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The Missing Counterpart

*Chalmers and Illumanesimo:
The Hard Problem of Composite Consciousness
and the Direction of Inquiry*

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Abstract

This essay develops a methodological proposal complementary to the research programme outlined in *CEFA – Proposta di indagine*. Taking the hard problem of consciousness as its starting point, it distinguishes subjective experience, the data through which we study it, and hypotheses concerning its origin. An examination of selected neuroscientific studies clarifies why the limitations of measurements and theories do not, by themselves, constitute evidence of a non-material component. Against this background, the Illumanist account of composite consciousness suggests investigating bodily conditions and qualitative manifestations together. The criterion of residual directionality is proposed as a means of identifying regularities left unexplained by explicitly specified models, while reserving causal attribution for a further stage of testing.

Keywords: composite consciousness; hard problem; Illumanesimo; CEFA; subjective experience; qualitative counterpart; residual directionality; testability.

Introduction

Consciousness research has developed ways to distinguish states, detect responses that escape ordinary observation, and compare predictions derived from competing theories. These advances also sharpen the question that accompanies them: how does what we can measure relate to the individual's lived experience? Explaining a performance, identifying an indicator, and understanding why experience occurs are related but distinct aims.

The preceding essay, *Human Nature and the Origin of Consciousness*, presented the Illuminist account of composite human consciousness, in which biological and qualitative contributions jointly constitute experience. The present essay develops a possible avenue of inquiry from that account, without requiring acceptance of its premises as a condition for discussing the method. It asks how we might identify and investigate what an explanation leaves unresolved, without either dismissing it as irrelevant or immediately attributing it to an additional source.

The expression “missing counterpart” names this need to bring the relevant dimensions into relation. Some approaches risk treating bodily realisation as incidental; others risk identifying experience with the indicator chosen to study it. It would be inaccurate, however, to extend these tendencies to philosophy or science as a whole: research already exists that relates subjective descriptions to neurophysiological measurements. The proposal developed here engages with that work and seeks to clarify the conditions under which an unexplained regularity can become the subject of a testable inquiry.

Three distinct meanings must also be kept apart. Experience is the phenomenon to be understood; reports and

behaviour provide data through which it can be studied; and the contribution of CEFA is a hypothesis about its constitution, grounded in the Illumanist philosophical framework. CEFA—an Italian acronym for *Campo Energetico di Forze Autocoscienti*, or “Energy Field of Self-Aware Forces”—denotes a conscious entity independent of matter, on which Illumanist philosophy as a whole is founded. Conflating these levels would turn the need to attend to a person’s account into a supposed demonstration of a non-material entity. Although the methodological proposal developed in this essay expressly aims to make possible the further inquiry advanced in the Illumanist books, it remains distinct from that inquiry and from the philosophical arguments that support it.

Part One · The Problem and the Scope of Explanation

1. What the Hard Problem Asks

In his 1995 paper, Chalmers distinguishes the explanation of cognitive functions from the explanation of experience. Discriminating stimuli, integrating information, directing attention, and reporting a mental state are problems that can be approached by identifying the mechanisms that perform these functions. The practical difficulties may be immense; the distinction concerns the kind of answer sought, rather than the amount of work required to obtain it. The hard problem asks why the performance of these functions is accompanied by subjective experience (Chalmers, 1995).

This question can be considered alongside Nagel’s account of the subjective character of experience: an objective description of how an organism functions does not immediately tell us what it is like to be that organism (Nagel,

1974). This gap has prompted various contested arguments. Considering them together helps clarify the problem, but does not amount to accumulating independent evidence against every physical explanation.

The distinction that matters here is between a finding and its explanatory scope. Explaining how a content becomes available to memory or for report may answer a genuine question without resolving every question about experience. Equally, the persistence of a philosophical problem does not invalidate what has been explained at the functional level. An adequate inquiry must make both points explicit, so that we can recognise where progress has been made and where a difficulty remains.

2. Organisation, Matter, and the Subject's History

The principle of organisational invariance discussed by Chalmers assigns a determining role in experience to a system's causal organisation, allowing that the same organisation may be realised in different materials. It does not claim that consciousness exists without physical realisation; the dispute concerns which differences between physical realisations matter for experience (Chalmers, 1995).

