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**TRUST AS AN ECONOMIC VIRTUE:
A THEOLOGICAL CRITIQUE OF EXPERIMENTAL ECONOMICS**

NICOLAS JACQUES BAUMGARTNER

How do we explain the phenomenon of trust? Catholic theologians on the one hand, and economists on the other, will provide differing answers. The reason is that their assumptions about human behaviour are at odds: whilst theologians tend to assume a moral economy where individuals and societies are called to act on their free will to pursue the common good by trusting and being trustworthy, economists tend to assume that human beings are driven by a utility-maximising self-interested behaviour.

How trust is construed in turn directly shapes how economic experiments are built and influences their results; these then impact policy-making. Theologians with a different understanding of trust would be particularly naïve to accept the insights of those experiments; they must question how their conclusions were drawn, especially if political decisions on which they are based impact the lives of many.

This thesis explores two main claims: firstly, that experimental economics is highly problematic from a theological perspective and that a differentiated method is necessary to apprehend the full reality of trust within a moral economy. That is because differing anthropological and metaphysical assumptions underly the two disciplines. Secondly, that theologians ought to attend to the empirical world in order to inform their own economic ethics. That is because theology stands a better chance of being heard in a public context if it is able to depart from an abstract normativity and engage with empirical sciences.

Finally, this thesis shows how an intelligent dialogue between theology and economics can only take place if both disciplines engage with a shared epistemology to engage with the empirical world and develop a common approach with their respective functional specialisations. It does so building particularly on the critical realist thought of Bernard Lonergan SJ and Tony Lawson.

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A THEOLOGICAL CRITIQUE OF EXPERIMENTAL ECONOMICS**

NICOLAS JACQUES BAUMGARTNER

Submitted for the degree of Doctor of Philosophy

DEPARTMENT OF THEOLOGY AND RELIGION

DURHAM UNIVERSITY

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Declaration

Pages 26-46 rely on work previously submitted in 2014 for my Master's thesis at Durham University and under the supervision of Prof. John M.G. Barclay.

Statement of Copyright

The copyright of this thesis rests with the author. No quotation from it should be published without the author's prior written consent and information derived from it should be acknowledged.

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It was Mark's input as an economist and his introduction to both Lonergan and Lawson that made this thesis possible; his dedication to this project stretched into the very last months of the illness that sadly took him away in December 2019. This thesis is dedicated to him, in the hope that it will have further advanced our shared goal of enabling an intelligent dialogue – all too often lacking – between economics and theology.

Dedication

To

Dr Mark Hayes (†)

It is in the measure that special methods acknowledge their common core in transcendental method, that norms common to all the sciences will be acknowledged, that a secure basis will be attained for tackling interdisciplinary problems, and that the sciences will be mobilized within a higher unity of vocabulary, thought and orientation, in which they will be able to make their quite significant contribution to the solution of fundamental problems.

- Bernard Lonergan SJ, *Method in Theology*

Introduction

The Barman's Trust

A Catholic theologian and an economist walk into a bar. As they order their drinks, the barman asks what brought them to this small town, having quickly realised they were not from here. The two respond that they are attending an academic conference nearby. When the time comes to pay, both realise that neither had brought any cash or card to settle the bill. The barman simply tells them to come back later, or even the day after, to pay what they owe.

As they walk back to their hotel, the two academics start wondering why the barman decided to trust them, fully knowing that they could walk out and never come anywhere near this small town ever again. The two offer each their own hypothesis.

The economist says that it seems, at least at first, to be an irrational decision because the theologian and the economist have no incentive to pay up since they could simply get away with not paying: neither live in this town and would ever have to face the consequences, including reputational ones. However, there is perhaps a solid reason why the barman decided to trust. It may be that by acting kindly towards others, the barman maximises his utility: the barman's kindness may help him feel good about himself, or maintain his reputation as a good person, or as a welcoming proprietor. For the economist, then, the barman is irrational in trusting them – unless he does it for a reason that is ultimately self-interested.

The theologian, on the other hand, is unconvinced by this explanation. He certainly acknowledges that people can be self-interested at times, but also generous and selfless at other times; he reckons that the barman is a kind person who believes in the goodness of others, even if that means, at times, that people will take advantage of him. Guided by an internal moral compass, the barman made a decision to show kindness towards his clients in

temporary misfortune. In fact, the theologian says, “we should probably be inspired by his behaviour.”

As the discussion progresses, it seems that the theologian and the economist cannot even begin to agree on what has been going on. The economist insists that there is no such thing as good or bad, only preferences informed by cultural and social norms. The barman’s desire to do good can be captured in its entirety through the concept of utility maximisation; that is, the barman maximised his utility by making the choice that would bring him the greatest sense of doing good, a behaviour encouraged by his particular society. The theologian is sceptical: surely, that is a very reductionist perspective of how humans come to make certain decisions – people are not entirely rational, even if we have our habits and these tend to stick. The theologian believes that we have freedom of choice, even if that freedom is contingent; the barman not only had a disposition to trust, but was able to freely act on it. It may not have been rational in the way the economist perceived it, but it still made sense ethically despite the moral hazard of trusting strangers. Perhaps they should just go back to the bar and ask the barman why he decided to trust them! But the economist objects: the barman may not understand his own motives; he may be blind to the fact that he is ultimately self-interested. Now the theologian objects: surely, the barman can at least in part offer an explanation, even if he does not fully understand what motivated his choice.

For the economist, however, an objective assessment of the barman’s motivation should ideally be made by a third party and on the basis of a series of rigorous, controlled observations: verifying or falsifying the theory within a hypothetico-deductive framework; anything else would be unscientific because it would be too subjective or not grounded in sufficient data.

The economist seems certain of his explanation, but the theologian would like to challenge him. However, this would be difficult because the economist is very strongly attached to what he perceives to be a scientific approach. The only alternative for the theologian, it seems, is to successfully question the premises the economist used to come to his conclusions. But he acknowledges that only sufficient empirical evidence could challenge the economist’s theory,

and that any theological account that is not grounded in theory verified through observations will be rejected by the economist as unscientific, wishy-washy stuff.

In an attempt to interest the economist in further debate, the theologian offers to pay for the drinks if the economist is able to propose a better explanation than him of the barman's behaviour, but the economist will pick up the bill if the theologian can prove that explanation to be erroneous. Both agree that there is a need for any explanation to refer to empirical facts and that the barman's explanation should also play a role in determining the veracity of a theory. Tomorrow morning, after having each offered a full explanation over breakfast, they would go back to the bar and ask the barman for the rationale behind his decision to trust.

The Theologian's Challenge

What is the theologian to do? Shaken by this late-night impromptu intervention and with only a short night to prepare his argument, the theologian now decides to focus on his initial programme: firstly, he needs to grasp the philosophy of science behind economics as well as economics itself. Without a deep understanding of both the discipline and its philosophical underpinnings, he risks misinterpreting how economists understand it and what underlies their assumptions. Secondly, he needs to be able to critique economics by highlighting its limitations and suggest alternative assumptions that are equally, if not more, reasonable; in doing so, he must offer a comprehensive system with its own internal logic. Failing to do so would make the alternative explanation vulnerable to a critique by the economist on the grounds that it is not internally consistent, something that mainstream economic theory, for all its ills, offers. Thirdly, in order to fully convince the economist, the theologian needs to disprove mainstream economic theory and prove his own theory through empirical evidence. If the theologian can only offer a theory that is self-consistent but cannot, at least in part, be proved to have a stronger explanatory power than economic theory, it is unlikely to convince the economist; unless the economist believes in the possibility of competing epistemologies with similar explanatory powers, which is highly unlikely, he is most likely to stick to existing economic theory.

This challenge, of course, would require more than several hours work into the night, and it is likely that, in this story, the theologian would still end up having to pay the bill. However, the analogy remains: if theologians are to challenge mainstream economic theory on its own terms, their approach needs to meet a number of criteria: firstly, it needs to engage with economic theory and its underlying philosophy seriously. Secondly, it needs to offer a sufficiently self-consistent alternative epistemology. Thirdly, it needs to show that the alternative epistemology has a greater explanatory power than existing economic theory by relating it to empirical evidence. However, this endeavour must be deeply self-conscious, acknowledging the risk of truncating theology, of limiting it to the natural sphere for the sole purpose of making the discipline less controversial in contemporary secular society.

In order to mitigate this particular risk, this thesis focuses on critiquing the existing assumptions of economic theory related to trust, and on offering counter-explanations that can, at least in part, be recognised through empirical observation. Its starting point is the idealised early Church, as recounted by Luke-Acts: not because it can be observed empirically but because it describes the possibility of a community pursuing the economic good as a result of their trust in God. At the heart of this thesis is the conviction that theologians have something important to contribute in apprehending economic behaviour, inspired both by Scripture and the Church, and that they can offer ethical as well as metaphysical insights: insights that are not currently part of economic theory and that may be as plausible, or more plausible, than the current (sometimes inadequate) assumptions which economists make.

But such an exercise requires the theologian truly to want to engage deeply with economics, with its empirical application, and with the philosophy of science behind it. This thesis is in great part the product of much frustration with theologians who have either proved unable to fully engage with the subject matter or who have chosen an approach that could not be understood, let alone respected, by economists. It is a substantiated call to engage more intelligently with economics and in particular its empirical form without relinquishing the belief of a benevolent God at work in the world.

As will become clear throughout this thesis, the exercise of reclaiming economics as a moral science requires not only a strong belief in the ability of theology to engage constructively

with other social sciences as well as critiquing them, but also a certain appreciation of what the social sciences have achieved and the current limits of theology.¹ Similarly, theologians have much to learn from an empirical approach to ethics, not the least to show that their discipline is more than a series of lofty statements detached from reality. In order to achieve this, this thesis will explore in depth the necessity to question the assumptions made in other disciplines and will argue for adopting differentiated methodologies – methodologies that describe the empirical world more adequately and comprehensively. As will become clear in the early chapters, theologians cannot take the contributions of other social sciences at face value, without understanding the assumptions on which these are made, and in particular how these assumptions relate to a theological understanding of reality. The metaphysical and anthropological assumptions of other social sciences can easily be at odds with those of theology, and these need to be addressed and corrected before their contributions can inform theological judgments.

The Contribution of this Thesis

This thesis specifically discusses the metaphysical and anthropological assumptions of experimental economics, and why these are at odd with theology, before offering a differentiated methodology more in line with the premises of theology. Experimental economics was first developed in the 1990s to put mainstream economic theories to the test with the help of empirical methods. It has done so through simple experiments historically mainly in a controlled classroom or laboratory setting, although differentiated approaches have been developed since then. It then aggregates the results to refute and/or posit a (counter-)hypothesis. By doing so, it disproved a number of mainstream premises and, in particular, it showed that individuals are very often not rational when it comes to economic decision-making. It has since then developed its own body of hypotheses about individual behaviour and rationality in parallel to behavioural economics, which stems from insights in psychology rather than experiments; and experimental psychology, which is more focused on

¹ As pointed out by Mark Hayes, it was Alfred Marshall in his *Principle of Economics* (1890) who called for economic modelling that began the process of departure from political economics and the reliance on economics and self-perceived positivism. Political economy at Cambridge University, where Marshall taught, became economics, thus separated from its moral dimension.

individual decision-making than aggregation. The discipline has gained recognition within the scientific community and in the public sphere with Bank of Sweden Nobel Memorial Prizes given to some of its leading researchers in 2002, 2017 and 2019 for their contribution to economics.²

Experimental economics is highly relevant to contemporary economic theory and is increasingly taught to complement traditional economic courses at universities. Its findings are also used for policy-making: for example, although the idea of “nudges” originally came from behavioural economics, empirical economics can give it an empirical grounding and test its potential as well as limits.³ However, there is, to date, no existing conversation between theology and experimental economics, with the exception perhaps of Christian economists seeking to apply experimental methods – and, as will see, still with all the underlying methodological and metaphysical issues these methods bring with them.⁴ This thesis builds a basis on which moral theologians can learn from the empirical work of economists whilst avoiding obvious and less obvious pitfalls.

In this thesis, I invite key thinkers to the table, in particular Bernard Lonergan and Tony Lawson, who can enable both an interdisciplinary critique and an interdisciplinary method. Friends and foes of these key thinkers are listened to, but only to the extent that they help refine the argument made in favour of an interdisciplinary engagement with the empirical world. Having built up a workable methodological groundwork over the first four chapters, I review and critique the existing experimental economic work on trust in chapter five. In other words, more emphasis has been put on developing a workable theoretical framework than on a review of the fairly sparse (and frequently uncritical) literature at the intersection of theology and economics. It is only in the fifth chapter that the full applied critique of experimental economics takes place, having built the argument over the previous four chapters.

2 See chapter four.

3 As we will see in chapter five, experimental economics increasingly shares many insights with experimental psychology, now enabling a dialogue between two disciplines that historically functioned separately.

4 See for instance Jonathan H. W. Tan and Claudia Vogel, "Religion and Trust: An experimental study," *Journal of Economic Psychology* 29, no. 6 (2008), <https://doi.org/10.1016/j.joep.2008.03.002>. This particular article will be reviewed in the seventh chapter.

Chapter Contents

The first chapter explores the category of trust, and in particular how trust is construed differently in theology and in experimental economics. The chapter begins with a brief review of the main existing theories of trust at the individual level. A theological definition of trust in an economic context will then be derived from Luke-Acts, building on my previous research.⁵ An exhaustive account of trust in the New Testament, let alone in the Scriptures as a whole, would be near to impossible and would make any empirical endeavour near to impossible. Luke, however, provides a particularly helpful definition of trust in relation to economic activity. The aim of focusing the exercise on Luke-Acts is to provide a specific example of a theological definition to highlight the stark differences in understanding the phenomenon of trust between theology and economics. A Christian category of trust, before any methodological considerations, already stands in stark contrast to secular definitions of the phenomenon, and as a result can have, for instance, substantial implications on how economic policy is developed. The Trust Game experiment developed by Berg, Dickhaut and McCabe will then be reviewed and a definition of trust derived from it; the rationale here is that their paper was seminal in defining trust within the parameters of experimental economics. The chapter will then delineate how a Lukan account differs from that of experimental economics. The former, which leads to generosity, can be construed as a virtue that is enabled by faith (or trust) in God's benevolence and providence. The latter, on the other hand, is construed as a strategic calculation determined in great part by the perceived trustworthiness of a counterpart, and causally determined by other variables such as social history between the parties.

⁵ The research addressed the context of payday lending. It concluded with the imperative for the Church of England to encourage trust in God as a catalyst of charity, rather than charity as a moral imperative or as a means for reaping rewards in heaven. I argued that the Church of England should further embody this principle by putting (some of) its own money into funds that would catalyse the creation of lending institutions for those who would normally turn to payday lenders, offering them lower interest rates and taking them on as borrowers at higher risk. (Also, that the Church should encourage its congregation to do the same.) The rationale, as we will see below, is that trust in God, rather than money, is what should guide our economic decision making rather than a neoclassical understanding of rational decision-making based on risk-return considerations. See Nicolas J. Baumgartner, *Lukan Trust and its Applicability to the Church of England's Drive Against Payday Lenders*, 2014, MA Thesis, Department Theology and Religion, Durham University.

The second chapter will draw on Bernard Lonergan's *Insight* to explain why theology and economics construe trust differently. These differences will explain why the construct of trust in experimental economics is inherently problematic from a theological perspective. The chapter will also review how particular philosophical currents since the Enlightenment (Hobbes, Hume, Lock and Kant) shaped our understanding of trust; and will point out the respective shortcomings of these theories. This short overview will exemplify how overreliance on a particular epistemology limits our perception and understanding of reality. The chapter will conclude by offering an alternate definition of trust based on the exegesis of Luke-Acts performed in the first chapter and incorporating key ideas from Lonergan's *Insight*.

The third chapter will explore why theologians should engage with empirical economics. In particular, Lonergan's account of the Incarnation as a metaphysical event will provide the starting point for a dialectical methodology in theological ethics that relates to empirical evidence; the chapter will also distinguish the approach from a naturalistic account. The thought of John Milbank will then be co-opted and critiqued, showing the extent to which Radical Orthodoxy is both a friend and a foe in a Lonerganian exercise. The importance of grace and its relationship to nature will then be explored in order to clarify Lonergan's position and how the relationship between grace and nature will, in turn, affect and limit any empirical approach to observing trust. The chapter will then draw on Lonergan's *Method in Theology* and define the role of the theologian when engaging with economics. The chapter will conclude with an overview of Lonergan's macroeconomic work, noting that whilst he himself did not engage with an empirical approach to economics, he nevertheless encouraged both theologians and economists to engage with the moral dimension of economic exchanges.

The fourth chapter will conduct an in-depth study of experimental economics, its limitations, and the necessary premises for a differentiated account. It will begin by exploring the metaphysical and anthropological premises of experimental economics. The chapter will then introduce critical realism through Tony Lawson's critique of economics, highlighting Lawson's differences with Lonergan's thought. This chapter will, firstly, enable the critique of existing experimental literature on trust to be conducted in the fifth chapter and, secondly, provide a

basis on which to build a differentiated approach to apprehending trust that will be further explored in chapter six and applied in chapter seven.

The fifth chapter will review a substantial sample of the experimental economics literature on trust and expose how its metaphysical and anthropological assumptions skew the way that trust is construed in the discipline. In particular, it will demonstrate how a deterministic framework and the reduction of economic behaviour to preference ordering does not yield sufficient explanatory power. But more than a pure critique of the literature, the aim of the chapter will also be to draw out some observations on how trust functions: whilst experiments have their limitations, they nevertheless produce useful insights into trust. The chapter will conclude by highlighting the limits of the discipline's premises and will call for a differentiated approach to observing trust through empirical data.

The sixth chapter will offer the basis for a differentiated methodology: it will first introduce Lonergan's approach to statistics, contrasting it not only to classical methods, but also to the econometric methods used in experimental economics. It will also show how Lonergan's approach can enable theologians and economists alike to observe the emergence of the ethical whilst accounting for freedom of choice. Lonergan's particular contribution – the turn to the subject, world process, and the emergence of values – will enhance the critical realist critique explored in the fourth chapter. The chapter will then reiterate the necessity to understand trust as an economic virtue, concluding with specific theoretical methodological considerations that will form the basis for the final chapter.

The seventh chapter will develop a differentiated methodology to observe trust as an economic virtue. The aim of the final chapter will be to offer a methodology for theologians to engage intelligently with empirical data and, by extension, with other social sciences. The chapter will then conclude with specific recommendations for the theologian to conduct research on trust that is empirically grounded and in conversation with other disciplines, with the aim to gain further theological insights into (Lukan) trust.

The conclusion will return to the story of our theologian and economist, highlighting the challenge of developing a common empirically derived approach to apprehending trust

(especially trust's moral dimension). The particular challenge addressed is to offer a method perceived as both sufficiently scientific, and theologically grounded.

Chapter 1 - Theological and Experimental Categories of Trust

Introduction

Trust, I will argue in this thesis, is an economic virtue. But whilst trust extends well beyond economic life, experimental economics focuses on economic exchanges. This chapter will first discuss the respective roles of trust and trustworthiness, starting from economic exchanges before broadening to a more general account. I will then argue why a moral account is necessary from a theological perspective. The chapter will then explore more general theories of trust before presenting a Biblical account (and more specifically a Lukan one). I will focus mainly on the economic dimension of trust in Luke before turning to how trust is constructed in experimental economics (specifically through the Trust Game) to sharpen the comparison. The differences between the Lukan account of trust and that in the Trust Game will then serve as the basis for the next chapter which will look more closely at the reasons behind these differences.

The Moral Dimension of Trust

Trust is essential to economic life: lenders, investors, even governments have to trust other actors for mutually beneficial transactions to succeed. Individuals find themselves vulnerable to other parties and choose to act in such a way under uncertainty, running the risk that their counterparts will take advantage of their trust. Equally, trusting a counterpart is not exactly the same as taking part in a lottery, even if there is a similar element of risk and the odds of winning or losing money may be very similar in both situations. The risk taken in a lottery can be quantified through a simple probability calculation if the odds are known, whereas the former situation is much harder to predict. And even if past behaviour gives some indication of future actions, the intentions of the trustee can still not be entirely predicted; the probability of particular outcomes can be quantified based on past observations but any prediction will be an assumption – a leap of faith of sorts.

Faced with the risk of betrayal, a trustor may choose to acquire additional information about the trustee before entrusting him or her with an object of trust, that is evaluating his or her trustworthiness. A trustor may further choose to establish a relationship with the trustee, trusting his or her counterpart with smaller objects of trust before taking a larger leap of trust. At any time, the trustor knows that in spite of all information gathered about the counterpart's trustworthiness, including experience interacting with him or her, the trustee may still choose to betray his or her trust. The trustee ultimately has some freedom in the choice he or she makes. It is therefore very difficult, if not ultimately impossible, to predict the exact behaviour of a counterpart in an economic transaction based on trust.

The trustor can never be certain of the outcome; lotteries never willingly betray, but people can and sometimes very much do. Betrayal from a counterpart begets a different response than the disappointment of losing the lottery: it is reasonable to change one's attitude towards that particular individual after the event took place. In the case of a lottery, it would be reasonable to not expect to win even before it takes place; the probability of winning was clear from the beginning, unlike the outcome of trusting someone else. Faced with betrayal, the change in attitude towards the counterpart makes sense because he or she could always have chosen to honour the trust extended. Furthermore, the decision to honour or betray one's trust is an inherently moral choice, i.e. one where a decision is consciously made to adhere or not to specific values or beliefs, whilst the outcome of a lottery is not.

The significance of trust and trustworthiness in economic life is clear but its moral dimension demands closer inspection, in particular from a theological perspective. If we could trust others without giving it a thought, the world would without a doubt be a better place (at least, easier to navigate). As such, trust is a social good, and such a social good depends on the free (if contingent) choices of individuals. Trust, therefore, depends on individual morality, even if individual choices are always made within a particular social habitus. In other words, in a world where trustworthiness is not universal, trust should be understood within a specifically moral framework.

The decision to trust, it seems at first, depends on the counterpart's perceived trustworthiness. However, trust in itself can be an individual good as much as a social one:

the trustor may choose to extend trust in the absence of certainty about the counterpart's trustworthiness – even, in some cases, regardless of such certainty. Trust is also a good in itself because it can elicit trustworthiness: as we will see in the experimental literature, greater acts of trust may invite others to respond more positively by honouring that trust. Trust precedes trustworthiness: it would be difficult to imagine how else relationships come into existence if parties did not trust the other first and make themselves vulnerable. In other words, trustworthiness would make no sense in a world without trust.

