# Responsibility to the Problem
# An Explicit Standard for the Expert-AI System

**15-minute conference presentation**

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**Purpose.** This presentation replaces the vague question of responsibility for AI with an explicit working standard for the expert-AI system in research on war-related environmental contamination.

## Slide 1  Opening

**0:00-1:00**

Discussions of artificial intelligence in science devote extraordinary attention to responsibility. The recurring question is familiar: who is responsible if AI produces an incorrect result? The question sounds serious, but its usual form is too vague to guide scientific work. It rarely identifies the object of responsibility, the decision being evaluated, or the cognitive process that produced it.

This presentation defines a narrower standard for two research units: the Laboratory of Military Ecotones and the Laboratory of Information Systems. We do not propose a universal theory for every culture, profession or institution. We establish the standard that we will use in research on war-related environmental contamination.

## Slide 2  The poorly formulated question

**1:00-2:05**

Much of the current discussion begins with fear. A researcher thinks: everyone will assume that AI wrote this text, and that assumption may damage my career. Attention moves away from the scientific problem and toward anticipated institutional judgement.

Our response is direct. Think about the problem. Make the work explicit. Verify the result. Accept responsibility for the expert decision. It does not matter whether a colleague, a computer program, a statistical package or an AI system helped to formulate a sentence. Assistance matters only when it affects the evidence, reasoning or decision, and those effects can be documented.

A badly formulated question reveals the institutional environment in which it appears. The fear surrounding AI concerns more than technical reliability. AI changes the organization of scientific cognition and weakens established methods for distributing responsibility through institutions.

## Slide 3  The isolated AI answer

**2:05-3:10**

Public criticism often presents one absurd or incorrect AI answer. The preceding session remains invisible. We do not see the original question, the supplied documents, the assumptions introduced by the user, the intermediate corrections, or the decision to accept the answer without verification.

An isolated quotation cannot represent an entire cognitive process. It may show a model error. It may also show a poor question, incomplete evidence, a lost context, an unstable instruction, or an expert who stopped checking. Removing the path to the answer converts analysis into theatre.

The practice resembles older forms of ideological quotation in which a sentence was removed from an argument and assigned a convenient meaning. The correct object of examination is the complete decision path, not a selected fragment.

## Slide 4  The unit of analysis

**3:10-4:15**

The unit of analysis is the expert-AI system. It includes the expert's formulation of the problem, the evidence introduced into the session, the model and its version, the generated alternatives, the corrections made during the interaction, the verification procedure and the final expert decision.

Cognitive work is joint because both the expert and AI affect the path by which the result appears. Final accountability remains human because a person or a research organization decides whether the result will be accepted, published or used in practice.

This distinction prevents two simplifications. We do not blame AI as though it acted independently. We also do not allow the expert to hide behind the claim that the model produced the answer.

## Slide 5  Incorrect results as diagnostic material

**4:15-5:15**

An incorrect result can occur in any developing cognitive system. It does not justify panic. It requires diagnosis. We examine whether the object was defined correctly, whether the evidence was adequate, which assumptions entered the analysis, which alternatives were omitted, how the output was checked, and why the expert accepted it.

The error becomes useful when the process remains reconstructable. It shows where the system failed and what must change. Without a record, the same error becomes difficult to explain and easy to repeat.

This is a working attitude rather than a defence of AI. A system that cannot expose and correct its errors does not meet our standard.

## Slide 6  Responsibility requires an object

**5:15-6:30**

Responsibility before whom, and responsibility for what? A researcher may feel responsible to a university, a journal, a funding body, a professional community, a career, or the real environmental problem. These responsibilities can conflict.

Our principal object of responsibility is the problem. In war-contamination research, the work must contribute to recognizing the process, identifying uncertainty, selecting necessary observations, or

improving a practical decision. Institutional compliance may support this work, but it cannot substitute for it.

The analogy with medicine is useful. Correct documentation and professional recognition do not replace the effort to understand and treat the patient. Likewise, a methodologically correct fragment does not by itself constitute an understanding of a long-term contamination process.

## Slide 7  A hierarchy of responsibility

**6:30-8:05**

Our standard has five levels. The first is personal cognitive responsibility. The expert must remain genuinely interested in understanding the object. Without that interest, research can become the performance of accepted procedures.