The Illumanist question can be posed without suggesting that this position excludes matter: does the organisation described by the theory encompass everything the body contributes to the constitution of consciousness? Evolutionary history, the organism's development, and the individual's biography may contribute in ways that a functional description does not adequately capture. For this objection to carry weight, however, it must specify which properties have been overlooked and what differences their inclusion would be expected to make. An appeal to matter alone cannot settle

the question, since causal organisation is itself materially realised.

This also calls for caution regarding artificial consciousness. The absence of a guarantee that two systems have the same experience does not establish that an artificial system could have no experience at all. Within the Illumanist framework, a possible form of naturally arising or computational consciousness must also be distinguished from human qualitative consciousness, whose explanation involves CEFA. The latter question requires further premises and cannot be resolved simply by denying the sufficiency of computation.

3. The Debate Between Ontological Accounts Remains Open

In his discussion of idealism, Chalmers considers the difficulties faced by different accounts of the relationship between mind and world. He does not conclude, however, that these accounts are equivalent or that further inquiry is futile. Instead, he invites comparison among the alternatives, arguing that idealism also deserves consideration despite its difficulties (Chalmers, 2019).

Illumanesimo offers its own response, recognising both the distinction between matter and individual non-material entities and their relationship in human life. Acknowledging the body's role does not, by itself, refute every conception of universal consciousness, just as the difficulties faced by alternative accounts do not automatically establish the Illumanist position. The debate becomes more productive when each account makes clear what it assumes, what it explains, and which questions it leaves open. On this basis, we can move from ontological debate to the conditions under which inquiry can proceed.

Part Two · What the Research Allows Us to Conclude

4. The Limits of Models and Unconfirmed Predictions

Studies of thresholds for conscious access show how changes in brain activity can be related to changes in the reported visibility of a stimulus. The work of Del Cul, Baillet, and Dehaene specifically concerns the dynamics associated with a nonlinear threshold for conscious access. It does not claim that this finding provides a complete account of every aspect of experience (Del Cul et al., 2007).

A different case is the Cogitate Consortium's adversarial comparison of global neuronal workspace theory and integrated information theory. Its findings challenge some predictions of both theories, providing grounds for revision and helping refine subsequent experiments. The conclusions must nevertheless remain tied to the predictions and paradigms actually tested. Acknowledging that an investigation does not encompass the full richness of experience is different from identifying a specific difficulty in explaining how conscious contents are updated. Neither establishes that a scientific explanation of consciousness is impossible (Cogitate Consortium, 2025).

Two situations must therefore be distinguished: a model may leave something unexplained because it was not designed to address it, or it may encounter a finding that contradicts one of its predictions. The first calls for extending its scope or supplementing it with other approaches; the second requires a critical examination of its assumptions. Neither, without further argument, warrants identifying what is missing as a non-material component.

5. Reporting and the Effects of Task Demands

In Frässle and colleagues' study of binocular rivalry, conditions requiring active reports through button presses are compared with conditions without that task, using eye-based indicators to track perceptual changes. The differential frontal activity observed in the former does not appear in the same way in the latter, although effects persist in other regions. The finding calls for a distinction between activity associated with perception and activity associated with the required introspection and the act of responding; it does not establish that frontal regions are generally irrelevant to consciousness (Frässle et al., 2014).

The difficulty is real: requesting a report changes the task, whereas dispensing with one requires the validation of indirect indicators. This does not, however, leave inquiry at an impasse. Comparing procedures can help distinguish what is attributable to the phenomenon under investigation from what is attributable to the way it is observed. Subjectivity does not disappear when an explicit response is no longer required; what changes is the chain of inferences through which it is studied, and that chain must be made explicit and subjected to scrutiny.

6. Clinical Indicators and the Limits of Inference

The Perturbational Complexity Index (PCI), which measures the complexity of the brain's response to a perturbation, illustrates the value of indirect measurement. In Casarotto and colleagues' study, validation in a reference sample of 150 subjects yielded a classification with 100% sensitivity and specificity; in the minimally conscious group, however, the reported sensitivity was 94.7%. These are important findings whose significance depends on the

populations and conditions examined, rather than a universal guarantee that every instance of experience can be detected (Casarotto et al., 2016).

Studies of patients who show no observable behavioural response make this distinction even clearer. In Bodien and colleagues' study, 60 of the 241 participants without an observable response to commands—25%—showed task-related responses detected by fMRI or EEG. Of the 112 participants who did respond observably to commands, 43 also showed responses in the instrument-based paradigms: 38%. The remaining 69, or 62%, did not show such responses. A negative result on the task therefore cannot automatically be equated with an absence of consciousness (Bodien et al., 2024).