Once we acknowledge that the decision to trust is not solely based on the trustworthiness of the counterpart, the question remains why people choose to trust if they cannot know the odds of their counterpart honouring or betraying their trust. And as with trustworthiness, trust can be construed as having an ethical dimension not only because it can lead to good outcomes but also because it can equally lead to morally undesirable outcomes: trust between mafiosi epitomises this particularly well. In other words, strengthening mutual trust in economic relations can provide benefits such as cost reduction that ultimately benefit all parties, but trust between criminals is not conducive to the general welfare of society.⁶ But before trust can be contemplated as a social good, it requires closer examination at the individual level. The act of trusting, as an individual choice rather than a function of a social habitus, will remain the focus of this thesis. This is not to assume that individuals act in a vacuum, but rather to insist that individuals can be virtuous regardless of their surroundings. It may simply be a rational act to trust others in a society where trustworthiness is prevalent but it becomes more likely for trusting others to be a virtue in the absence of trustworthiness. In particular, in the face of uncertainty, trust as a theological good is what can lead individuals to charity and altruism, a more trusting and trustworthy society. This particular argument will become clearer as both the meaning of trust in Luke-Acts is explored and as the experimental literature is reviewed.

Theology can provide insights into what is real in a way that secular (economic) sciences cannot. But rather than positioning a theological contribution as a form of social psychology,

⁶ In credit relationships the cost of acquiring information about past behaviour (“credit scores”) or the estimated risk of default can be high in proportion to the loan sum and this often passed onto customers through higher interest rates, in particular in the case of payday loans and credit card debt.

in effect offering an alternative explanation for the behaviour of individuals (say, because these individuals are embedded in a religious habitus) this thesis elevates theology to a level where it can critique the methodology and implicit metaphysical claims of experimental economics. Such an approach, as we will see, is – at first – similar to John Milbank’s. But it also quickly departs from Radical Orthodoxy by making an additional claim: theology can not only critique secular social sciences but can also remediate them, at least to some extent, by suggesting methodological approaches that are more in line with its central claims, and in particular its commitment to the Incarnation. This is why and how Bernard Lonergan’s body of work will quickly become the backbone of this thesis.

It will become clear in the next chapter that the epistemological difference explored in Chapter One is the tip of an iceberg and that the more problematic issues at work are of the metaphysical type. If so, the theologian can no longer sit back, in his or her own bubble, accepting the inferences on economic behaviour from the social scientific theories du jour. As I have highlighted elsewhere, the methodology and metaphysical assumptions of the social sciences have a real impact on people’s lives; they have an inherent ethical dimension:

If trust is to be fostered within society, economists and theologians will inevitably suggest different policies: the former would advise an incentive system or perhaps nudges to elicit higher trust levels, whilst the theologian is more likely to educate individuals as to why trust is a good and encourage them to act on it.

At the root of this difference is the modelling of decision-making: much of economic theory is deterministic because of the necessity to capture human behaviour through mathematical models, whereas the theologian is much more able to [take into account] freedom of will. Reality, of course, is much more likely to be somewhere in the middle, not least because our decisions are contingent on learnt patterns. But policy-makers need to know the limits of the economic studies they use to make decisions, and trust is a prime example of that....

If we are to build a thriving liberal society, then, it may be necessary to drop the cynical belief core to economic theory that people inherently want to cheat the system and are only trustworthy when incentivised. Similarly, a forced redistribution of wealth to create a fairer society may not be necessary or even wise. Instead, our governments

may be much better advised to elicit a fairer society by starting to show more trust in the people they serve.⁷

Defining trust is a crucial first step. As will become clear throughout this thesis, the definition of trust is ultimately determined by the limits and possibilities of each discipline's language. A relativistic Wittgensteinian analysis would highlight how different definitions apprehend the notion of trust within an intrinsically logical language-game, and would conclude that there cannot ultimately be any categorical equivalence between the differing accounts of trust. This would echo the incommensurability argument developed by Thomas Kuhn and Paul Feyerabend in the philosophy of science of the early 1960s.⁸

However, this thesis will reject categorical relativity by adhering to a critical realist framework: what is primordial is not the intrinsic logic of language but the accuracy of its description. This is because truth is deemed embodied, and language is in turn measured by its truthfulness, namely the extent to which it adequately represents that embodiment. It will become clear throughout this thesis why a Lonerganian approach would be sympathetic to a correspondence theory of truth rather than one of coherence: his cognitive theory demands that we apprehend objects as real through a dialectical method that would constantly question and reformulate our epistemological constructs; this also explains his inclination to empirical methods.

As a result, the approach demands interdisciplinarity: because disciplines are invited to study the same objects, these disciplines are not necessarily defined by their language and methodology anymore and need not be so clearly differentiated. The rationale is that emergence becomes a necessity of a critical realist approach if the guiding object is the ontological rather than the epistemological. As will be discussed in more depth in the last chapters, a theological approach to observing trust empirically will demand both a single category and the possibility of emergence; the dialectic between object and category then

7 Nicolas J. Baumgartner, "What Economists Can Learn from Religion about Trust," *Future of Economic Progress, World Economic Forum*, 21/12/2019, 2018, <https://www.weforum.org/agenda/2018/04/trust-and-economics-what-the-early-church-can-teach-us-about-a-fairer-society/>.

8 See Thomas Kuhn, *The Structure of Scientific Revolutions* (Chicago: University of Chicago Press, 1962); Paul Feyerabend, "Explanation, Reduction and Empiricism," in *Scientific Explanation, Space, and Time*, ed. H. Feigl and G. Maxwell (Minneapolis: University of Minneapolis Press, 1962).

becomes interdisciplinary and is subject to further revision when new empirical evidence emerges.

Defining trust precisely is difficult, with most of the philosophical work focused on conceptual analysis and, more often than not, as if there was one such phenomenon as trust.⁹ This highlights crucial aspects about research on trust: firstly, trust is arguably an umbrella term for different types of phenomena. This thesis specifically focuses on how trust in God affects economic behaviour.¹⁰ Secondly, the difficulty to apprehend trust means that several methodological approaches are possible. This thesis argues that differing accounts are symptomatic of epistemological differences.

I propose that the reality trust is not primarily in its definition but rather when it is embodied: it takes place in front of us, actualised through the actions of individuals. Defining trust nevertheless requires a more transcendental starting point. This thesis answers the question of how to come to a closer understanding of trust by proposing a dialectic approach between a theological category derived from Scriptures and an inductive methodology that allows for a moral dimension, viz grace, freedom of choice and the irrationality of sin. Finally, this thesis focuses on trust at the individual level, acknowledging its broader implication on the economy and society and as such its status as a social good.¹¹

9 Thomas W. Simpson, "What Is Trust?," *Pacific Philosophical Quarterly* 93, no. 4 (2012), <https://doi.org/10.1111/j.1468-0114.2012.01438.x>. Simpson observes the lack of much literature on trust although it is seen as primordial in inter-personal relations. He himself argues in favour of a genealogical approach by looking to answer the question "What human needs does the concept of trust answer to?" However, such a question will tend to negate the moral dimension of trust.

10 A similar point is made by John M. G. Barclay in his study of the gift in Paul. Surveying socio-scientific definitions of gift, he not only highlights how contemporary categories are at anachronistic odds with Biblical ones but also that there is no one single definition of the gift in anthropology. John M. G. Barclay, *Paul and the Gift* (Grand Rapids, MI: William B. Eerdmans Publishing Company, 2015), 63.

11 Francis Fukuyama's contribution on trust as social good is noted here mainly as having brought attention to its importance to the fabric of economic life. However, two broad critiques can be made about his work that substantially limit the relevance and strength of his argument to this thesis: firstly, it is a profoundly ideological and arguably lacunary defense of free-market and corporatist economic theory, which is at odds with Lonergan's economic thought. Secondly, it fails to provide a definition of trust at the individual and cognitional level, which is the focus of this thesis: "Trust is the expectation that arises within a community of regular, honest, and cooperative behavior, based on commonly shared norms, on the part of other members of that community" Francis Fukuyama, *Trust: The Social Virtues and the Creation of Prosperity* (London: Hamish Hamilton, 1995), 26.

From a critical realist perspective, trust is ontological and therefore necessarily something that requires a variety of epistemological approaches to be described adequately. But a working definition of trust remains necessary before any empirical work can be conducted: it is difficult to observe trust without knowing what elements constitute it.

I will first explore how contemporary theories of trust differ on the essence and the functioning of trust. By exploring a number of those, it will be easier to delineate Lukan trust, and in particular the category of *pistis* (πίστις), as an example of how we can come to a theological account of trust through exegesis. I will then compare this with how experimental economics approaches the question of defining trust, which is inherently tied to the discipline's methodology and underlying empiricism. The next chapter will then, in turn, explore the reasons behind these differences and offer a working definition of trust that takes into account theological insights while remaining open to contributions from empirical research.

Competing Accounts of Trust

The following section will explore some of the main competing philosophical accounts of trust and draw the main distinctions between them. The focus of this section is not specifically on trust in economic relationship but rather a more general approach to better situate the mechanics of trust both as proposed by Luke and as implicit in experimental economics (specifically in the Trust Game).

The specific theories of trust explored below are: (1) trust as understood from the perspective of rational choice theory, and specifically as defended by Russel Hardin. This is the closest account to how (experimental) economics understands trust. It will provide the basis for our later discussion of trust in experimental economics; (2) Annette Baier's implicit criticism of rational choice theory, her alternative account, and why she believes that trust has a moral dimension. As this thesis will argue that trust must be understood within a moral framework, Baier will provide additional philosophical grounding about why that should be the case; (3) Karen Jones and her defence of trust as an affect. Her argument will provide the

philosophical basis for insights gained by experimental psychology into the role of emotions in trust relationships; (4) Richard Holton and the differentiation between trust and belief, which will help sharpen the later discussion on *pistis* (in particular, when translated as “faith”) as a trust in God rather than the belief in a set of propositions.

Rational Choice Theory and Hardinian Trust

Rational choice theory remains central to contemporary economic thought in spite of theoretical criticism and empirical evidence (much of it from behavioural and experimental economics) that has cast doubt on its accuracy and credibility.¹² Rational choice theory functions around a number of axioms: (a) self-interest and/or consistency, (b) utility maximisation, and by extension (c) natural selection.¹³ It asserts that human beings are rational and therefore make decisions out of self-interest or out of consistency towards achieving a certain preferred goal. A particularly blunt example of how trust is understood from a utility-maximising perspective is James Coleman’s: “the elements confronting the potential trustor are nothing more or less than the considerations a rational actor applies in deciding whether to place a bet.”¹⁴

In contrast, Russel Hardin’s position is more subtle: Hardin posits that A (trustor) trusts B (trustee) with C (object of trust) when B can encapsulate A’s interest: A trusts B because B has an interest in fulfilling A’s trust.¹⁵ More specifically, (1) Hardinian trust is a function of the other party’s incentive either to cheat or honour their contract, and therefore they can encapsulate my interest or not; (2) it is iterative, i.e. it requires reassessing the other’s interest repeatedly (an individual may have been trustworthy in the past, but the circumstances might have changed and it is therefore necessary to continually review the other’s trustworthiness); (3) it is rational and cognitive, and always based on available information. In short, for

12 For a detailed discussion of the theoretical limits of rational behaviour theory, see *Amartya Sen, "Rational Behaviour," in The New Palgrave Dictionary of Economics*, ed. Steven N. Durlauf and Lawrence E. Blume (2nd, Houndmills / New York: Palgrave Macmillan, 2008).

13 Sen, "Rational Behaviour."

14 James S. Coleman, *Foundations of Social Theory* (Cambridge, MA: Belknap Press, 1990), 99.

15 Russel Hardin, *Trust & Trustworthiness*, ed. Russel Hardin and Margaret Levi Karen S. Cook, vol. IV, The Russel Sage Foundation Series on Trust, (New York: Russel Sage Foundation, 2002).

Hardin's rational choice trust theory, trust is a decision made in view of perceived trustworthiness.

Thomas Simpson adds a wrinkle to this understanding of trust by citing the case of a parent and child:

A father may give his daughter some money and a list of shopping to get from the local store, despite her known predilection for cola bottles. He may do so as a form of moral training, despite having no fixed belief that she will be trustworthy, or even despite believing that she will succumb to the temptation. There is surely a permissible sense in which he trusts her.¹⁶

But Hardin subsumes even the parent-child analogy under the terms of (an immature) rational choice. He cites as an example the faith that Abraham had in God.¹⁷ Such trust is "a blanket that whatever that god causes to happen must be right or for the best."¹⁸ It can be likened in his view to that of an infant because it is trust without sufficient grounds; however, an infant grows out of such a trust once it gains capacity for reason, leaving such faith solely to the realm of religion. According to Hardin, Abraham did not make a positive choice to trust God in the Binding of Isaac (Genesis 22) because his trust is akin to that of an infant. Instead, for Hardin, the fully formed trust of an adult must be based on a rational decision based on available information about the other party's trustworthiness; faith in a god therefore cannot be a form of trust and is different from trust in individuals. But Hardin misses a crucial dimension of trust, as developed by Annette Baier: good will is present in, and ultimately facilitates and justifies, most forms of trust. Additionally, the infant's trust is rational if they have been consistently loved: they never had reason not to trust; trusting would only become irrational if they carried on doing so although they had reasons to stop trusting their carer(s).

16 Simpson, "What Is Trust?," 553.

17 Hardin, *Trust & Trustworthiness*, IV, 69-73.

18 Hardin, *Trust & Trustworthiness*, IV, 70. The relatively naïve presentation of how believers see God highlights how his construal misses central tenets of Christianity: the freedom bestowed to humanity as well as God's benevolence.

Annette Baier and Good Will

Contrary to Hardin, Annette Baier suggests that trust relationships all possess a moral fabric. Good will is the core to trust relationships between human beings (let alone one between an individual and God): “when I trust another, I depend on her good will toward me.”¹⁹ I trust my business partner to show good will in harder economic times and if I am late in my payments; but I expect my bank to charge me as soon as I miss one payment, because I only rely on them to follow the contract rules. The difference between trust and reliance is that trust incorporates benevolence. This differentiation permits an analysis of relationships that are asymmetrical in both power and information. As Baier explains: “we come to realize what trust involves retrospectively and posthumously, once our vulnerability is brought home to us by actual wounds.”²⁰ But against Baier, Onora O’Neill argues that a doctor may be trusted to exercise proper professional judgment, which is not the same as good will; rather it is a job requirement.²¹ Similarly, Richard Holton argues that “one member of an estranged couple between whom there is precious little good will can still trust the other to look after the children.”²² Acknowledging that there may be instances, as with O’Neill, where we come to trust a profession, both instances are examples of where the trusted parties encapsulate my interests: Hardin would argue that the doctor has little incentive to be a bad one, for reputational reasons that would affect his future work, and the estranged couple share the same interest in bringing up healthy children. Rather, what Baier points to is more general: trusting behaviour can and does exist even when we cannot be certain that the other has an interest in showing good will. In O’Neill’s and Holton’s examples, we are more likely encountering reliance than trust.

Baier produces a number of important observations: (a) that trust cannot be dissociated from notions of morality; (b) that good will is necessary to maintain trust in situations of information and power asymmetry; the weaker partner can otherwise easily be exploited; and (c) that trust relationships are not iterative (i.e. I do not constantly reassess my

19 Annette Baier, "Trust and Antitrust," *Ethics* 96, no. 2 (Jan. 1986 1986): 235.

20 Baier, "Trust and Antitrust," 235.

21 Onora O’Neill, *Autonomy and Trust in Bioethics* (Cambridge: Cambridge University Press, 2002), 14.

22 Richard Holton, "Deciding to trust, coming to believe," *Australasian Journal of Philosophy* 72, no. 1 (1994): 65, <https://doi.org/10.1080/00048409412345881>.

counterpart's trustworthiness); the decision to trust encompasses more than the incentives a counterpart has in a particular transaction, namely it assumes the possibility of good will. Similarly to Hardin, Baier assumes that trust is cognitive; it is a conscious decision.

Furthermore, it is vulnerability that makes benevolence or its absence possible. As Baier argues: "Trust...is letting other persons (natural or artificial, such as firms, nations, etc.) take care of something the truster cares about, where such 'caring for' involves some exercise of discretionary powers."²³ A similar understanding of trust is proposed by Mayer, Davis, and Schoorman, with trust being "the willingness of a party to be vulnerable to the actions of another party based on the expectation that the other will perform a particular action important to the trustor, irrespective of the ability to monitor or control that other party."²⁴ This is why, as I will argue later, for the Christian believer trust in God cannot be dissociated from the idea that God is benevolent; the vulnerability that comes with faith is what allows for God's loving action.

Additionally, the Hardinian assumption that trust is iterative and is maintained as long as the other party has no incentive to cheat is morally questionable: "To the extent that what the truster relies on for the continuance of the trust relation is something, which once realized by the truster, is likely to lead to (increased) abuse of trust, and eventually to destabilization and destruction of that relation, the trust is morally corrupt."²⁵

In a similar vein, Simpson argues against the construct of trust as an action (an actualised potential) because it fails to describe situations where trust, and in particular the reliance on the trusted party's benevolence, is latent: "Out of kindness to the child she never had, a rich aunt promises her nephew that if he ever falls on tough times, she will bail him out. As it happens, the nephew does well and wants for nothing. Yet he still trusts that she would have fulfilled that promise if things had not gone so well. So the nephew trusts, but never acts in a way that relies on another."²⁶ Such a latent (generalised) trust in God, we will see,

23 Baier, "Trust and Antitrust," 240.

24 James H. Davis and F. David Schoorman Roger C. Mayer, "An Integrative Model of Organizational Trust," *Academy of Management Review* 20, no. 3 (1995): 712.

25 Baier, "Trust and Antitrust," 255.

26 Simpson, "What Is Trust?," 553.

encompasses not only potential events that may never actualise but is arguably what is described as “faith” or “belief” in their more common usages.

So far, it has been argued that trust may not always be (as Hardin wrongly insists) an iterative and rational calculation that depends on a counterpart’s alignment with our interests. Rather, as Baier argues, many situations point to the trustor’s vulnerability being dependent on his or her counterpart’s good will, whether or not it is actualised. As such, trust relationships have an inherent moral quality in the presence of power asymmetries and are often embedded in “thicker” relationships than rational choice theory posits. Trusting is not always rational, not the least because choice is not always an option – as with children having to trust their parents. And as we will see below, trust cannot always be purely cognitive: it can be unconscious, as with children believing without much thought that their parents will always look after them.

Karen Jones and Trust as an Affect

Karen Jones argues that trust is not solely cognitive; it is also affective. Trust can be perceived as follows: “An attitude of optimism that the goodwill and competence of another will extend to cover the domain of our interaction with her, together with the expectation that the one trusted will be directly and favourably moved by the thought that we are counting on her.”²⁷

The importance of trust as an attitude of optimism, rather than a fully cognitive experience (as Hardin and Baier suggest), is that, as with Simpson, trust is not always a fully conscious move: “When the attitude and expectation lead the truster to willingly rely on the one trusted, there may be (though there does not have to be) some vagueness about what it is the truster is counting on her for.”²⁸ More specifically: “Usually, when we say that A trusts B (within a certain domain), we mean that A’s relationship with B (within the domain in

27 “Trust as an Affective Attitude,” *Ethics* 107, no. 1 (1996): 4.

28 Jones, “Trust as an Affective Attitude,” 8.

question) is predominantly characterized by trust's distinctive way of seeing someone, and not merely that on occasion A sees B through the lens of trust."²⁹

It follows that many, if not all, ongoing relationships will include elements of trust that are not fully cognitive. As with Jones, trust is a function of a deeper affective relationship, and for the Christian believer, trust is a function of their relationship with God rather than specific situations. Only if I trusted God on a case-by-case basis would iterative trust be an appropriate description of my trust relationship with God. As will be more fully explored below, a general trust in God is what ought to inform the economic behaviour of Christian individuals towards others.

Richard Holton and Trust vs. Belief

Richard Holton addresses the particular relationship between trust and belief;³⁰ he separates the two notions in that we may decide to trust even though we do not believe our counterparts are trustworthy: it is possible to trust an employee who has been convicted of petty theft in the past as a way to give him or her another chance, without necessarily expecting them to not steal.³¹

Implicit in Holton's argument is that we can make a choice to trust independently of whether we can rely on the other; trust is a state of mind that clearly goes beyond a rational calculation. It is a value and encompasses the pursuit of a particular good: again, a climber may choose to rely on a rope or his or her partner's hand; both are equally reliable, but one is conducive of a deeper (trusting) relationship. Even if at risk of being reduced to a subjective utility, the act of trust has the possibility of actualising and furthering values.³² Most crucially, Holton highlights how we can decide to trust immediately but that we cannot believe equally rapidly; beliefs are built and revised over time and informed by the decisions we have made

29 Jones, "Trust as an Affective Attitude," 13. Nevertheless, as observed by Simpson, oligarchs cold-heartedly arranging a price-fix highlights how some types of trust are not affective: "The initiating oligarch does so only because she has good reasons to believe that the others will follow; optimism does not come into it. Trust is not always an affective matter." Simpson, "What Is Trust?," 552.

30 Holton, "Deciding to trust, coming to believe."

31 Holton, "Deciding to trust, coming to believe," 63.

32 See Holton, "Deciding to trust, coming to believe," 63.

to trust. The possibility of deciding to trust in spite of doubts about a counterpart's trustworthiness will be particularly useful in understanding trust as an economic virtue that can be actualised towards the greater good. But, as we will see below, this act follows a particular belief in God (which Holton himself considers to be "faith").³³

The above theories of trust shed light on the complexity of trust: although rational choice theory neatly fits with mainstream economic theory, it is reductivist. Rather, it is difficult to separate trust and trustworthiness from a moral dimension: vulnerability demands good will and relies on thicker relationships that are not always conscious. The trust of children in their close family or of patients in a hospital setting exemplifies this. Yet, conscious trust may also appear to be an irrational act: one can choose to trust even though the counterpart is not trustworthy. Nevertheless, the accounts above miss one crucial element in the construal of trust from a theological perspective, namely God: the belief in his existence, and in particular his benevolence, will affect our economic behaviour. Trusting in God, we will see, is what enables charity; this means that trustworthiness, even if desirable, plays a lesser role in the decision to trust others.

