THE PARADIGM OF THE MILITARY ECOTONE

Theoretical and Methodological Foundations for the Study of War-Related Environmental Pollution

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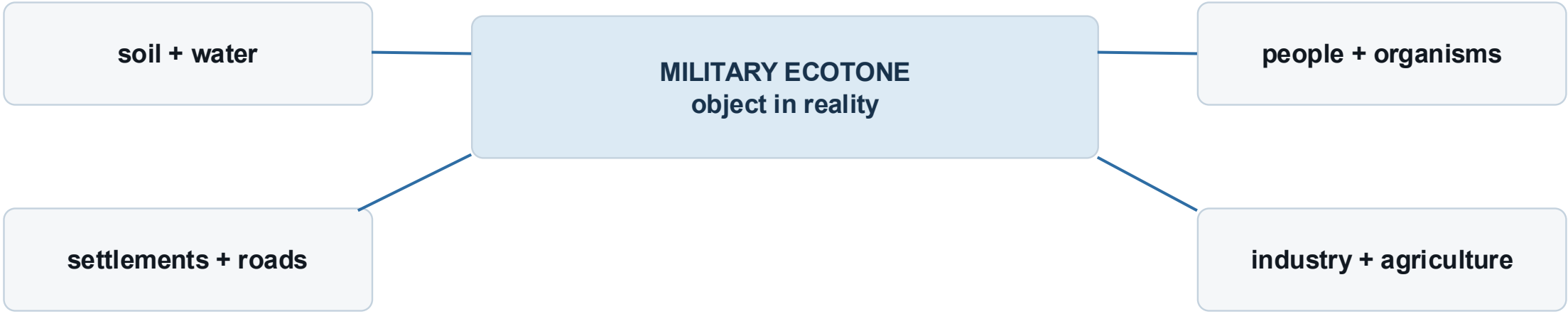
War, Soil, and Freshwater Systems · Prague · 15–17 October 2026

The military ecotone arises in reality.
The theory arises in knowledge.

https://doi.org/10.66659/nm7g2h26

A new object

War does not merely damage a landscape. It creates a new configuration of relations.



Humans initiate the change. The system then develops beyond human control.

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War as a regime

PEACEFUL REGIME

production · residence · transport
water supply · agriculture · maintenance

MILITARY REGIME

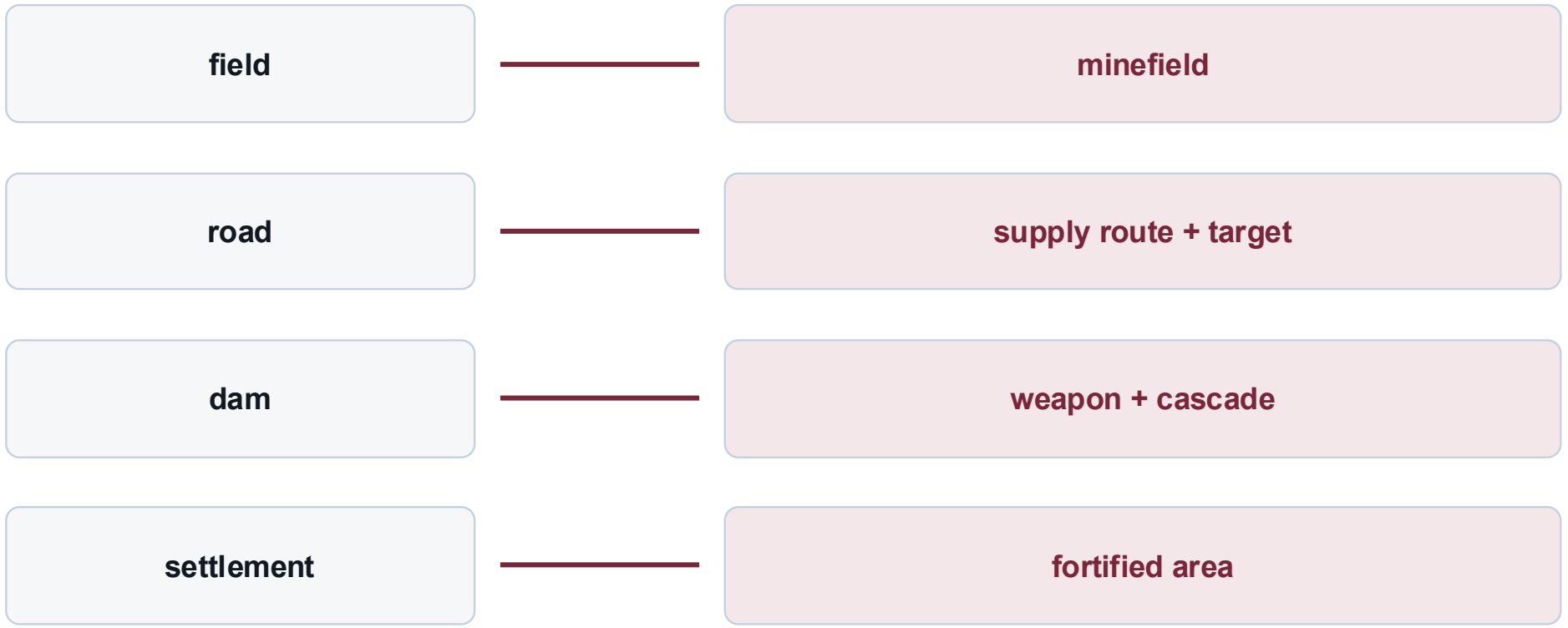
use · blockade · destruction
targeting · denial · maximisation of military effect

