

Prologue: Mittermaier's Conceptual Framework

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In 1976, nearly 50 years ago, Karl Mittermaier submitted an unsupervised dissertation to an economics professor. It received a poor reception, not because it lacked merit but because it was not understood. In the absence of feedback or suggestions, it was put aside.¹ That it was not understood is unsurprising for it covers a wide terrain, approaches economics from a philosophical angle, introduces novel concepts, presents a deep and reflective work, and requires time for the arguments and their interconnections to be appreciated. Thanks to the tireless efforts of his widow, Isabella, recommendations from readers, and Bristol University Press, it is now publicly available.

His setback was both our gain and our loss. Our benefit was having two major works from his pen, one pursuing discipline-wide foundational matters, and the other analysing foundational matters in Smith and Smithian exegesis. Our loss was that the first was stillborn, for had a degree been awarded at that time we would doubtless have had more contributions from his pen on a most important subject.²

Unlike modern dissertations, however, it does not begin with introductory remarks outlining its aims, main ideas, methodology or conclusions. It dives straight into its subject matter, and only partway through the first chapter do we learn of its grand objective. Similarly, the final chapter provides neither synthesis nor summary, but focuses entirely on the last element in his framework.

It was thus suggested that a prologue providing a brief overview might assist initial understandings, encourage deeper understandings and promote further discussion of this complex, subtle and carefully worded work. Because brevity can interfere with accuracy, what follows is a sketch-map, not a detailed representation of the territory traversed, a partial resumé of certain key issues rather than a complete account. The economic schools discussed largely concern neo-classical and Austrian economics which, for

conciseness, are sometimes here termed orthodox economics due to their similarities rather than their differences.³

1. A revolutionary goal, modestly presented

Mittermaier's reading in economics, philosophy and history left him highly dissatisfied with the current state of economics and motivated his efforts to improve it as a scientific discipline. Of the two options available – retain and revise, or reject and replace – he chose the more radical course. And, although not underlined at the start, the construction of a new conceptual framework for economic analysis to replace dominant orthodox frameworks is its grand objective. The 'conventional' frameworks need to be abandoned, and a better alternative devised.⁴

2. Primary components

His new framework is founded on a realist philosophy valorizing empirical and historical observation, not an idealist philosophy valorizing non-empirical, timeless or empty abstractions. All its elements are interrelated and realism-based, with the following playing central roles.⁵

1. Facts, and their different kinds.
2. Induction as a means of establishing facts and axioms for deductive theorizing.
3. Institutions.
4. Historical time.
5. Determinacy and indeterminacy in outcomes.
6. Propositional logic, not purely mathematical logic.

He described his new framework as 'obvious', but with this obviousness obscured by the nature of orthodox economics.

3. Facts

Facts are vital to his analytical enterprise, with two distinctions drawn.

3.1 *Ex ante and ex post facts*

At first sight, this appears odd. Surely no fact could be *ex ante*, for facts refer to events that have happened or are happening, as in 'it rained' or 'it is raining'. His meaning is different and novel, with subtle relations to temporality.

Ex post facts refer to events that have occurred in the past prior to *some* moment in time. The subtlety is that this moment can either be now (in

which case the facts have happened and are knowable), or in the future (in which case the facts are similar to predictions with their truth known only after the future moment has passed). In both cases *ex post* facts refer to what happened once we reach a given moment, and hence to what then lies behind us at that moment.

Ex ante facts refer to facts that exist before *ex post* facts occur. The most important kind are *the structural features of the economy that generate the ex post facts as outcomes*. In this sense, *ex ante* facts are causes, and *ex post* facts are effects. An economy is viewed as having an empirical, factual structure described by such matters as its institutions and their interrelationships, the agents performing various roles within the structure (either individually or in combination), and the objectives and capacities of the agents in pursuing their goals. In combination, these structural features (or *ex ante* facts) cause certain outcomes to occur. Hence they play central roles in scientific theorizing that seeks to understand the economy, and explain why it behaves as it does, as indicated by outcomes in the past (or outcomes yet to be revealed in the future). These outcomes are the *ex post* facts caused either fully by the *ex ante* facts or largely by them (see [section 4](#)).

