligence or imagery analyst, can nonetheless be morally injured, and the model places such analysts in the high-moral region alongside the shooters.

Two contextual features amplify both pathways without constituting a third, and the model treats them as moderators. The first is the daily transition between the kill chain and the kitchen table, the home-station role-switching that denies the operator both the decompression of a deployment cycle and the comradeship of a deployed unit, and that

the occupational-stress literature links to distress and burnout (Bryant-Lees et al., 2021a; Tett et al., 2025; Mulhearn et al., 2024). The dissonance of conducting lethal operations and parenting within the same day is not itself a moral transgression, but it removes the contextual supports that might otherwise help the operator integrate the moral weight of the work. The second amplifier is cultural: a warrior ethos that ties legitimate trauma to physical danger stigmatises the operator's distress as unearned, discouraging disclosure and help-seeking and compounding the shame at the centre of moral injury (Molenkamp et al., 2025; Imre-Millei 2025). Both amplifiers raise the moral-emotional load without adding fear, which is why the model represents them as pushing the operator further into the high-moral, low-fear region rather than along the fear axis.

The mapping of specific stressors to pathways, set out in Table 2, makes the model concrete and testable at the level of the individual exposure. Weapon release loads the agentic pathway and predicts guilt; battle-damage assessment loads both pathways and predicts shame and moral disgust; prolonged surveillance loads the witnessing pathway and predicts the anticipatory guilt of an engineered intimacy; powerless witnessing of atrocity loads the omission pathway and predicts the helpless guilt and sense of betrayal that the moral-injury literature ties to others' transgressions. Each mapping is a prediction that a study measuring exposure and moral emotion at the event level could confirm or refute, and the model's value is partly that it renders the operator's heterogeneous stressors legible as instances of two underlying moral mechanisms rather than as an undifferentiated list.

WHY THE PROFILE DIVERGES FROM FEAR-CIRCUITRY PTSD

The second claim is that the operator's symptom profile should differ in kind from classic post-traumatic stress disorder, and the

argument rests on the established distinction between the two syndromes. The moral-injury literature has consistently held that, although moral injury and post-traumatic stress disorder overlap and co-occur, their cores are different: post-traumatic stress disorder is organised around fear and threat, with re-experiencing, hyperarousal, and avoidance as its signature, whereas moral injury is organised around the moral emotions of guilt and shame and the disruption of meaning, with withdrawal, anhedonia, and self-condemnation as its signature (Griffin et al., 2019; Litz & Kerig, 2019; Litz & Walker, 2025). The divergence the model predicts in Figure 2 is simply this established distinction applied to a population whose exposure should push it toward the moral pole, and the prediction is therefore not speculative but a deduction from accepted clinical science.

The diagnostic architecture sharpens the point. The post-traumatic stress disorder diagnosis is gated by a Criterion-A stressor, exposure to actual or threatened death, serious injury, or sexual violence, and the operator's relation to that criterion is ambiguous at best, since the operator is exposed to others' death but not to any threat to the self (American Psychiatric Association, 2022). An operator with profound guilt, shame, and loss of meaning but without fear-based re-experiencing or hyperarousal may fail to meet the diagnosis while being severely impaired, which is exactly the pattern the moral-injury measurement literature was developed to capture and which fear-based instruments miss (Nieuwsma et al., 2021; Norman et al., 2024). The model predicts, in other words, not merely a different distribution of symptoms but a population for whom the dominant diagnostic instrument is structurally mismatched to the dominant pathology.

The clinical-significance literature confirms that the moral pole is not a milder condition that fear-based screening can safely overlook. Moral injury independently predicts depression, functional impairment, and, most seriously, suicidal ideation and

behaviour, over and above post-traumatic stress disorder, in both veteran and civilian samples (Hall et al., 2022; Fani et al., 2021; Nichter et al., 2021; Levi-Belz et al., 2023). For a population already shown to report suicide ideation and whose protective factors are imperfectly understood (Bryant-Lees et al., 2021b), a screening apparatus that under-detects the moral pole is not a measurement nicety but a safety gap. The model's prediction that operators sit at the moral pole therefore carries a direct clinical warning: the very symptoms most associated with suicide risk in this literature are the ones a fear-based screen is least likely to register.

