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Integrated Reality Theory (IRT) as a Processual-Relational Integrative Framework: Synthesis, Novelties, and Methodological Implications

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ABSTRACT

This article examines Integrated Reality Theory (IRT) as a cross-disciplinary synthesis effort to answer the fragmentation of modern knowledge. With a conceptual-comparative approach, this article puts IRT in dialogue with critical realism, general systems theory, and the science of complexity. The results of the analysis show that IRT has novelty in integrating processual ontology, relationalism, critical realism, and the formalization of five main variables—energy, information, entropy, consciousness, and evolution—into a dynamic model that is operational. However, the validity of constructs, especially on the variables of consciousness and evolution, is still a major challenge. This article concludes that IRT has the potential to be a useful analytical framework for the study of states, organizations, and social change, but it still requires further empirical testing.

Keywords: *Integrated Reality Theory, processual-relational, critical realism, systems theory, complexity, science integration*

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INTRODUCTION

Modern science has reached an extraordinary level of specialization. Each discipline develops its own vocabulary, methods, and ontology to produce an unprecedented depth of analysis in human history. However, behind this achievement lies a fundamental problem: the fragmentation of knowledge that makes reality partially understood, fragmented, and loses its coherence (MHS, 2026).

Physics talks about particles and waves, biology about genes and ecosystems, economics about markets and incentives, sociology about structure and agency, psychology about cognition and emotions. Each provides a valid explanation within its own limits, but none is able to explain how the whole piece forms a whole reality. Social, political, and development realities, in particular, are multidimensional phenomena that cannot be reduced to the logic of one discipline alone. Development policies that rely solely on economic logic, for example, often fail because they ignore the cultural dimension, collective psychology, institutional quality, and power dynamics that all interact simultaneously (MHS, 2026).

Criticism of this fragmentation is not new. Since the mid-20th century, various thinkers have warned that excessive specialization produces what sociologist C. Wright Mills calls "methodological awe"—a fascination with the sophistication of methods that obscures the great questions of the nature of social reality. In a more contemporary context, this fragmentation is also seen in the way universities organize faculties, journals compartmentalize themes, and donor institutions design development programs sectorally without an integrative understanding of how one sector affects another.

Awareness of the problem of fragmentation has given birth to several traditions of thought that seek to offer an integrative framework. Three of them are most relevant to this article are critical realism, general systems theory, and complexity science.

Critical Realism, which was primarily developed by Roy Bhaskar (Bhaskar, 2008)(Bhaskar, 1998)(Archer, 1998), offers a layered ontology of realism (stratified reality) that distinguishes between the empirical domain (what is observed), the actual domain (events that occur, observed or not), and the real domain (the causal mechanisms that produce events). In this view, science is not enough to simply describe surface patterns, but must perform retroduction—reasoning backwards from phenomena to the structures that produce them. Critical realism provides a strong

philosophical foundation for the non-positivist social sciences, but its weakness lies in its high degree of abstraction. He talks more about "mechanisms" and "structures" philosophically, without offering an operational model that can be directly used for empirical research (Bhaskar, 1998)(Archer, 1998).

General Systems Theory, pioneered by Ludwig von Bertalanffy (Von Bertalanffy, 1968)(Meadows, 2008), departs from the premise that reality is composed of open systems that interact with each other. These systems are emergent in nature—the whole is more than just the sum of its parts—and exhibit patterns such as self-regulation, feedback, and equifinality (the same goal can be achieved from different starting points). This theory has succeeded in providing a common language across disciplines and has been applied to biology, management, and political science. However, its weakness is its descriptive and functional tendencies: it explains how systems work, but says little about why systems change in a certain direction, what the role of consciousness is in them, and how normative interventions can be designed (Meadows, 2008).