Two related distinctions are involved. One concerns answers to questions. *Ex post* facts answer backward-looking questions such as ‘what happened?’, and make ‘That X’ statements, as in ‘It is the case that X happened’. By contrast, *ex ante* facts provide answers to ‘why did that happen?’, and so deliver explanatory responses to ‘Why X?’ statements, as in ‘This is why X occurred’. The second distinction is between explanation and prediction. Here *ex ante* facts not only play major roles in explaining the *ex post* facts of the past, but also in predicting the *ex post* facts possibly occurring in the future.

Obviously, Mittermaier’s distinction does not refer to the *same* specific fact at different times, say today’s prediction of tomorrow’s weather compared to what tomorrow actually delivers. It is about ‘two entirely different orders of fact’. The *ex ante* facts refer collectively to the structural features of the economy that generate the specific *ex post* facts that will occur if these causal structures have been correctly identified, remain constant, and nothing else intervenes. The temporal or before-and-after aspect of the distinction is associated with theorization in two senses: causality, because causes precede effects; and theoretical reasoning, because (a) premises precede conclusions, and (b) conceptual frameworks precede the specific theories developed therein.

3.2 Causal and casual facts

Despite similarity in spelling, these must not be confused. Causal facts are the *ex ante* or structural facts present in the causal chains determining the *ex post* facts, *ceteris paribus*. Casual facts are time- or place-specific facts

arising ‘accidentally’, not structurally. In general, observed *ex post* outcomes are generated either by causal facts alone or by combinations of causal and casual facts.

Physical mechanisms provide examples. In an automated production line, if all machines are well-made and maintained, and no external interferences occur, the output is generated only by the causal facts and will satisfy prescribed tolerances. But if such provisos are not met (say due to poor machine manufacture, excessively worn parts, or the presence of dirt), the output will be created by a combination of causal and casual facts, and may be unsatisfactory.⁶ Most of Mittermaier’s discussion focuses on causal facts.⁷

3.3 *Confusing ex ante and ex post facts*

This major criticism is levelled at orthodox theorizing. Whatever the observed *ex post* outcomes might be, they are seen as identical to the outcomes delivered by the *ex ante* ‘facts’ of its theory. If theory concludes that well-organized free market systems generate universal optimization, then that outcome is what will happen in reality (with or without short adjustment times).⁸ The outcomes deduced from the theory’s *ex ante* facts are seen as replicated by the *ex post* facts of reality.

Two implications follow. First, explanation and prediction become identical. The same theory is deployed but in reverse directions: explanation is backward-looking and prediction forward-looking just as in ‘classical mechanics’. Here the argument is that good economic theorizing separates the two activities. Good explanations of the past are always available when theories have realistic axioms, but fully reliable predictions of the future are rarely, if ever, available from any economic theory. The second implication concerns determinism and indeterminism. Orthodoxy delivers deterministic equilibrium outcomes, not indeterministic ones. The former arise from idealized axioms (say perfect knowledge and abilities in the neo-classical case) chosen to deliver the best possible outcomes (universal optimization). By contrast, non-orthodox frameworks are capable of delivering non-optimal equilibrium outcomes.

4. Induction

How do we obtain knowledge of the *ex ante* facts or structural features? By observing reality and drawing inferences. Induction then becomes central to the new framework because it is the key means of gaining an understanding of the elements playing causal roles in determining outcomes – institutions and their properties, uncertainty in various forms, the scope and effectiveness of our capabilities in decision-making, and the mechanisms generating

outcomes and any variabilities in these outcomes. The common or repeated features of the *ex post* facts thus lead to the *ex ante* facts or structural features generating the observed outcomes.⁹ Logical reasoning based on these facts then delivers conceptual frameworks and hence the theories inhabiting these frameworks.