There is a mechanistic subtlety the model should acknowledge rather than gloss. Guilt and shame are not interchangeable, and the moral-injury literature shows that they relate differently to rumination and cognitive flexibility and carry different prognostic weight, with shame and its self-condemnatory rigidity more strongly tied to the worst outcomes (Cenkner et al., 2023; Benfer et al., 2023). The operator's two pathways may load these emotions differently, with the agentic pathway of commission weighting guilt and responsibility and the witnessing pathway of betrayal weighting shame and moral disgust, a refinement Table 2 anticipates. This is where the model is most clearly a hypothesis rather than a finding, because the differential emotional loading of the two pathways has not been tested in operators, and it is one of the empirical questions the article's conclusion places on the agenda.

IMPLICATIONS FOR PSYCHOLOGICAL SELECTION

If the operator's vulnerability is moral rather than fearful, then selection should screen for moral-emotional resilience rather than only for the fear-reactivity and emotional stability that conventional aircrew selection emphasises, and this is the third claim's first half. The logic is direct: a selection system optimised to exclude those prone

to fear-based breakdown will not identify those prone to moral breakdown, because the predisposing characteristics differ. The moral-injury literature points toward the relevant traits, including the rigidity or flexibility of a person's moral schemas, the capacity for cognitive flexibility under moral conflict, and the resources for meaning-making and values clarity that allow a person to integrate morally weighty experience without fragmentation (Cenkner et al., 2023; Litz & Walker, 2025). The model predicts that operators with rigid, absolutist moral schemas and low cognitive flexibility are at elevated risk, because they cannot accommodate the dissonance between the act and the self, whereas those with flexible schemas and strong meaning resources are protected.

This reframing does not imply selecting for moral indifference, which would be both unethical and operationally counterproductive, and the distinction matters. The aim is not to choose operators who feel less but to choose operators who can metabolise what they feel, integrating the moral weight of the work into a coherent and durable sense of self and purpose. The well-being literature's finding that spiritual and existential resources buffer distress in remote combatants supports this orientation, suggesting that meaning-making capacity is a protective resource that selection could assess and that training could strengthen (Bufford et al., 2023; Winkeljohn Black & Klinger, 2022). Selection on moral-emotional resilience is thus continuous with support, identifying at intake the same capacities that intervention later seeks to build.

The model also cautions against two selection errors that a fear-based paradigm invites. The first is treating the absence of fear-based vulnerability as evidence of resilience, when the model predicts that fear-stable individuals may still be morally vulnerable, so that a clean conventional screen offers false reassurance. The second is over-relying on pre-enlistment and personality screening to the neglect of the dynamic, exposure-

dependent character of moral injury, since the longitudinal evidence shows that moral injury accrues through events and interacts with pre-existing characteristics rather than being fixed at intake (Levi-Belz et al., 2023). Selection, on the model's account, can identify predisposing vulnerability and protective resource, but it cannot inoculate, and it must therefore be paired with the ongoing monitoring and support the next section describes. The selection implication is real but bounded: it shifts the criteria from fear to moral resilience without pretending that any intake screen can substitute for care across a career.

IMPLICATIONS FOR SCREENING AND SUPPORT

The screening implication is the model's most immediately actionable claim and the second hypothesis stated as a recommendation: because the operator's dominant pathology is moral, screening built only on fear-based instruments will systematically underdetect it, and validated moral-injury measures should be added to the surveillance of these crews. The instruments exist and are psychometrically sound, including the Moral Injury Events Scale, the Expressions of Moral Injury Scale, the Moral Injury Symptom Scale, and the newer Moral Injury and Distress Scale, and the comparative work shows that they capture variance in distress and diagnosis that fear-based measures do not (Richardson et al., 2020; Currier et al., 2020; Chesnut et al., 2022; Norman et al., 2024; Nieuwsma et al., 2021). Adding such a measure to periodic operator assessment is a low-cost change with a direct safety rationale, given the established link between moral injury and suicidality in adjacent populations (Nichter et al., 2021; Levi-Belz et al., 2023). The model's prediction here is sharp enough to be tested immediately, by administering both instrument families to an operator sample and examining how many morally injured operators the fear-based screen alone would miss.

