

The Pragmatism Trap: Economics in Crisis

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Abstract: As a discipline grounded in pragmatic methodology, economics has exerted wide interdisciplinary influence through its epistemological framework and research practices. However, despite its strong explanatory capacity, orthodox economics, covering both theory-oriented academic economics and policy-oriented political economics, exhibits limited predictive power. This paper argues that the root cause is the shift since the 1970s toward a more self-contained intellectual enterprise within the economics community. More precisely, the discipline has faced a paradigmatic crisis over the past fifty years, in which instrumental rationality—favoring methodological precision, temporal expediency, and sectoral optimization—has taken precedence over value rationality, with its focus on ethical evaluation, long-term sustainability, and holistic perspectives. Examining four dimensions—disciplinary imbalances, methodological limits, theoretical presuppositions, and socio-institutional implications—this study argues that prioritizing instrumental over value rationality continues an Enlightenment-style scientific hegemony rooted in a misreading of pragmatic epistemology.

Keywords: Intellectual History; Quantification (/Model) Worship; Instrumental Rationality; Social Responsibility; Ethical Vacuum;

JEL: A1, B0, E0, H0, P0

1. Introduction

The historical evolution of economic thought reveals that before its formalization as an independent discipline, economics was inherently intertwined with political governance, primarily focusing on how to achieve the effective production and rational distribution of material wealth to ensure the long-term stability of the state (regime). This is both the starting point and the end point of economics. Therefore, the original name of economics should have been political economy. However, with the depoliticization of economics, as it developed into an independent discipline, its focus gradually shifted from the political question of how to achieve the effective production and rational distribution of national wealth to the technical problem of how to achieve a match between supply and

demand. However, confronted with persistent failures in addressing purely technical economic challenges, the discipline was compelled to re-engage with political considerations, that is, to begin focusing on and studying how to achieve a rational balance between the free market and government planning. However, after being hijacked by mathematical tools, modern economics is no longer as clear and profound in its thinking as classical political economy; it is no longer able to keenly perceive the changes and evolution of the socio-economic body and has lost its explanatory power for reality. (XIE et al. 2025; XIE 2026)

Therefore, as an independent discipline, orthodox economics has died since the 1970s, because it has devolved into an insular intellectual exercise confined within disciplinary boundaries. In other words, orthodox economics (mainly referring to the theoretical economics that dominates current academic research and the political economics that prevails in the current policy-making process) is experiencing a severe paradigm crisis. (XIE 2020, 2023) This is mainly manifested in orthodox economics' overemphasis on instrumental rationality while neglecting value rationality.

We will argue the above assertion from the following four aspects: the imbalance in disciplinary development, the real-world consequences of the social crisis from the expansion of instrumental rationality, methodological flaws, and the biased presuppositions of its theoretical foundation.

2. There is a Significant Structural Imbalance among Different Disciplines within Orthodox economics

Orthodox economics can be subdivided into many interconnected disciplines, but the development of these disciplines has shown significant structural imbalances, mainly reflected in three aspects: the cognitive blind spot of plural rationality, the closed nature of interdisciplinary dialogue, and the disconnection from the historical context.

2.1 Cognitive Blind Spot of Plural Rationality

Orthodox economics equates rationality with instrumental rationality, confusing rational ability (computational level) with rational nature (value choice). Maurice Allais and Ole Hagen, in their book "*Expected Utility Hypotheses and the Allais Paradox*," explored the multidimensionality of rational decision-making, criticizing the simplification of orthodox economics that equates rationality with instrumental rationality. They argue that economics needs to incorporate psychological, social, and cultural factors

to more comprehensively understand human decision-making. (Allais and Hagen 1979) James and others proposed the concept of "plural rationalities", suggesting that human decision-making is not only based on instrumental rationality but also includes social norms, emotions, and values. Scholars criticize the excessive reliance of orthodox economics on instrumental rationality and call for a more comprehensive understanding of human behavior. (Thompson 1991) Gerd Gigerenzer, Reinhard Selten, and others, in their book *"Bounded Rationality: The Adaptive Toolbox,"* criticize the narrow definition of instrumental rationality in orthodox economics and propose the concept of "bounded rationality," emphasizing that human decision-making is not solely dependent on computation but is based on heuristic and adaptive strategies. They argue that economics needs to break through the framework of instrumental rationality and incorporate a pluralistic perspective of rationality. (Gigerenzer and Selten 2001) Daniel Kahneman points out that although behavioral economics has revised traditional models, it has not completely broken through the framework of instrumental rationality, and therefore, he calls for economics to more deeply understand the plural rationality of human decision-making. (Kahneman 2003) Alfred Mele and Piers Rawling, editors of *"The Oxford Handbook of Rationality,"* compile discussions on the concept of rationality by economists and philosophers, criticizing the tendency of orthodox economics to simplify rationality to instrumental rationality. Scholars emphasize that rationality should include value choices and ethical judgments, not just computational ability. (Mele and Rawling 2004) Peter Diamond and Hannu Vartiainen, editors of *"Behavioral Economics and Its Applications,"* discuss the research progress of behavioral economics and also point out that although behavioral economics has discovered the phenomenon of "bounded rationality," it has not completely broken through the framework of instrumental rationality, merely correcting models through psychological variables, and therefore scholars call for economics to more comprehensively understand the complexity of human decision-making. (Diamond and Vartiainen 2007) Mainstream orthodox economics often places greater emphasis on the value of competition while neglecting the importance of love and nurturing (Stanfield and Stanfield 1997), a topic that O'Hara's work systematically explores. (O'Hara 2014, 2022)