Complexity Science, which developed from the work of Ilya Prigogine (Prigogine & Stengers, 1984), Melanie Mitchell (Mitchell, 2009), and others, adds important dimensions that are absent in classical systems theory: nlinearity, radical emergence, feedback loops, and bifurcation points where small changes can produce large effects. In this framework, reality is understood as a complex adaptive system that continues to evolve without being linearly predictable. Complexity science is very useful for explaining crises, sudden transitions, and tipping point phenomena in politics and economics. However, like classical systems theory, complexity science tends to be descriptive. He explains that systems can change unexpectedly, but rarely offer a normative framework for reading the direction of change or designing meaningful interventions (Mitchell, 2009).

These three traditions make great contributions, but each has its limitations. Critical realism is philosophically strong but less operational. General systems theory is structurally strong but less causally profound. Complexity science is dynamically strong but less normative. What is not yet available is a framework that explicitly combines the strengths of all three: the layered ontology of critical realism, the systems logic of general systems theory, the nonlinear sensitivity of complexity science, and—this is important—adding the dimensions of consciousness and evolution as causal variables that can be proxied and operationalized.

This is where Integrated Reality Theory (IRT) offers its contribution. IRT is an integrative framework built on a processual-relational ontology: the view that reality is not a collection of static substances, but rather a network of events and relationships that are constantly changing (MHS, 2026). In this respect, IRT is close to the tradition of process philosophy that can be traced from Heraclitus to Whitehead, but it takes it a step further by formalizing this procedural notion into five main variables: energy, information, entropy, consciousness, and evolution.

Energy is understood as the capacity of a system to act and defend itself. Information is the quality and availability of knowledge that enables the system to make decisions. Entropy is a tendency towards irregularities that waste energy and disrupt the coherence of the system. Consciousness is the system's reflective capacity to understand itself and its environment in depth—not just individual consciousness, but institutionalized collective consciousness. Evolution is the rate of adaptation of a system to changes in the internal and external environment (MHS, 2026).

These five variables are IRT's efforts to translate procedural ontology into a model that can be empirically proximate. In the original text, the IRT proposed early proxies such as Government Effectiveness for consciousness, Control of Corruption for entropy, and Human Capital Index for evolution (MHS, 2026). This is a preliminary step, not a final solution—a point that will be discussed further in the limitations section of this article.

This article has three main objectives. First, it systematically describes the position of IRT in the contemporary theoretical landscape by comparing it with critical realism, general systems theory, and complexity science. Second, identify specifically what constitutes the novelty of the IRT—what is its novelty, where is its contribution, and what distinguishes it from existing theories. Third, it honestly assesses the methodological limits and validity challenges facing IRT, so that the reader can place IRT proportionately: not as a final theory that has been completed, but as a research program that is promising but still requires further testing and development.

Thus, the contribution of this article is conceptual as well as evaluative. It not only promotes IRT, but also shows where its strengths lie, where its weak points are, and where further research can be directed. Overall, this article argues that IRT fills an important gap in the contemporary theoretical landscape, especially in the attempt to connect process philosophy with empirical social science, but it still needs to be

strengthened in terms of construct validity, empirical estimation, and application limits in order to be more widely accepted in academic forums.

RESEARCH METHOD

This article is a conceptual-comparative study that aims to assess the theoretical position, novelty, and methodological challenges of Integrated Reality Theory (IRT). This study does not use primary data, but builds its entire argument on a systematic analysis of the relevant literature. This approach is commonly used in the social sciences and philosophy of science when the primary goal is conceptual clarification, theoretical comparison, and evaluation of frameworks—rather than testing empirical hypotheses (Bhaskar, 1998)(Archer, 1998).

Epistemologically, this article adopts the position of critical realism, which recognizes that theoretical comparisons are not just a game of language, but an attempt to compare the explanatory power of various frameworks in uncovering the causal mechanisms at work behind social reality (Bhaskar, 2008)(Bhaskar, 1998). This position is consistent with the spirit of IRT itself which emphasizes that theory must be able to explain structures in reality, not just describe its surface (MHS, 2026).