The second level is epistemic responsibility. Observation must remain separate from interpretation. Hypothesis must remain separate from verified fact. Uncertainty must remain visible.

The third level is process responsibility. The path through the expert-AI system must be reconstructable. The fourth is decision responsibility. A named expert evaluates the result and accepts the final decision. The fifth is practical responsibility. We assess whether the work advances recognition or resolution of the real problem.

This hierarchy does not measure virtue. It defines the minimum information required to evaluate scientific work.

## Slide 8  The working standard

**8:05-9:10**

The standard is explicit. Authorship and AI assistance are disclosed. Evidence and assumptions are identifiable. Alternative explanations are considered. The verification procedure is stated. Remaining uncertainty is recorded. A human expert signs the decision. Finally, the contribution to the real problem is evaluated.

The central question therefore changes. We do not ask whether AI helped to write the result. We ask whether the expert-AI system produced a transparent, testable, correctable and problem-relevant decision.

The first question protects an institutional image. The second evaluates scientific work.

## Slide 9  Two levels of documentation

**9:10-10:20**

We preserve the cognitive process at two levels. The first is an archival session record. It retains the original interaction, the model version, the documents supplied to the system, substantial corrections and the resulting files. Access may be restricted when the research contains personal, military, geographic or otherwise sensitive information.

The second level is a concise Logical Record of Expert-AI Problem Solving. This is not a transcript of one hundred pages. It reconstructs the scientific logic of the work and provides the information required for evaluation.

The archival record supports audit. The logical record supports ordinary scientific verification.

## Slide 10  The logical record

**10:20-11:35**

The logical record identifies the problem and object, the expert question, the evidence base, the initial assumptions, the AI system and version, the hypotheses and alternatives considered, the important expert corrections, the method of verification, the final decision, the remaining uncertainty and the practical significance of the result.

It also names the responsible expert and, where access is permitted, links to the archived session. The record does not attempt to reproduce every phrase. It preserves the steps that materially affected the conclusion.

If the cognitive path cannot be reconstructed, confidence in the result must be limited accordingly. Absence of a record does not prove that the conclusion is false. It means that one important basis for confidence is missing.

## Slide 11  Application in two laboratories

**11:35-12:35**

The Laboratory of Military Ecotones defines the war-transformed environmental object. It examines duration, transitions, relations between contamination sources, soil, freshwater and later human activity. It determines which field questions matter.

The Laboratory of Information Systems preserves sources, distinguishes observation from inference, documents the expert-AI process, registers competing hypotheses and maintains the logical record.

One laboratory defines and investigates the evolving object. The other organizes the information and cognitive trace required to evaluate that investigation.

## Slide 12  Institutional resistance

**12:35-13:45**

The disproportionate attention given to AI responsibility partly reflects an attempt to preserve the familiar institutional structure of science. In that structure, responsibility passes through departments, journals, reviewers and recognized communities. Each institution validates a fragment, while responsibility for understanding the entire process becomes diffuse.

The academies of sciences retained in many post-Soviet states provide a clear historical example. They preserve important elements of a Soviet research organization created within a centralized and authoritarian political order. Their continued existence does not establish the continuing effectiveness of their cognitive structure.

The expert-AI system changes this arrangement. It restores a visible expert decision at the end of a reconstructable cognitive process. Institutions may provide infrastructure and criticism, but they cannot replace personal scientific responsibility.

## Slide 13  Conclusion

**13:45-15:00**

We will not spend years debating a badly formulated question. For our laboratories, the question has been reformulated and the working standard has been defined.

AI-generated output is not accepted as an expert decision. A disciplinary fragment is not presented as a complete understanding of the process. Institutional recognition is not treated as verification. The cognitive path must remain reconstructable, and the limits of the result must remain explicit.

Authorship is disclosed. The expert-AI system is documented. A named expert accepts the decision. The result is evaluated by its logical quality, its relation to evidence and its contribution to recognizing or resolving the problem of war-related environmental contamination.

The guiding principle is simple: responsibility begins with the real problem and remains with the expert who decides how the result will be used.

## Source basis


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