2.2 Closed Nature of Interdisciplinary Dialogue

Economics excludes discussions of value rationality by philosophy and ethics, leading to its inability to respond to complex social issues. For example, climate change

requires intergenerational ethical considerations, but carbon trading markets still price environmental value based on instrumental rationality logic. As mentioned earlier, Milton Friedman, while emphasizing the importance of the free market, also acknowledged that economic decisions may involve ethical issues. He proposed that businesses and society need to find a balance between instrumental rationality and ethical values, rather than completely avoiding ethical judgment. (Friedman 1968) John Rawls stressed that social institutions ought to be grounded in the principle of fairness, rather than being solely based on instrumental rationality. He took issue with the excessive emphasis on efficiency and utilitarianism within economics, arguing that such an approach neglects the significance of social justice and individual rights. (Rawls 2005) As mentioned earlier, Amartya Sen criticizes the neglect of ethical values by orthodox economics, arguing that economics should not claim to be "value-neutral" but should incorporate considerations of justice, fairness, and human well-being. He points out that the separation of economics and ethics has led to its limitations in addressing complex social issues such as climate change. (Sen 1987) Luigino Bruni and Stefano Zamagni criticize the excessive reliance of orthodox economics on instrumental rationality, arguing that economic decisions should not be separated from ethical issues, but rather, economics should consider ethical values such as human dignity, social solidarity, and sustainable development. (Eecke 2008) Stephen Gardiner's series of works systematically explores the ethical issues of climate change, criticizing carbon trading markets and other instrumentally rational solutions for ignoring intergenerational ethics and fairness issues. (Gardiner et al. 2010; Gardiner 2011; Gardiner and A 2016; Gardiner and Thompson 2017) John Broome, in his book "*Climate Matters: Ethics in a Warming World*," discusses the ethical issues of climate change, criticizing the excessive reliance of economics on instrumental rationality and arguing that mechanisms such as carbon trading markets fail to fully consider the ethical dimensions of environmental value. (Broome 2012)

2.3 Disconnection from Historical Context

Alfred Marshall, in his book "*Principles of Economics*," proposed basic concepts such as supply and demand theory, marginal utility, and market equilibrium (Marshall 2013), but these theories are detached from specific historical and social conditions, making it difficult to explain the value rationality traditions of non-Western societies. For example, the distinction between righteousness and profit in Confucian thought in China (Lam 2003; Yu 2023) and the oneness with all things in African philosophy (Janz 2010;

Matolino 2011) are difficult to explain using these theories. As mentioned earlier, Milton Friedman, while emphasizing the importance of the free market, also acknowledged that economic decisions may involve ethical issues. He proposed that businesses and society need to find a balance between instrumental rationality and ethical values, rather than completely avoiding ethical judgment. (Friedman 1968) In his seminal work "*A Theory of Justice*," John Rawls underscores the importance of grounding social institutions in the principle of fairness, rather than relying solely on instrumental rationality. He critiques the preoccupation with efficiency and utilitarianism in economics, arguing that this approach fails to account for the intrinsic value of social justice and individual rights.^[61] As mentioned earlier, Amartya Sen criticizes the neglect of historical and social context by orthodox economics, arguing that economics should incorporate considerations of justice, fairness, and human well-being, rather than just abstract theoretical models. (Sen 1987)

3. The Instrumental Rationality Orientation of Orthodox economics Has Led to Serious Social Crises

Due to the aforementioned shortcomings, modern orthodox economics has led to a social crisis of instrumental rationality expansion, which is mainly reflected in three aspects: the intensification of social alienation, the value desertification of the public domain, and the spread of the meaning crisis.

3.1 Intensification of Social Alienation

The intensification of social alienation is the result of the combined effects of instrumental rationality and capitalist logic, manifesting across economic, technological, political, and cultural domains.