The data sources in this article are divided into three categories. First, the IRT manuscript as the main object of the study (MHS, 2026). This manuscript is treated as a primary document whose elements of ontology, epistemology, variables, models, and proxies will be systematically analyzed.

Second, the comparative literature of the three great traditions that make up the IRT's main dialogue: (a) critical realism represented primarily by the works of Roy Bhaskar (Bhaskar, 2008)(Bhaskar, 1998)(Archer, 1998), (b) general systems theory represented by Ludwig von Bertalanffy and Donella Meadows (Von Bertalanffy, 1968)(Meadows, 2008), and (c) the science of complexity represented by Ilya Prigogine and Melanie Mitchell (Prigogine & Stengers, 1984)(Mitchell, 2009). The criteria for selecting these figures are based on their canonical position in their respective traditions and the direct relevance of their ideas to the elements of the IRT.

Third, supporting literature from reputable journals that discuss the application, criticism, and development of the three traditions above. This literature is used to

enrich the analysis, especially in the discussion section on the methodological challenges and validity of the IRT construct.

The analysis was carried out in four steps. The first step is the identification of the key elements of IRT: ontology, epistemology, the five main variables, the model of relationships between variables, and the proposed initial proxies. This step results in a complete conceptual map of IRT as the basis for comparison.

The second step is a systematic comparison between IRT and each comparative tradition. Comparisons are made against four dimensions: ontology (what is perceived as real and what it is), epistemology (how reality can be known), key variables (the main concepts used to explain reality), and the nature of the framework (whether descriptive or normative, philosophical or operational).

The third step is novelty analysis. After placing the IRT on the comparison map, the analysis is directed to identify specifically what is new about the IRT, what distinguishes it from each of the comparative traditions, and where its distinctive contributions lie. Novelty is not judged by whether IRT created concepts that never existed at all, but rather by whether IRT produces new synthesis that is not found in the traditions being compared.

The fourth step is the evaluation of methodological challenges. At this step, the article critically assesses the weaknesses and limitations of IRT, in particular on the validity of the construct, the direction of causality, and its empirical reach. This evaluation is important to place IRT proportionally, not as a final theory, but as a research program that requires further development.

The framework proposes that energy and information strengthen adaptive evolution, while entropy weakens system coherence. Consciousness functions as a regulatory mechanism that directs collective adaptation.

As a conceptual-comparative study, this article does not conduct empirical testing of IRT claims. Therefore, this article cannot conclude whether IRT is factually "correct", but can only assess its logical coherence, its position relative to other theories, and its feasibility as a research framework. This limitation is recognized and will be discussed further in the conclusion section as a direction for further research.

RESULT AND DISCUSSION

3.1. The Position of IRT in the Contemporary Theoretical Landscape

To understand where IRT stands, this section presents a systematic comparison between IRT and the three comparative traditions. The results of the comparison are presented in Table 1.

Table 1. Comparison of IRT with the Three Great Traditions

Dimensions	IRT (Integrated Reality Theory)	Critical Realism	General Systems Theory	Science of Complexity
Ontology	Processual-relational with critical realism: reality is an ever-changing network of events and relationships, made up of inner mechanisms that do not always appear empirical	Multi-layered realism: the empirical, actual, and real domains; Independent causal mechanisms of observation	Reality as an open system that interacts with each other; Emergent traits	Reality as a complex adaptive system; Radical emergence of simple agent interactions
Epistemology	Retroduction plus formalization: causal mechanisms are deduced through backward	Retroduction as the main strategy; causal explanation through the identification of	Functional: understanding the system through input, output, and feedback	Agent-based simulation and modeling; Explanation through a simple

	reasoning, and then formalized into a model of proximal variables	mechanisms in		generative mechanism
Key Variables	Five variables: energy, information, entropy, consciousness, evolution	Mechanisms, structure, causal forces (not formalized as a single variable)	Inputs, outputs, feedback, homeostasis, equality	Agents, interaction rules, feedback loops, emergence, bifurcation points
Skeletal Properties	Normative and operational: explain the direction of change and can be proxied for empirical research	Critical and philosophical: dismantling assumptions, but lacking operational guidance	Descriptive and structural: explain how the system works, not its normative direction	Descriptive and dynamic: describes nonlinear changes, but does not provide intervention directions