Theological Trust: The Meaning of pistis in Luke-Acts

Understanding trust from a theological and, in particular, a Scriptural perspective requires apprehending it within its Biblical context first; it is a hermeneutical exercise to begin with. An exact equivalent to "trust" as understood in English does not exist as such in the New Testament. The closest concept in Koine Greek, the language of the New Testament, is πίστις (*pistis*), which has frequently been translated as both trust and faith, and sometimes belief. Here the importance of language becomes salient: how we understand a particular concept determines what it is we look for, and therefore the methodology. In other words, it is already at this very early stage in the thesis apparent that what a theologian will look for (in an experiment) will be inherently different from what an experimental economist looks for, simply because the theological category differs from the experimental one in what it describes.

³³ Holton, "Deciding to trust, coming to believe," 64.

It would not be unfair to ask why a theologian should focus on a concept (*pistis*) that is two thousand years old. The answer to this is twofold. Firstly, it will become apparent over the course of this chapter and the next chapters that a different, richer construct of trust becomes necessary to fully apprehend what goes on in both experiments and in reality, since the working definition used in experimental economics is proving insufficient. The concept of *pistis* may possess greater explanatory power than the concept of trust used in experimental economics. In particular, it suggests something that cannot be construed within the epistemological limitations of experimental sciences, namely the possibility that trust can be an economic virtue that encompasses a(n) (individual) desire to do good, and not just an economically beneficial phenomenon.

Secondly, as explored above, scientific disciplines possess each their own language and, as a result, these portray reality differently; theology necessarily competes with secular disciplines in how it describes reality through language. And the theologian's starting point is quite simply theology. Furthermore, because this thesis aims to not only engage with but also shape empirical research, it is important to highlight the differences in underlying assumptions between disciplines by first addressing differences in categories. In that sense, understanding differences in language is the first step to enable the theologian to engage with secular empirical research; by first mastering his or her native language, the theologian then has a broader language to understand and redescribe the objects reported by the economist.

Still, it is likely that there is not one single meaning of *pistis* to be derived systematically from the New Testament, whose different authors may have understood the term differently.³⁴ At all events, it remains that *pistis*, in the context of the New Testament, most often refers to the relationship to God rather than to other individuals, which explains why faith is often the

34 This is the case not the least because it is unclear whether πίστις in the New Testament derives from the Septuagint translation of the Hebrew word for faith or if it is borrowed from the Greek culture in which the authors were living. James Barr, *The Semantics of Biblical Language* (Oxford: Oxford University Press, 1961). For a discussion on differences between Luke and Paul on the meaning of trust, see Rudolf Bultmann, "πιστεύω (pisteuo): the πίστις (pistis) Group in the New Testament," in *Theological Dictionary of the New Testament*, ed. Gerhard Friedrich (Grand Rapids, MI: William B. Eerdmans, 1968).

preferred translation; it is this primary relationship with God that then informs the behaviour of the believers towards one another.³⁵

Whilst the concept of *pistis* for the authors of the New Testament was primarily oriented towards God, their non-Christian contemporaries broadly understood it as interpersonal, with the *Theological Lexicon of the New Testament* highlighting this difference: “No secular text can offer a parallel to NT or OT ‘faith’, but *pistis*, which derives from *peithomai* (‘be persuaded, have confidence, obey’), connotes persuasion, conviction, and commitment, and always implies confidence, which is expressed in human relationships as fidelity, trust, assurance, oath proof, guaranteed.”³⁶

Whilst a more detailed comparison could be drawn between the use of *pistis* by different authors in the New Testament, an observation can already be made: one risks forcing a categorical construct onto a concept that otherwise conveys several meanings in the New Testament. For instance, the discussion on the Pauline objective “faith in Christ” vs. subjective “faith of Christ” as found in e.g. Romans 3.22 exemplifies how *pistis* can easily become a disputed concept, i.e. whether it is a belief about Christ or whether Christ is an example of perfect trust in God.³⁷ Similarly, the meaning of *pistis* is most often discussed in Bible dictionaries under entries on “faith” rather than “trust.” This arguably already imposes a later, if not contemporary, meaning of “faith” onto the Classical Greek meaning of *pistis*: a form of generalised belief. As noted by Dieter Lührmann, this dynamic already existed at the time the gospels were written:

At the beginning of early Christianity, it was not the linguistic usage of Jesus which had formed the language of Christian theology. Rather one can see in the NT a variety of traditions, which at the same time in Judaism had taken the developed meanings of *pist-*, and from them formulated concepts of how salvation was accomplished in Jesus. At the beginning there was no unified concept of faith, which was interpreted in

35 See Benjamin Schliesser, *Abraham's Faith in Romans 4: Paul's Concept of Faith in Light of the History of Reception of Genesis 15:6*, vol. 224, Wissenschaftliche Untersuchungen zum Neuen Testament. 2. Reihe, (Tübingen: Mohr Siebeck, 2007), 54-67.

36 "πίστις (*pistis*)," in *Theological Lexicon of the New Testament*, ed. Ceslas Spicq (Peabody, MA: Hendrickson Publishers, 1994; reprint, 2.), 110.

37 See for instance George Howard, "Faith: "Faith of Christ"," in *The Anchor Bible Dictionary*, ed. David Noel Freedman (New York: Doubleday, 1992).

different ways, yet early Christianity did have a common self-definition of *pistis*, which referred in different ways to salvation accomplished in Christ.³⁸

Nevertheless, a particular set of observations can be made on the different uses of *pistis*: in the Synoptics, faith – arguably more a form of trust in God than a set of beliefs – produces miracles whilst, in John, miracles elicit faith – in this case, belief(s) about God. In Paul, faith is a cognitive response to God’s salvific action.³⁹ The discrepancy in meaning between the Koine category of *pistis* and contemporary meanings of belief/faith/trust together with the lack of a systematic meaning throughout the New Testament compound the difficulty that comes with providing one single definition for a theological category of trust.

And – as if the meaning of theological trust was not confusing enough because of the issues highlighted above – “faith” or *pistis* can also be interpreted through an anachronistic and/or denominational lens: for instance, in an Evangelical reading which focuses on the personal relationship to Christ and grace alone, faith becomes an attitude “whereby a man abandons all reliance in his own efforts to obtain salvation, be they deeds of piety, of ethical goodness or anything else. It is the attitude of complete trust in Christ, of reliance on him alone for all that salvation means.”⁴⁰ The above focus on salvation through faith alone is likely to irk the Catholic theologian.

Given the above, the methodological approach taken here is to focus on one particular understanding and interpretation of *pistis* that is relevant to economic life, namely that developed by the author of Luke-Acts. The alternative would risk bringing about both hermeneutical and epistemological imprecision and confusion, making any empirical work a nightmare if not outright impossible.

38 Dieter Lührmann, "Faith: New Testament," in *The Anchor Bible Dictionary*, ed. David Noel Freedman (New York: Doubleday, 1992), 753.

39 Calvin Mercer, "Faith," in *Lutterworth Dictionary of The Bible*, ed. Watson E. Mills (Cambridge: The Lutterworth Press, 1990), 290; John Reumann, "Faith," in *Eerdmans Dictionary of the Bible*, ed. David Noel Freedman (Grand Rapids, MI: Wm. B. Eerdmans Publishing Co., 2000), 453.

40 L. L. Morris, "Faith," in *New Bible Dictionary*, ed. J. D. Douglas (2nd, Wheaton, IL: Tyndale House Publishers, 1982), 366-7.

The Meaning of *pistis* in Luke's Gospel

As observed above, the meaning of *pistis* may differ somewhat among the authors of the New Testament, let alone within the entirety of Scriptures. The aim of this chapter is to highlight how concepts of trust can differ, in particular between a theological and an experimental account. I focus on the meaning of *pistis* in Luke-Acts because the way its author portrays *pistis* has particular repercussions on how the early Christian community would be expected to behave in their economic dealings. In particular, as we will see, how Luke understands trust ultimately informs his vision of charity – a construct that has been overlooked completely in experimental economics and that could explain, in part, what has been so far been construed as irrational behaviour in economic thought. The relationship of trust between individuals and God goes two ways: not only do individuals trust God, but God also entrusts them with a mission. That mission is what believers (i.e., those who have trust in God) share in common.

As noted by Gerhard Barth, Luke uses *pistis* in several ways. Firstly, it can mean believing someone's words or message, as in Luke 1:20.⁴¹ It can also mean entrusting something to someone, as in the story of the Shrewd Manager.⁴² Trust can additionally be conferred; faith can be put in someone.⁴³ It is also used in the aorist to describe the early community of believers later in Acts, literally "those having believed,"⁴⁴ describing a state of belief ("Stand im Glauben"), as in Luke 22:32.⁴⁵ Luke in fact uses *pistis* differently to John: in Luke there is no such thing as faith in Christ and Christ never calls for faith in him; rather, he calls for a radical trust (in God), something theologians contemporary to Luke did not portray quite as much.⁴⁶ The relationship to God, therefore, is primary in Luke, and *pistis* encompasses trust as much as belief or hope in God.

41 "Jemandes Worten oder Botschaft Glauben schenken"; "καὶ ἰδοὺ ἔση σιωπῶν καὶ μὴ δυνάμενος λαλῆσαι ἄχρι ἧς ἡμέρας γένηται ταῦτα, ἀνθ' ὧν οὐκ ἐπίστευσας τοῖς λόγοις μου, οἵτινες πληρωθήσονται εἰς τὸν καιρὸν αὐτῶν." Gerhard Barth, "Πίστις (*pistis*)," in *Exegetisches Wörterbuch zum Neuen Testament*, ed. Horst Balz and Gerhard Schneider (Stuttgart: Verlag W.Kohlhammer, 1983).

42 "εἰ οὖν ἐν τῷ ἀδίκῳ μαμωνᾷ πιστοὶ οὐκ ἐγένεσθε, τὸ ἀληθινὸν τίς ὑμῖν πιστεύσει;" Lk 16:11

43 "Καὶ εἶπαν οἱ ἀπόστολοι τῷ Κυρίῳ Πρόσθετε ἡμῖν πίστιν." Lk 17:5

44 See Luke 8:12: πιστεύσαντες

45 "ἐγὼ δὲ ἐδεήθην περὶ σοῦ ἵνα μὴ ἐκλίπη ἡ πίστις σου."

46 "Zwar hat Jesus nicht zum Glauben an seine Person aufgefordert; aber er hat offensichtlich zu einem Glauben aufgerufen und ermutigt, der in seiner Radikalität weit über das hinausgeht, was zeitgenössische Theologie über Glauben zu sagen wusste". Barth, "Πίστις (*pistis*)," 223.

The notion of *pistis* also encompasses a form of optimism rooted in God's and Christ's benevolence: Luke uses the word to describe a belief that healing would be guaranteed, as with those bringing the paralytic through the roof, the father of the dead girl, a Centurion, a blind man or a Samaritan leper.⁴⁷ Trust in God demands that he is trustworthy and as such benevolent, rather than demanding that God punishes when we fail to comply; and the way Luke uses *pistis* is testament to this. It is this trust in God's benevolence, as we will see, that enables *agape*, a form of behaviour entrusted by God to his believers. And this behaviour affects all areas of a Christian's life, including economic relationships.

Lukan trust can be characterised through four key principles: firstly, God is benevolent and provident. Secondly, trust in God must be absolute. The third principle follows: if I fully trust in a God who is benevolent and provident, I do not need to expect reciprocity from counterparts even if it is desirable because I trust God for my well-being. Finally, because I can trust in a benevolent God for providence, charity (the ability to gift something without necessarily having to expect reciprocity from that specific counterpart) becomes a function of my trust in God.⁴⁸

The reader of Luke-Acts is first reminded in the story of The Tempest that trust in God ought to be absolute, where Christ asks his disciples: "where is your trust?"⁴⁹ Trust in God can also be more implicit in Jesus' teachings. For instance, he asks his disciples to pray asking for their daily bread, implying day-to-day utter reliance on God's generosity.⁵⁰ This is in turn why the twelve disciples and the Seventy are sent without taking anything with them that could provide some means of subsistence: they are to take nothing for their journey, "no staff, nor bag [lit. "beggar's bag"], nor bread, nor money – not even an extra tunic" in the case of the disciples, and "no purse, no bag [lit. "beggar's bag"], no sandals" in the case of the Seventy.⁵¹

47 Lk 5:20, 8:25, 8:50, 7:9, 17:19, 18:42

48 John M. G. Barclay argues against a contemporary reading of unconditional free gifts. For him, "a gift can be *unconditioned* (free of prior conditions regarding the recipient) without also being *unconditional* (free of expectations that the recipient will offer some 'return')." Barclay, *Paul and the Gift*, 562-3. In the case of Lukan trust, this would mean that charity is made possible because individuals can expect a reward from God – rather than a return from their counterpart.

49 Ποῦ ἡ πίστις ὑμῶν? Lk 8:25; see Lk 8:22-35.

50 Lk 11:3

51 Lk 9:1-6, 10:1-2

In Luke's Gospel, Jesus makes it clear that no one can become his disciple if he does not give up or renounce all possessions.⁵² In fact, the choice to trust God is both stark and necessary: "those who try to make their life secure will lose it, but those who lose their life will keep it."⁵³

It is important to note that such an absolute trust in God could not be legitimised if he did not provide for daily necessities; trust cannot be coerced. This means, for Luke, that God necessarily guarantees subsistence, and he is benevolent rather than simply holding up his end of the bargain. Throughout Luke's gospel, we find God to not only be benevolent but also generous to those who have trust: in calling the first disciples, Jesus shows it is possible to catch fish even though there were none previously. Because he trusts Jesus' word, Simon lets down his net saying, "Master, we have worked all night long but have caught nothing. Yet if you say so, I will let down the net" – and catches more fish than their boats could carry.⁵⁴ This generosity is repeated when Jesus feeds the five thousand,⁵⁵ Jesus' trust in God's providence is warranted.

Luke further insists on God's benevolence beyond providing daily necessities, highlighting that this trust relationship is not about two parties holding their end of the bargain but about God's very character. The story of the widow and unrighteous judge exemplifies this: if a malevolent judge finally concedes to the widow's continuous requests, Luke's Jesus asks "how will not God grant justice to his chosen ones who cry to him day and night? Will he delay long in helping them? I tell you, he will quickly grant justice to them. And yet, when the Son of Man comes, will he find faith (*pistin*) on earth?"⁵⁶ This is further echoed in Jesus' teachings on prayer: "Is there anyone among you who, if your child asks for a fish will give a snake instead of a fish? Or if the child asks for an egg, will give a scorpion? If you then, who are evil, know how to give good gifts to your children, how much more will the heavenly Father give the Holy Spirit to those who ask him!"⁵⁷

52 Lk 14:33

53 Lk 17:33

54 Lk 5:1-11

55 Lk 9:12-17

56 Lk 18:7-8

57 Lk 11:11-13

Through trust in a benevolent and generous God, the need for reciprocity in (economic) relations is lessened. This is not to say that reciprocity and trustworthiness between individuals are not important. Rather, in Luke the decision by a believer to trust another is not much affected (if at all!) by the trustworthiness of the counterpart and his or her propensity to reciprocate. Trust in a benevolent and generous God is what can enable charity, because non-reciprocity from counterparts is not as salient in decision-making since the reward will come from God: “when you give a banquet, invite the crippled, the lame, and the blind. And you will be blessed, because they cannot repay you, for you will be repaid at the resurrection of the righteous.”⁵⁸

Similarly, the Good Samaritan gives to someone who could not reciprocate, by offering him care and bringing him to safety, and promising to cover any additional costs not covered by the money already spent to care for the victim.⁵⁹ However, this does not mean that creditors are let off their debts if they can repay, as with the parable of the Shrewd Manager, where the manager used wealth that was not his.⁶⁰ Therefore, if someone can reciprocate, it is appropriate to expect this; however, if that someone cannot reciprocate, trust in God’s benevolence will enable the lender to forgive the creditor’s debt because he can rely on God as a lender of last resort.

For Luke, wealth always belongs to God: in the parable of the Shrewd Manager, the main protagonist merely looks after the wealth of the Rich Man (God?).⁶¹ In other words, we never really own anything. Luke seems to go even further in his thinking: if we rely on our own wealth, we are less likely to trust and follow God; this is why the rich ruler is unwilling to let go of his wealth and give it to the poor.⁶² With the above argument on trust in mind, distributing one’s money to the poor is the most reasonable thing to do. The point here is more about one’s misguided reliance on wealth, than on the necessity to redistribute one’s money. This is why Zacchaeus is not required to give away all his wealth, but only part of it:

58 Lk 14:12-14

59 Lk 10:29-37

60 Lk 16:1-9

61 Lk 16:1-13

62 Lk 18:18-25

his heart is changed, and he needs not rely on wealth gained through defrauding others because that wealth has become meaningless to him.⁶³

It is that same trust in God that enables the poor widow to give away the little money that she has.⁶⁴ The amount given does not matter, but rather how the primary relationship to God informs the decision to give: in Luke 18:9-14, the Pharisee gives ten percent of his income but does not show as much humility as the tax collector, who gives nothing, yet is justified.

It becomes clear that charity is a function of trust in God. Charity is not about giving to the poor for its own sake: God's benevolence means I do not need to rely on my own wealth for my security, and therefore it is only just that the poor are the indirect beneficiaries of this from my trust in God. This principle is best explored in the story of Ananias and Sapphira.

Lukan Trust in Action: A Reading of Ananias and Sapphira (Acts 5:1-11)

Luke tells the story in Acts of Ananias and Sapphira, who we assume were postulating to become members of the early Church. The story in itself is short: the man and his wife sold a piece of property, keeping part of the proceeds and putting the rest at the apostles' feet.⁶⁵ But Peter sees through this and questions separately Ananias and then his wife Sapphira. Ananias remains silent but Sapphira lies claiming to have put all the proceeds at Peter's feet. Peter exposes their lies and they are each struck dead. Peter asks – rhetorically – in Ananias' case:

Why has Satan filled your heart to lie to the Holy Spirit and to keep back part of the proceeds of the land? While it remained unsold, did it not remain your own? And after it was sold, were not the proceeds at your disposal? How is it that you have contrived this deed in your heart? You did not lie to us but to God!⁶⁶

63 Lk 19:1-10

64 Lk 21:1-4

65 Hänchen notes that the recurring nature of παρά τοὺς πόδας (Luke 7:38, 8:35; 17:16; Acts 4:35, 37; 5:2; 7:58; 22:3) as “referring to Ps 8:7 LXX: πάντα ὑπέταξας ὑποκάτω τῶν ποδῶν αὐτοῦ [which] recalls an old custom whereby one setting his foot on a person or object acquired right of property and free disposal of the same.” Ernst Hänchen, *The Acts of The Apostles* (Oxford: Basil Blackwell, 1971), 231.

66 Acts 5:3-4

In turn, Peter questions Sapphira: “How is it that you have agreed together to put the Spirit of the Lord to the test?”⁶⁷ The sin Ananias and Sapphira committed was not against men, nor was it an unwillingness to participate in the common fund since such contributions were voluntary. The reason why Ananias and Sapphira sinned only becomes apparent when the story is read in conjunction with previous verses of the chapter.

Firstly, there is the case of Barnabas, the good example: Joseph, who is later to be renamed Barnabas (meaning “son of encouragement”), sold a field and laid the money at the apostles’ feet.⁶⁸ The story takes place within the context of the early Christian community, which is described in English translations as “those who believed,” however it can equally be translated as “those who trusted”.⁶⁹ They were “of one heart and soul, and no one claimed private ownership of any possession, but everything they owned was held in common.”⁷⁰ Like Ananias and Sapphira, Barnabas also sold a piece of land.⁷¹ But contrarily to them, he does not hold back any proceeds in what we would understand within the broader writings of Luke-Acts to be a likely attempt at self-reliance. It is worth noting that it is assumed the apostles (or those empowered to do so by them) distributed the proceeds: the apostles were expected to become stewards of God’s wealth on earth.⁷²

Earlier, in Acts 1:18, Luke tells the story of Judas buying a field⁷³ with the money he had received for his betrayal. Like Ananias and Sapphira, he falls dead immediately soon after the deed. In this we see the mirror opposite of Barnabas’s actions: Judas, filled by the Satan before betraying Jesus, having lost trust his in Christ and his place among the disciples, chose the security that a field would provide.⁷⁴ Luke Timothy Johnson observes that in Luke’s story, Judas does not return the money as a sign of repentance but takes the betrayal money and buys a field.⁷⁵ Unlike the other gospel narratives, Luke chooses to tie Judas’ death to this very

67 Acts 5:9

68 Acts 4:37

69 τῶν πιστευσάντων. Acts 4:32

70 Acts 4:32

71 Ananias and Sapphira sold a χωρίον (field, farm); Barnabas sold an ἀγρός (field)

72 Hänchen, *The Acts of The Apostles*, 231.

73 Χωρίον.

74 Lk 22:3

75 Luke Timothy Johnson, *The Literary Function of Possessions in Luke-Acts*, ed. Howard C. Kee and Douglas A. Knight, vol. 39, Society of Biblical Literature Dissertation Series, (Missoula, MT: Scholars Press, 1977), 179.

act of using unrighteous money to buy a field that might guarantee some long-term income – in contrast to the expectations laid out later in Acts 4:32 where the disciples sell their possessions.

Daniel Marguerat suggests that Judas's behaviour needs to be understood in the context of both Genesis 3 and the creation of the *ekklesia*.⁷⁶ In both Genesis 3 and Acts 5, the Satan brings about distrust between Adam and Eve or Ananias and Sapphira, and God: the Satan casts doubt on God's benevolence by arguing that God does not want their eyes to be open, and that God lies to them by saying that they will die.⁷⁷ Adam and Eve lose trust in God, listen to the Satan, and are expelled from the Garden of Eden. Judas too is expelled from the disciples, with his death coming immediately before the Coming of the Holy Spirit.⁷⁸ It is that Holy Spirit who guided the early Christian community.