1) Labor Alienation in Digital Capitalism. Under digital capitalism and flexible accumulation models, labor alienation has shifted from traditional factory exploitation to more concealed systemic oppression. Workers are instrumented by algorithms and platform economies, such as food delivery riders constrained by algorithm-optimized delivery times, sacrificing safety and dignity. Capital fragments the division of labor through technology, reducing workers to parts in the efficiency chain, and losing control over the labor process. (Marx 2015; Braverman 1998)

2) Consumption Alienation and Symbolic Manipulation. Capital creates false needs through consumerist culture and digital technology, turning people into slaves to symbolic consumption. Digital platforms promote excessive consumption, such as

Amazon's algorithm-driven recommendations, stimulating irrational shopping, leading to resource overconsumption and ecological crises. Individuals pursue identity in consumption, only to fall into a cycle of emptiness and material desire. (Marcuse 1991; Baudrillard and Ritzer 1970)

3) Digital Alienation and Algorithmic Domination. Digital technology, through codification and algorithmic control, conceals exploitation and exacerbates the alienation of social relations. Social media platforms (e.g., Meta) turn interpersonal relationships into data, making users passive recipients of algorithmic recommendations, and gig economy workers are subject to platform rating systems, losing autonomy. (Rosa 2010; Zuboff 2020)

4) Political Alienation and Democratic Erosion. Under the dominance of instrumental rationality, Western democratic systems have become tools for elite rule and capital manipulation. For example, the "money politics" in American elections and the "veto politics" under a two-party system lead to policy gridlock, excluding ordinary people from decision-making. (Fukuyama 2014; Wolin 2017)

5) Existential Alienation in Accelerated Modernity. The social acceleration mechanism, through the synergistic effects of technology, economy, and culture, permeates alienation into daily life. For instance, time pressure leads to "involution" (e.g., excessive competition among Silicon Valley engineers) and "lying flat" (e.g., the negative attitude of European youth towards the future); digital natives experience anxiety about self-presentation on social media. (Rosa 2015; Han 2015) These phenomena indicate that Max Weber's warning of the "Iron Cage of Rationality" is becoming a reality. (Weber 1930)

3.2 Value Desertification of the Public Domain

The value desertification of the public domain is the result of the collusion of capital, politics, and technology, manifested as the commodification of rational spaces, manipulation of democratic procedures, virtualization of communication, and the collapse of consensus mechanisms.

1) Colonization of the public domain by capital logic. Surveillance capitalism turns the public domain into a tool for capital proliferation through the commodification of data. Social media platforms (e.g., Meta, Google) use algorithms to convert user behavior data into predictable commodities, creating "false needs" through personalized advertising, and forcing the public to become passive consumers rather than rational participants. For example, Amazon's recommendation system stimulates irrational consumption, eroding

the substantive content of public discourse. (Zuboff 2020)

2) Collusion between political power and technology. States collude with tech companies to distort democratic processes through digital technology. The PRISM scandal in the United States revealed government cooperation with internet companies to monitor public data; Cambridge Analytica manipulated elections with 87 million users' data, using psychographic technology to target political ads, undermining the autonomy of the public domain. Shoshana Zuboff's theory of surveillance capitalism further points out that the alliance of capital and political power has turned the public domain into a "market for behavioral correction," with technology becoming a tool for manipulating voters. (Zuboff 2020)

3) Technological alienation and the virtualization of communication. Artificial intelligence and algorithmic technology lead to the "dehumanization" of public discourse. Social media is filled with AI bots (e.g., ChatGPT) generating false interactions and creating echo chambers; platforms push extremist content through algorithms, exacerbating group polarization. For example, bot accounts on Twitter manipulate hashtags, distorting the public agenda. Jürgen Habermas's prediction that technological mediation could destroy the intersubjectivity of the public domain, leading to the collapse of communicative rationality (Jurgen 1991), is becoming a reality.

4) Disappearance of critical publicness and information entropy. The failure of traditional media "gatekeepers" leads to the proliferation of fake news, conspiracy theories, and extreme rhetoric in digital spaces (e.g., the spread of QAnon in the United States), trapping the public in "information cocoons," unable to reach a rational consensus. Zeynep Tufekci analyzes how social media amplifies irrational emotions, leading to the loss of "critical discourse" in the public domain, and the fragmented dissemination mechanism undermines the possibility of consensus formation. (Tufekci 2018)

3.3 Spread of the Meaning Crisis

The spread of the meaning crisis is the result of the combined effects of capitalist logic, technological alienation, and cultural fragmentation, manifested as the commodification of consumption, temporal acceleration, relativization of values, instrumentalization of labor, and the retreat of transcendental values.

1) The symbolic hegemony of consumerism and the hollowing out of the meaning of life. Capital transforms people's value identification into the possession of commodity symbols through consumerism, dissolving the meaning foundation of traditional ethics

and community spirit. Social media (e.g., Instagram) creates a virtual landscape of "perfect life," where users build self-identity through material display (luxury goods, travel check-ins), but fall into "symbolic poverty" and existential anxiety. (Baudrillard and Ritzer 1970; Han 2015)