Induction offers no support whatsoever to the perfections informing the axioms of neo-classicism – agent omniscience (including preference orderings over vast numbers of possibilities, and uncertainty-absence), perfect calculating abilities, and perfectly competitive markets generating universal optimization. Observation of real humans and markets will never inductively generate propositions about the imaginary perfect beings, capacities and outcomes of idealism-based theorizing. The facts entering genuine inductions are the facts presented by reality, not imaginary facts or fictional reconstructions of actual facts. The inputs are based on observed past facts and the outputs are observable future facts. If future facts differ from past facts, revised inductive conclusions will emerge (given the absence of casual facts).

Induction has been criticized, from at least Hume onwards, as deductively unjustifiable. But from the 1950s at least, philosophers have advanced theories providing non-deductive justifications of induction. These deliver philosophical underpinnings for both rational beliefs based on existing data, *and* rational changes in rational belief when justified by additional data. Deduction using axioms assumed to be universally true eliminates doubt in conclusions, whereas deductions based on inductively derived axioms always involve the possibility of doubt for induction never eliminates doubt entirely.

5. Institutions

The dissertation begins and ends with this core element of all real economies. [Chapter 1](#) opens by claiming that his approach differs from that of early institutionalism by seeking a primarily analytical, rather than a primarily historical, approach. Whether one agrees or disagrees with his alternative approach and its accompanying definition of institutions, the key points are twofold: institutions play central roles in the new framework (as against orthodoxy which omits or sidelines them due to its foundations in individualism); and institutions are understood as *ex ante* facts playing analytical roles in economic theory. The [final chapter](#) returns to institutions as components of historical evolution.

6. Genetic understanding

This idea (also called narrative understanding) draws on the concept of ‘genetic explanation’ to provide accounts of how a ‘system has developed

into its current form from some earlier stage'.¹⁰ Mittermaier's reframing as 'genetic understanding' emphasizes its links to '*Verstehen*', or intuitive understandings of how events involving humans can occur as they do, for we, as current humans, can understand the situations facing past humans and the decisions they made. The idea explicitly involves history, causality and change whether relevant to large systems (economies), medium systems (institutions), and very small systems (inter-individual negotiations).¹¹

In Mittermaier's framework, temporality is explicitly present from the start, being inherent in the distinctions between *ex ante* and *ex post*, cause and effect, explanation and prediction, and possible revisions of *ex ante* facts. The economy, its institutions and its agents all move through time from past to present to future, with significant openness present at the *beginning* of analysis so that we understand how the present developed from the past and can influence the future. That must not be ignored by using abstract universal constructs eliminating or trivializing temporal change.

In economics the difference is between empirical constructs drawn from reality and non-empirical constructs drawn from pre-conceived abstractions in idealized realities. In the former, reality figures in the construction of its *explanans*, while in the latter reality only enters via particular interpretations of the *explanans* and *explananda*. Where the former is open and emerges from the evidence, the latter is closed and imposes itself on the evidence to ensure consistency with pre-given conclusions. Otherwise put, the difference is that between allowing the system *itself* to determine the possible outcomes of its multiple interdependent elements, versus insisting in advance that the system always reaches the same destination of universal agent optimization.

This difference is closely related to other key elements in Mittermaier's framework. One is the *ex ante/ex post* fact distinction. Genetic understanding provides explanations that keep these separate; *ex ante* facts exist before, and help explain, the *ex post* facts that occur in some future, *ceteris paribus*. *A priori* deductive explanations, however, equate them. The *ex ante* facts presumed to exist (in keeping with its axioms) become identical to the *ex post* facts that occur in reality. A second concerns induction. The *ex post* facts of the past contributed to the *ex ante* facts of the present, but the *ex post* facts arriving in future may differ from those of the past, so leading to revised inductive conclusions and hence revised *ex ante* facts. Genetic understanding allows difference between the two kinds of facts, whereas explanations based on universal propositions do not. Finally, there is the important issue of whether a theory embraces determinism (in the sense of always reaching the same unique outcome from the universal axiomatic constructs in an idealized world), or allows for non-determinism (as in beginning with empirically

based constructs drawn from the real world that allow for variability in outcomes across time and space).¹²