The support implication follows from the same logic: if the injury is moral, the first-line intervention should target meaning and values rather than fear extinction. The dominant evidence-based treatments for post-traumatic stress disorder are exposure-based and work by extinguishing fear responses to trauma reminders, a mechanism well matched to fear-circuitry pathology but poorly matched to guilt, shame, and the loss of meaning, which are not extinguished by repeated exposure and may even be aggravated by a treatment that implies the operator's moral pain is an irrational fear to be habituated away (Griffin et al., 2019; Litz & Walker, 2025). The interventions developed specifically for moral injury, including acceptance and commitment approaches that work on the relationship to moral pain and on values-based action, and spiritually integrated approaches that rebuild meaning, are the better-matched first line for this population (Walser et al., 2024; Winkeljohn Black & Klinger, 2022). The model thus predicts not only that the right cases will be missed by the wrong screen but that the found cases may be offered the wrong treatment.

Organisational and cultural measures complete the support picture, because moral injury is sustained by isolation and stigma as much as by exposure. The literature on embedded mental-health services and on reducing barriers to care suggests that bringing support into the operator's own unit, rather than requiring a stigmatising referral out of it, raises help-seeking and is well suited to a population that distrusts the legitimacy of its own distress (Martinez et al., 2023b; McInerney et al., 2024). Directly addressing the cultural stigma that brands danger-free trauma as illegitimate is itself a clinical intervention, because that stigma feeds the concealment and shame at the centre of moral injury, and the operator literature documents both the stigma and its costs (Molenkamp et al., 2025; Imre-Millei 2025). The reconstitution and operational-tempo findings add a structural lever, since adequate breaks and manageable

workload reduce the burnout that compounds moral injury and erodes the meaning resources that protect against it (Mulhearn et al., 2024; Martinez et al., 2023a). Support, on the model's account, is a system of measures, clinical, organisational, and cultural, aligned to the moral rather than the fear nature of the harm.

CONCLUSION

The remotely piloted aircraft operator is the clearest case yet of a combatant injured by war without ever being endangered by it, and that fact strains a diagnostic and selection apparatus built around danger. This article set out to specify how the operator's distinctive exposure should translate into a distinctive form of harm, and the model it proposes supports an ordered set of conclusions.

The first hypothesis, that operators exhibit a moral-injury-dominant and fear-attenuated profile distinct from fear-circuitry post-traumatic stress disorder, is the model's central prediction, and it follows deductively from the established distinction between the two syndromes applied to a population whose exposure removes life-threat while maximising agentic and witnessing moral exposure (Litz et al., 2009; Griffin et al., 2019; Enemark, 2019). The second hypothesis, that fear-based screening systematically under-detects this presentation, follows from the diagnostic mismatch between a Criterion-A-gated, fear-anchored instrument and a pathology whose core is guilt, shame, and loss of meaning, and it is supported by the comparative measurement literature and carries a direct safety rationale given the moral-injury-suicide link (American Psychiatric Association, 2022; Nieuwsma et al., 2021; Nichter et al., 2021).

The third hypothesis, that selection and support should target moral-emotional resilience and meaning rather than fear, follows from the first two and is consistent with the treatment and well-being evidence. Selection should weight moral-schema and cognitive

flexibility and meaning-making capacity rather than only fear-stability; screening should add validated moral-injury instruments to fear-based ones; and first-line support should be meaning- and values-based and embedded in the operator's own unit and culture rather than exposure-based and referred out (Cenkner et al., 2023; Norman et al., 2024; Walser et al., 2024; Martinez et al., 2023b). Each recommendation is a change the force could make without waiting for new science, because the instruments and interventions already exist; what has been missing is the model that says they are the right ones for this population.

The principal original contribution of this article is that model, the Agentic-Exposure differential model, which locates remote combatants in a two-dimensional traumatic-load space, derives their predicted moral-injury-dominant symptom profile, and connects that profile to concrete selection, screening, and support consequences. The model joins two literatures that had addressed the problem separately, it explains the paradox of harm without danger, and it converts the operator's documented exposure into falsifiable predictions about symptom structure and screening sensitivity. That integrative and generative ambition is the

proper aim of an original contribution, and it is the one pursued here.