2) Digital technology's deconstruction of temporal experience and dilution of existential meaning. Digital technology accelerates the fragmentation of time, reducing human action to a mechanical cycle of immediate feedback. Short video platforms (e.g., TikTok) create "instant pleasure traps" through algorithms, immersing users in rapidly changing sensory stimuli, losing the anchor of deep thinking and long-term goals. Therefore, Hartmut Rosa and others propose the theory of social acceleration, arguing that technological acceleration compresses the "present," leading to time alienation and meaning nihilism. (Rosa 2015) Meanwhile, Shoshana Zuboff's work reveals how data capitalism transforms human behavior into predictable commodities, eroding the significance of human autonomy. (Zuboff 2020)

3) The paradox of multiculturalism and the disintegration of common values. The excessive diversification promoted by neoliberalism weakens social consensus, leading to the fragmentation of meaning identification. Identity politics intensifies group opposition (e.g., the "Black Lives Matter" movement in the United States vs. right-wing populism), reducing public discourse to a "victim narrative competition," unable to form a vision of the common good. Therefore, Charles Taylor analyzed how the diversification of "meaning options" in the process of secularization leads to a crisis of value relativism. (Charles 2007) Zygmunt Bauman proposed the concept of "liquid modernity" to describe how individualized societies dismantle stable frameworks of meaning. (Bida 2018)

4) Deepening labor alienation and the loss of work meaning. Post-Fordist labor models instrumentalize workers, severing the intrinsic connection between labor and self-actualization. In the gig economy (e.g., Uber drivers), workers are dominated by algorithmic rating systems, with work reduced to "calculable performance," losing creativity and a sense of belonging. Therefore, André Gorz and Chris Turner analyzed how the dematerialization of labor in the knowledge economy dissolves the meaning foundation of traditional labor ethics. (Gorz 2010) David Graeber, on the other hand, was more direct in criticizing capitalism for creating a large number of meaningless jobs, leading to "spiritual violence" and a sense of existential absurdity. (Graeber 2018)

5) The retreat of religion and transcendental values and the spread of the spiritual vacuum. The secularization process and the decline of Christian traditions are causing

Western society to lose its transcendental meaning coordinates, exacerbating existential confusion. The increasing vacancy rate of churches in Europe (e.g., only 14% of the population in Germany regularly participates in religious activities) and alternative beliefs (e.g., spiritual consumption, astrology) cannot fill the deep-seated need for meaning. In fact, Max Weber analyzed how religious ethics provided a supportive meaning for capitalism and predicted that its disappearance would trigger a crisis of values as early as the beginning of the 20th century. (Weber 1930) Peter Berger, in his renowned work "*The Sacred Canopy: Elements of a Sociological Theory of Religion*," argued that the collapse of religion as a canopy of meaning leads to cognitive disarray in modern society. (Berger 1990)

4. Orthodox Economics Suffers from the Flaws of Quantitative Worship and Ethical Vacuum in Methodology

Orthodox economics has flaws at the methodological level, which are mainly reflected in three aspects: the hegemonic position of scientism, the systematic exclusion of value rationality, and the lack of ethical judgment.

4.1 The Hegemonic Position of Scientism

Economics constructs "objective truths" through mathematical models, excluding unquantifiable values (such as dignity and cultural identity) from the analytical framework. Donella Meadows, Dennis Meadows, and others revealed the unsustainability of economic growth to resources and the environment through system dynamics models and criticized the tendency of traditional economics to ignore ecological costs. They emphasized the need to redefine development to incorporate environmental and social factors. (Meadows 1979) Herman Daly and Joshua Farley put forward the framework of ecological economics in the book "*Ecological Economics: Principles and Applications*", emphasizing that economic activities should be carried out within the constraints of the ecosystem and criticizing the neglect of natural resources by traditional economics. They advocated incorporating ecological and social values into economic analysis. (Daly and Farley 2004) Giacomo Alisa and others criticized the paradigm of economic growth supremacy in the book "*Degrowth: A Vocabulary for a New Era*" and advocated achieving ecological sustainability and social equity by reducing the scale of economic activities. (D'Alisa et al. 2014) Wolfgang Streeck explored the internal contradictions of the capitalist economic system in the essay collection "*How Will Capitalism End?: Essays on*

a Failing System," criticized the development model centered on GDP growth, and believed that this model ignored hidden costs such as social inequality and ecological destruction. (Streeck 2017) Kate Raworth criticized the excessive dependence of traditional economics on GDP growth in the book *"Doughnut Economics: Seven Ways to Think Like a 21st-Century Economist"* and proposed the "Doughnut Economics" model, emphasizing that economic development should meet human basic needs while not exceeding the carrying capacity of the Earth's ecosystem. She believed that economics needs to incorporate ecological and social values, rather than just quantitative indicators. (Raworth 2018)