Source*: (MHS, 2026)(Bhaskar, 2008)(Von Bertalanffy, 1968)(Prigogine & Stengers, 1984)(Bhaskar, 1998)(Archer, 1998)(Meadows, 2008)(Mitchell, 2009), processed by the author.*

From the table above, the position of IRT can be formulated as follows. IRT borrows layered ontologies and retroduction strategies from critical realism, open systems logic and emergent properties from general systems theory, as well as the sensitivity to nlinearity, feedback, and unexpected changes of complexity science. However, IRT doesn't just add all three eclectically to it. He does three things that each tradition does not do individually: (a) formalize ontology into proximal variables,

(b) include consciousness as a serious causal variable, and (c) offer a normative direction about system change (evolution as a positive rate of adaptation). This position is the entry point to discuss the novelty of IRT in more detail.

3.2. IRT Novelty: Four Key Novelties

3.2.1. Formalization of Procedural Ontology

Many philosophical and social science traditions speak of reality as a process, flow, or becoming. Procedural thinking has a long history from the philosophy of Heraclitus, Hegel, Henri Bergson, to Alfred North Whitehead. In contemporary social science, this idea lives on in theories that emphasize relationality, networking, and fluidity. However, almost all of these approaches stop at metaphors or high abstraction. Reality is said to be "flowing", but how to measure it? Relationships are said to be "constitutive", but how do they operate in empirical research? (MHS, 2026)

This is where IRT's first novelty lies. IRT takes procedural ideas and translates them into a proximate five-variable model. Energy is the capacity to act, information is the quality of knowledge, entropy is a systemic barrier, consciousness is a reflective capacity, and evolution is the rate of adaptation. This is no longer a philosophical metaphor, but a measurable construct—albeit with an initial proxy that still needs to be further tested (MHS, 2026).

When compared to critical realism, IRT takes it a step further. Critical realism stops at the concept of "causal mechanisms", but does not provide a specific model of how such mechanisms can be formalized (Bhaskar, 2008)(Bhaskar, 1998). IRT, on the other hand, posits five variables as candidates for causal mechanisms that work in social reality. This is the bridge that has been missing between realist ontology and empirical methodology.

3.2.2. Consciousness as a Causal Variable

The second novelty of IRT lies in the treatment of consciousness. In general systems theory, systems are understood through input-output-feedback logic, but consciousness hardly emerges as a variable. Biological, ecological, or mechanical systems can be explained without the need for the concept of consciousness (Von Bertalanffy, 1968)(Meadows, 2008). In complexity science, agents do have rules of behavior, but these rules are usually simple and do not include deep reflective

capacity (Prigogine & Stengers, 1984)(Mitchell, 2009). Even in critical realism, consciousness is more often discussed in the context of individual human agency, rather than as a systemic variable that can be proxied in the aggregate (Bhaskar, 1998)(Archer, 1998).

IRT explicitly makes consciousness one of the five key variables. Consciousness here is not just individual consciousness, but the collective consciousness of a system—for example, a country's awareness of its position, its challenges, and its strategic choices. The initial proxy proposed by IRT is Government Effectiveness (MHS, 2026). While this proxy is debatable, the IRT's move to include consciousness as a causal variable is an important step. This opens up the possibility of explaining why two systems with similar energy and information can have very different performances: because their levels of consciousness are different.

