

The Cockroach Doctrine

A resilience doctrine for remaining operational under repeated asymmetric disruption

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Abstract

The Cockroach Doctrine is a practical resilience framework centered on one directive: remain on the board. It treats survival, continuity, and recoverable function as prerequisites for every later objective. Unlike narratives that glorify stoicism, domination, or endless endurance, the doctrine defines resilience as maintaining critical function through buffering, adaptation, graceful degradation, recovery, and strategic withdrawal. This paper translates an informal survival heuristic into a testable socio-technical framework. It specifies principles, operational states, metrics, ethical boundaries, and failure modes; distinguishes resilience from mere suffering; and connects the doctrine to resilience engineering research on adaptive capacity, brittleness, graceful extensibility, and recovery. The framework is intended for individuals, teams, and small institutions operating under sustained resource scarcity or repeated disruption.

Keywords: resilience, adaptive capacity, graceful degradation, continuity, recovery, resource scarcity, socio-technical systems

1. Introduction

The informal phrase 'cockroach mentality' describes a refusal to disappear under adverse conditions. As a doctrine, however, persistence alone is insufficient. A system can continue operating while accumulating irreversible damage, losing judgment, or sacrificing the very values it aims to preserve. The Cockroach Doctrine formalizes persistence as managed continuity rather than heroic suffering.

Its core directive is: remain on the board. In strategic terms, a participant who retains minimum viable agency can still adapt, negotiate, document, rebuild, or win later. A participant who exhausts all resources in a single exchange may achieve a symbolic victory while losing the capacity to continue.

2. Relationship to Resilience Engineering

Resilience engineering studies how people and systems recognize, absorb, adapt to, and recover from variations and surprises, especially when events exceed the disturbances for which the system was designed. Woods distinguishes resilience as rebound, robustness, graceful extensibility beyond normal boundaries, and sustained adaptability in evolving networks. The Cockroach Doctrine draws most heavily on the latter two concepts.

The doctrine is not a substitute for resilience engineering. It is a compact operational philosophy that converts several resilience concepts into decisions usable under pressure and resource scarcity.

3. Core Definition

Formal working definition. The Cockroach Doctrine is a continuity-first strategy in which an actor preserves minimum viable agency, protects irreplaceable assets, degrades gracefully under pressure, recovers capacity whenever possible, and avoids irreversible commitments unless continued operation is no longer ethically or materially viable.

4. Core Principles

- Remain operational: continuity is the first objective because every later objective depends on it.
- Protect the core: identity, evidence, health, legal position, key relationships, and essential tools receive priority over peripheral assets.
- Absorb without normalizing harm: surviving damage does not make the damage acceptable or sustainable.
- Degrade gracefully: reduce scope, speed, comfort, or output before allowing catastrophic collapse.
- Preserve receipts: document events, decisions, losses, and adaptations so survival does not erase accountability.
- Borrow capacity: use networks, tools, institutions, and temporary support when internal reserves approach exhaustion.
- Recover deliberately: food, sleep, medical treatment, backups, maintenance, and pacing are operational infrastructure.
- Choose battles asymmetrically: do not spend irreplaceable resources merely to prove toughness.
- Retain an exit: withdrawal, pause, surrender of a minor objective, or route change may preserve the larger mission.
- Outlast without becoming the threat: continuity does not excuse coercion, retaliation, deception, or reckless harm.

5. Operational State Model

State	Condition	Permitted strategy	Primary objective
STABLE	Resources exceed current demand.	Build reserves, backups, skills, and relationships.	Increase margin.
PRESSURED	Demand rises or capacity falls, but normal function continues.	Triage, slow nonessential work, increase monitoring.	Prevent reserve depletion.
DEGRADED	Full performance is impossible without unacceptable risk.	Preserve core functions; suspend peripheral commitments.	Maintain minimum viable agency.
SURVIVAL	Immediate threat to health, safety, liberty, evidence, or continuity.	Seek aid, use emergency resources, document, withdraw where possible.	Avoid irreversible loss.
RECOVERY	Threat has receded but capacity remains impaired.	Repair, rest, reconcile records, replenish reserves.	Restore adaptive capacity.
REORIENTATION	Prior mission or strategy is no longer viable.	Redefine objectives and architecture without erasing history.	Continue in a safer form.

6. The Minimum Viable Agency Model

A system remains 'on the board' when it retains enough agency to observe, decide, communicate, and act. Minimum viable agency can be represented as five protected capacities:

- Perception: access to sufficiently reliable information.
- Decision: cognitive and procedural ability to select among options.

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- Action: physical, financial, technical, or institutional ability to execute at least one option.
- Memory: preservation of records, lessons, credentials, and continuity state.
- Recovery: a path for restoring depleted capacity.

Loss of any single capacity may be survivable if another layer compensates. Loss of all five constitutes functional removal from the board.

7. Cockroach Logistics

The doctrine treats maintenance as strategy rather than indulgence. Practical continuity depends on boring logistics that heroic narratives routinely neglect:

- medical follow-up and treatment compliance;
- sleep and nutritional minimums;
- redundant copies of essential records;
- secure access to identification, communications, and transportation;
- small financial and energy reserves;
- scheduled pauses before irreversible decisions;
- trusted people who can provide reality checks or temporary capacity;
- clear thresholds for emergency escalation.

