Soil After War as a Configurational Object of the Military Ecotone

Protocols of Expert-AI Scientific Inquiry

Laboratory of Military Ecotones

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The beginning of the soil military ecotone



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Soil after War as a Configurational Object of the Military Ecotone

Protocol for Developing a Theory for the Study of Soil Transformed by War

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In this theory, war changes the territorial regime.

Soil functions, relations and development enter that changed regime.

Military chemical pollution is one possible component.

The object can precede detection and administrative recognition.

The meaning of a configurational object

Pre-war history conditions the response to military disturbance.

Impacts change functions and relations within the soil system.

The sequence and combination of changes matter.

The subsequent trajectory forms part of the object.

Four elementary transformations

Transformation	Illustrative changes
Addition	Substances, displaced material and energy
Destruction	Horizon mixing, craters and damaged drainage
Cessation	Cultivation, chemical inputs or maintenance stop
Reorganisation	Use, access and territorial functions change

Soil protocol §8 / working concepts of the military ecotone

Soil as carrier, archive and active medium

Soil retains material traces of successive impacts.

Physical, chemical and biological processes alter those traces.

Soil can accumulate substances and become a secondary source.

Relations with water, organisms and later land use require testing.

Soil protocol §§6–7, 18

Pre-war history and the actual soil condition

War enters an existing natural and human history.

Detection after war does not establish military origin.

A soil classification name does not describe every current function.

An unknown baseline must remain identifiable as unknown.

Soil protocol §§4, 11–12

CONCEPTUAL EXAMPLE

An abandoned agricultural territory

War-related fear or restricted access can stop cultivation.

Maintenance of drainage and irrigation may cease.

Water, vegetation and soil processes can then change.

The proposed connection requires territorial evidence.

Soil protocol §§3, 8–10 / illustrative scenario, not field findings

Carrier-dependent boundaries

Boundary or carrier	What the research must distinguish
Soil and displaced material	Direct disturbance and material redistribution
Water	Connections through surface water and groundwater
Organisms	Proposed transfer through plants and animals
Regulatory boundary	Permission or restriction as a separate layer

Soil protocol §13 / carrier-dependent boundary

Different parameters have different trajectories

Physical repair, chemical change and biological response have different timing.

Recovery of most indicators can leave a significant residual process.

Changed use or water conditions can reactivate a latent process.

The endpoint requires criteria appropriate to the studied scale.

Eight groups of indicators

Indicator group	Question for observation
Land use	What has stopped or changed?
Pollutants	Which substances, forms and availability?
Physical soil transformation	What has happened to soil structure?
Freshwater regime	How have water relations changed?
Biological changes	Which communities and interactions change?
Flows of substances	What enters, moves or leaves?
Human presence	Who has left, returned or changed use?
Control and observability	What can be observed, and what is missing?

Soil protocol §10 / open initial system of indicators

Research polygons and micropolygon sites

A polygon represents a defined configuration of history and military activity.

A micropolygon supports detailed, repeated local investigation.

Samples belong to a site, time and relation being tested.

A representativeness record states the limits of extrapolation.

Soil protocol §§15–17

The hypothesis–evidence relation

Proposed link	Evidence needed for that link
Source and military event	Records, timing and alternative sources
Input into soil	Sampling context and relevant measurements
Transformation and transfer to water	Mechanism, conditions and pathway evidence
Wider ecological significance	Separate tests of the proposed consequence

Soil protocol §§7, 19 / illustrative relation, not an established causal finding

Field observations, experiments and research memory

Fieldwork examines actual configurations and spatial relations.

Controlled experiments test particular mechanisms.

A domain of transfer defines applicability to field conditions.

The expert–AI information system preserves evidence and model revisions.

Soil protocol §§17, 20

The open dynamic soil profile

The profile records condition, history, relations and boundaries.

Each claim retains its evidence status and methodological limits.

Later observations revise the trajectory and competing explanations.

Standards and administrative decisions form separate interpretive layers.

Soil protocol §§23–25 / standards as a separate layer

The approach has a right to project-based testing

A project states the theory and its observable consequences.

Sampling, indicators and duration follow the distinctive research question.

Access to data and samples enables independent verification.

Negative findings and failures of the theory remain part of the record.

Right to Empirical Testing §§10–14 / Soil protocol §§21–22

The theoretical and methodological sequence

Soil as a Configurational Object (94, v1.0)
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The Paradigm of the Military Ecotone (92)
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The Right to Empirical Testing (95, v1.1)
DOI: 10.66659/h6bcbb78

Why Were There No Soil Papers? (96, v1.0)
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Soil as a developing configuration

The military regime changes the conditions in which soil functions.

History and relations explain the meaning of individual measurements.

Field and experimental projects test particular configurations.

The scientific result is a profile that can develop with the object.

Full soil protocol

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Soil protocol §§23, 28–30