The value of these indicators lies precisely in their ability to correct overly simple inferences. The debate surrounding mental imagery paradigms likewise concerns experimental controls that can distinguish intentional responses from alternative explanations, rather than solely the impossibility of gaining direct access to another person's experience (Owen et al., 2008). Experience remains what the inquiry seeks to understand, but its study can proceed through converging evidence from different sources, provided that each indicator is used within the scope for which it has been validated.

7. Introspection and Debates over Testability

Reports also have limitations that must be acknowledged without overgeneralising. In Johansson and colleagues' experiment on choice blindness, participants detected 46 of the 354 manipulations during the task, approximately 13%. The figure of 87% therefore refers to manipulated trials in which the alteration went unnoticed, rather than to the

proportion of participants who justified a choice they had never made. The study also documents confabulatory explanations, showing that people can reconstruct their reasons for a choice without reliable access to the process that produced it (Johansson et al., 2005).

A report can therefore provide information about what a person feels or believes without offering a definitive explanation of its causes. Similarly, observed differences between patients experiencing dissociative states and controls instructed to simulate them do not make neuroimaging a general means of establishing the authenticity of any reported state (Reinders et al., 2012).

A further issue concerns the testability of theories. Doerig and colleagues challenge the explanatory capacity of certain theories grounded in causal structure by considering systems with equivalent behaviour but different structures. Their argument must be assessed in terms of its premises and implications; it does not establish that every theory taking experience as its starting point is impossible to test (Doerig et al., 2019).

This review thus distinguishes five difficulties: defining the scope of what is being explained, predictions that are not confirmed, the effects of task demands, the reliability of indicators and reports, and the possibility of discriminating between theories. Considering these difficulties together demonstrates the need for different forms of control, but does not establish that they are manifestations of a single unexplained ontological element. What they share is the need to make explicit the reasoning that leads from evidence to conclusion.

Part Three · The Illumanist Foundations

8. The Dual-Track Thesis and Composite Consciousness

In *Esperienze*, Illumanesimo advances the dual-track thesis of the development of human consciousness. It recognises a naturally arising form of animal consciousness, rooted in the brain and the evolutionary history of species, which comes into relation with a qualitative consciousness of non-material origin. Alongside the material dimension, the Illumanist account thus posits a qualitative contribution from CEFA, through which it interprets the development of human capacities relating to principles, values, and meanings. This encounter is situated within a process involving psychological and bodily development, rather than being offered as a substitute for that process (Mucciarini, 2025a, “La coscienza”).

Human consciousness is described as composite because, on this account, it takes shape through distinct contributions that become integrated in the individual’s life. The claim is therefore not that the brain produces no naturally arising conscious activity, but that this natural origin does not fully account for the constitution of human consciousness as a whole. Nor does recognising a brain-based level of consciousness imply that it is causally inert: questions about the origin of consciousness must remain distinct from questions about its causal efficacy.

The use of “qualitative” also requires clarification. In discussions of the hard problem, the term refers primarily to the felt character of experience, such as feeling pain or perceiving a colour. In Illumanesimo, qualitative consciousness also concerns an openness to values, meanings, and orientations attributed to the relationship with CEFA.

These two domains intersect in human experience, but they are not identical. A finding concerning a moral orientation does not, by itself, resolve the problem of sensation, just as a finding about perception does not settle the question of where values originate.

9. Body, Soul, and Mediation

Illumanesimo clarifies the relationship between these terms without treating them as functionally interchangeable. In the glossary of *Metafisica necessaria*, the entry “L’Anima” (The Soul) describes the soul as the interface that enables two-way communication between CEFA and the body; it is distinguished from CEFA, the mind, and the psyche. Bodily and psychological experiences are thus brought into relation with the spiritual dimension through a process of translation (Mucciarini, 2025d).

This distinction gives the body an active role. Biological conditions, memory, perceptual capacities, and personal history all contribute to the concrete form of lived experience. Accordingly, in its chapter on the relationship between Spirit and matter, *Il senso di ogni vita* calls for broadening the scope of inquiry while retaining the study of matter, rather than replacing it with an explanation that renders the organism superfluous (Mucciarini, 2025b).