4.2 Systematic Exclusion of Value Rationality

Instrumental rationality demands "calculability" and "universality," but value rationality, which emphasizes "unquantifiable" factors such as faith and morality, is labeled as "irrational." Max Weber pointed out that the development of capitalism has promoted the dominant position of instrumental rationality, while value rationality (such as religious beliefs and morality) has gradually been marginalized. He analyzed how Protestant ethics promoted the instrumental rationalization of capitalism but also led to the decline of value rationality. He used the concept of *"The Iron Cage of Rationality"* to describe how instrumental rationality has turned modern society into an iron cage, where efficiency and calculability dominate, and value rationality (such as faith and morality) is excluded. He believed that this rationalization process led to the alienation of people and the loss of meaning. (Weber 1930) Herbert Marcuse, in his famous work *"One-Dimensional Man: Studies in the Ideology of Advanced Industrial Society"*, criticized the hegemonic position of instrumental rationality in modern industrial society, arguing that technological rationality suppressed human criticality and creativity, leading to the marginalization of value rationality (such as art, philosophy, and morality). He pointed out that this one-dimensional society caused people to lose their pursuit of higher values. (Marcuse 1991) Jürgen Habermas, in his book *"The Philosophical Discourse of Modernity"*, explored the colonization of the lifeworld by instrumental rationality in modern society, believing that the expansion of instrumental rationality led to the systematic exclusion of value rationality. He proposed the need to restore the status of value rationality through communicative rationality. (Jurgen 1990) Wolfgang Streeck and others, in the collection of essays *"How Will Capitalism End?: Essays on a Failing System"*, criticized capitalism's over-reliance on economic growth, believing that this

model, dominated by instrumental rationality, ignored ecological and social values. They called for a re-examination of the role of value rationality in the economy and society. (Streeck 2017)

4.3 Absence of Ethical Judgment

Philippe Mongin examines the issues of value judgments and value neutrality in economic research. (Mongin 2006) At its core, this debate revolves around the relationship between positive economics (descriptive, fact-based analysis) and normative economics (prescriptive, value-laden judgments). Mark Blaug argues that empirical analysis constitutes the scientific foundation of economics, while normative claims should be discussed transparently outside this empirical framework. (Blaug 1992, 1998) Thomas Mayer evaluates the role of formalism and methodological rigor in economics (Mayer 1992), while Bruce Caldwell traces the historical influence of positivism on economic thought. (Caldwell 2013) Further expanding the discourse, Ben Fine and Dimitris Milonakis critically analyze the phenomenon of economic imperialism—the expansion of economic methodologies into non-economic disciplines. (Fine and Milonakis 2009) Orthodox economics often claims to be "value-neutral," but the application of instrumental rationality itself implies value choices. For example, corporate layoff decisions are based on the principle of cost minimization (instrumental rationality), but they avoid value considerations such as employees' right to subsistence and social stability. Milton Friedman, in his book "*Capitalism and Freedom*," although emphasizing the importance of the free market, also acknowledged that economic decisions might involve ethical issues. He proposed that businesses and society need to find a balance between instrumental rationality and ethical values, rather than completely avoiding ethical judgment. (Friedman 1968) John Rawls, in his famous work "*A Theory of Justice*," proposed the theory of "justice as fairness," emphasizing that social institutions should be based on the principle of fairness rather than purely instrumental rationality. He criticized the excessive focus on efficiency and utilitarianism in economics, believing that this ignored the value of social justice and individual rights. (Rawls 2005) Viviana Zelizer, in her book "*Morals and Markets*," analyzed the ethical dimension of market behavior, criticizing the tendency of economics to reduce market behavior to instrumental rationality. She emphasized that market behavior should take into account moral and social values. (Zelizer 2017) Edited by Daniel Hausman, the collection "*The Philosophy of Economics*" brought together discussions on philosophical issues in economics by several scholars,

including critiques of instrumental rationality and ethical judgment. The book emphasizes that economics should not ignore its implicit ethical choices. (Hausman 1984) Amartya Sen, in his book "*On Ethics and Economics*," criticized the neglect of ethical values by orthodox economics, believing that economics should not claim to be value-neutral but should incorporate considerations of justice, fairness, and human well-being. He pointed out that the application of instrumental rationality itself implies ethical choices, and economics needs to re-examine its ethical foundations. (Sen 1987) Luigino Bruni and Stefano Zamagni, in their book "*The Ethical Dimensions of the Economy*," explored the ethical issues in economics, criticizing the excessive reliance of orthodox economics on instrumental rationality. They believed that economic decisions should consider ethical values such as human dignity, social solidarity, and sustainable development. (Eecke 2008)

5. The Theoretical Foundation of Orthodox economics includes the Disciplinary Gene of Instrumental Rationality

Orthodox economics exhibits a bias in its theoretical presuppositions, which is mainly reflected in three aspects: the singularity of the economic man hypothesis, the instrumental tendency of rational choice theory, and the one-sidedness of the scarcity theory.