The lies of Adam and Eve, and of Judas, are signs that their relationship with God is not a trusting one. The coming of the Holy Spirit is therefore key, as Aaron J. Kucker argues: "Satan prompts a treacherous turn away from the community and leads to destruction.... The Spirit prompts a turn toward the community and leads to restored relationships and times of refreshing."⁷⁹ The Satan fills Judas, and the latter loses trust in God and Christ, preferring the security of money (and a field) to an uncertain future. It is also this Satan that Peter refers to when pointing to Ananias' sin: "why has Satan filled your heart to lie to the Holy Spirit and to keep back part of the proceeds of the land?"⁸⁰ As Johnson remarks: "This episode reminds again of the prophecy of Jesus that Satan would seek to sift the disciples like wheat."⁸¹

The story of Ananias and Sapphira coincides with the emergence of the Early Church; the *ekklesia* is mentioned for the first time by Luke immediately after Sapphira's death. Within

76 Daniel Marguerat, "La Mort d' Ananias et Saphira (Ac. 5.1-11) dans la Stratégie Narrative de Luc," *New Testament Studies* 39, no. 2 (1993), <https://doi.org/http://dx.doi.org/10.1017/S0028688500022815>.

77 Acts 5:3; Gen 2:17

78 Acts 2:1-4

79 Aaron J. Kucker, "The Spirit and the "Other", Satan and the "Self": Economic Ethics as a Consequence of Identity Transformation in Luke-Acts," in *Engaging Economics: New Testament Scenarios and Early Christian Reception*, ed. Bruce W. Longenecker and Kelly D. Liebengood (Grand Rapids, MI: William B. Eerdmans Publishing Company, 2009), 101.

80 Acts 5:3

81 Luke 22:32; Johnson, *The Literary Function of Possessions in Luke-Acts*, 39, 209.

the context explored above, the *ekklesia* is the new Eden, and those who fail to trust God fail to be full members of the Early Church; they will face a similar fate as Adam and Eve, because they too listened to the Satan. Stephen C. Barton points to spiritual ostracism: “What Ananias and Sapphira do in lying to the Holy Spirit places them outside the sphere of grace and the communal circle of salvation and into the sphere of Satan.”⁸² The miracles performed by the apostles in the earlier chapters of Acts are a witness to the Kingdom of God that Jesus had foretold in Luke: “The kingdom of God is not coming with things that can be observed... For, in fact, the kingdom of God is among [or “within”] you.”⁸³ The Spirit holds the new Eden together.

The story of Ananias and Sapphira appears to be a necessary device for Luke to introduce the *ekklesia* and the arrival of the Kingdom of God. The Kingdom is only available to those who fully trust in God. The selling of possession is only a testimony to this rather than an actual requirement; new members give away their possessions because possessions prevent them from following Christ, as was already the case with the disciples and the Seventy early in Luke’s Gospel. But such an act is one of free will: “Luke must have reasoned that the spontaneity with which all devoted their property to the common cause should, in itself, have permitted Ananias to keep his.”⁸⁴ Peter reminds Ananias that such an act is voluntary: “While it remained unsold, did it not remain your own? And after it was sold, were not the proceeds at your disposal [lit. “in your authority”]?”⁸⁵

In sum, Ananias’s and Sapphira’s sin is the same as that of Adam and Eve: distrusting God and his benevolence and generosity, and lying to disguise that distrust. Ananias and Sapphira, like Adam and Eve, preferred to trust the Satan, and rely on their own means for survival rather than on God: “To make the grand gesture of sharing all things, while holding back something that can be called ‘one’s own’ is a mockery of [the] Spirit of unity... An offense against the unity [which the Spirit of God creates] is therefore an offense against God.”⁸⁶ Echoing the

82 Stephen C. Barton, "Money Matters: Economic Relations and the Transformation of Value in Early Christianity," in *Engaging Economics: New Testament Scenarios and Early Christian Reception*, ed. Bruce W. Longenecker & Kelly D. Liebengood (Grand Rapids, MI: William B. Eerdmans, 2009), 55.

83 Lk 17:21

84 Hänchen, *The Acts of The Apostles*, 237.

85 Acts 5:4

86 Johnson, *The Literary Function of Possessions in Luke-Acts*, 39, 206-7.

words of Peter, it was not a lie to men, but a lie to God: I act as if I trust him when in fact it is not the case. Ananias and Sapphira tried to conceal their distrust in God's project and lied to his Spirit. There is therefore no place for them in the *ekklesia*, the new Eden, because it is built on trust in God. This is especially clear when Luke reminds us – immediately before the story of Ananias and Sapphira – that “there was not a needy person among them.”⁸⁷ In other words, anyone could see that trust in God was paying off; the Kingdom of God was truly present.

Trust in God and Trust within Economic Relationships

The above exegesis will have shown that for Luke, *pistis* means something much richer than dyadic trust in economic relationships; in fact, it informs them: for Luke, it would be impossible to think of trust in economic relationships separately from trust in God. Ananias and Sapphira did not demonstrate an absolute trust in God and listened to the Satan; as such they could not be part of a community filled by his Spirit because they continued to rely on their own wealth.

Luke shows how his understanding of *pistis* has all-encompassing repercussions on the behaviour of the Early Church. This construct may, at first, seem limited to an idealised depiction of the *ekklesia*: how it relates to the trust studied in economic experiments is not evident. Yet, as we will discover in later chapters, the existing constructs of trust in the experimental literature fail to fully explain why people choose to trust for no apparent rational reason. It may, arguably, be a form of tacit or even unconscious trust in God. In particular, Adriaan T. Peperzaak underlines how, even for agnostics or atheists, there is a need for a deeper a priori generalised trust in some kind of ultimate “being”; nature, human existence, history, or even Mother Nature, a mysterious Energy or Will or Power that can generally be relied upon, or else the universe would be so chaotically unpredictable that our own existence would become impossible: “by abolishing not only all gods and pseudo-Gods,

87 Acts 4:34

but also God, an atheist is forced to perceive and think the universe as a self-giving, self-supporting, and self-enlightening *causa sui*.”⁸⁸

Choosing Luke’s understanding of trust is key to grasping why trust plays a more important role in economic relationships than trustworthiness: whether my counterpart is trustworthy and honours my trusts may not be as significant if I do not ultimately rely on him but on God, in particular if I do not perceive wealth to be ultimately my own but God’s. I am therefore free(er) to trust a counterpart and run the risk that my trust will be betrayed. In other words, trust does not need to depend on the trustworthiness of counterparts but on God’s trustworthiness, which for Luke is always true. This may seem at this stage a small observation, but its implications are crucial when exploring existing research and suggesting future avenues of inquiry: trust, from a theological perspective, ought to be constructed as a virtue enabled by God’s benevolence.

Moreover, trust precedes trustworthiness because it not only enables it but also brings it into existence. Such a theological understanding is clearly at odds with constructs derived from economic theory, such as Russel Hardin’s: “Any cognitive theory of trust...makes trust depend on assessments of the trustworthiness of another in the relevant circumstances. If I have reason to think you will be trustworthy, then I trust you. Hence to account for trust we first need an account of trustworthiness.”⁸⁹

Additionally, trust as presented by Luke has a clear moral dimension: not only can it lead to greater social welfare through charity, since we rely less on our own wealth and can give it away, but trust in God is in itself a good, a gift to the believer, the importance of which should not be underestimated as starkly presented by Luke in the story of Ananias and Sapphira. Trust in God enables the Kingdom of God and the ultimate fulfilment of the good.

88 Adriaan T. Peperzak, *Trust: Who or What Might Support Us?* (New York: Fordham University Press, 2013), 154-5.

89 Russel Hardin, "Gaming Trust," in *Trust & Reciprocity: Interdisciplinary Lessons from Experimental Research*, ed. Elinor Ostrom and James Walker (New York: Russel Sage Foundation, 2003), 83.

Experimental Trust: The Trust Game

The Trust Game

The above exercise is an exegetical one, apprehending trust from Scriptures and from Luke-Acts in particular: it is interpretative and from within a particular discipline. In fact, the hermeneutical task is limited to a particular author, with the rationale that it is easier to have a coherent description of trust by doing so than by broadening the exercise to the entire New Testament, let alone the whole Bible.

The approach taken below is not dissimilar: here, the definition of trust is explored from within the specific discipline of experimental economics. Furthermore, its starting point is a seminal paper and methodology developed within the particular branch of economics to observe trust. Trust in experimental economics was first explored by Joyce Berg, John Dickhaut and Kevin McCabe in an article entitled "Trust, Reciprocity, and Social History" published in 1995. For the authors, mainstream economic theory did not consider trust a constituent, or even a determinant, of economic decisions, and they sought to prove that the discipline was wrongly ignoring a fundamental element of how individuals make decisions.⁹⁰

Berg, Dickhaut and McCabe devised an experiment to observe trust whereby "subjects in room A decide how much of their \$10 show-up fee to send to an anonymous counterpart in room B. Subjects were informed that each dollar sent would triple by the time it reached room B. Subjects in room B then decide how much of the tripled money to keep and how much to send back to their respective counterparts."⁹¹ The experiment was set up so that the two groups of participants were sat in two different rooms and could not interact with each other. The exchanges made between the two rooms were carried through both a monitor and a recorder, neither of which were one of the experimenters.

90 Joyce Berg, John Dickhaut, and Kevin McCabe, "Trust, Reciprocity, and Social History," *Games and Economic Behavior* 10, no. 1 (1995): 122, <https://doi.org/10.1006/game.1995.1027>.

91 Berg, Dickhaut, and McCabe, "Trust, Reciprocity, and Social History," 123.

Thus, the experiment followed a double-blind procedure: the experimenters and the participants could not identify each other. The authors explained that their choice reflected a desire to control the undesired effects that repeated games could have on the results as well as potential extra-experimental influences such as reputation, collusion or contractual pre-commitments or the threat of punishment: "by providing social history in a double-blind, one-shot setting, we focus on the internalization of social norms as opposed to other potential mechanisms for reciprocity such as reputation building."⁹² The experimenters were able to gather the necessary data for their experiment, even if fully anonymised. The set of experiments were conducted between July and August 1993 at the University of Minnesota with a group of undergraduate students who had participated in a least one unrelated paid laboratory experiment.

At the beginning of their article, the authors explain that their starting point is an evolutionary framework, and in particular one where agents learn to make decisions that ensure their survival in the long-term. The authors confer that "trust can be viewed as a behavioral primitive that guides behavior in new situations; however, it may in some circumstances become extinct or it may be superseded by an individual's capacity to engage in self-interested decisionmaking."⁹³

The authors' construct of trust within the context of their experiment sought to identify whether individuals trust in two specific situations: (1) when isolated from social consideration, and (2) when counterparts cannot continue to cooperate in subsequent games (because it is a one-shot game):

Trust can be defined in terms of the following two actions: first, the trustor gives a trustee the right to make a decision; and second, the trustee makes a decision which affects both trustor and trustee. Subjects have used trust to facilitate exchange if the following conditions are met: (1) placing trust in the trustee puts the trustor at risk; (2) relative to the set of possible actions, the trustee's decision benefits the trustor at a cost to the trustee and (3) both trustor and trustee are made better off from the transaction compared to the outcome which would have occurred if the trustor had not entrusted the trustee.⁹⁴

92 Berg, Dickhaut, and McCabe, "Trust, Reciprocity, and Social History," 132.

93 Berg, Dickhaut, and McCabe, "Trust, Reciprocity, and Social History," 124.

94 Berg, Dickhaut, and McCabe, "Trust, Reciprocity, and Social History," 126.

In this game, then, trust is situational; trust is constructed and defined by the game itself. As such it is limited to what can be observed and quantified through the monetary amounts passed between subjects in rooms A and B. It is, in other words, a situation-specific construct of trust rather than a universal understanding of trust: only what is observed in a particular situation constitutes trust; that is, the phenomenon is empirically constructed. Arguably, the point of the experiment conducted was not to define trust but rather to show that something like trust, or at least something considered akin to trust, is a constituent of economic decision making.

The experiments showed that something other than self-interest was at work because people were not purely selfish as expected from mainstream theory: subjects in room A passed on money to subjects in room B even though the theory would have predicted that room A participants would expect those in room B to be selfish and not reciprocate, and as a result would not pass on any money as tokens of trust. In the more specific terminology of economics, the predicted Nash equilibrium was not fulfilled; the null hypothesis (where 0 is the initial amount expected to be transferred from player A to player B) was rejected, as well as the alternative hypothesis that counterparts in room B would not send any money back because they had no reason to since the game was limited to one iteration.⁹⁵

Berg, Dickaut and McCabe further addressed whether social history – in the form of an anonymised report on the results of previous interactions by players – informed the players' decision to trust their counterparts. In other words, by showing the results of a previous experiment, players would take into account social norms, that is the extent to which counterparts are trustworthy. Two sets of experiments were then conducted: games with no social history and games with social history. On average, and in both games, participants in room A sent just over \$5, that is just over half the amount they were given to participate in the experiment. The difference in amount sent between no social history and social history

95 Nash Equilibrium refers to a game theoretical concept developed by American mathematician John Forbes Nash Jr., whereby two players faced with the same choice assume the other's move and act accordingly. In the case of the Prisoner's Dilemma, both players are expected to defect as they assume this is what the other will do, even if both would be better off if both do not defect.

was marginal: in the first case, it amounted to \$5.16 without social history, and \$5.36 in the social history treatment. However, the striking difference between the two sets of games was the correlation between the amounts sent and payback decisions: in the game without social history, the amount sent by room A players was no basis on which to predict the amount they would receive back from their counterpart in room B. However, in the set of games with social history, not only was the average payback higher (\$6.46 vs. \$4.66), but the correlation increased, meaning that the amount sent would be a basis on which to predict the amount received back. Trusting behaviour did not increase substantially because trust levels were average, but expectations to be trusted were arguably raised. In other words, previous results set expectations of a certain level of trust, and if these were not met, the trustee responded accordingly.

Even if the study concluded with clear behavioural tendencies, the results still showed considerable variations and differences: in the first treatment, that is without social history, five players out of 32 sent the entire \$10, six sent \$5, with nine players sending \$6-9, ten sending \$1-4, and two sent nothing. In the second treatment, that is with social history, seven players out of 28 sent the full \$10, seven sent \$5, with four sending \$6-9, seven sending \$1-4 and three sent zero.

The second treatment, which included social history, changed the dynamic of room B subjects: a shift in average return from a negative \$0.50 (no history) to a positive \$1.10 (social history), with an increase in the average payback of \$1.80. Additionally, there was increased correlation between amounts sent and payback decisions. The authors concluded: "Taken together our two treatments provide a strong rejection of the subgame perfect prediction that room A subjects will send no money. They did so 55 out of 60 times."⁹⁶

It is worth noting that the difference in the number of players sending specific amounts does not vary substantially, but the main difference lies in the reciprocal behaviour: in the first treatment, the initial move had little predictive power on the amount the second player would send back; the correlation between amounts sent by Player A and the amount returned

96 Berg, Dickhaut, and McCabe, "Trust, Reciprocity, and Social History," 137.

by Player B was very low ($r_s = 0.01$). In the second treatment, the correlation is much higher ($r_s = 0.34$) but remains weak enough to question the predictive power of social history and whether social history in itself necessarily increases reciprocity. In other words, social history may appear to increase the probability of reciprocity but there is insufficient proof for a causal link between two.

The sample ranging from 28 to 32 participants is arguably too small to draw strong conclusions on correlation in behaviour. Additionally, the experiment does not ask the players for their rationale, and this is to fully protect the anonymity of the game, in line with the experimental design to protect anonymity and avoid influencing the players' behaviour if these know they will need to explain their actions (i.e. the expectation would be that they would be more likely to act fairly and share their wealth in line with social norms if they had to justify their actions). Nevertheless, a conclusion that can be drawn is that people trust, even if they have absolutely no information about the trustworthiness of their counterparts. The experiments also showed that individuals can be sensitive about the trust that is shown to them, in particular in the light of social history. But most importantly, the experiments showed that self-interest alone is insufficient in its explanatory power.

After reviewing existing experimental literature on reciprocity, Berg, Dickhaut and McCabe cement the concept that trust expects reciprocity and may impel the counterpart to do so: if the first player shows trust, and therefore the expectation of reciprocity, the probability that the second player will reciprocate is higher. Crucially, the authors present trust as enabling "positive reciprocity" whereby trust is a carrot as opposed to the stick of punishment mechanisms: "The investment game provides evidence that people are also willing to reward appropriate behavior and that this too is taken into account."⁹⁷

Berg, Dickhaut and McCabe, by building an experimental framework that allows for the possibility of trust, showed how mainstream economics had been blind in its conception of cooperation in economic exchanges. By overlooking trust, mainstream theory relied on negative reciprocity, namely punishment mechanisms, because individuals could not possibly

97 Berg, Dickhaut, and McCabe, "Trust, Reciprocity, and Social History," 138-9.

trust as it would not be rational. Mainstream economic theory would argue that the selfishness of individuals could only be met with punishment if social policy was to be conducive of a greater good. Yet the findings by Berg, Dickhaut and McCabe shed a different light on human beings, namely that they do trust even when it appears to make no sense; they are able and willing to take a risk.

The contribution of this experiment to the field of economics cannot be underestimated: it not only proved wrong the assumption that individuals would behave purely out of self-interest, but also that there was an additional constituent to economic cooperation that mainstream economic theory had overlooked, namely what the authors understood to be trust. However, as we will see in the next chapters, experimental economics as a discipline never fully detached itself from mainstream economic theory in its anthropological and metaphysical assumptions, and the results drawn from its research continue to be inherently problematic and demand a differentiated methodology.

Defining Experimental Trust

Trust in experimental economics is considered mainly dyadic in that it is limited to an exchange between two individuals within the confines of the experiment(s): participants remain anonymous and therefore cannot identify their counterparts; any pre-existing trusting relationship (“thick relationship”) plays no role in determining the trust extended.⁹⁸ As a result, trust is not observed in relation to the trustworthiness of a particular individual, but rather trust in relation to a complete stranger; the assumption is that the disposition to trust a stranger represents the purer form of any individual’s trust because it will not be affected by other factors: as if every individual possessed the same propensity to trust and individual deviations could be explained through other factors.

Focus on trust rather than trustworthiness is particularly useful if we assume that trust precedes and enables trustworthiness. Although it is possible to argue that before we can

98 Hardin, "Gaming Trust."

have an account of trust, we need one of trustworthiness, the exegesis pursued above showed that an act of trust ought to be considered – at least in theory – independent from trustworthiness because trusting another individual is a virtue since it can be seen as a function of one's trust in God's providence.⁹⁹

However, the act of trust in experimental economics is not presented as having an ethical dimension, but purely as a calculative imperative: it assumes that the rational act is concurrent with self-interest and the expectation that the counterpart is equally self-interested. Still, as we will see below, experimental economics highlights a paradox: individuals should in theory not extend trust to an anonymous counterpart if they are fully rational because such counterpart has a clear incentive to betray them. Yet people choose to trust, and this in the vast majority. Why they do so remains unexplained and appears irrational.¹⁰⁰ It is in light of this paradox, which will be explored below, that recasting the category of trust as virtue is necessary to obtain a richer understanding of the phenomenon. And until trust is construed as being a moral good (a point at the centre of this thesis's argument), it is likely that this paradox will remain unresolved.

Conclusion

As argued above, there is an inherent tension between the disciplines of experimental economics and theology about the definition of trust, and in particular about how that category is construed. For Luke, trust can be construed as a virtue that is enabled by faith (or trust) in God's benevolence and providence and that in turn leads to generosity. Further, trust is what precedes and actualises trustworthiness. In the Trust Game, on the other hand, trust is construed as a strategic calculation determined in great part by the perceived trustworthiness of a counterpart, and causally determined by other variables such as social history between the parties. In other words, (perceived) trustworthiness determines trust.

⁹⁹ See Hardin, "Gaming Trust," 100.

¹⁰⁰ See Hardin, "Gaming Trust," 96.

For Luke, whether my counterpart is trustworthy and honours my trusts may not be significant, since I do not ultimately rely on that counterpart but on God. This is particularly true if I perceive my wealth as a gift from God. This is also what allows me to be more vulnerable to others, trusting that my vulnerability will be met by God's benevolence. This, in turn, allows for trust to be key in a moral economy and allows it to be pursued as an economic virtue: it can lead to charity and greater social welfare. For Luke, as observed above, trust in God enables the Kingdom of God and the ultimate fulfilment of the good.

The definition derived from the Trust Game differs substantially: firstly, it is construed as a function of the perceived trustworthiness of the counterpart. But this clearly fails to explain why people trust anonymous individuals; it can only be explained by the fact that they must hold a generalised belief about people's trustworthiness. Such a definition also does not encompass the possibility of a more general trust in God who could inform their behaviour. Secondly, it is iterative: people are expected to not be trustworthy in the last round of exchanges. This highlights how experimental economists cannot see beyond a utilitarian reading of trust, as with Hardin's encapsulated trust. Trust cannot be a moral good, a virtue independent of a particular situation, that extends beyond a specific dyadic relationship.

The difference in definition is crucial because it will determine the methodology used to observe trust. This is why the different social sciences fail to agree not only in their definition of trust but also in their methodologies. The theologian's task in apprehending trust is therefore complex: not only does he or she need to know what trust is from within his or her own discipline and determine how to observe it, but he or she also needs to adopt an approach that enables him or her to engage with other social sciences. If a theologian is to participate in conversations about economic ethics, in particular given the centrality of trust, not only does he or she need to engage with existing research, but also develop a definition of trust and a methodology that is proper to his or her discipline: the following chapters will explore in depth why methods not only differ but also matter, and why the assumptions and underlying metaphysics of other social sciences can be problematic from a theological perspective.

Nevertheless, experimental economics remains a prime source of conversation for theologians. The rationale for this is two-fold. Firstly, its research is empirically grounded rather than purely theoretical. With moral theology being easily left out of public discourses, not least because it often fails to engage with perceived reality and the corresponding scientific methods, it is necessary to hit the nail on its head: by engaging with the world of the empirical, theology stands a better chance to have a voice in the shaping of future society.

Secondly, experimental economics is closely related to mainstream economics whilst profoundly questioning some of its assumptions. Engaging with experimental economics enables the theologian to critique mainstream economics by engaging with a mode of enquiry that is recognised by economists as being sufficiently scientific. Whilst the object of this thesis is also to critique the methodology of experimental economics, its main purpose is to retain an approach that allows for empirical enquiry and therefore echoes the main aim of experimental economics, namely to test assumptions made by mainstream economics about human behaviour.