CEFA – Proposta di indagine posits that CEFAs act indirectly and proposes investigating their possible secondary effects in human life. Simply stating this account does not, however, provide an empirically verified mechanism of mediation. The proposal must still explain how a non-material contribution gives rise to observable effects; that explanatory burden cannot be discharged by calling “spiritual” whatever a model cannot yet explain (Mucciarini, 2025c).

10. Culture and Individuality

In *Esperienze*, brain-based consciousness is also linked to cultural development. Culture encompasses both acquired knowledge and the conditioning through which individuals interpret the world. At the same time, the Illuminist account emphasises the capacity to develop meanings that go beyond reproducing what has already been learned. A distinction must therefore be drawn between the available cultural heritage and the possible qualitative contribution that, on this account, may find expression through it (Mucciarini, 2025a, “La coscienza”).

This distinction makes the inquiry more demanding. Innovative behaviour may arise from an original combination of prior learning, while the recurrence of a value across different contexts may reflect shared conditions. *CEFA – Proposta di indagine* acknowledges the difficulty of distinguishing contributions arising from the body and the mind from those attributable to an additional element. It suggests qualities such as depth, authenticity, and the capacity to go beyond instinct as possible indicators. The volume also states that the observations discussed do not prove the existence of CEFAs (Mucciarini, 2025c, “Le evidenze empiriche come base di partenza”).

In *Oltre il nulla e la Gloria*, the entry “Dignità qualitativa” (Qualitative Dignity) interprets the irreducibility of individual orientations as an expression of the CEFA dimension. This is a thesis internal to the philosophical account. To use it in research, it will be necessary to establish what evidence would warrant a claim of irreducibility and relative to which explanations. The present essay addresses this problem without attributing to the book an experimental criterion that

the philosophical claim alone does not provide (Mucciarini, 2026).

Part Four · The New Proposal for Inquiry

11. Clarifying the Counterpart's Role in the Method

The central proposal of this essay is that philosophy and scientific research should each recognise an indispensable counterpart. Philosophy is asked to acknowledge matter as metaphysically constitutive of human experience, with a role extending beyond that of an object whose organisation is to be studied: the body, its history, and its relationship with the world contribute to the very possibility of experience and to the concrete form it takes. Scientific research, across neuroscience, psychology, the social sciences, and anthropology, is asked to acknowledge the existence of qualitative levels of experience whose significance cannot be assumed in advance to be exhausted by a description of the mechanisms through which they manifest themselves. This recognition does not predetermine their origin, but requires that it remain genuinely open to inquiry. Without such reciprocal openness, an investigation of the scope proposed here would lose its foundation, since each field would continue to approach experience within boundaries that already restrict the possible answers. As a philosophy, Illumanesimo advocates this openness and sets out the reasons for it, without claiming to take the place of scientific research in determining procedures or assessing results. The interdisciplinary collaboration required therefore extends both across the sciences and between philosophy and empirical research: reflection on foundations should help formulate testable questions, while research findings should, in turn, be

able to refine, correct, or challenge philosophical interpretations.

The call to bring experience and objective description into relation has precedents that must be acknowledged. Neurophenomenology already proposes a relationship of mutual constraint between experiential and neurophysiological data. Discussions of second-person methods also address how descriptions can be elicited with the help of trained interlocutors, while confronting difficulties involving memory, language, and the interaction between interviewer and participant (Olivares et al., 2015).

The counterpart proposal therefore does not seek to introduce subjectivity into the data for the first time. It asks that, when moving from indicators to a comprehensive explanation of consciousness, researchers make explicit what those data represent and which conclusions they do not yet warrant. Experience is not identical with its report; reports are already part of research; and the relationship between them can be investigated without assuming that any single measure fully captures it.

The specific contribution attempted here also concerns the qualitative orientations identified in the CEFA research programme. The proposal is to examine whether regularities emerge that warrant investigation in their own right when assessed against explanations specified in advance. It is a complementary development of that programme, rather than a method or an established answer to the hard problem.

12. The Criterion of Residual Directionality

Depth and authenticity may guide a philosophical question, but they become unreliable criteria if their attribution depends on prior acceptance of the hypothesis under examination.

Investigating a possible additional contribution requires a description of the phenomenon that allows researchers with different theoretical commitments to assess the same findings. The criterion of residual directionality is therefore formulated as follows.