5.1 The Singularity of the Economic Man Hypothesis

Adam Smith proposed the moral man hypothesis in "*The Theory of Moral Sentiments*," emphasizing that human behavior is not only driven by self-interest but also influenced by sympathy, morality, and social norms. This contrasts with his economic man hypothesis in "*An Inquiry into the Nature and Causes of the Wealth of Nations*," indicating that Smith did not reduce human behavior to purely economic calculation. (Smith 2018, 2008) John Stuart Mill criticized Bentham's utilitarianism for oversimplifying human behavior in "*Utilitarianism*," arguing that happiness encompasses not only the pursuit of material interests but also spiritual, moral, and emotional fulfillment. Therefore, he famously stated that it is better to be a dissatisfied Socrates than a satisfied pig. (Mill 2012) Karl Marx criticized the capitalist tendency to reduce all social relations to exchange value in "*Das Kapital*." He pointed out that people are seen as personifications of economic categories, with their behavior and motives determined by capitalist production relations, ignoring human subjectivity and sociality. (Marx 2024) Peter Berger and Thomas Luckmann, in "*The Social Construction of Reality*," explored the social construction of

human behavior from a sociological perspective, noting that the economic man hypothesis overlooks the impact of culture, history, and social norms on human behavior. They argue that human behavior cannot be reduced to a single economic motive. (Döbler 2022) John Maynard Keynes also criticized classical economics' reliance on the economic man hypothesis, suggesting that human behavior is not entirely rational but is influenced by psychological, emotional, and social factors. Therefore, he advocated for government intervention to compensate for the deficiencies of market mechanisms. (Keynes 2004) Amitai Etzioni directly criticized orthodox economics' dependence on the economic man hypothesis, proposing the concept of social economics and emphasizing the importance of morality, emotion, and social relations in economic behavior. (Etzioni 2010) XIE argued that the micro-foundations of modern orthodox economics (the economic man hypothesis and the scarcity hypothesis) have serious flaws, leading to instability in the theoretical edifices of neoclassical macroeconomics and Keynesian economics, and the corresponding economic policies are also imperfect. (XIE 2020) This indicates that theoretical economics needs to be more realistic; otherwise, the effectiveness of its paradigms and policy recommendations will be questioned. (XIE 2026) Galit Ailon analyzed the limitations of the economic man hypothesis from a phenomenological perspective, pointing out that its universality in market societies is not based on reality but is maintained through social interaction and cultural norms. The author believes that the economic man model neglects the sociality and complexity of human behavior. (Ailon 2020)

5.2 The Instrumental Tendency of Rational Choice Theory

Rational choice theory pushes instrumental rationality to the extreme, believing that human behavior can be fully explained through cost-benefit accounting. This logic transforms social issues (such as environmental protection and labor relations) into technical calculations, ignoring their ethical connotations. Max Weber was the first to distinguish between instrumental rationality and value rationality in "*The Protestant Ethic and the Spirit of Capitalism*," and pointed out that the excessive expansion of instrumental rationality will lead to the alienation of social relations and the loss of ethical connotations. He believed that modern capitalist society simplifies all behaviors into technical calculations, ignoring the value of morality and emotion. (Weber 1930) As mentioned earlier, Adam Smith emphasized in "*The Theory of Moral Sentiments*" that human behavior is not only driven by self-interest but also influenced by sympathy, morality, and

social norms. This contrasts with the economic man hypothesis he proposed in *An Inquiry into the Nature and Causes of the Wealth of Nations*, indicating that Smith did not reduce human behavior to mere economic calculation. (Smith 2018, 2008) As previously mentioned, Peter Berger and Thomas Luckmann explored the social constructiveness of human behavior from a sociological perspective, pointing out that rational choice theory ignores the influence of culture, history, and social norms on human behavior. They believe that human behavior cannot be simplified to a single economic motive. (Döbler 2022) Karen Cook and Margaret Levi strongly criticized rational choice theory in "*The Limits of Rationality*," emphasizing that its instrumental tendency ignores the complexity and diversity of human behavior, especially in the application to social issues and ethical decision-making. (Cook and Levi 1990) James Coleman explored in "*Foundations of Social Theory*" how to explain the relationship between individual actions and macro-social structures through rational choice theory, but also pointed out its limitations, especially in ignoring ethical and moral factors when explaining complex social phenomena. (Coleman 1990) Schwartz explored in "*The Paradox of Choice: Why More Is Less*" the limitations of rational choice theory in real life, pointing out that too many choices and calculations can lead to decision fatigue and dissatisfaction, ignoring the role of emotions and psychological factors. (Schwartz 2005)

5.3 The One-Sidedness of Scarcity Theory

Orthodox economics starts with the premise of resource scarcity, presupposing the principles of competition and efficiency, but it does not reflect on whether scarcity is created by the production mode itself, dominated by instrumental rationality (such as resource depletion caused by overconsumption). This linear thinking ignores the regulatory role of value rationality in the fairness of resource allocation. Peter Berger and Thomas Luckmann discussed the social construction of resource scarcity from a sociological perspective, pointing out that scarcity is often shaped by social norms, cultural concepts, and economic systems. They criticized the instrumental understanding of scarcity in orthodox economics, emphasizing the need to pay attention to social equity and ethical values. (Döbler 2022) Nicholas Georgescu-Roegen analyzed resource scarcity from the perspective of the second law of thermodynamics, pointing out that resource depletion and environmental pollution are inevitable results of economic activities. In his book "*The Entropy Law and the Economic Process*," he criticized the simplified understanding of resource scarcity in orthodox economics, emphasizing the need to