All in all, unless the theologian engages with a discipline that is considered sufficiently scientific by economists, he or she is less likely to be heard. Similarly, the necessity of the empirical can also enable theology to remain truer to reality and limit the possibility that the Church's teachings on economic matters will be disconnected from the possible and desirable. However, even before a moral theologian can engage with experimental economics, he or she first needs to understand the differences in what both disciplines understand by trust, and the object of this chapter was to explore the gap between theological and economic categories of trust.

The next chapter will explore in more depth the categorical difference between theology and economics by introducing the thought of Bernard Lonergan, and in particular his work *Insight*. In particular we shall focus on the difference in how trust comes to be defined between theology and experimental economics, and on the assumptions that are made to provide such a definition. It will conclude with a working definition of trust that takes into account both the theological insights drawn from an exegesis of Luke-Acts and the contributions of

empirical study. This definition, as we shall see, will avoid some of the problematic underlying assumptions made by experimental economics.

Chapter 2 - Lonergan's *Insight* and the Construal of Trust

Introduction

The difference between how trust is construed by Luke and how it is constructed in experimental economics is stark, and this chapter will explore in detail the reasons behind this difference. It could be argued that this categorical difference is inherently irreconcilable: the economist may hold onto mainstream economic theory and integrate the findings of experimental economics, perceiving a theological contribution as insufficiently scientific, whilst the theologian may reject secular constructs of trust and decide to maintain a deductivist approach grounded in Biblical hermeneutics; some economists and some theologians may desire to maintain the (self-perceived) purity of their own discipline. The danger here is one of intellectual isolation, thereby ignoring the benefit of an interdisciplinary approach. Such approaches are to be favoured, not the least because emergence between disciplines is pushing the boundaries of knowledge in a way that isolated endeavours could never achieve. The particular reasons why theologians should engage with empirical sciences and economics will be explored in the third chapter.

The theologian could of course seek to integrate the findings of empirical economics without questioning the language used, ignoring the anthropological and metaphysical assumptions that lie behind it. As we will explore in this chapter, this is highly problematic because theology and (empirical) economics have very different understandings of what reality encompasses, and therefore how it can be observed. Similarly, the experimental economist who holds Christian beliefs may attempt to take into account a theological understanding of trust but may lack the necessary grounding in philosophy of science. This would in turn mean he or she would fail to grasp the gap and lack of common ground between theology and experimental methodology. As such, he or she would struggle to make a theological contribution based on empirical findings.

In other words, a method to further understand trust needs to be developed to both remain true to a theological, and therefore moral, account whilst taking into account existing empirical research methods; the remainder of this thesis will seek to delineate such a methodology. But in order to develop it, it is crucial to first explore why trust is construed so differently between theology and experimental economics.

This chapter will begin with a short review drawn from Martin Hollis' *Trust within Reason*, highlighting how our understanding of trust has been affected by different philosophical schools of thoughts since the Enlightenment.¹⁰¹ This review will help cement the understanding that how we construe trust is much more a function of the epistemology of the day than a reflection of what trust really is.

Most of the chapter will then draw on a number of Lonergan's methodological propositions. I will in particular explore how the category of trust is affected by four main differences in metaphysical and anthropological assumptions between (Catholic) theology and experimental economics: firstly, what is understood by "rationality", and how this understanding affects how trust can be comprehended; secondly, "positive vs. normative enquiry", and in particular how a desire to adhere to a positivist framework affects the normative and ethical dimension of trust; thirdly, "objectivity": what approach is necessary to reach an objective understanding of trust if there is such a thing as objectivity; and, fourthly, "truth and meaning": how shifting to a cognitive framework allows for the language and categories of a particular epistemology to be questioned and reviewed intelligently. All of this is to explore the deeper differences between the two disciplines of theology and experimental economics. Once these are clear, the chapter will conclude with a description of what trust is, based on insights gained in the previous chapter and this one.

The Construal of Trust: Philosophical Hinterland

Before conducting an in-depth comparative analysis between the construal of trust from Lonergan's theological perspective, and that of experimental economics, it is necessary to

101 Martin Hollis, *Trust within Reason* (Cambridge: Cambridge University Press, 1998).

understand more broadly how the category of trust is always situated within a particular philosophical or socio-scientific tradition. A failure to do so would mean taking the risk of embracing anthropological and metaphysical assumptions that are at odds with one's own discipline and tradition. The theologian would therefore be well advised to first understand in general how epistemologies compete in order to better discern why and how his or her definition of trust ought to differ from that of other philosophical traditions.¹⁰²

In his book *Trust within Reason*, Hollis conducted an analysis of how the rational utility-maximising anthropological construct is insufficient. He explores each of these in turn: Rational Choice Theory, Hobbes' sense of prudence, Locke's sense of sympathy, Kant's moral imperatives, and Rawls' social contract, before settling on a thicker understanding of trust relationships: individuals are considered reasonable rather than rational, and social rather than individual, with trust mediated through social ties involving a generalised reciprocity. The journey with Hollis will highlight how the construct of trust is never independent from a broader philosophical framework, and will invite theologians to work from within their traditions in order to develop their own understanding of trust.

In Hollis' exposé, Adam and Eve are not cast out of the Garden of Eden but rather, like our theologian and economist, head out for a drink at the pub.¹⁰³ Their path resembles that of a pub crawl with the last establishment on the trail named "The Triumph of Reason"; it is, for Hollis, the best watering hole among all the others from the perspective of the Enlightenment. However, Adam and Eve will be tempted along the way and where they quench their thirst will depend on their ability to surpass a philosophically egocentric and instrumental individualism.¹⁰⁴

The first possible stop is The Rational Choice where Hollis' protagonists would be left with little other choice than to stay there: they would not trust each other to take into account the other's preferences and, as a result, settle for the lowest common denominator of self-

102 See in particular Alasdair MacIntyre, *Whose Justice? Which Rationality?* (Notre Dame, IN: University of Notre Dame Press, 1988).

103 Hollis, *Trust within Reason*.

104 Arguably also Ananias and Saphira's sin.

interest, namely The Rational Choice.¹⁰⁵ They would end up doing so even though neither had a particular desire to spend time there in the first place: they both assume that the other will act self-interestedly, no matter what. In other words, their decision to stay at the Rational Choice is purely a result of anticipating the other's future moves.

Yet, trust is not solely predictive, i.e. based on an assessment of the counterpart's trustworthiness; it can also be normative. For Hollis, rational choice theory abstracts and idealises individuals with a philosophical, even if not psychological, egoism; it reduces decision-making to a process solely driven by satisfying individual desires.¹⁰⁶ But humans are social beings who cannot be detached from others and their actions are very often a function of their relationships: Hollis calls on Thomas Hobbes' prudence and David Hume's sympathy – which in themselves are not sufficient to prevent Adam and Eve from staying at The Rational Choice – to illustrate how trust is ultimately and inherently a social category. Indeed, Adam and Eve might still have ended up at The (Hobbesian) Foole were they not constrained by the fear of societal or divine punishment, or at The (Humean) Sensible Knave, should they only care about those they know and like. But for Hollis, both Hobbes and Hume failed to offer sufficient reasons to move beyond philosophical egoism; the fear of God or the power of discrete personal relationships do not constitute sufficient reasons to detach ethical considerations from a purely personal account of trust.

In turn, a fully Kantian construct of trust – with counterparts motivated by the moral imperative to be trustworthy – would unnecessarily remove any conditional elements. This is a solution to the problem of philosophical egoism (individuals can pursue an impersonal common good through generalised reciprocity), but its lack of individual conditionality means that individual circumstances, needs, and preferences – including ones deemed legitimate – could not play a role in decision-making. Would any parent tell their child's exact location to a kidnapper if they knew that their child's life would be at risk? Could being trustworthy ever be a good thing in this situation? Hollis illustrates through a football analogy:

105 As with the Nash equilibrium in the prisoner's dilemma.

106 Hollis, *Trust within Reason*, 160.

[Kantian] players who get the ball ask themselves what any and every player so placed should do with it, and, thus armed with a universal maxim, act accordingly. When duty says “Pass,” they pass; and the ball finds team mates correctly positioned, since they too have been performing correlative exercises in practical reasoning. Since each player can trust the others completely, [the Kantian team] is faring better than the [Rational Choice Theory team]....

But there are drawbacks to so high-minded a style of play. An initial one was that it used to take time to identify the relevant maxim and by then opponents had collared the ball. This has since been overcome by practice – a case where habit is not the enemy but the friend of reason. The major one remains, however, that the players are unclear how much regard to have for consequences. They soon discovered that, if maxims are kept simple – “Shoot, whenever in the penalty area” – and applied unswervingly, opponents too often get in the way. But the corrective is tricky, since maxims which pack in too many clauses about what the opposition might do are unworkable, and anyway are, arguably, too concerned with consequences to serve as maxims.¹⁰⁷

John Rawls’s solution, The Social Contract public house, is a tempting one to visit if Adam and Eve think through their veil of ignorance. But a bar brawl seems inevitable once past that veil of ignorance: societal trust quickly breaks down when utility-maximisers ignorant of the pre-agreed system act selfishly whilst better-off utility-maximisers seek to use their strong bargaining positions to subscribe only to as little of the welfare state as they need (in order to secure a useful insurance policy for themselves). In the Social Contract setting, Kantians would lose out because they would be bound to do what they agreed to without regard to their particular preferences or consequential considerations.¹⁰⁸

For Hollis, the issue with the philosophical frameworks explored above are their anthropological assumptions. His solution is to consider individuals “as reasonable persons, essentially, if incompletely, social, who solve the problem of trust through socially mediated ties involving a generalised reciprocity”; this calls for a shift from “rational” to “reasonable”, whereby “reasonable persons are not confined to forward-looking reasons and have a moral psychology which distances them from their preferences. They act on maxims suited to joint undertakings.”¹⁰⁹ But the issue has a deeper moral dimension: individuals also need to be

107 Hollis, *Trust within Reason*, 107-8.

108 Hollis, *Trust within Reason*, 93.

109 Hollis, *Trust within Reason*, 127.

equipped to act reasonably, and this against a rationalist construct, or else this may destroy the very fabric of trust in society.

I endorse the fear that instrumental, “economic” rationality can destroy trust, and hence, among other things, the trust which markets need too. Putting this account of rationality into people's minds as a scientifically true account tends to have the sad effect of helping it come truer. But it does not make it true, because it breaches the limits to what can be consistently believed. Conversely, therefore, reasoning them out of it makes it less influential; and reasoning them into a rival account of trust in a well ordered society makes a well ordered society likelier to come about. Since this latter proposition involves no incoherence, we can finally transcend our human limitations as we flesh it out.¹¹⁰

Hollis' argumentation does not present us with a workable understanding of trust from a theological perspective; it simply emphasises how the construct of trust is never independent from a broader philosophical framework. Epistemologies compete and this calls on the theologian to not only be aware of this fact but also to work from within his or her tradition, which is the approach taken in this thesis. Hollis' rationalism and secular attachment to the Enlightenment makes him an unlikely road companion in this theological quest; yet he remains a good drinking buddy at the start of this thesis' journey: he shares a deep distrust of the simplistic constructs of trust in mainstream economics (in particular its philosophical individualism), and he foresees how these can and will have very real negative implications unless they are questioned and rectified.

Hollis and I part ways when it comes to the moral dimension of trust. Hollis would quickly find problematic the theological category of grace, and the metaphysical event of the Incarnation, two givens that will play a pivotal role in the approach taken in this thesis. Therefore, Hollis may better stay and enjoy a few more rounds at *The Triumph of Reason* whilst we depart and meet Lonergan – and his thirst for knowledge – for the remainder of this long and arduous journey.

110 Hollis, *Trust within Reason*, 159.

Lonergan's Methodological Propositions

Lonergan's methodological propositions are a valuable contribution to the project of this thesis. Firstly, they are embedded in the critical realist tradition, which in itself already offers a strong secular critique of mainstream economics (through the work of Tony Lawson, to be explored in chapter four).¹¹¹ Secondly, Lonergan's thought very much encompasses the ethical dimension that is necessary for a theological account of trust. Thirdly, Lonergan has developed a coherent theological approach to engage with empirical science, both from a meta-methodological perspective through *Insight* and from the perspective of the theologian's work and role in *Method in Theology*.¹¹² In that sense, Lonergan offers a uniquely systematic approach to help theologians engage with empirical economics and therefore make a contribution in interdisciplinary conversations about trust. As William Matthews shrewdly observes, *Insight* may seem like an arduous read (and at times may appear theologically heterodox), but its contribution to engaging with the sciences is unmatched:

If one's vision of philosophy is such that its central task is the untying of knots and the avoidance of any fixed position then the programme of *Insight* will seem senseless. But if on the other hand one is alert to the growing problem of interdisciplinary relations, of the growing need for interdisciplinary collaboration, then the slogan of *Insight* will become extremely meaningful.¹¹³

The difficulty to establish a common understanding of trust between experimental economics and theology, we will see, is due to anthropological and metaphysical assumptions that are not easily detached from each other: experimental economics is built on a deterministic framework at odds with Catholic theology; Catholic theology holds that individuals have (contingent) free will. Similarly, the anthropology of mainstream economics demands that individuals are utility maximising and self-interested, whilst theology portrays a more

111 The combination of Lonergan and Lawson will prove particularly helpful to develop a differentiated methodology. Lonergan's *Insight* will strengthen Lawson's critical realist exposé of the metaphysical shortcomings of mainstream economics after having relied on it for the more specific critique of economic methodology.

112 Bernard J. F. Lonergan, *Method in Theology*, 2nd ed. (Darton: Longman and Todd, 1973); Bernard J. F. Lonergan, *Insight: a Study of Human Understanding*, 5th ed., ed. Frederick E. Crowe and Robert M. Doran, Collected Works of Bernard Lonergan, (Toronto: University of Toronto Press, 1992).

113 William Mathews, "Lonergan's Awake: A Reply to Fergus Kerr," *New Blackfriars* 57, no. 668 (1976): 13, <http://www.jstor.org/stable/43246490>.

complex understanding of why individuals make – or fail to make – moral choices. Finally, experimental economics perceives itself to be value free – although whether this actually is the case is, as we will see, highly questionable; theology, however, functions within a normative framework. The former does not offer judgment as to what is good, but the latter at the very least attempts to do so. In particular we will see how economics’ self-positivist position is an epistemological shortcoming that inevitably truncates any explanation of why people choose to trust despite the supposed irrationality.

Rationality

Bernard Lonergan’s account of rationality profoundly differs from that of mainstream and experimental economics. As Neil Ormerod, Paul Oslington and Robin Koning note:

For contemporary economics, the dominant view of rationality is the consistency of the decisions a person makes to satisfy arbitrarily determined preferences. For Lonergan, to act rationally as an economic agent is to recognize the intrinsic intelligibility of economic processes themselves and to conform oneself to that intelligibility.¹¹⁴

The observation of Ormerod et al. is not only well founded, it also highlights the arbitrary nature of mainstream economic theories. Although “economists have been reluctant to claim that human beings ‘really’ are hyperrational” and thus have treated self-interested rationality as an as-if hypothesis, all that matters for economists is the predictive rather than the explanatory power of theories.¹¹⁵ Indeed, for the likes of Milton Friedman, it is irrelevant whether such assumptions are realistic; and Friedman’s instrumentalism continues to dominate experimental economics.¹¹⁶

114 Neil Ormerod, Paul Oslington, and Robin Koning, "The Development of Catholic Social Teaching on Economics: Bernard Lonergan and Benedict XVI," *Theological Studies* 73, no. 2 (2012): 401, <https://doi.org/10.1177/004056391207300206>.

115 Nick Bardsley, *Experimental Economics : Rethinking the Rules* (Princeton, N.J. ; Oxford: Princeton University Press, 2010), 154.

116 See Milton Friedman, "The Methodology of Positive Economics," in *Essays in Positive Economics* (Chicago, IL: Chicago University Press, 1953); Daniel M. Hausman, *The Inexact and Separate Science of Economics* (Cambridge: Cambridge University Press, 1992).

Whilst contemporary economics understands rationality as utility-maximising self-interested behaviour, Lonergan develops a much deeper description of why and how individuals make decisions, and how these decisions can be objectively understood as rational. Most importantly, Lonergan's account of rationality is a moral one. This is in contrast to experimental economics, where individual choices simply adhere to or deviate from an expected rational decision. For experimental economists, "the frequency of errors [i.e. deviations from perceived rational decisions] is important because errors might affect economic efficiency, and methods for removing errors could be useful policy tools."¹¹⁷ In other words, errors are not to be understood as the actualisation of free will but rather as deviations tolerated by policy-makers.

The root of this difference is teleological in nature. For Lonergan, human beings have an intrinsic desire to understand themselves and their environment: "the business of the human mind in this life seems to be, not contemplation of what we know, but relentless devotion to the task of adding increments to a merely habitual knowledge."¹¹⁸ He further describes this eros of the mind:

By the desire to know is meant the dynamic orientation manifest in questions for intelligence and for reflection.... This pure desire has an objective. It is a desire to know. As mere desire, it is for the satisfaction of acts of knowing, for the satisfaction of understanding, of understanding fully, of understanding correctly. But as pure desire, as cool, as disinterested, detached, it is not for cognitional acts and for the satisfaction they give their subject, but for the cognitional contents, for what is to be known.¹¹⁹

In mainstream economics, the object of desire is never specified: we maximise our utility, but what constitutes this utility may differ. One individual may seek to maximise his income whilst another seeks to maximise his sense of compliance with normative expectations. In other words, mainstream economics is interested neither in the object of desire nor in the well-being of the individual, but in the efficiency of markets. The rationale is that it is for economists to adhere to a positivist approach and not to bear normative judgment: whatever

117 Colin Camerer, "Individual Decision Making," in *The Handbook of Experimental Economics*, ed. John H. Kagel and Alvin E. Roth (Princeton, NJ: Princeton University Press, 1995), 588.

118 Lonergan, *Insight*, 97, 303.

119 Lonergan, *Insight*, 372-3.

people desire is what they desire, the only commonality is that they seek to maximise it through rational behaviour. This focus on the process rather than the object is symptomatic of an approach embedded in a desire to adhere to the natural sciences' reliance on mathematics, which is in itself problematic methodologically as we will see in the fourth chapter.

But for Lonergan, we come with an inborn thirst for knowledge, and that knowledge has an object, namely being. For Lonergan, we do not desire knowledge for knowledge's sake but for its telos: apprehending and understanding being. This is in contrast to the economist's assumption that we maximise utility for the sake of maximising it, regardless of the object. For Ormerod et al., a discussion between theology and economics is rendered difficult as a result of the terminological differences: the utilitarianism of economics is not truly teleological, even if it appears to be at first sight, but rather consequentialist and at odds with the Aristotelian-Thomist understanding of teleology.¹²⁰

Being, the teleological object of our desire to know, is "what is known by the totality of true judgments."¹²¹ We must develop ways to apprehend reality and understand ourselves and our environment through trial and error to get to a true representation of being. For Ormerod et al., Lonergan's approach falls within the Catholic natural law tradition, whereby a correct understanding of the telos of actions forms the basis for moral evaluation of those actions; Lonergan further develops the Thomist tradition, where ends are given by human nature and can be apprehended through the proper understanding of the human person.¹²²

Being, for Lonergan, is always intelligible. Therefore, we are on a quest to understand what is inherently intelligible. Additionally, being exists prior to knowledge of it and, therefore, knowledge is shaped by the intelligibility of being: "The notion of being is prior to thinking, for were it not, then thinking could not be for the purpose of judging, for the purpose of determining whether or not the merely thought exists. The notion of being, then, is prior to

120 Ormerod, Oslington, and Koning, "The Development of Catholic Social Teaching on Economics: Bernard Lonergan and Benedict XVI," 401-2.

121 Lonergan, *Insight*, 374.

122 Ormerod, Oslington, and Koning, "The Development of Catholic Social Teaching on Economics: Bernard Lonergan and Benedict XVI," 402.

conception and goes beyond it; and it is prior to judgment and goes beyond it."¹²³ We are also on a quest to understand everything, since being is both all that is known and all that remains to be known.¹²⁴ Being is all-inclusive, and apart from being, there is nothing: "Again, being is completely concrete and completely universal. It is completely concrete: over and above the being of any thing, there is nothing more of that thing. It is completely universal: apart from the realm of being, there is simply nothing."¹²⁵

Individuals are inherently capable of apprehending being, which includes them and their environment, and through this to show self-awareness. But that desire demands the active task of knowing through correct judgments.¹²⁶ For Lonergan, the act of knowing consists of being attentive, being intelligent, and being reasonable; that is, gathering information appropriately, imparting sense to that data correctly, and ensuring that it is grounded empirically.¹²⁷ This is, at first sight, not very different from the mainstream economist assumption of perfect knowledge: we make rational choices based on full information. What is different and remarkable with Lonergan is his insistence on being responsible in the act of knowing, because the enquirer's actions affect his environment. In other words, rationality requires knowing and doing to be aligned in order to maintain the consistency of being pertaining to the individual and his environment:

The detached, disinterested, unrestricted desire to know grasps intelligently and affirms reasonably not only the facts of the universe of being but also its practical possibilities. Such practical possibilities include intelligent transformations not only of the environment in which man lives but also of man's own spontaneous living. For that living exhibits an otherwise coincidental manifold into which man can introduce a higher system by his own understanding of himself and his own deliberate choices. So it is that the empirically, intelligently, rationally conscious subject of self-affirmation becomes a morally self-conscious subject. Man is not only a knower but also a doer, the same intelligent and rational consciousness grounds the doing as well as the knowing; and from that identity of consciousness there springs inevitably an exigence for self-consistency in knowing and doing.¹²⁸

123 Lonergan, *Insight*, 378. For an evaluation of Lonergan's critical realism and the place of being, see Noel Dermot O'Donoghue, "Lonergan's Notion of Being in Relation to His 'Method'," in *Looking at Lonergan's Method*, ed. Patrick Corcoran (Dublin: Talbot Press, 1975).