3.2.3. Entropy as a Systemic Barrier

The concept of entropy comes from thermodynamics, which describes the tendency of physical systems towards irregularities. Some social thinkers, such as Nicholas Georgescu-Roegen in ecological economics, have adapted this concept to the social sciences. However, in general systems theory and complexity science, systemic barriers are more often explained through the concepts of friction, resistance, or coordination failure—rather than entropy as a fundamental tendency of reality (Von Bertalanffy, 1968)(Prigogine & Stengers, 1984).

IRT places entropy as one of its key variables. Within the framework of IRT, entropy is the tendency of a system to lose its energy and coherence due to internal leakage: corruption, disinformation, inefficient bureaucracy, internal conflict, and other dysfunctional mechanisms (MHS, 2026). By making entropy a proxy variable (e.g. through Control of Corruption), IRT provides a way to detect and measure "leaks" that are often not seen in conventional system analysis. It is a significant conceptual novelty because it gives a name and place to a phenomenon that is often perceived but rarely formalized in major theories.

3.2.4. Evolution as a Rate of Adaptation

In social theory, change is often discussed as a relatively static concept: a change from condition A to condition B, for example from a traditional to modern society, or from authoritarian to democratic. In complexity science, change is

recognized as a nonlinear process that can jump and reverse, but the analysis focuses more on the tipping point mechanism than on the rate of adaptation as a standalone variable (Prigogine & Stengers, 1984)(Mitchell, 2009).

IRT defines evolution not as a change from one stage to another, but rather as the speed at which a system learns—how quickly a system can read changes in the environment, absorb new information, and adapt to itself (MHS, 2026). The initial proxy proposed is the Human Capital Index. By defining evolution as pace, not status, IRT opens up a more dynamic analysis: a system is not only judged by its current state, but by its ability to change.

3.3. Implication Methodology

3.3.1. Dynamic Models, Not Simple Linear

One of the most direct methodological implications of IRT is that empirical research based on IRT is not suitable for using simple linear models. If the five IRT variables affect each other interchangeably with feedback loops and possible nonlinearity, then a single linear regression will not be adequate (MHS, 2026).

Research that utilizes IRT needs to adopt models capable of capturing these interdependencies: panel data to capture variation across time and units, dynamic models that accommodate historical dependencies, system dynamics to explicitly model feedback loops, or agent-based modeling to simulate agent interactions that generate emergent properties (Prigogine & Stengers, 1984)(Mitchell, 2009). In this case, IRT moves in tandem with complexity science, which also encourages process-based modeling and simulation.

3.3.2. Retroduction as an Inference Strategy

From an epistemological perspective, IRT encourages a retroduction strategy: reasoning backwards from observed phenomena to causal mechanisms that might explain them (MHS, 2026)(Bhaskar, 2008)(Bhaskar, 1998)(Archer, 1998). As an illustration, if the researcher observes a country with abundant natural resources but remains poor (the paradox of resource abundance), the IRT does not stop at the surface correlation. Researchers will ask: is the energy leaked through high entropy (massive corruption)? Is the information corrupted (data is inaccurate, the press is not free)? Is the awareness low so that strategic policies are not taken? Or is evolution slow due to inadequate human qualities to manage natural resources? (MHS, 2026)

The five IRT variables provide candidates with causal mechanisms that can be examined individually or simultaneously. In this context, IRT is fully in line with the spirit of critical realism (Bhaskar, 2008)(Bhaskar, 1998), but with the advantage that its causal mechanisms are already formulated in a more specific form than simply abstract "structures" or "causal forces".

3.3.3. Variable Proxies: Potential and Limitations

One of the most methodologically relevant operational elements of IRT is the proposed initial proxies for each variable. Table 2 summarizes these proxies and their potential and limitations.