A precise strike can initiate an almost uncontrollable environmental process.

Precision of impact ≠ precision of consequences

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Functional inversion and two colliding logics



The same explosion produces different consequences in different places.

LOCATION MATTERS

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Passive, latent, and trigger states

PASSIVE

A defensive line changes a territory even if it never enters combat.

LATENT

A minefield or contaminated sediment preserves a capacity for later activation.

TRIGGER

A limited impact produces a disproportionate transformation because of place, time, and system condition.

Trigger sensitivity

Fast: explosion · flood · mass flight

Slow: migration · corrosion · land-use change · disease

The object may end by one parameter and continue by another.

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A boundary is not a line on a map

The boundary follows transformation—not distance from military action.

WATER

SOIL

PEOPLE

FOOD

INFRASTRUCTURE

space

time

carrier-dependent · multidimensional · spatial · temporal · dynamic

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Military contamination is only one part

CONTAMINATION STRATIGRAPHY

Donbas was polluted before 2014. War adds a layer and changes sources, transfers, controls, and observation.

AZOVSTAL PARADOX

Destruction may create an acute release and simultaneously end a chronic industrial source.

TERRITORY OF FEAR

No new chemical release is required. People leave; maintenance ends; fields are abandoned; functions disappear.

SYSTEMIC TRANSFORMATION

Separate emission totals cannot describe the whole object. War changes the regime of the territory.

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Before and after the military-induced rupture

BEFORE
pre-war baseline

WAR
change of regime

AFTER
transformation

Military-induced rupture

population · chemistry · hydrology · morphology · land use · disease · function

Fingerprint of war = diagnostic configuration, not a single universal marker

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Transformation, reactivation, and the relict state

TRANSFORMATION

Succession may occur, but dioxin, heptyl, mines, infrastructure failure, depopulation, and disease follow different trajectories.

REACTIVATION

A new function or carrier can activate a latent process. Agriculture may open a soil–plant–food–human or animal chain.