rethink production and consumption patterns. (Georgescu-Roegen 1971) Donella Meadows and Dennis Meadows, among others, analyzed the relationship between resource consumption and economic growth through system dynamics models, pointing out that resource scarcity is not merely a natural phenomenon but is exacerbated by human production and consumption patterns. In their book "*The Limits to Growth*," they criticized the linear thinking of orthodox economics on resource scarcity, emphasizing the need to re-examine economic growth models. (Meadows 1979) E.F. Schumacher criticized the instrumental understanding of resource scarcity in modern economics in his book "*Small Is Beautiful: A Study of Economics As If People Mattered*," advocating for the inclusion of ethics and sustainability in economic decision-making. He believed that resource scarcity is often caused by overconsumption and irrational production methods, rather than natural limitations. (Schumacher 2010) Thomas Piketty explored the relationship between capital accumulation and resource distribution in his book "*Capital in the Twenty-First Century*," pointing out that resource scarcity is amplified under the capitalist system, leading to increased social inequality. He criticized the excessive emphasis on efficiency and competition in orthodox economics, overlooking fairness and sustainability. (Piketty 2017)

6. Conclusion and Prospect

As is well known, following the crisis of economic theory in the 1980s, due to its inability to explain the real world (the stagflation phenomenon), orthodox economics experienced a "prediction failure" crisis during the Great Recession of 2008. Furthermore, we have also witnessed a "crisis" in the content and education of economics, titled "(Post-)Autistic Economics". (Fullbrook 2003) So, we believe that orthodox economics is experiencing a severe paradigm crisis. (XIE 2020, 2023) This is mainly manifested in its overemphasis on instrumental rationality while neglecting value rationality.

The two concepts of instrumental rationality and value rationality come from the German sociologist Max Weber. (Weber 1930; Heidelberg 2010) The two differ in many aspects. In terms of logical approach, instrumental rationality emphasizes instrumental logic and computational thinking, whereas value rationality places greater importance on value logic and belief-based thinking. In terms of core focus, instrumental rationality emphasizes the effectiveness of means, while value rationality attaches more importance to the legitimacy of ends. In terms of judgment criteria, instrumental rationality values whether short-term expected results can be achieved (i.e., utilitarianism) and is prone to

falling into the trap of short-sighted and narrow pragmatism. Value rationality, on the other hand, places more emphasis on whether it aligns with value beliefs (i.e., morality), stressing the long-term, comprehensive, and balanced nature of utilitarian outcomes.

Benefiting from (and also suffering from) quantitative tools (such as mathematical techniques), the analysis of orthodox economics often remains at the micro-meso and short-term levels, where it may seem reasonable, but is often contradictory and illogical at the macro-global and long-term levels. Baran and Sweezy pointed out that orthodox economics has constructed a framework that may be rational at the micro-meso-narrow level but is irrational for the entire system. (Baran and Sweezy 1966) Some concepts in orthodox economics may be rational at a local level, but not so for the entire system. For example, neoliberalism may be rational at the micro-meso-narrow levels but not at the systemic level. (Wrenn 2018) This is particularly evident in the context of the global economy. Because the global economy requires logic (or illogic) and understanding that go far beyond meso and micro dimensions (as well as narrow macro perspectives on other very limited viewpoints). Academic literature on circular cumulative causality, emergence, and complexity recognizes these broader issues. (Martin and Edward 1975)

We have analyzed and elaborated in detail on the paradigm crisis confronting modern orthodox economics from four perspectives: disciplinary structure, value orientation, methodology, and theoretical foundations.

Disciplinary Structure: A significant structural imbalance exists among different sub-disciplines within orthodox economics.

Value Orientation: The instrumental rationality orientation of modern orthodox economics has engendered severe social alienation, leading to the desertification of values in the public sphere and the proliferation of a crisis of meaning.

Methodology: Current orthodox economics suffers from the defects of quantification worship and an ethical vacuum.

Theoretical Foundations: The homo economicus assumption is overly simplistic, rational choice theory is excessively instrumentalized, and the scarcity assumption is too one-sided.

We aim to expose and critique the paradigmatic crisis confronting orthodox economics—its excessive prioritization of instrumental rationality at the expense of value rationality. To this end, the study extensively draws on research from Heterodox Economics. Breakthroughs in transcending the limitations of instrumental rationality are primarily reflected in five key dimensions:

1. Incorporating Historical and Institutional Analytical Perspectives. Heterodox schools emphasize the historical embeddedness and institutional dependency of economic activities, arguing that economic phenomena cannot be divorced from specific social, cultural, and historical contexts. For instance, New Institutional Economics and Evolutionary Economics focus on how institutional changes and historical evolution shape economic behavior, opposing mainstream static equilibrium frameworks.