Table 2. IRT Variable Proxies and Their Limitations

IRT variable	Initial Proxies	Potential	Key Limitations
Energy	Availability of natural/fiscal resources	Instantly scalable and available in international data	Need weighting; Not all countries with large resources have high system energy
Information	Public data disclosure, freedom of the press	Capturing the crucial dimensions of information quality	Difficult to measure in closed regimes; Data is vulnerable to reporting bias
Entropy	Corruption Control (World Governance Indicators)	Established proxies with global coverage	It only captures one dimension of entropy (corruption), it has not captured disinformation or non-corrupt inefficiencies
Awareness	Government Effectiveness (World Governance	Established proxies, available across countries	Overlap with the quality of the institution; does not necessarily capture collective strategic

	Indicator)		awareness
Evolution	Human Resource Index	Established proxies with global validity	Capturing stock, not the rate of change; does not capture short-term adaptation speed

Source*: (MHS, 2026), author's analysis.*

This table shows that IRT has taken a serious step towards operationalization, but this step is still early and full of challenges. Government Effectiveness, for example, is a proxy for the quality of bureaucracy and public services in general—but does it really capture "system consciousness"? Control of Corruption is a proxy for one form of entropy—but entropy can also arise from uncorrupt ethnic conflicts, from organizational cultures that stifle innovation, or from conflicting policies. These proxies are aids, not final truths, and this article emphasizes that this is one point where future research needs to work: compile more valid proxies, compile composite indexes, and test whether these variables behave as predicted by IRT (MHS, 2026).

3.4. Limitations of IRT: Space for Debate and Development

3.4.1. Construct Validity

The most fundamental challenge facing IRT is the validity of the construct: do IRT variables really measure what it claims to measure? (MHS, 2026) Does Government Effectiveness really measure system awareness, or does it measure more mechanized administrative capacity? Does the Human Capital Index measure the rate of evolution, or is it just the stock of human capital at a single point in time?

These questions cannot be answered by conceptual arguments alone. Serious validation research, including convergent and discriminating validation, is needed to show that IRT variables behave differently from other established variables in political science and development economics. Without this validation, the IRT is vulnerable to criticism that it is simply giving new names to things that have been known for a long time.

3.4.2. The Problem of Circular Causality

IRT implies that energy and information are inputs, entropy is an obstacle, consciousness is a directer, and evolution is an output. However, in reality these five

variables affect each other interchangeably. High awareness can reduce entropy. Rapid evolution can increase energy. Good information can increase awareness (MHS, 2026). This circular causality problem makes econometric estimation very complex. Researchers who want to test IRT empirically will face serious endogeneity issues.

This is a challenge that complexity science and general systems theory also face. The solution does not lie in simplifying the model, but in using methods that are designed to deal with interdependence: vector autoregression, structural equation modeling with panel data, or agent-based simulation (Prigogine & Stengers, 1984)(Mitchell, 2009). However, this means that IRT cannot be tested with simple statistical tools—and therefore, IRT research requires a significant methodological investment.

3.4.3. Empirical Reach and Status as a Research Program

Until this article is written, IRT is still a deductive framework. There have been no studies that have empirically tested IRT across countries with a full five-variable model and adequate data. In this condition, IRT is more appropriately positioned as a research program in the sense of Imre Lakatos—a framework that has a "hard core" in the form of a processual-relational ontology and five variables, as well as a "protective belt" in the form of proxies, estimation methods, and application limits that can continue to be revised based on new findings (MHS, 2026).

This position is not weakness, but intellectual honesty. Many great frameworks in the history of science were born as untested research programs, and their value lies not in their current truthfulness, but in their ability to generate productive research questions. The IRT, with all its limitations, provides a sufficiently structured map to ask such questions: How to measure entropy leakage in political systems? What is the relationship between collective consciousness and the rate of institutional evolution? Do high-energy systems always evolve faster, or are they trapped in high entropy? These questions are the fruit of IRT, and the answers will test, correct, or even replace IRT—and that's how science is supposed to work.

CONCLUSION AND SUGGESTION

This article departs from the problem of fragmentation of modern knowledge and examines the Theory of Integrated Reality (IRT) in response to such fragmentation. Through conceptual-comparative studies, three main findings were successfully formulated.