7. Logically valid conceptual argument

Once *ex ante* facts have been inductively determined, Mittermaier deploys conceptual deductive logic in his theorizing, not mathematical logic. The following are emphasized:

1. The understanding of meanings, as in ‘the prediction of a chance event’ is a ‘contradiction in terms’.
2. The importance of drawing conceptual distinctions in economics and philosophy, and avoiding conflation. This constant theme in his thought is illustrated by his observation that ‘logical consistency’ differs from ‘consistency over time’, for the former has a separate meaning in axiomatic constructs due to ‘the temporal order of experience not entering the picture’.
3. Obedience to the law of non-contradiction, and hence the avoidance of ‘irreconcilable basic premises’, at all times.

Overall, his conclusion is that two things are required in constructing the new conceptual framework: ‘a logical reconstruction of the way knowledge is built upon knowledge’, and ‘a criterion for what sort of knowledge we can begin with’. *Inter alia*, the first involves certain key differences between propositional and mathematical reasoning, while the second involves differences between realism and idealism.

7.1 *A methodology for scientific reasoning*

A basic question is where to start in economics when developing frameworks and theories. Two main alternatives exist.

1. Begin with ideas drawn from reality, form axioms consistent with reality and develop theories capable of explaining reality. The concrete *explanandum* and the abstract *explanans* concern the *same reality*.
2. Begin with ideas drawn from some imaginary reality (say involving perfections and universality), form axioms based on that reality, develop theories consistent with this construct, and only later deal with any problems that arise. The concrete *explanandum* and the abstract *explanans* now concern very *different* realities. The former is real and imperfect while the latter is imaginary and perfect, so that bridging the gap then poses significant theoretical problems.

Mittermaier chose the former. The *ex ante* facts on which scientific conceptual frameworks must be grounded are the facts generated by the observed reality, not by sets of imaginary perfections thought to inform some meta-reality inside or beyond the world we actually experience, and which we would observe if only we could strip away the (largely human) imperfections delivering the empirical reality we do experience.

Consider, for example, his discussion of consumption. Realism-based analysts talk about ‘things that everyone knows something about and can therefore criticize’. But orthodox preference field analysts only talk about ‘a catch-all which no-one has experienced’, and it is in ‘the nature of a catch-all that it can explain everything and nothing’. The former supplies a realism-based explanation that may be acceptable or unacceptable on given criteria. The latter supplies *neither* a realism-based explanation, *nor* a logically acceptable explanation, for it is consistent with both everything and nothing. One might add that since this property is what contradictions alone can do, the catch-all will contain at least one contradiction. Mittermaier’s softly worded criticism effectively says that neo-classical preference fields are inherently self-contradictory.

Another illustration concerns the current Walrasian conceptions of *all* market economies and Mittermaier’s conception of *current* market economies. In Walrasian economies, the structural features (axioms) posit that all agents are self-focused utility maximizers, possess perfect knowledge (of commodities, contingencies and personal preference orderings), have perfect calculating abilities, and then have all their decisions coordinated by a time-zero auction in which the entire future is embraced, no trading occurs until universal optimization has been achieved, and no further economic decision-making occurs after time-zero. Here the assumed *ex ante* features of the theory (universal optimization and hence no unemployed resources) are *guaranteed* to be the *ex post* features of reality (universal optimization and no unemployed resources).¹³

By contrast, the *ex ante* facts in Mittermaier’s framework pertain to reality. They currently concern a capitalist economy populated by agents who perform different roles, have imperfect abilities and knowledge, operate with expected values in an uncertain world, undertake transactions through historical time, make mistakes, often fail to meet goals, often operate in non-clearing markets, and inhabit a world in which outcomes can fall short of universal optimization. Here the *ex ante* facts allow a wide range of *ex post* facts. Equilibrium outcomes are not unique states or magnitudes, but involve a spectrum of possible states or magnitudes. Similarly, explanation and prediction are not identical. Good explanations of the *ex post* facts of the past are always possible, but providing good (reliable) predictions of the facts that will occur in the future is impossible because the mechanisms

creating outcomes can generate multiple possible outcomes, and hence indeterminacy as to which particular outcome will appear.