8. Metrics

Metric	Operational meaning	Example indicator
Buffer capacity	Resources available before core failure.	Days of medication, cash reserve, spare device, backup copy.
Functional floor	Minimum output that preserves mission continuity.	One verified filing, one active communication channel, one safe sleeping location.
Recovery latency	Time required to restore a lost capability.	Hours to restore data or days to recover work capacity.
Graceful degradation	Ability to reduce performance without sudden collapse.	Reduced workload while preserving deadlines and evidence.
Adaptation cost	Damage or debt created by the coping strategy.	Sleep loss, legal exposure, financial cost, relationship strain.
Boundary proximity	Distance from irreversible failure.	Missed medication, device battery, filing deadline, escalating symptoms.
Learning retention	Whether adaptations become reusable knowledge.	Updated checklist, versioned protocol, documented failure branch.

9. Decision Rule

Before committing scarce capacity, ask:

1. Does this action protect or endanger minimum viable agency?
2. Is the threatened asset replaceable, recoverable, or irreplaceable?
3. Can scope be reduced before capacity is exhausted?
4. Is there external adaptive capacity that can be borrowed safely?
5. What is the recovery cost if the action fails?
6. Does the action preserve evidence and future options?

7. Is persistence still serving the mission, or has persistence become self-destruction?

10. Distinction from Adjacent Ideas

Concept	Difference from the Cockroach Doctrine
Stoicism	Emphasizes judgment and response to uncontrollable events; the doctrine emphasizes operational continuity and resource architecture.
Grit	Emphasizes sustained effort toward long-term goals; the doctrine permits changing goals to preserve agency.
Robustness	Resists disturbance while retaining form; the doctrine also permits adaptation, degradation, and reorientation.
Antifragility	Claims improvement through volatility in some systems; the doctrine requires only survival and recoverability, not benefit from harm.
Martyrdom	Accepts destruction for a value or cause; the doctrine generally treats continued agency as the more useful form of service.
Denial	Pretends damage is absent; the doctrine requires explicit damage assessment and recovery accounting.

11. Failure Modes and Ethical Boundaries

- Endurance theater: visible toughness replaces effective protection of core capacity.
- Permanent emergency mode: temporary survival adaptations become normalized and destroy long-term health.
- Mission capture: the need to persist becomes more important than the original reason for persisting.
- Isolation: refusing help is mistaken for resilience, eliminating access to borrowed adaptive capacity.
- Retaliatory survival: harming others is justified as necessary continuity without proportionality or evidence.
- Evidence neglect: urgent action is taken without preserving records, weakening later accountability.
- Medical minimization: dangerous symptoms are reframed as another hit to absorb rather than a reason for immediate care.
- Identity fusion: stopping or changing one project is experienced as personal extinction.

The doctrine must never be used to encourage remaining in immediate danger when safe exit, emergency assistance, medical care, or lawful protection is available. Remaining on the board may require leaving the board position presently occupied.

12. Testable Propositions

- P1: Continuity plans organized around minimum viable agency will produce fewer catastrophic all-at-once failures than plans organized around full-performance maintenance.
- P2: Explicit recovery accounting will reduce the duration of harmful emergency adaptations.

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- P3: Systems with documented borrowing pathways for adaptive capacity will recover faster from surprise events.
- P4: Preserving receipts during disruption will improve post-event learning and accountability.
- P5: The doctrine will fail when persistence is rewarded without measuring accumulated adaptation cost.

13. Proposed Evaluation Design

The doctrine can be evaluated through scenario exercises and longitudinal case studies. Teams or individuals would define their critical functions, functional floor, protected assets, degradation sequence, assistance pathways, and recovery thresholds. Outcomes would include continuity duration, irreversible losses, time to recovery, adaptation cost, option preservation, and whether emergency measures were retired after the threat passed. Comparison groups could use conventional goal-persistence plans without an explicit functional floor.

14. Discussion

The Cockroach Doctrine is intentionally unglamorous. It rejects the idea that resilience is demonstrated by taking unlimited damage. A resilient actor notices depletion, protects the core, accepts temporary reduction, borrows capacity, and returns. The doctrine therefore treats maintenance, retreat, documentation, and recovery as forms of strength.

Its central contribution is strategic sequencing. Survival is not the final objective; it is the condition that keeps future objectives possible. Remaining on the board creates time for evidence to accumulate, institutions to respond, health to recover, strategies to change, and work to be evaluated.

15. Limitations

- The framework is conceptual and has not been independently validated.
- The metaphor may trivialize severe adversity if used without care.
- Minimum viable agency is context-dependent and difficult to quantify across domains.
- Persistence can become harmful when exit criteria are vague or social support is unavailable.
- The doctrine cannot substitute for medical, legal, safety, or mental-health professionals in high-stakes situations.

16. Conclusion

The Cockroach Doctrine can be reduced to one sentence: stay on the board without destroying the player. Its practical meaning is more disciplined: preserve minimum viable agency, protect irreplaceable assets, degrade gracefully, borrow capacity, document the pressure, recover deliberately, and change position when continuation in the present form becomes unsafe or unethical. Outlasting is not passive endurance. It is continuity engineered under constraint.

Declarations

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