First, IRT occupies a distinctive position in the contemporary theoretical landscape. He does not simply repeat, but synthesizes the strongest elements of critical realism, general systems theory, and the science of complexity into a single unified framework. From critical realism, IRT inherited a layered realist ontology and a strategy of retroduction. From general systems theory, IRT borrows the logic of open systems and emergent properties. From complexity science, IRT adopts sensitivity to nlinearity and feedback. However, this synthesis is not a simple summation of IRT holding it together on top of the foundations of a processual-relational ontology that gives it internal coherence (MHS, 2026)(Bhaskar, 2008)(Von Bertalanffy, 1968)(Prigogine & Stengers, 1984).

Second, the novelty of IRT lies in four specific contributions that are not present simultaneously in its comparative traditions: (a) the formalization of processual ontology into a proximal five-variable model, (b) the recognition of consciousness as a systemic causal variable, (c) the conceptualization of entropy as a systemic obstacle that wastes energy and information, and (d) the definition of evolution as a rate of adaptation, not simply a change in status. These four contributions make IRT more operational than critical realism, more normative than general systems theory, and more theoretically structured than many variants of complexity science (MHS, 2026)(Bhaskar, 1998)(Meadows, 2008)(Mitchell, 2009).

Third, methodologically IRT encourages the use of dynamic models (data panels, system dynamics, agent-based modeling) and retroduction strategies as a way to investigate the causal mechanisms behind social phenomena. However, this article also shows that the validity of constructs—especially on the variables of consciousness and evolution—is still a serious challenge. The initial proxies proposed by IRT still require further validation, and the problem of circular causality between variables requires a non-simple estimation method (MHS, 2026).

The IRT's main contribution, as shown by the analysis in this article, is to fill the gap between a philosophy of processes that often stops at metaphors and an

empirical social science that often lacks an ontological foundation. IRT offers bridges: deep ontologies, operable variables, and methodological strategies that can be followed.

With the concept of systemic entropy, IRT also provides a conceptual tool to diagnose more sharply development failures that cannot be explained by conventional economic or political logic alone. With the concept of evolution as the rate of adaptation, IRT opens up the possibility of assessing a nation's learning capacity more dynamically. In this context, IRT can serve as a conceptual umbrella for studies of the state, organization, and social change that require an integrative perspective.

It is noteworthy that the IRT's contribution is a research program, not a final theory. The IRT provides a fairly clear map, but the map itself must continue to be tested, revised, and developed by subsequent research.

Based on the limitations that have been discussed, this article suggests three directions for further research. First, the development and validation of proxies. Future research will need to construct more valid proxies for each IRT variable, either by developing new composite indices or by testing the convergent and discriminant validity of existing proxies. The variables of consciousness and evolution are the top priorities given their highest level of abstraction among the five variables.

Second, cross-country empirical testing. The IRT needs to be tested with adequate cross-country panel data to see if all five variables behave according to theoretical predictions. Dynamic models such as panel vector autoregression or structural equation modeling with longitudinal data are suitable candidate methods. This kind of research will greatly determine whether IRT has empirical durability or is just conceptually beautiful.

Third, the integration of IRT with qualitative methods. Given that IRT emphasizes deep causal mechanisms that are not always visible on the surface of quantitative data, qualitative and mixed-methods research can help capture how the five IRT variables work in concrete contexts. Case studies of countries or organizations that have successfully managed entropy and rapidly increased its evolution, for example, can provide an empirical illustration that strengthens or corrects the IRT framework.

True science is not born from closed dogma, but from open dialogue. The Theory of Integrated Reality, with all its promise and limitations, is an invitation to that

kind of dialogue between disciplines, between ontology and methodology, between philosophical abstraction and responsible empiricism. This article has tried to put IRT in that dialogue honestly: showing where it shines and where it still needs more hard work. In the end, the value of IRT will not be determined by conceptual arguments alone, but by its ability to produce richer, more integrative, and more honest research in the face of complex realities.

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