2. Reclaiming Social Justice and Ethical Concerns. Heterodox economics criticizes mainstream theory's obsession with instrumental rationality for neglecting social equity and ethical values. Represented by Marxist and Radical Political Economics, it analyzes how production structures and social institutions determine economic distribution, advocating for re-examining economic issues through a lens of social justice.

3. Reflecting on Excessive Mathematization and Formalization. Heterodox schools oppose orthodox economics' tendency to elevate mathematical models above reality, noting that such methods detach from empirical contexts and fail to explain complex phenomena. The Austrian School, for example, characterizes markets as dynamic transactional processes, rejecting neoclassical "general equilibrium" mechanistic constructs.

4. Confronting Uncertainty and Trial-and-Error Mechanisms. Heterodox economics (e.g., Austrian and evolutionary schools) underscores the uncertainty and complexity inherent in economic systems, advocating adaptive trial-and-error learning mechanisms over preset rational models.

5. Deconstructing and Transcending the "Rational Man" Presupposition. Heterodox economics (e.g., behavioral and evolutionary economics) challenges the "rational man" axiom of mainstream theory, revealing that human decisions are often constrained by bounded rationality, information asymmetry, and psychological factors—far from complete rationality.

The over-reliance on instrumental rationality and the over-neglect of value rationality within the orthodox economics (and social sciences) community is a continuation of the hegemonic scientific thinking since the Enlightenment. (XIE 2023) The narrow-mindedness and short-sightedness exhibited by the orthodox economics (and social sciences) community, at its core, stems from a misunderstanding of pragmatist philosophy. (XIE 2025)

To transcend this predicament, one must revisit Max Weber's caution: instrumental rationality is a giant in mastering means, while value rationality serves as the beacon that

guides meaning. (Weber 1930) Only by forging a dynamic balance between the two can economics truly become a discipline that benefits society, rather than being reduced to a purely calculative craft. This demands paradigmatic innovation at the theoretical level, a pluralistic orientation at the methodological level, and value calibration in policy design.

It is neither necessary nor realistic to completely subvert the existing research paradigm in the short term. A feasible approach is to introduce complex thinking and dialectical rationality, bridge the gap between capital logic and humanistic values, and seek a dynamic balance point between efficiency and fairness, as well as between material and spiritual aspects.

Theoretical economics can draw on sociology's theory of 'embeddedness' to reposition economic behavior within social relationship networks and acknowledge the leading role of value rationality over instrumental rationality. (Polanyi 2001; Granovetter 1985; Sharon and DiMaggio 1990) Social enterprises, which use commercial means to fulfill public welfare missions, serve as clear evidence of this.

Political economy should establish a multi-dimensional development indicator system (such as happiness index, ecological footprint, etc.) and incorporate ethical weights into cost-benefit analysis. The Nordic welfare states, which regulate wealth distribution through high taxation, are a paradigm of the synergistic effect of instrumental rationality and value rationality.

In short, the core difference between orthodox economics and heterodox economics lies in their scope, perspective, and consideration of the emergent properties of processes and historical evolution. A major anomaly of orthodox economics (and some heterodox economics) lies in its inability to expand the network of entities considered in its analysis. Economists, therefore, need to examine economic problems with greater breadth (and depth). One can easily expand their inquiry in emergent and ontological ways to fully encompass power, relational stocks, and further issues of institutions, technologies, and ecologies. Thus, it is not merely a question of rationality, or the level of instrumental versus value rationality, but more fundamentally about the scope, breadth, and resulting depth of inquiry. Simultaneously, it is not about equilibrium, but about process, systems, and vision. Much depends on emergence, scope, and vision. It is a question of the entire reproductive system (including values), not merely its parts (or "narrow pores" rather than the "whole"). (O'Hara 2025)

In addition, the (ir)rationality of the rational economic agent assumption has long been recognized. Apart from values, perhaps the institutions, technologies, and ecological

models that underpin these values, as well as the overall potential for irrationality, should also be considered. Therefore, it is possible to examine values in conjunction with institutions, technologies, and ecology as a systemic whole (i.e., VITE). In particular, attention should be paid to the potentially irrational consequences that may arise from instrumental patterns of possible rationality (micro, meso, and narrow macro levels). From a systemic perspective, the main differences between the two lie in the breadth, scope, and emergent perspective of VITE, rather than just equilibrium, narrow scope, and short-sightedness.

Finally, it should be noted that although there are debates between mainstream and heterodox schools, and this paper offers many criticisms of orthodox economics, some people may argue that there is insufficient evidence to prove that orthodox economics is in crisis. They believe that mainstream and heterodox approaches coexist and continue to create economic knowledge in a diversified manner. This is indeed the current situation. Therefore, as stated at the beginning of our article, our purpose is not only to criticize but also to construct. We hope that economic research can achieve a dialectical unity of instrumental rationality and value rationality, as well as a dialectical unity of short-term-local analysis and long-term-whole perspective.

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