When a deviation from the predictions of an explicitly specified set of models exhibits a direction defined in advance, withstands the relevant controls, and is replicated in independent observations, it constitutes a regularity warranting further investigation, even though it does not yet identify the nature of its cause.

“Residual” here refers to what those models fail to explain under the conditions considered, rather than to something that no material explanation could ever account for. “Directionality” refers to a pattern specified before analysis and identifiable through explicit indicators and criteria, rather than simply to a judgement that a behaviour appears elevated or morally desirable. The magnitude of the deviation and the uncertainty of the measurement also matter, since an apparent regularity may arise from systematic errors or an inadequate description of the phenomenon.

The distinction between dispersion and directionality thus retains its role in guiding inquiry without becoming a shortcut to causal attribution. A directional deviation may arise from an overlooked variable, shared conditions, or a common procedural error. Challenging its attribution to CEFA does not require showing that no regularity exists; it is enough to demonstrate that another explanation accounts for the result. Conversely, a residual pattern without directionality is not necessarily uninteresting; it simply does not satisfy the specific criterion proposed here.

13. Four Filters with a Defined Scope

The criterion is developed through the four filters already proposed: adaptation, culture, individual learning, and chance. These structure the comparison between explanations without providing an exhaustive account of all possible causes. Their usefulness depends on the precision of the models employed and on acknowledging the limits of what each filter can rule out.

The adaptation filter assesses the phenomenon against explanations involving, among other factors, kin selection, reciprocity, reputation, and costly signalling. An act that entails an immediate cost is not thereby exempt from all adaptive processes: the interests a subject reports, short-term individual advantage, and evolutionary consequences belong to different levels of explanation. The task is to compare specific predictions, avoiding both the dismissal of adaptation on the basis of a moral impression and its use as an explanation capable of accommodating any outcome.

The cultural filter examines transmission, shared norms, and historical contact. When an orientation recurs across different populations, researchers must assess both the independence of the observations and the comparability of the meanings attributed to the behaviours. The absence of documented contact does not rule out common origins, similar environmental conditions, or convergent developments. Cultural independence must therefore be assessed as a matter of degree, with the available evidence and its limitations made explicit.

The individual learning filter considers the subject's developmental history, reinforcement, experiences, and observable exposure to relevant influences. The early emergence of a behaviour may be significant, but it does not

justify assigning it to a presumed stage preceding all learning or cultural influence. The developmental period and what is known about prior experience must be specified, without treating a lack of information as an absence of causes.

The chance filter requires effect sizes, estimates of uncertainty, statistical criteria, and controls appropriate to the research question, together with independent replication and procedures for handling multiple comparisons. Researchers must also establish that the observed directionality is not produced by data selection, measurement errors, or shared procedures. Preregistration helps distinguish predictions from subsequent interpretations, but it cannot make an indicator adequate if it fails to represent the phenomenon, nor can it make an incomplete set of models exhaustive.

14. From a Philosophical Perspective to a Testable Question

The phenomena identified in *CEFA – Proposta di indagine* include the diversity of human orientations, the recurrence of fundamental values, and forms of creativity or moral action that go beyond individual self-interest. These areas help guide the selection of research questions, but do not themselves provide an unambiguous measure of what should be attributed to CEFA. The proposal of residual directionality addresses precisely the gap between a philosophical suggestion and a prediction that can be tested against data.

Before undertaking an investigation, researchers would need to specify which behaviour is being observed, what “going beyond individual self-interest” means in that context, and what pattern the competing models predict. They would also need to state which findings would constitute the expected deviation, how that deviation would be measured, and which outcomes would render the proposed interpretation

untenable. The criteria must also be applicable by those who do not share the Illumanist outlook.

If a replicable regularity remained after these comparisons, a more clearly defined problem would have been identified. Attributing it to an additional qualitative component would, however, require a positive explanatory model: an account of how that contribution produces specific differences and generates further predictions, testable against data not used to construct the model. Merely naming CEFA does not supply this explanatory step. This essay outlines a requirement for progress without suggesting that a model meeting it is already available.

The analogy with investigating entities through their indirect effects must likewise remain limited. The example of the neutrino may suggest the general possibility of investigating what is not directly observed, but it does not confer on this proposal the evidential force of a quantitative balance grounded in specific laws and constraints. Here, the comparisons involve heterogeneous models and assumptions that still require clarification; their capacity to identify causes therefore remains to be developed.