124 Lonergan, *Insight*, 374.

125 Lonergan, *Insight*, 374-5.

126 Lonergan, *Insight*, 378.

127 Lonergan, *Insight*, 375.

128 Lonergan, *Insight*, 622.

And here is a large gap in anthropology between Lonergan's account and that of the mainstream or experimental economist: the question of what rationality means. For the latter, rationality is, in its strong form, the actualisation of self-interest, and in the weaker form, utility maximisation, even if this is not self-interest per se (e.g. altruism still maximises preferences). But for Lonergan, rationality cannot be separated from ethics because normativity is inherent to being. Thus, economists assume that our decisions are immediate, that they are aimed solely at utility maximisation, that they are made in a vacuum. But Lonergan insist that our actions have effects on our environment. Again, we see how the desire to leave normativity outside the academy means that economics, as a field, decidedly chooses to ignore the ethical dimension of our decisions. The *homo economicus* makes amoral and predictable decisions, whereas Lonergan's human being is much less predictable and leaves the door open to the good (or to its absence through irrational behaviour). Ormerod et al. make this very explicit: "Lonergan introduces a category completely absent from both contemporary economics and most of the social sciences, namely evil."¹²⁹

That is because, for Lonergan, being rational cannot be detached from being both reasonable and responsible, unless we assume that man does not shape his environment in a way that reflects his intelligence and his understanding of the reality he apprehends. Economic theory and experiments look to isolate individual behaviour, but this is problematic because behaviour never happens in a vacuum. It seems a much more reasonable assumption that human beings are not only affected by their environment but are also aware that their actions will reflect their environment, and physically and irremediably affect it.

For Lonergan, knowing necessitates a process of intellectual discernment, and this process can be impaired at various stages. There is always a necessity to choose the data appropriately and provide an intelligent account of its meaning, but also to be reasonable and responsible when substantiating and acting on the veracity of the process. In other words, it is not sufficient to gather data and develop a particular hypothesis for it; the processes of

129 Ormerod, Oslington, and Koning, "The Development of Catholic Social Teaching on Economics: Bernard Lonergan and Benedict XVI," 403.

gathering, ordering, and explaining information are all inherently normative because those processes can be completed and acted upon in different ways.

The process of gathering and ordering information relies on any subject to be attentive to the data, to show intelligence in its interpretation, and to judge whether the application of this interpretation does in fact match the object under study; it would certainly be rather worrying if an experimental economist did not do that. Lonergan's thought points to an irony in the practice of economists as they depict human behaviour and the necessary causality between information and action: in theories and experiments, economists consider the actions of individuals to be determined by certain variables, leaving no room for reflection on the part of those individuals. But economists themselves are engaged in a more complicated thought process in their research that cannot be reduced to a causality between determinants and the theory they create. Therefore, there is no reason to believe that economic decisions are made any differently: individuals act after having considered different options; they act upon reflection, even if those actions end up being inconsistent with their own thinking.

Positive vs. Normative Enquiry

Lonergan agrees with a particular precept of secular empirical research (present in the social sciences and therefore by extension in experimental economics): enquiry requires a methodology that is free from biases. But Lonergan interprets "bias" differently than most secular empirical researchers. For Lonergan, biases are what can corrupt the efforts of our desire to know; they render our observations unintelligible. They appear when the enquirer fails to be fully rational, reasonable, and responsible. The main difference between the mainstream account of biases and Lonergan's is the ethical dimension: the enquirer is engaged in a moral exercise. In other words, there is, for Lonergan, no need for a clear separation between scientific and moral enquiry: what is rational is also what is good, and therefore pursuing the rational is also pursuing the good; our desire to know is also a desire to know the good.

Because Lonergan's writings are rooted in the Thomist tradition, he understands sin to be unintelligible; sin is the irrational: "Why does it occur? If there were a reason, it would not be sin."¹³⁰ In *Insight*, Lonergan insists that the enquirer needs to be self-consistent in order to meet the detachment and disinterestedness central to knowing being, and thus that the enquirer should shun sin.¹³¹ However, the reality of sin, in the form of cognitional and behavioural shortcoming, is very real for every decision made:

By basic sin I shall mean the failure of free will to choose a morally obligatory course of action or its failure to reject a morally reprehensible course of action. Thus basic sin is the root of the irrational in man's rational self-consciousness. As intelligently and rationally conscious, man grasps and affirms what he ought to do and what he ought not to do; but knowing is one thing and doing is another; if he wills, he diverts his attention from proposals to do what is not executed; again, if he fails to will, his attention remains on illicit proposals; the incompleteness of their intelligibility and the incoherence of their apparent reasonableness are disregarded; and in this contraction of consciousness, which is the basic sin, there occurs the wrong action, which is more conspicuous but really derivative.¹³²

The same applies to individuals universally and to the social scientist specifically: the desire to know being can be upset in its course by the unintelligibility that stems from irrational research methods, whereby the social scientist insists on using an inappropriate methodology. For Lonergan, moral failure is what prevents man from truly knowing.

The ethical and its categorical imperatives emerge through speculative intelligence and reason when uncorrupted by sin. What emerges are intelligible orders; these "include concrete objects of desire and exclude concrete objects of aversion, and so from the dynamic exigence of rational self-consciousness, by the simple process of asking what in fact that exigence concretely is, there can be determined a body of ethical principles."¹³³ A universal order then appears:

It penetrates, corrects and develops every particular order; and rational self-consciousness cannot consistently choose the conditioned and reject the condition, choose the part and reject the whole, choose the consequent and reject the

130 Lonergan, *Insight*, 690.

131 Lonergan, *Insight*, 622-3.

132 Lonergan, *Insight*, 689.

133 Lonergan, *Insight*, 625-6.

antecedent. Accordingly, since man is involved in choosing, and since every consistent choice, at least implicitly, is a choice of universal order, the realization of universal order is a true order.¹³⁴

For Lonergan, the good is always a possibility to be grasped by intelligence, and therefore a value that can be acted on. Values then are always true “insofar as the possible choice is rational, but false insofar as the possibility of the choice results from a flight from self-consciousness, or from rationalization, or from moral renunciation.”¹³⁵ They are also terminal “inasmuch they are objects for possible choices, but they are originating inasmuch as directly and explicitly or indirectly and implicitly the fact that they are chosen modifies our habitual willingness, our effective orientation in the universe, and so our contribution to the dialectical process of progress or decline.”¹³⁶ Finally, values are “are actual or in process, or in prospect, according as they have been realized already, or are in course of being realized, or merely are under consideration.”¹³⁷

The scientist’s methodological approach has to be responsible or it risks being misleading. And because the scientist’s actions impact research, he or she ought to follow ethical principles that are self-reinforcing, values that enable the appearance of a universal order which is inherently normative. Lonergan’s thesis is radical: our desire to know draws us not only to the rational, but also simultaneously to the good; the good is identical “with the intelligibility that is intrinsic to being.”¹³⁸ In other words, the more we become true to being through knowing, the more we ourselves become intelligible, and the more ethical patterns emanate from our actions. To put it another way: our actions are as distant from the ethical as our knowing is from being; full intelligibility is the attainment of absolute, normative, and experiential objectivity.

Lonergan’s thesis is also radical: truth can never emanate from theories themselves but rather from the accuracy of our understanding of reality. In other words, a theory may be more or less accurate in explaining a series of events, but because reality cannot always be generalised

134 Lonergan, *Insight*, 628-9.

135 Lonergan, *Insight*, 624.

136 Lonergan, *Insight*, 624.

137 Lonergan, *Insight*, 624.

138 Lonergan, *Insight*, 628.

and pre-determined, it is our understanding of the particular that can shed a truthful light on events. Thus, for Lonergan, truth is a function of the ontological, as with critical realism, but it is determined by our ability to conform our understanding to the being it affirms.¹³⁹ This has a further fundamental effect on methodology because our knowing is inherently normative when it proceeds from being:

As long as human studies copy the methods of the natural sciences, they obtain assured results, but they minimize or omit the human world mediated by meaning and motivated by value. On the other hand, when human studies attempt to deal bravely and boldly with the world mediated by meaning and motivated by value, they find themselves involved in philosophic, ethical, and religious issues.¹⁴⁰

There is, properly speaking, no such methodological paradigm as positivism; positivisms are simply mistaken normative frameworks that are ultimately unintelligible, because they untruthfully represent being. By studying our environments and ourselves, we can become increasingly aware of the normative and the ethical.

This has substantial consequences. One is that deductivism must be brushed aside, “not because there are no universal precepts, nor because conclusions do not follow from them, but because the most basic precepts with all their conclusions fail to go to the root of the matter.” Lonergan makes this claim because “the root of ethics, as the root of metaphysics, lies neither in sentences, nor in propositions, nor in judgments but in the dynamic structure of rational self-consciousness.”¹⁴¹

Everyone possesses this structure of rational self-consciousness, and individuals can choose to act on it or to ignore it; the structure itself is independent of the subjects in that they can depart from it – “[it] can be dodged.”¹⁴² As a result, there is a possible dialectical criticism of subjects; subjects can be judged by that structure. The structure is recurrent in every choice

139 Lonergan portrays critical realism as “a realism that knows the real because it knows what is true.” Bernard J. F. Lonergan, “Moral Theology and the Human Sciences,” in *Philosophical and theological papers, 1965-1980*, ed. Robert C. Croken and Robert M. Doran (Toronto: University of Toronto Press, 2004), 309.

140 Bernard J. F. Lonergan, “The Ongoing Genesis of Methods,” *Studies in Religion/Sciences Religieuses* 6, no. 4 (1977): 348, <https://doi.org/10.1177/000842987700600402>.

141 Lonergan, *Insight*, 627.

142 Lonergan, *Insight*, 627.

made by the subject and therefore universal as an object; it is concrete by nature of its universal recurrence. As a result, “ethical method, as metaphysical, can take subjects as they are; it can correct any aberration in their view by dialectical criticism; and it can apply these concrete views to the totality of concrete objects of choice.”¹⁴³ Whilst Lonergan does not explicitly use these words, the structure of rational self-consciousness is what enables us to take an active part in the life of God through our choices. Equally, non-participation is irrational, with such action being unintelligible, that is sinful, and a deviation from the good and the rational.

Ethics, for Lonergan, find its roots in rational self-consciousness: in simpler, but admittedly somewhat imprecise, words, individuals have the ability to know and act towards the good by participating in a perception of reality as it is and by acting on that perception. More specifically, a critical realist perception of reality (and by extension a critical realist epistemology for the theologian and the social scientist), can become truthful in its representation of the ontological, through inter-subjective cognitional activity.

For Lonergan, ethics cannot be reduced to either “the legalism of remote and static generalities” or the “relativism of mere concreteness”; rather there is an unchanging dynamic objectivity in which every individual can participate to enact the rational and the good.¹⁴⁴ And that rational self-consciousness is not only what “sets forth correct precepts” but also “a radical criticism for mistaken concepts;” it can “invoke dialectical analysis to reveal how situations are to be corrected.”¹⁴⁵ Lonergan’s ethical method therefore is based not only on precepts but also principles, “which are not propositions or judgments but existing persons.” Individuals can hold that truth in the sense that this truth really only comes into full existence through individuals.¹⁴⁶

143 Lonergan, *Insight*, 628.

144 Lonergan, *Insight*, 628.

145 Lonergan, *Insight*, 628.

146 Lonergan, *Insight*, 628. See John A. Raymaker, “The Theory-Praxis of Social Ethics: The Complementarity Between Hermeneutical and Dialectical Foundations,” in *Creativity and Method: Essays in Honor of Bernard Lonergan, S.J.*, ed. Matthew L. Lamb (Milwaukee, WI: Marquette University Press, 1981); Kenneth R. Melchin, *History, Ethics, and Emergent Probability: Ethics, Society, and History in the Work of Bernard Lonergan* (The Lonergan Web Site, 1999), https://lonerganresource.com/pdf/books/6/Melchin,_Kenneth_-_History,_Ethics,_and_Emergent_Probability.pdf. For analysis of Aristotle’s notion of *epieikeia*, see Garrett Barden, “Aristotle’s Notion of *Epieikeia*,” in *Creativity and Method: Essays in Honor of Bernard Lonergan, S.J.*,

This construct of human behaviour is more complex than that proposed by mainstream and experimental economists: not only is the ethical an imperative in that it is what we do by acting rationally (as Lonergan understands it), but the process by which individuals make decisions is held in dialectic with a dynamic and objective knowing. Therefore, how we construct a methodology around decision-making cannot be amoral since there is an objective normativity; however, this normativity is not static, and, as we will see in methodological considerations in the next chapters, the theologian is the one called to discern at a particular time and place what is a truthful rendition of reality.

As seen above, positivism, in particular in the social sciences, is simply not a possibility for Lonergan:

There is a profound difference between natural science and historical study. Both the scientist and the historian would understand: the scientist would understand nature; the historian would understand man. But when the scientist understands nature, he is not grasping nature's understanding of itself; for though nature is intelligible, it is not intelligent. But when the historian understands man, his understanding is a recapturing of man's understanding of himself. This recapturing is interpretation. It differs from the understanding that it recaptures, for it makes thematic, puts in words, an understanding that was not thematized but lived. Yet in another fashion it corresponds to what it recaptures; for it envisages an earlier situation and recounts how an individual or group understood that situation and revealed themselves by their understanding of it.¹⁴⁷

Lonergan's logic is clear: ethics in the research process is necessary because social scientists, like the rest of mankind, seek to grasp the intelligibility of being. This means showing consistency in how economists construct their anthropology and how they understand their own scientific endeavour. Economists are engaged in the on-going process of gaining objective knowledge about how they themselves and other human beings function, and this requires them to hold as few biases as possible.

ed. Matthew L. Lamb (1981). For Barden, the habit of justice emerges through a communal sense of justice that is based on the conviction arising from the fundamental morality of human communal experience. Barden echoes Lonergan: the exercise of communal discernment is ultimately one of moral intersubjectivity that arises through what Lonergan calls the dynamic structure of rational self-consciousness
147 Lonergan, "The Ongoing Genesis of Methods," 347.

Objectivity

There is, for Lonergan, an understanding of objectivity that is inherently normative and dynamic, as both cause and effect of our knowledge and actions. This differs from the declared and self-perceived objectivity of the social sciences, including mainstream and experimental economics. In particular, and as we will explore in more depth in the next chapter, Lonergan implicitly questions the risk of limiting our understanding of the world to the observable. More so, he rejects the determinist approach adopted from the natural sciences, which rely on mathematical functions to explain and predict behaviour. Ormerod et al. highlight this:

Lonergan...has a keen sense of human freedom. Since people will not necessarily act according to the intelligibility of economic processes, even if they understand them, no direct prediction is possible. Predictive modelling of macroeconomic variables is further undermined by the difficulties of aggregation that Lonergan seems aware of—the wholes or systems have properties that do not seem deducible from the behavior of individuals within them. Without predictive models, control (for instance by a government through monetary and fiscal policy) is impossible.¹⁴⁸

Lonergan also strongly adheres to the belief in objectivity and rejects pure relativism. For Lonergan, objectivity is absolute:

Because the content of the judgment is an absolute, it is withdrawn from relativity to the subject that utters it, the place in which he utters it, the time at which he utters it. Caesar's crossing of the Rubicon was a contingent event occurring at a particular place and time. But a true affirmation of that is an eternal, immutable, definitive validity. For if it is true that he did cross, then no one whatever at any place or time can truly deny that he did.¹⁴⁹

He also advances that "several judgments are needed to posit, to distinguish, and to relate," (in short) to gain objectivity, because "posited beings, their distinctions, and their relations are not all unconditioned or there is some defect in absolute objectivity."¹⁵⁰ In other words, several approaches – ultimately inter-subjectivity and arguably inter-disciplinarity – are

148 Ormerod, Oslington, and Koning, "The Development of Catholic Social Teaching on Economics: Bernard Lonergan and Benedict XVI," 402.

149 Lonergan, *Insight*, 402.

150 Lonergan, *Insight*, 403.

necessary to better apprehend and comprehend objects. Only a series of cognitive processes can shape the epistemological and render the ontological truthfully.

In contrast to the self-perceived positivist methodology of economics, Lonergan further posits that objectivity is never detached from a moral dimension:

The ground of normative objectivity lies in the unfolding of the unrestricted, detached, disinterested desire to know. Because it is unrestricted, it opposes the obscurantism that hides truth or blocks access to it in whole or in part. Because it is detached, it is opposed to the inhibitions of cognitional process that arise from other human desires and drives. Because it is disinterested, it is opposed to the well-meaning but disastrous reinforcement that other desires lend cognitional process only to twist its orientation into the narrow confines of their limited range.¹⁵¹

As argued above, Lonergan's description of normative objectivity is a call to anyone desiring to know, that they must ensure that their methods do not produce biased research. It is therefore also a profound call to (social) scientists to adhere to ethics in research, and this goes beyond following set methodological rules: "to be objective, in the normative sense of the term, is to give free rein to the pure desire, to its questions for intelligence, and to its questions for reflection."¹⁵² Again, for Lonergan, logic and method are the "inner exigence of the pure desire to know" and are subject to a dialectic process: "they are to be accepted insofar as they succeed in formulating that dynamic exigence and they are to be revised insofar as they fail."¹⁵³

Lonergan also argues that objectivity has an experiential quality. In particular, scientists must, to start with, have a hunch, a conceptual idea, and even a sense of what to look for before embarking with their research. They also at times need to conceptualise being in a way that is not readily observable or tangible, particularly in the social sciences – but this does not in itself mean that the exercise is not objective. The field of experiential objectivity "is the field of materials about which one enquires, in which one finds the fulfilment of conditions for the unconditioned, to which cognitional processes repeatedly return to generate the series of

151 Lonergan, *Insight*, 404.

152 Lonergan, *Insight*, 404.

153 Lonergan, *Insight*, 404.

inquiries and reflections that yield the contextual manifold of judgment.”¹⁵⁴ Experiential objectivity goes beyond the realm of enquiry in the natural sciences and therefore it can include “not only the veridical deliverances of outer sense but also images, dreams, illusions, hallucinations, personal equations, subjective bias, and so forth.”¹⁵⁵

Lonergan understands objectivity to be the telos of the desire to know rather than what can be verified independently concerning experience. It necessitates reaching beyond the reach of the natural sciences and their methods, methods to which mainstream and experimental economics seek to adhere. Lonergan calls for a broader, interdisciplinary research exercise that goes beyond the remit of any one scientific discipline:

No doubt, a more restricted use of [objectivity] would be desirable if we were speaking from the limited viewpoint of natural science. But we are working at a general theory of objectivity, and so we have to acknowledge as given not only the materials into which natural science inquires but also the psychologist or methodologist or cultural historian inquires.¹⁵⁶

Being, then, is apprehended not solely through the realm of the natural sciences, but also through more experiential fields that pertain to the social sciences such as psychology and history. By extension, human behaviour is not only to be apprehended through the natural sciences and their methods, but also through a wider range of explanatory tools. That is because human behaviour cannot solely be explained through the methodological canons of the natural sciences (where only the use of mathematics and the assumption of simple causality would apply). Rather, human behaviour belongs to an objective reality that is richer than what experimental economists tend to assume. Ignoring experiential objectivity would only be a reductionist apprehension of being, and therefore incomplete if not simply mistaken. This in turn calls for rethinking the hermeneutics of scientific investigation.¹⁵⁷

154 Lonergan, *Insight*, 406.

155 Lonergan, *Insight*, 406.

156 Lonergan, *Insight*, 406-7.

157 As part of a volume of essays by several academics starkly critiquing Lonergan’s *Method in Theology* published two years before, Mary Hess questions Lonergan’s understanding of objectivity. She is particularly critical of Lonergan’s reliance on the “turn to the subject” whereby objectivity is to be found in a form of inter-subjective knowing that follows intellectual, moral and religious conversion because it removes objective criteria. She asks how such authenticity and conversion be recognised, especially given that “Christendom has been too full of sects of warring theologians and philosophers...to allow us to suppose that following Lonergan’s injunctions will dispense us from hard and testing attempts at philosophical argument and the

As Lonergan argued himself, “modern science is not...knowledge but hypothesis, theory, system. It is not in terms of final, efficient, material formal causes, but whatever intelligibility is brought to light by scientific method”; science “may be certain in rejecting earlier views, its own positive contribution claims no more than probability. Hence a modern science offers not demonstration, but the best available contemporary opinion.”¹⁵⁸

The methodology of experimental economics will be critiqued in the fourth chapter, but it is worth highlighting at this stage already the extent to which methodology plays a role in our understanding of human behaviour, and how mainstream and experimental economics are likely to limit themselves in their metaphysical and anthropological assumptions. It has also become apparent how a more complex and differentiated metaphysical framework is necessary to provide better and stronger answers when seeking to apprehend and comprehend reality, and how reliance on the methods of the natural sciences alone is insufficient.

Truth and Meaning

Paul St Amour describes how Lonergan’s self-appropriation through the cognitional allows critical realism to offer an alternative to a dominant idealism, an idealism which is particularly evident in the economists’ reliance on epistemology. Cognitional theory supersedes metaphysics and epistemology in Lonergan’s take on critical realism.¹⁵⁹ This also explains the normative character of any enquiry:

Human consciousness is intentional consciousness. Self appropriation reveals not merely the presence of the subject to itself, but the intentionality of a subject who is

rational elaboration from psychological criteria of objectivity.” It should be recognised here that the point is rather that Lonergan does not attempt to be bound by secular methods, in particular their inherent tendencies (i.e. positivism, naturalism, empirical constructivism) that are problematic from a theological perspective. Instead, he offers an alternative approach that the likes of Hesse confuse with a weak form of subjectivism. See Mary Hesse, "Lonergan and the Method in the Natural Sciences," in *Looking at Lonergan's Method*, ed. Patrick Corcoran (Dublin: Talbot Press, 1975), 70.