8. Extending the framework

Mittermaier's framework is open to further development in multiple directions of which only three are noted here. First, expansion via extension or addition. Uncertainty is an enduring human reality and hence a major *ex ante* fact that can take various forms (such as probabilistic and non-probabilistic, for example), and possesses links to induction, indeterminacy, history and genetic understanding. Adding macro-economics to the micro-economics that is Mittermaier's primary focus is also possible.

Second, syntheses with other non-orthodox frameworks. Realism gives his framework (with or without modification) strong interconnectivity with other heterodox schools of thought such as institutionalism, Keynes's mature economics, behavioural economics, ecological economics and feminist economics. Finally, post-1976 contributions in economics and philosophy may be deployed to update, revise and expand the approaches taken to the key components, a move consistent with the historical development of scientific work in research programmes.

9. Conclusion

This rich, thought-provoking work contains more of economic and philosophical interest than has been canvassed here. On any subject, Mittermaier made valuable and penetrating contributions, with few things more important than ways to improve the methodologies, theories and policies of economics. He opened by remarking that 'many voices of dissent have been raised against economics', and closed by contrasting the inadequate explanatory power of *imaginary ex ante* facts with the superior power of *realism-based ex ante* facts.

If, despite possible differences in our backgrounds, we all share the goal of significantly improving economics, we need openness to better conceptual theorizing of this world, not more purely mathematized analyses of imaginary worlds. We should be guided by the same peaks that guided Mittermaier, Mt Improvement, Mt Realism, Mt Logic and Mt Fearless. Despite inadequate institutional support early in his academic career, the legacy of this deeply thoughtful philosopher-economist may still promote the cause he pursued. If the social science of economics is to deliver relevant and valid *explanans* for its *explananda*, and avoid fictional accounts based on imaginary worlds, mathematics-devotion or ideology, major changes are necessary.

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Notes

- ¹ One might extend sympathy to the readers who did not understand it, but no further. Later, in 1987, he obtained a doctorate with a brilliant dissertation on the more specific topic of Adam Smith; see [Mittermaier \(2020\)](#).
- ² Both dissertations are seminal contributions seeking improved understandings of their subject matters. While the second is easier to read, the first has greater relevance to progress in economics.
- ³ Walras, Pareto, Menger and Marshall are key figures, for example.
- ⁴ He sometimes called the latter a ‘sceptic’ framework, but this is insufficiently descriptive. What is advanced is not merely an expression of doubt, but an alternative. Given his student status, and the likelihood of orthodox examiners, his terminology was probably the wiser course: legitimate well-argued scepticism had more chance of success than calls for major change even if well-conceived and argued.
- ⁵ As no one at the university kept a copy, the title of the submitted 1976 dissertation remains unclear. The present title is representative of its overall nature.
- ⁶ [Nagel \(1961: 560n8\)](#) uses a gun and bullets.
- ⁷ The distinction can also be related to *ceteris paribus* clauses. Note also that while casual facts are *ex ante* in time, they are not *ex ante* facts for they are accidental, not structural.
- ⁸ ‘Well-organized’ means no interference from forces defined as non-market forces.
- ⁹ Careful analyses of any differences between past and present inductive conclusions also assist in deciding whether these differences might be due to casual facts.
- ¹⁰ See [Nagel \(1961: 20, 25–6, 551–75\)](#).
- ¹¹ *Verstehen* also connects humans as participants in economies to humans as theorizers of economies, an important point in Mittermaier’s framework.
- ¹² From a scientific, realist and causal perspective, the proper handling of historical events and time are vital issues in economics.
- ¹³ Rational expectations versions of neo-classicism employ similar assumptions except for the treatment of coordination and time.

References

- Mittermaier, K. (2020) *The Hand behind the Invisible Hand*. Bristol: Bristol University Press.
- Nagel, E. (1961) *The Structure of Science*. London: Routledge and Kegan Paul.