15. What Can Be Refuted

Predictions and criteria for ruling out explanations must be specified before testing, with exploratory analyses distinguished from confirmatory tests. If the expected directionality fails to emerge, cannot be replicated, or is explained by a competing model, that particular hypothesis about the phenomenon is weakened or abandoned. Such a result does not automatically refute every possible claim about CEFAs, but it must have substantive consequences for the proposal whose prediction was put to the test.

It is therefore more precise to speak of testing hypotheses than of “falsifying the criterion” as such. A procedure may prove uninformative or overly permissive, whereas a prediction may be contradicted by the data. Keeping these levels distinct prevents both the dismissal of every negative finding and the expectation that a single experiment could settle the status of an entire metaphysical framework.

The same applies to a favourable outcome. Replicating a deviation provides firmer evidence that there is a problem to explain, but does not eliminate alternatives that have yet to be examined. The proposal would make progress by producing more precise explanations and better predictions, while accepting that comparison with competing accounts may require its claims to be scaled back. The acknowledgement in the CEFA volume that the initial observations do not constitute proof must remain in force throughout the inquiry.

16. Two Connected Levels, Two Distinct Explanatory Burdens

The account of composite consciousness and the method outlined here are connected, but the extent of their independence must be stated precisely. Within *Illumanesimo*, the hypothesis of distinct contributions motivates inquiry into their relationships and manifestations. Outside that framework, the call to examine experience, indicators, and models in relation to one another can still be considered without accepting the existence of CEFA. A researcher may therefore use the criterion of residual directionality while interpreting any resulting findings within a naturalistic account.

What cannot be made independent of the ontological premise is the conclusion that consciousness necessarily

requires two contributions of different kinds. Reaching that conclusion demands arguments beyond the usefulness of the method. The first stage can identify a regularity and assess it against existing explanations; the second must justify its attribution to a specific cause, provided there are sufficient grounds to attempt such an attribution.

This distinction also applies to the term “counterpart”. In *Oltre il nulla e la Gloria*, CEFA is presented as the knowing counterpart to the manifestation of Reality, within a discussion of the spiritual subject’s role. Here, the term is extended to the methodological domain: it expresses the need to make explicit the relationship between what is experienced, what is measured, and what is hypothesised to constitute that experience. The reference to the book clarifies the proposal’s philosophical provenance; the new proposal developed in this essay must be supported by arguments of its own.

Conclusion

The hard problem draws attention to a distinction that every inquiry must continue to observe: explaining how a system functions is not automatically equivalent to explaining the felt character of experience. The studies examined here reveal concrete advances and different kinds of difficulty, both of which become clearer when neither their scope nor their significance is overstated or diminished.

The Illumanist account proposes that human experience arises through the integration of the body’s contribution with the qualitative contribution of CEFA. This perspective informs the essay’s central question, but cannot replace the work required to make its implications open to assessment. The new counterpart proposal calls for an explicit relationship

between levels that inquiry might otherwise conflate or keep too far apart.

The criterion of residual directionality seeks to give this requirement a testable form. Its first possible achievement would be to identify a regularity that the explanations considered have not yet accounted for; determining its origin would remain a subsequent task. This distinction makes room for a dialogue in which philosophy and science address the same question, each remaining accountable for its claims and accepting that inquiry may revise even the expectations from which it began.

The proposal brings together a philosophical account seeking a unified understanding and research capabilities that now allow its implications to be investigated more concretely. On the philosophical side, Illumanesimo offers an account encompassing both Reality as a whole and human existence, bringing reflection on each within a single argumentative framework. This framework supports its claims through explicit premises and logical relationships, rather than relying on fragmentary intuitions or gaps in existing explanations alone. Such coherence provides the proposal's philosophical foundation, while remaining distinct from empirical testing of its implications. On the research side, advances in artificial intelligence and investigative technologies make interdisciplinary work more practicable than before, particularly where it requires relating observations, knowledge, and models across different fields. The capacity to analyse large datasets and compare competing explanations within the same system offers ways to broaden the scope and improve the precision of the proposed research. Its feasibility therefore depends on translating a philosophically developed question into coordinated investigations open to scrutiny, in which new technologies support critical inquiry without

dispensing with what matters: the quality of substantial datasets, rigorous criteria, and responsible interpretation.

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