158 Lonergan, "Moral Theology and the Human Sciences," 303.

159 Paul St. Amour, "Lonergan and Gilson on the Problem of Critical Realism," *The Thomist: A Speculative Quarterly Review* 69, no. 4 (2005): 576, <https://doi.org/10.1353/tho.2005.0003>.

dynamically oriented, by questioning, to the real. Questioning intends being. Human beings are not satisfied with raw experience. We seek to understand, to interpret, to grasp the pattern, the relation, the intelligible point; we ask "what?" and "why?" with respect to our experience. Nor are we completely satisfied when we attain insights into our experience. Recognizing that any act of understanding is merely hypothetically relevant to what may actually be the case, we feel compelled to raise further relevant questions, to gather and weigh evidence, critically to judge the correctness of our understandings. The dynamism of conscious intentionality is normative because what it intends is the intelligible, the true, the real.¹⁶⁰

Truth, for Lonergan, is inseparable from the relationship between knowing and being: "knowing is true by its relation to being, and truth is a relation of knowing to being" and "truth consists in the absence of any difference whatsoever, between the knowing and the known being."¹⁶¹ There follows an isomorphism between the structure of our knowing and the structure of its proportionate known; "ontological truth, then, is the intrinsic intelligibility of being. It is the conformity of being to the conditions of its being known through intelligent inquiry and critical reflection."¹⁶²

Words can also refer to concepts, to the intangible, and therefore pertain to objectivity in its experiential quality; research would otherwise be impossible if we could not use our intellect to imagine possible explanations of data, and therefore meaning gains its veracity not from the observable but from the intelligibility of being: "truth pertains to the judgment inasmuch as it proceeds from a grasp of the virtually unconditioned, as it conforms to the being it affirms, and as it demands an intrinsic intelligibility in being a condition of the possibility of knowing."¹⁶³

Lonergan rejects an understanding of language whereby internal consistency is the only criterion of truth: "were words related only to other words, their meaning would never be more than verbal. But the mere fact that a word can occur in a sentence that is affirmed endows it with a basic reference to the objective of intelligent and rational consciousness, to being."¹⁶⁴ Meynell explains that for Lonergan, "the main clue to the relationship between

160 Lonergan, *Insight*, 579.

161 Lonergan, *Insight*, 575.

162 Lonergan, *Insight*, 576.

163 Lonergan, *Insight*, 580.

164 Lonergan, *Insight*, 580.

language and extra-linguistic reality is not a hierarchy of truth-functionally related propositions;" rather, "it is that the world, the sum-total of things and facts, is what is to be known by putting questions to the data of experience, propounding possible explanations, and accepting as probably or certainly true those explanations, which best account for the data."¹⁶⁵ The desire to know, then, also demands a language that is truthful, in that it enables the knowing to be identical with the known; the categories used by social scientists matter and must be dialectically engaged with what is observed. Indeed, "equivalent to Wittgenstein's insistence on the essential publicity of language is Lonergan's assertion that it is at the level of judgment that we apprehend a shared a public world."¹⁶⁶

Construing Trust as an Economic Virtue

We saw in the previous chapter how the categories of trust emerged differently in theology and economics and that what they ultimately describe are inherently different even if they relate to the same object; there is a stark inherent dissonance between the two disciplines. This dissonance can only be reconciled through two options: one option is to admit that the two disciplines share two different viewpoints and cannot ultimately speak the same language, i.e. incommensurability. Alternatively (the approach taken in this thesis), resolving the dissonance between disciplines requires a shift in the locus of truth from the epistemological to the ontological through cognitional activity, thereby rejecting the idea that the two disciplines cannot adhere to the same anthropological assumptions and metaphysics.

165 Hugo A. Meynell, "Lonergan, Wittgenstein, and Where Language Hooks onto the World," in *Creativity and Method: Essays in Honor of Bernard Lonergan, S.J.*, ed. Matthew L. Lamb (Milwaukee, WI: Marquette University Press, 1981), 371. See also Hugo A. Meynell and Bernard J. F. Lonergan, *The Theology of Bernard Lonergan* (Atlanta, GA: Scholars Press, 1986).

166 Meynell, "Lonergan, Wittgenstein, and Where Language Hooks onto the World," 378. See Ludwig Wittgenstein, *Tractatus Logico-Philosophus, Tagebücher 1914-1916, Philosophische Untersuchungen* (Frankfurt am Main: Suhrkamp, 2014). For a (partially) Wittgensteinian critique of Lonergan from Fergus Kerr and the ensuing discussion with Matthews Williams S.J., see Fergus Kerr, "Objections to Lonergan's Method," *New Blackfriars* 56, no. 662 (1975), <http://www.jstor.org/stable/43246398>; Mathews, "Lonergan's Awake: A Reply to Fergus Kerr."; Fergus Kerr, "Beyond Lonergan's Method: A Response to William Mathews," *New Blackfriars* 57, no. 669 (1976), <http://www.jstor.org/stable/43246503>. For a particularly meaningful engagement between theology and Wittgenstein's work, including on the question of freedom and determinism and bodies as loci of language as material practice, see Rowan Williams, *The Edge of Words* (London: Bloomsbury, 2014), 35-65;66-94.

Such an approach requires a starting point, and the starting point here is Christian theology – it will become clear over the course of this thesis why a theological construct may yield a richer understanding of trust. But more importantly, if the theologian is to be sufficiently and successfully critical of (experimental) economics, he or she must offer a hypothesis that can be proven at least in part empirically. The applied methodological consequences of using a particular theological language and category of trust will be explored in the next chapters.

Yet, in order to develop a differentiated methodology, the theologian must offer a starting point, something to be observed, and this effectively means a description of what to look for. And whilst any working theological definition of trust will have to be revised dialectically through empirical findings, a theological definition is clearly required if theology is to critique (experimental) economics. Any working theological definition of trust ought to be grounded in a privileged theological source – such as *pistis* in Luke-Acts. Additionally, any such concept of trust must reflect three theological realities. Firstly, trust between individuals, especially in an economic setting, cannot be dissociated from an individual's trust, distrust, or in-existent trust in God.¹⁶⁷

Secondly, trust needs to be construed as primordial over trustworthiness. Whilst perceived trustworthiness does facilitate trust, trust need not be dependent on trustworthiness: not only is it possible to trust an anonymous stranger without any indication of their trustworthiness, as in the Trust Game, but individuals can also make the conscious choice to trust even if they do not believe that the other will reciprocate. This, as observed in the previous chapter, may be because an individual wants to enable the other to show trustworthiness: a parent may trust their child with some freedom, without believing that they will necessarily use it wisely, but with the hope that they will learn to earn their parent's trust given the chance. This situation exemplifies how trust is not a calculating act but rather a choice with a clear moral dimension. Empirical evidence surveyed in the fifth chapter will further cement this phenomenon.

167 In a more universal context – outside the scope of this analysis – God may arguably be replaced with a form of generalised optimism or trust in a benevolent state.

Thirdly, we must understand that, from a theological perspective, participation in the life of God is made possible through trust in God; and that the *ekklesia*, the Body of Christ, is an ontological reality in which Christians are called to participate through the Holy Spirit.

Any theological understanding of trust should also take into account a number of additional metaphysical demands that are in line with its own premises. Those posited by Lonergan in *Insight*, and as explored above, provide a strong basis for an appropriate metaphysical framework: using a specifically theological understanding of rationality, acknowledging the ethical throughout the research process, considering the implications of an objective reality that may not be fully observable, and accepting that truth is inherently ontological. How this specifically applies to the concept of trust will be explored below.

Lonergan's account of the rational means that throughout the decision-making process, individuals are gathering information about their counterpart and about the effects of their counterparts' action(s): all of this inevitably has an ethical dimension. Trustors in reality do assess, or at least seek to assess, the trustworthiness of their counterpart. Luke's *pistis* therefore cannot be about blindly trusting anyone, in particular in the light of Lonergan's rationality. As argued in the previous chapter, trust in God informs charity, and in such a dynamic, charity is not about giving to the poor for the sake of giving to the poor; it is not a Kantian moral imperative. Rather, charity is a consequence of reliance on God, in light of which the reasonable thing to do is to share one's surplus of wealth with the needy. This is very different from being expected to blindly trust anyone because God will always provide. Trust is an individual moral good in that it can foster the common good, and is therefore a social good as well, but equally requires discernment.

In that sense, Christians ought to trust God but they should not trust others for the sake of trusting them. Rather, Christians can rely on God and are therefore in a better position to take a risk and make a loss, in particular if the outcome would lead to the common good and if full information is not fully available, i.e. if the counterpart's trustworthiness is difficult to assess. This is in particular true in the case where someone is deemed trustworthy but still decides to betray the trust held in him or her: the one who trusts God can take that chance. The reason is that trust can elicit trustworthiness, as we will see through empirical studies in the

fifth chapter; trust can be conducive of the good and as such should be enacted unless there are good reasons not to. Such reasons can be instances where trust is not conducive to the good, such as the trust held between members of a criminal gang, or possibly where the counterpart is clearly not deemed trustworthy.

If we follow Lonergan's thinking, being rational, intelligent and reasonable, in the case of trust, means fully engaging with the information available about the counterpart: what effect trusting them can have, and whether it is conducive of the common good. There is a necessity to gather this information, understand it, and discern the right decision to make. The decision is at least partially based on observable information, such as social history or the reputation of the counterpart and on an appraisal of whether the effect of trusting a counterpart can have a positive effect on them and wider society. But there is ultimately an element of faith in the decision because it is not entirely based on information but on beliefs about future outcomes, and such beliefs are inherently normative: either I believe that all other things being equal I achieve something good, or I don't.

In the case of the early *ekklesia*, Ananias and Sapphira could see for themselves, as could anyone else, that selling possessions and putting everything in common was working. Therefore, trusting Peter with the money gained by selling the field would have been conducive of the good by enabling others in the community to receive what they needed. Within the logic of the Lukan narrative, the community was a tangible actualisation of the good enabled through trust in God, and Ananias and Sapphira had no reason to distrust the good achieved with such faith. The irrationality of their choice was therefore not based on insufficient information but rather simply failing to act on it; there could be no explanation for their sin as their action was irrational. Further, Lonergan's concept of rationality in the context of this story cannot be detached from an understanding of the good: doing the right thing was clearly the rational choice; distrust in God (and therefore not enabling others to have enough) made no sense. Yet Ananias and Sapphira still lied about the proceeds from the land, and for no good reason; in view of the irrationality of their action, they plainly sinned and were excluded from the Early Christian community.

In view of this, and against the construct of mainstream and experimental economics, rationality is not about self-interested utility-maximisation but about virtue: it is the morally right thing to trust others in cases where it is difficult to assess their trustworthiness (rather than expecting them to betray my trust). Such an ethical construct of trust goes plainly against what economic theory would recommend, namely that people would necessarily default and therefore no one would trust anyone else (i.e. the Nash equilibrium). The behaviour expected of the counterpart and the decision we make on this account epitomises the profound epistemological differences between a theological and an economic account of trust: once we move away from a self-interested utility-maximising anthropology and allow for the ethical, our understanding of how decisions are made, and therefore of expected behaviour, is entirely different. Here we see clearly the importance of using a theological category to challenge the categories of economics.

The use of economic theory is therefore clearly to be questioned: relying on the intrinsic logic of a particular epistemology is problematic; the theologian cannot blindly rely on the categories of economics (or other social sciences) without questioning them or, better, developing his own. Lonergan, in one of his later essays, highlights how a hermeneutic of suspicion towards the social sciences, and economics in particular, is crucial:

The human science is itself open to suspicion. Its representatives are divided ideologically. They advocate contrary courses of action, all of which have their respective good points, but none is without very serious defects. The notorious instance at the present time is economics.¹⁶⁸

This reliance on a specific worldview, in particular an anthropology that limits human beings to the role of self-interested utility-maximising agents, is likely to be proved wrong by a more careful study (the literature review conducted in the fifth chapter highlights these shortcomings).

Additionally, from a theological perspective, not only the category used for trust but also the methodology needs to reflect theological assumptions rather than (very different) economic

168 Lonergan, "Moral Theology and the Human Sciences," 302.

ones. The definition of trust must be inherently theological regardless of whether current methodologies used by experimental economics can fully observe trust. Such a definition must encompass the ethical and cannot be positive; the research method also has to be inherently ethical; and the theologian must test his own category to the extent that it is reasonably possible (to avoid seeming unmoored from real life).

Finally, the ethical objectivity that derives from Lonergan's dynamic rational self-consciousness demands that any understanding of trust is derived from the discerning subject, in this case the social scientist. As I will argue in the next chapter, truth is necessarily embodied because of the metaphysical event of the Incarnation; trust becomes "true" through participation in the life of God, through the Church or through Luke's *ekklesia*. The meaning and implication of the theological category of trust is therefore necessarily derived from participation in the life of God. This means that the theologian must take a part in the process of apprehending and comprehending trust alongside other social scientists to bring out the true meaning of trust and its implications.

In the light of the above, a differentiated working definition of trust is required. Trust needs to be clearly defined as a theological category. It must also encompass a clearly ethical dimension in that its telos is the common good. Such a telos is what ultimately informs the decision to trust, alongside the trustworthiness of the counterpart. The decision to trust must be rational, intelligent, and reasonable; it must take into account available information, and this information must be understood well and grounded in sufficient observations. But, ultimately, this decision also demands taking a risk. Theologically speaking, the decision demands faith (trust in God), because ultimately God is also relied upon. It cannot be solely a calculative act but rather demands both discernment and faith, which is something developed through habit. Because the good is something that emerges through habitual behaviour, trust is best understood as a virtue.¹⁶⁹ I therefore suggest the following definition of (Lukan) trust, for which the methodological consequences will be explored in the next chapters:

169 Here, I depart from Peperzak's argument that trust should not be considered a virtue: for him, "many beings, among them quite a number of persons, deserve distrust from those who seriously try to be or to become good, whereas trust among murderers can be vicious. The idea that trust is a virtue must consequently be avoided." Peperzak, *Trust*, 17. A theological virtue, as would be the case with Lukan trust, can never be detached from the common good as telos. In particular, and following Lonergan's thought, a virtue is

(Lukan) trust, as a theological category, is a virtue necessary to achieve the economic common good, enabling an individual to choose to act in a way that leaves him or her vulnerable to the action of someone else by instead primarily relying on God for his or her welfare.

Conclusion

This chapter has explored why categorical differences truly matter and how an uncritical borrowing of social scientific categories would amount to naivety on the part of the theologian. Instead he or she is invited to develop a specifically theological category to critique other categories and how those categories are construed. This is because categories are never neutral in the metaphysical and anthropological assumptions that they make, and these assumptions can be at odds with those of (Catholic) theology.

Hollis' account highlighted how philosophical currents have construed trust differently since the Enlightenment, epitomising how our understanding of trust is always rooted within a particular philosophical framework. He then proposed a departure from the rational and calculating account of trust to an act that is a reasonable choice when socially embedded in thick relationships. But Hollis' proposal is insufficient from a theological perspective: it cannot account for grace and would be at odds with a Christian account of morality. In turn, Lonergan's methodological propositions shed light on the shortcomings of experimental economics' construal of trust and allow for a differentiated methodology to apprehend trust.

We saw how, for Lonergan, an account of rationality cannot be separated from an account of the good; humans take decisions situationally, discerning through their judgment; such a judgment should be based on an understanding of what would lead to the greater good. As a result, it is very difficult to maintain a positivist methodology because individual choices cannot be understood from a neutral perspective but rather only within a (tentative)

the result of discernment rather than simply following a moral imperative (as with Hollis' Kantian football team). Lonergan's cognitive framework is also what prevents trust from becoming a Machiavellian end that would justify any means to achieve it: it would be unthinkable to have Lonerganian mafiosi maintaining trust in the criminal organisation through the execution of strayers.

normative framework. Yet, experimental economics accounts neither for human discernment nor for its ethical dimension, thereby reducing the act of trusting to an amoral Pavlovian reaction determined by a number of variables. Lonergan's *Insight and Method in Theology* invite us to depart from the methodology of the natural sciences and towards a richer, interdisciplinary approach when it comes to the empirical study of trust. There, human judgment should also guide the discernment of what trust is, questioning existing approaches; truth derives from a cognitional activity that apprehends reality rather than purely from epistemology. As a Catholic theologian, Lonergan maintains a sense of morality and free will in his methodological contribution, and also provides an alternative to the problematic anthropological and metaphysical framework of experimental economics; it paves the way for a differentiated methodology that will be developed in the later chapters of this thesis.

The chapter then concluded with a definition of (Lukan) trust construed as a virtue, a habit formed through free will, framed in light of a teleological (common) good, and the belief in a benevolent God. This is a departure from the problematic assumptions of experimental economics, and it is enabled by Lonergan's methodological contribution.

This chapter has shown that the theologian ought to refine his or her own understanding of theological trust, and to engage with economics in order to critique that discipline's methodology and its category of trust. Unless the theologian is able to understand the need for such research, he or she will not be able to engage intelligently with other disciplines. The rationale for such research was explored in this and the previous chapter; the theological imperative for theologians to engage with economics will be the focus of the next chapter.

Chapter 3 - The Theologian's Imperative to Engage with Empirical Economics

Introduction

The previous two chapters explored, firstly, how the meaning of trust profoundly differs between a theological account and the construct used in experimental economics, and, secondly, the reasons behind these conflicting accounts. The differences in metaphysical and anthropological assumptions mean that categories are not commensurable, let alone substitutable. It follows that the theologian needs to use his or her own categories, or else risks taking over assumptions that are alien to theology.

It became clear that a theological category of trust would necessarily call for a differentiated methodology if we sought to observe it. This is because the premises of economics, including experimental economics, would be at odds with those of theology. This will be the focus of the following chapters. But before the theologian can fully engage with the methodology of experimental economics, one particular question remains: why should theologians engage with empirical economics? Radical Orthodoxy, a prominent example of Christian exceptionalism in British theological thought, would reject a meaningful engagement with the secular endeavour and would instead want to develop a specifically Christian social science. Engaging with empirical economics for a theologian is indeed far from straightforward and demands a closer discussion of why and to what extent such an exercise is both meaningful and necessary. This chapter will address these questions and prepare the ground to answer the question of how theologians should proceed in the exercise.

This chapter will start with what I posit is the necessary starting point of the theologian in his or her understanding of the empirical: the Incarnation as a metaphysical event. The Incarnation is what shapes a theologian's understanding of reality, of the ethical, and ultimately of his or her intellectual method. The Incarnation, a uniquely Christian and Trinitarian claim with profound consequences, determines the theologian's metaphysics and

his or her engagement with both the empirical and the ethical: for Christians, Christ is the real, embodied example to follow. Lonergan's approach to ethics offers a particularly strong virtue-based alternative to a Kantian deontological framework (in spite of John Milbank's attempted intellectual ambush in the form of Radical Orthodoxy, which we shall explore below). That is because Lonergan's embodied ethics is derived from the dynamic structure of rational self-consciousness, as explored in the previous chapter. It is in this dynamic, immanent and embodied framework that the theologian can recover the moral dimension in economic science, and in particular empirical economics. But to do so requires referring to the Incarnation and its metaphysical consequences.

A further, brief discussion of nature and grace will first be necessary to fully present Lonergan's *Method in Theology*, in particular in view of the critique that followed its publication. *Method in Theology* will, in turn, provide the framework for a meaningful encounter between theology and (experimental) economics without compromising theology's own premises: whilst the volume was not written specifically to engage with economics but rather with history, it nevertheless offers an approach on how theologians can intelligently engage with other social sciences and how they can draw the necessary insights both to inform their own theology and to communicate (inherently moral) theological insights to the wider world in the form of contemporary teachings. In particular, the move from a deductivist theological approach to one that engages with the empirical is what will enable a true dialogue between theology and economics.

The chapter will then conclude with an overview of Lonergan's macroeconomic writings and how they are relevant to this thesis. We will see in particular (1) how models of individual decision-making and macroeconomics relate in the case of Lonergan, and (2) the ensuing necessity to observe and understand the moral dimension of economic decisions in greater depth. Whilst Lonergan did not focus much of his attention on microeconomic behaviour (the focus of this thesis), his reflections on macroeconomics are founded on questions of moral decision-making; in particular, he calls on economists to conduct research that reveals how moral precepts form the basis of economic processes, and he calls on moral theorists to develop economic precepts that arise out of economic processes. It is from this understanding that we will derive the mandate to engage with empirical economics.

The Incarnation and the Dialectic between Ethics and the Empirical

Lonergan sets out what theology ought to do in the introduction of *Method in Theology*; the volume is a profound call to anchor at the centre of the discipline the dialectic between religious experience and the understanding of that experience: “a theology mediates between a cultural matrix and the significance and role of a religion in that matrix.”¹⁷⁰ Lonergan took a strong and explicit stance against what he saw as a “classicist notion of culture” and in particular the belief that there is one culture that is both universal and permanent. Rather, he argues for an “empirical notion of culture” that is “the set of meanings and values that informs a way of life”; such an empirical notion of culture “may remain unchanged for ages. It may be in process of slow development or rapid dissolution.”¹⁷¹ As a result, theology is an ongoing process; theology needs a method more than a set of static universal ethical truths, and “method is not a set of rules to be followed meticulously by a dolt. It is a framework for collaborative creativity.”¹⁷² Such a method would understand that the theologian’s tasks take place “in the context of modern science, modern scholarship, modern philosophy, of historicity, collective practicality and coresponsibility.”¹⁷³

In *Method in Theology*, Lonergan does not directly discuss how a theologian should specifically engage with disciplines other than history, but his methodological approach to theology inherently demands of theologians to engage with those disciplines; this was in particular the case with economics, as will be explored at the end of this chapter. There is, for Lonergan, an implicit desire to understand doctrine through contextual human experiences in order to better communicate theology to contemporaries. But, as I will argue below, in order to engage with other social sciences, the theologian must make the event of the Incarnation central to his endeavour because the reality of a God incarnate is what helps guide his or her understanding.

170 Lonergan, *Method in Theology*, xi.

171 Lonergan, *Method in Theology*, xi.

172 Lonergan, *Method in Theology*, xi.

173 Lonergan, *Method in Theology*, xi.

The Metaphysical Event of the Incarnation

The emergence of ethics over time and the inherent normativity of scientific endeavours, which were introduced in the last chapter, do not in themselves necessitate a specifically Catholic paradigm: a naturalist account would not differ substantially if all that is retained of Lonergan's *Insight* is a desire to know whereby individuals are increasingly intelligent and responsible. Similarly, a non-Christian theist account could also embrace the dynamic structure of rational self-consciousness advanced by Lonergan. It is therefore necessary to ascertain what would make an engagement with empirical economics specifically Christian.¹⁷⁴

This would, in the first place, need to start with the understanding that the basis of ethics and metaphysics is the dynamic structure of rational self-consciousness, rather than sentences, propositions, or judgments. The moral discernment of economic decisions, we will see below, is to be entrusted to theologians.

Any Christian ethic that is driven by the dynamic structure of rational self-consciousness is inseparable from a participation in the Body of Christ.¹⁷⁵ From a Christian perspective, Christ is the specific paradigm that determines the basis of ethics and metaphysics, and therefore how he actualised his dynamic structure of rational self-consciousness is what determines truthful knowing of being. Christ is the embodiment of truth that operated as man but without sin, and therefore fully knowing and being divine will: he was one person but of two wills. A Christian theological understanding of ethical decision-making must be informed by how Christ – as the embodied example for Christians to follow – came to make perfect decisions himself. In other words, Christology is crucial to understanding the role in making good decisions of nature and grace, and of free will – both themes which are central to this thesis.