RELICT MILITARY ECOTONE

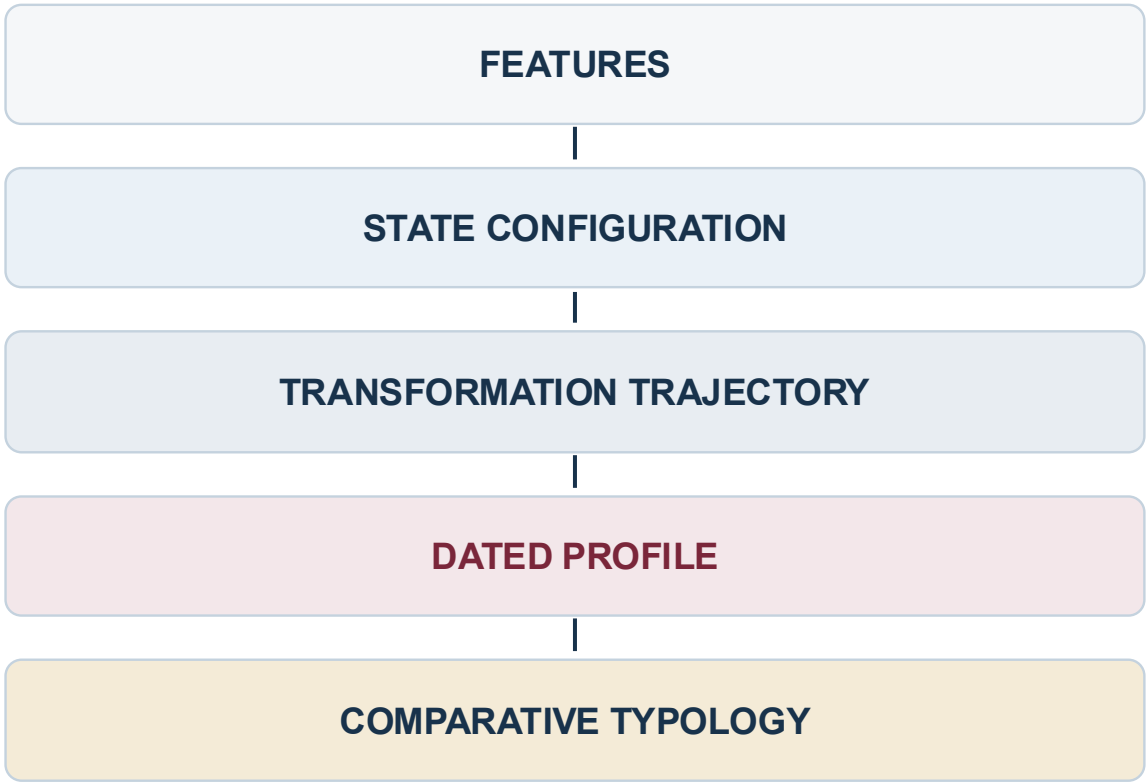
Most manifestations disappear, but particular carriers, processes, or consequences continue or can return.

initial state — latent interval — renewed pathway

Vietnam: war parameters ended; the dioxin chain continued.

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Configuration, trajectory, and profile

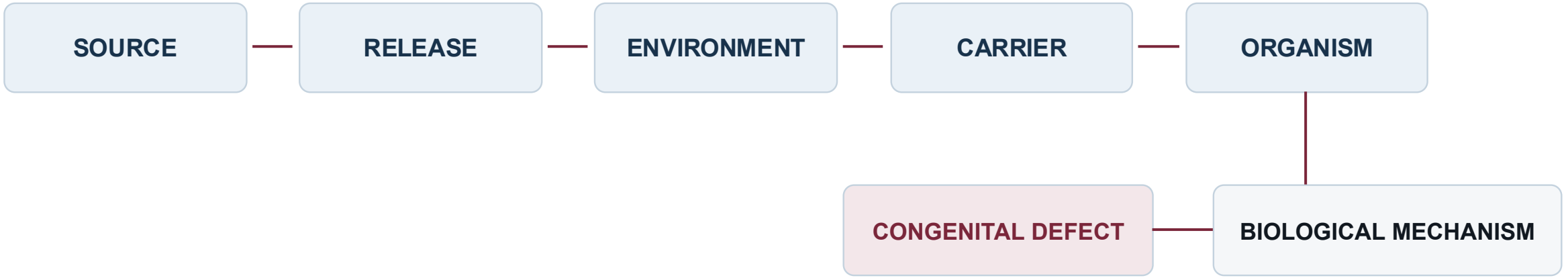


Do not assign a timeless type to one changing state.

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Problem centre and research contour

Reality provides the configuration. The researcher selects the problem.
The causal relation determines the contour.



Each link needs location · time · source · method · confidence

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The relational information system

MINIMUM RECORD

- feature
- value
- carrier
- state
- pre-war baseline

RELATIONAL CONNECTION

- military-induced rupture
- source + method
- confidence
- location + time
- problem centre

Keep separate: observation · hypothesis · proposed relation · confirmed link · interpretation

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The expert–AI system

EXPERT

formulates the problem
distinguishes object from subject
selects evidence
evaluates proposals
remains responsible

AI

compares material
finds logical breaks
proposes concepts
records contradictions
preserves development history

Verifiability comes from the preserved working trace—not assumed machine honesty.

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What the theory claims

1. War can create a new natural–anthropogenic object.
2. Military contamination is one component, not the whole object.
3. A valid disciplinary fragment must not replace the object.
4. The theory remains versioned because the object changes.

MAIN DISCUSSION QUESTION

What must be recognised and recorded before war-related environmental change can be studied as one connected object rather than as a collection of disciplinary fragments?

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