The limitations bound the claims and define the agenda. The model is conceptual, and its decisive test, administering fear-based and moral-injury instruments together in the same operator sample and comparing their yield, has not yet been run; the predicted symptom-prominence values are illustrative, not measured; the evidence base is dominated by United States samples; and moral-injury and post-traumatic stress disorder genuinely co-occur, so the model's sharp contrast idealises overlapping realities. These boundaries specify what is needed next: a head-to-head measurement study in operators to test the predicted profile and the screening gap; an event-level study to test whether the agentic and witnessing pathways load guilt and shame differently as the model predicts; and a selection study to test whether moral-emotional resilience predicts outcomes better than fear-stability. Until that work is done, the responsible reading is that the operators who watch and kill from a safe distance are not spared the moral cost of war but are, if anything, peculiarly exposed to it, and that protecting them requires measuring and treating the injury they actually have rather than the one the diagnostic tradition expects.

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MORALNA POVREDA KOD OPERATERA BORBENIH DRONOVA (DALJINSKI UPRAVLJANIH VAZDUHOPLOVA) NASUPROT KLASIČNOM PTSP-U: DISTINKTIVNI SIMPTOMSKI PROFIL I POSLJEDICE ZA PSIHOLOŠKU SELEKCIJU I PODRŠKU

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Originalni naučni članak

Primljen: 22.01.2026. Revidiran: 18.04.2026. Odobren: 19.05.2026.

DOI: <https://doi.org/10.65932/military-studies-2026-1-4> **UDK:** 159.944.4:355.232.6

Sažetak: Operateri daljinski upravljanih vazduhoplova ubijaju i posmatraju s udaljenosti od hiljada kilometara, a potom se vraćaju kući svojim porodicama — okolnost koja se loše uklapa u dijagnostički model borbene traume izgrađen oko prijetnje vlastitom životu. Literatura o mentalnom zdravlju ovih posada dokumentovala je stvarnu patnju, ali ju je uglavnom mjerila instrumentima za posttraumatski stresni poremećaj zasnovanim na strahu i nije objasnila zašto bi ta patnja imala drugačiji oblik. Ovaj rad razvija taj argument. Njegov originalni doprinos jeste diferencijalni model agentivne izloženosti, koji smješta operatere u dvodimenzionalni prostor traumatskog opterećenja definisan opterećenjem zasnovanim na strahu na jednoj osi i moralno-emocionalnom povredom na drugoj, i predviđa da ova populacija zauzima distinktivno područje: visoka moralna povreda i ublažen strah — profil kvalitativno različit od PTSP-a zasnovanog na strahu kod fizički raspoređenih boraca. Model identifikuje dva puta izloženosti koja pokreću moralno opterećenje: agentivni put preciznog ubijanja i procjene posljedica dejstva, te svjedočki put dugotrajnog intimnog nadzora bez moći da se intervenira, i izvodi predviđeni simptomski profil u kojem dominiraju krivica, sram, gubitak smisla, anhedonija i socijalna otuđenost, a ne hiperpobuđenost, ponovno proživljavanje i izbjegavanje. Model je izgrađen integrativnom teorijskom sintezom literature o moralnoj povredi i o mentalnom zdravlju operatera i izražen je kroz dva konceptualna dijagrama i dvije uporedne tabele. Njegove središnje praktične tvrdnje slijede direktno: da standardni skrining zasnovan na strahu sistematski podcjenjuje klinički značajnu patnju u ovoj populaciji i treba ga dopuniti validiranim instrumentima moralne povrede; da selekcija treba da vrednuje moralno-emocionalnu otpornost i kognitivnu i moralno-shematsku fleksibilnost umjesto samo reaktivnosti na strah; te da prva linija podrške treba da bude zasnovana na smislu i vrijednostima, a ne na gašenju straha. Model je konceptualan, a predviđeni profili ilustrativni, te generišu provjerljive hipoteze koje rad precizira za empirijsku validaciju.

Ključne riječi: *moralna povreda, posttraumatski stresni poremećaj, daljinski upravljani vazduhoplovi, operateri dronova, vojna psihologija, psihološka selekcija, skrining.*