174 On Christology, following Lonergan's approach to history, see Ben Meyer, "The "Inside" of the Jesus Event," in *Creativity and Method: Essays in Honor of Bernard Lonergan, S.J.*, ed. Matthew L. Lamb (Milwaukee, WI: Marquette University Press, 1981).

175 On soteriological questions from a Lonerganian perspective, see William Lowe, "Towards a Responsible Contemporary Soteriology," in *Creativity and Method: Essays in Honor of Bernard Lonergan, S.J.*, ed. Matthew L. Lamb (Milwaukee: Marquette University Press, 1981). Also see Sebastian Moore, "For a Soteriology of the Existential Subject," in *Creativity and Method: Essays in Honor of Bernard Lonergan, S.J.*, ed. Matthew L. Lamb (Milwaukee, WI: Marquette University Press, 1981).

In *The Ontological and Psychological Constitution of Christ*, Lonergan explains that the hypostatic union “can be constituted only by that real act of existence that is also identical with the act of understanding and willing.”¹⁷⁶

Insofar...as Christ as man senses, he is empirically conscious; insofar as he understands, he is intellectually conscious; insofar as he judges, he is rationally conscious; insofar as he chooses, he is morally conscious.... Christ as man...both understands and affirms himself, but it is through his intelligence that he understands himself and through his judgment that he affirms himself.¹⁷⁷

For Lonergan, the two natures and the two sets of operations are both present in Christ unchanged and unmixed: “in Christ, God and man, there is but one person that performs both divine and human operations; in view of this oneness of person, therefore, only one principle that operates...is, to be admitted, namely, the divine person itself.”¹⁷⁸

Lonergan further addresses in *The Incarnate Word* how it is that Christ, being fully human and fully divine, could fulfil divine will through his dynamic structure of rational self-consciousness: the divine Word united to himself flesh animated by a rational soul and became like us.¹⁷⁹ Christ, one person and two natures, and therefore two wills, one divine and one human, willed and operated at two distinctive levels, but undivided:

One and the same is both truly God and truly man; that is the one person of the divine Word subsists in two natures, divine and human; and since the person must not be divided so as to have one person who is divine and another who is human, the union is said to be in the person, in contradiction to the opinion of the Nestorians; on the other hand, since the two natures are not to be merged so that a single nature somehow results from the two, the union is said to be on the basis of the person, in contradiction to the opinion of the Monophysites.... A being in the strict sense is that which is. But in Christ, God and man, the very same one that is God is also man; and therefore since there is only one reality that is both God and man, Christ is necessarily one that-which-is, that is, one being. Finally, a thing is that which has a nature. But in Christ, God and man, there is not one thing that has a divine nature and another thing

176 Bernard J. F. Lonergan, *The Ontological and Psychological Constitution of Christ*, ed. Michael G. Shields (Toronto: University of Toronto Press, 2002), 133.

177 Lonergan, *The Ontological and Psychological Constitution of Christ*, 209.

178 Lonergan, *The Ontological and Psychological Constitution of Christ*, 227.

179 Bernard J. F. Lonergan, *The Incarnate Word*, trans. Charles C. Jr Hefling, ed. Robert M. Doran and Jeremy D. Wilkins (Toronto: University of Toronto Press, 2016), 178-95.

that has a human nature, but the one same thing has both natures. Christ is therefore one thing.¹⁸⁰

Christ was fully human and fully divine, and therefore could operate fully as human thereby giving us an idea of what it means for a human being to follow divine will: he prayed, gained wisdom, was obedient, suffered. For Lonergan, “these are operations of a man who has a human intellectual soul, and they are not the operations of a divine nature that has put on human flesh.”¹⁸¹

Lonergan proposes that there were two natural operations and two natural wills in Christ: “as in Christ, God and man, the divine nature is other than the human nature, so also the divine natural operation in him is other than the human natural operation, and likewise the divine natural will is other than the human natural will.”¹⁸² For Lonergan, when Christ willingly accepted his own death, love acted freely and was therefore undetermined; it was unpredictable yet irresistibly followed divine will:

If God infallibly knows that such and such a free, created will be; if he efficaciously wills that it will be, if he irresistibly makes it occur then this act cannot but be. But with regard to every free, created, future act, God infallibly knows and efficaciously wills and irresistibly acts. Therefore, every such act is necessitated.¹⁸³

The event is necessitated because it is “intrinsically unthinkable for God to know infallibly and nevertheless err; it is intrinsically unthinkable for God efficaciously to will what nevertheless does not happen; it is intrinsically unthinkable for God irresistibly to effect what is not effected.”¹⁸⁴ God’s infinite perfection means that divine knowledge is infallible, as is divine willing and its efficacy, and divine action and its irresistibility.

It follows that “no contradiction between the complete dominion of the divine will and the perfect freedom of the human will can occur.”¹⁸⁵ Christ, as man, freely accepting his suffering

180 Lonergan, *The Ontological and Psychological Constitution of Christ*, 109.

181 Lonergan, *The Incarnate Word*, 191.

182 Lonergan, *The Incarnate Word*, 315.

183 Lonergan, *The Incarnate Word*, 743.

184 Lonergan, *The Incarnate Word*, 743.

185 Lonergan, *The Incarnate Word*, 747.

and death, followed the irresistible divine will, and acted on love through rational self-consciousness. In other words, Christ's suffering, death, and resurrection were not predetermined as much as they were irresistible and self-actualised because Christ, in his divine nature, knew being fully, as he himself was God. Determinism, then, has no place in Christian metaphysics and ethics, but only the unpredictable possibility of love, as when divine will irresistibly self-actualised itself through the suffering, death, and the resurrection of Jesus Christ.

Christ, as the truth incarnate, a person of the triune God, actualising knowing fully proportionately to being, is the example to follow; rational, intelligent, and reasonable knowing, and responsible doing are all fulfilled in Christ. Christians are called to follow divine will and take their example from Christ. This means not so much replicating the very acts of Christ as replicating his desire for knowing and doing the divine will in a fully rational, intelligent, reasonable, and responsible way. The challenge for the theologian then lies not so much in acknowledging this proposition as in understanding the implications of this paradigm when deriving ethics.¹⁸⁶

Truth incarnate is ontological, that is real, in the person of Christ, and equally cognitive; it is fully self-conscious. Knowing, the epistemological, is then derived from and is fully proportionate to being in the person of Christ. Ethics, therefore, cannot be reduced to a set of static and systematic sentences, propositions, and judgments that are detached from the living Christ; ethics cannot be static, but is rather the result of a method that acknowledges the dynamic structure of rational self-consciousness, and specifically acknowledges our desire to know being, and the freedom which that desire demands.

The metaphysics of the Incarnation as the source of ethics also demands a real and tangible Church – even if it is very imperfect and its boundaries are not always clear; if the Word became flesh, then the Church is a physical body that continues to embody divine knowing in this time and place. A collective, intersubjective and incarnated dynamic structure of rational

186 See also Melchin, *History, Ethics, and Emergent Probability: Ethics, Society, and History in the Work of Bernard Lonergan*.

self-consciousness is necessary to actualise love on earth.¹⁸⁷ In that sense, Scriptures would be insufficient because they can only speak of the truth, rather than be the truth (since the Scriptures are neither knowing nor being). Communities of Christian faith, like the Early Church, are the loci where Lukan trust is to be observed, even if these fail to fully embody it. This particular observation will be further explored in the last chapter alongside a revised methodology to observe Lukan trust.

Critiques of Lonergan's Metaphysics and Methodology

Radical Orthodoxy: both Friend and Foe

John Milbank's rejection of modernity, and by extension of contemporary social and economic sciences, lies in a desire to expose how secular thought is (paradoxically) both inherently religious and fundamentally theological. For Milbank, the assumptions of modernity are no more justifiable than the Christian positions, and in fact they owe a "perverse debt" to Christianity, undergirded though they be by a heterodox theology. In other words, scientific social theories are theologies or anti-theologies in disguise.¹⁸⁸ This means, in turn, for Milbank, that "if theology no longer seeks to position, qualify or criticize other discourses, then it is inevitable that the discourses will position theology."¹⁸⁹ It is such a belief that, in part, prompted the pursuit of this thesis and the desire to offer a critique of experimental economics. But equally, Milbank's bold and at times broad-sweeping statements call for a more precise endeavour than what he himself offers from purely a historical and metaphysical perspective; Radical Orthodoxy, alas, does not appear to (want to) engage (constructively) with social scientific methodology.

187 See Joseph Komonchak, "Lonergan and the Tasks of Ecclesiology," in *Creativity and Method: Essays in Honor of Bernard Lonergan, S.J.*, ed. Matthew L. Lamb (Milwaukee, WI: Marquette University Press, 1981). The chapter summarises Lonergan's ecclesiology in *Method in Theology* as a community communicating Christ's message and emanating from the inner gift of God's love to live out the gift now through experience (including the experience of transformed intersubjectivity). See also Tad Dunne, "Consciousness in Christian Community," in *Creativity and Method: Essays in Honor of Bernard Lonergan, S.J.*, ed. Matthew L. Lamb (Milwaukee, WI: Marquette University Press, 1981).

188 John Milbank, *Theology and Social Theory* (Blackwell, 1993), 1-3; James K. A. Smith, *Introducing Radical Orthodoxy: Mapping a Post-Secular Theology* (Milton Keynes: Paternoster Press; Grand Rapids, Mich.: Baker Academic, 2004), 127.

189 Milbank, *Theology and Social Theory*, 1.

Milbank's understanding of how (neo-)classical economics developed is helpful: for him, a series of shifts in political economy led to some of the shortcomings of economics as a social science; this began with the reversal of order of priority between desire and goal in economic theory, whereby the desire itself, rather than its telos, became the driver of economic exchanges:

Adam Smith contends that the desire for gain is as much to do with "vanity" as security or comfort-seeking, and he develops a new fundamental image of "man" as homo mercans, a figure engaged in a constant struggle to match persuasively his own desire to the desires of others in the most advantageous manner possible.¹⁹⁰

For Milbank, this is a "new secular aesthetic, detached from its transcendental link with the True and the Good;" the human passions, through the laws of supply and demand, become an economy that is beautiful by itself, in the absence of God, through its "inner consistency and the 'harmony' of the operations of utility."¹⁹¹ In such an aesthetic, the division of labour would be ascribed not to an immanent formality and finality but rather to the extrinsic work of a designing agent, God or Nature:

Hence, God-Nature is not merely invoked as a primary or creative cause operating "through" secondary causes, as for traditional Christian thought. On the contrary, natural theology is invoked as a "scientific" complement to science because it also traces a level of primary and immediate causality operating "alongside" efficient causation. However, by ascribing all finality and purpose to a single agent – God-Nature – it leaves empirical science free to confine itself to traceable and provable efficient operations.¹⁹²

This shift, from ascribing design to a transcendent God to ascribing it to an immanent "nature," means that Smith's hidden hand is a metaphor for the self-interest that God would have designed – the self-interest that would ultimately result in an overall harmony of the market system. Such a move amounts to theodicy and it represents a glorification of self-control and self-interest over God.¹⁹³

190 Milbank, *Theology and Social Theory*, 33.

191 Milbank, *Theology and Social Theory*, 34.

192 Milbank, *Theology and Social Theory*, 40.

193 Milbank, *Theology and Social Theory*, 37.

For Milbank, the detachment of desire and choice from a broader social discourse is what allowed for the establishment of an economic science based on private sentiments and natural design.¹⁹⁴ The solution is the creation of a distinguishable Christian social theory based in practice; an ecclesiology based on the Church as the framework of reference. This “counter-ontology” in the economic realm demands that the Church be “a space (a space whose boundaries are properly ill-defined) where truly just economic exchanges occur,” hopefully leading to a reduction in “arbitrary exchange motivated by the search for maximum profit and dominated by manipulation.”¹⁹⁵ Truth, for Christianity (according to Milbank, referring to Augustine), is not correspondence but rather “participation of the beautiful in the beauty of God.”¹⁹⁶

As highlighted above, this thesis echoes a number of Milbank’s and Radical Orthodoxy’s attacks on secularism and economics, and is not unsympathetic to the enterprise. But Milbank’s approach has its problems – as evidenced in the difficult relationship between Milbank and Lonergan. In *Theology & Social Theory*, Milbank accuses Lonergan, together with Karl Rahner and David Tracy, of allying themselves with “empiricist and Kantian attitudes that are part and parcel of the modernist attempt to give a positive ‘once and for all’ representation of finitude.”¹⁹⁷ They do so, according to Milbank, by “hold[ing] onto the notion of a ‘reality’ with which propositions made in discourse can be compared and so confirmed or disconfirmed” and “defend[ing] the integrity of the noumenal subject as a locus for certain constant, universal predilections and dispositions.”¹⁹⁸

In *The Word Made Strange*, Milbank further accuses Lonergan of interpreting Aquinas incorrectly. According to Milbank, Lonergan seeks “to show that the active element in the mind, for Thomas, arises in so far as the mind is able to ‘transcend’ the intentional concept or the inner word.”¹⁹⁹ Instead, Milbank argues that Aquinas proposed a “relation emanating at

194 Milbank, *Theology and Social Theory*, 41.

195 Milbank, *Theology and Social Theory*, 422.

196 Milbank, *Theology and Social Theory*, 427.

197 Milbank, *Theology and Social Theory*, 294.

198 Milbank, *Theology and Social Theory*, 294.

199 John Milbank, *The Word Made Strange: Theology, Language, Culture* (Oxford: Blackwell, 1997), 93. See also Jonathan Robert Heaps, “A Supernatural Nowhere: How Radical Orthodoxy and Lonergan Studies Have

the highest level of the intellectual act," thereby "always returning the mind to an intentional 'encounter' with external esse at the precise point of its own productiveness."²⁰⁰

But, as highlighted by Neil Ormerod and echoed by Jonathan Robert Heaps, Milbank fails to appreciate how, for Lonergan, understanding that proceeds unto knowledge is an ontological participation in the life of God,— in Heaps' words, participation in "uncreated Light."²⁰¹ As Heaps highlights, "Lonergan only 'epistemologizes' the theory of truth insofar as he claims that one can only come to discover for one's self the fact of ontological participation in uncreated Light by coming to some modicum of self-knowledge."²⁰² For Lonergan, the telos of our eros (to fully know being), is actualised neither by simply finding out about objects that exist in and of themselves (as with a form of naïve realism), nor by building an idealist coherent epistemology in the absence of being able to fully apprehend reality; to fully know being can only be achieved if it is ultimately enabled by grace. Milbank, it seems, wrongly naturalises Lonergan's cognitive processes.²⁰³ This critique is not new, but as we will see below, this is a recurring misunderstanding of Lonergan's thought.

There is nevertheless some common ground between Radical Orthodox and Lonergan scholars. As Heaps contends, what Milbank understands and defends as linguistic idealism echoes Lonergan's idea of a world mediated by meaning, in particular in the shared desire to move beyond "static concepts of nature and the supernatural" to "an account of the supernatural as operative through history and its constitutive cultural meanings."²⁰⁴ In addition, the Radical Orthodox and the Lonerganians share a critique of (neo-)scholasticism, naïve scientism and natural theology.

Failed to Get Along (And Why they Should)," *Radical Orthodoxy: Theology, Philosophy, Politics* 3, no. 1 (2015): 52.

200 Milbank, *The Word Made Strange*, 93.

201 Neil Ormerod, "'It Is Easy to See'," *Philosophy and Theology* 11, no. 2 (1999),

<https://doi.org/10.5840/philtheol19991121>. Heaps, "A Supernatural Nowhere: How Radical Orthodoxy and Lonergan Studies Have Failed to Get Along (And Why they Should)," 56. See Bernard J. F. Lonergan, *Verbum: Word and Idea in Aquinas*, ed. Frederick E. Crowe and Robert M. Doran (Toronto: University of Toronto Press, 1997), 100.

202 Heaps, "A Supernatural Nowhere: How Radical Orthodoxy and Lonergan Studies Have Failed to Get Along (And Why they Should)," 56.

203 Milbank does so arguably to elevate and equate his own proposition of participation in the divine – and thus downgrades our desire to know to fit – of course – a modernist enterprise.

204 Heaps, "A Supernatural Nowhere: How Radical Orthodoxy and Lonergan Studies Have Failed to Get Along (And Why they Should)," 59.

Nature and Grace

Critics of Lonergan have questioned his treatment of nature and grace. In particular, the uncaring and unsystematic reader of Lonergan tends to quickly accuse him of naturalism. It is therefore crucial to clarify Lonergan's position before proceeding further with this thesis: a proper understanding of the tension between nature and grace in Lonergan's writings, in particular at the cognitive level (as with the event of the Incarnation explored above), will become central to the argument laid out in this thesis. Specifically, there is a need to allow for the possibility of grace in how individuals choose to act, or else we risk reducing reality solely to the natural.

The question of nature and grace is at the centre of Lonergan's writings on economics because the economy is ultimately part of a broader process of history. When exploring the dialectic of human history in notes referring to *Macroeconomic dynamics : an essay in circulation analysis*, Lonergan observes the following:²⁰⁵

We are touching upon a very large issue. In its fundamental form it is the tension of liberty between grace and sin (Romans 7 and 8). In its theological form it is the thought of Augustine and his commentators and continuators.... In its secular form it is the affirmation of the perfectibility of man by man. Economists move under this secularist mantle when they conceive economics on the analogy of natural science or, when that fails, hand the management of the economy over to the welfare state.

As Fred Lawrence notes in his preface to *Macroeconomics Dynamics*, "for Lonergan, the proper understanding of economic dynamism also needs to be set in the context of the 'dynamics of history' that encompass not only growing understanding and knowledge, but the objective surd of sin, and the redemptive potentialities of God's grace."²⁰⁶ Similarly, Neil Ormerod argues in *The Grace-Nature Distinction and the Construction of a Systematic Theology* that the question of the distinction of nature-grace in theology has underpinned many developments in both science and systematic theology.²⁰⁷

205 Bernard J. F. Lonergan, *Macroeconomic Dynamics: an Essay in Circulation Analysis*, ed. Frederick G. Lawrence, Patrick H. Byrne, and Charles C. Hefling (Toronto: University of Toronto Press, 1999).

206 Lonergan, *Macroeconomic Dynamics*, lxxi.

207 This is also something Milbank recognises. But Ormerod is quick to show, albeit implicitly, that Lonergan noted this decades before Milbank. He then goes on to critique the latter, referring in a footnote that

A critic of Lonergan on nature-grace is Donald J. Keefe.²⁰⁸ His criticism of *Method in Theology* and *Insight* is that Lonergan's understanding of the nature-grace distinction is distorted, and rooted in an archaic understanding of the natural-supernatural distinction; according to Keefe, Lonergan believes that nature is what determines reality and that grace is accidental and extrinsic, essentially an after-thought.²⁰⁹ At the heart of Keefe's issues with Lonergan is what he believes to be an intrinsic assumption that the human mind is self-sufficient, as if individuals could achieve the good by themselves without God's grace (a position vitiating long ago by Augustine). But Keefe is clearly misunderstanding how, for Lonergan, grace is immanent at the cognitive level, as explored in the event of the Incarnation detailed above.

Lonergan points to the difficulty in fully comprehending the categorical notion of nature. For him, the fault can be traced back to human thinking: "the fallacy in early thought had been an unconscious confusion of the metaphysical abstraction 'nature' with the concrete data which do not quite correspond."²¹⁰ Part of this confusion is whether nature is intrinsically teleological. For example, for de Lubac, our desire for the beatific vision is constitutive of our nature and therefore there is no pure nature, whilst for Rahner, every human desire has a supernatural desire for God, not essential to it but instilled in it by God.²¹¹ Ormerod notes that these two lines of thought continue to influence contemporary debates on the subject, "but do not actually advance the issue beyond the distinction itself to unpack and give the distinction structure"; he notes that such debates "would be as much at home in the Middle Ages as in the present theological climate, or even more so."²¹²

mentions de Lubac and von Balthasar: "Despite [the teaching of Pope Pius XII that the nature-grace distinction has theological validity], much current Catholic theology is less than convinced of the importance of this distinction, stressing the impact of divine grace to such an extent that the construct of an underlying human nature, or at least its usefulness, is called into question. Theologies that promote a disjunction between church and world, for example, often lead in this direction in their efforts to emphasize Christian distinctiveness." Neil Ormerod, "The Grace–Nature Distinction and the Construction of a Systematic Theology," *Theological Studies* 75, no. 3 (2014): 516, <https://doi.org/10.1177/0040563914538718>.

208 Donald J. Keefe, "A Methodological Critique of Lonergan's Theological Method," *The Thomist: A Speculative Quarterly Review* 50, no. 1 (1986): 39, <https://doi.org/10.1353/tho.1986.0045>.

209 Terry J. Tekippe, "Response to Donald Keefe on Lonergan," *The Thomist: A Speculative Quarterly Review* 52, no. 1 (1988), <https://doi.org/10.1353/tho.1988.0034>.

210 Bernard J. F. Lonergan, *Grace and Freedom: Operative Grace in the Thought of St. Thomas Aquinas*, ed. Frederick E. Crowe and Robert M. Doran (Toronto: University of Toronto, 2000), 17.

211 Ormerod, "The Grace–Nature Distinction and the Construction of a Systematic Theology," 525-7.

212 Ormerod, "The Grace–Nature Distinction and the Construction of a Systematic Theology," 528-9.

Ormerod assumes, like Lonergan, that any understanding of reality is primarily a cognitional question that cannot be reduced to a static category derived from deductivism; nature is dynamic and to be known through experience. As such, it is apprehended through empirical data but, equally, cannot be reduced to such data because no distinction ought to be made between the natural and supernatural. We remember in particular how Lonergan's cognitional exposé of the Incarnation highlights that Christ is a man of two inseparable divine and human natures: God became man with an unencumbered free will, with grace immanent in all his acts. As a result, Ormerod seeks, as does Lonergan, to shift the theological work towards method and away from deductivism.

He calls on Lonergan's hierarchical and normative scale of values and shows how this helps to shift away from dualisms in traditional accounts of human nature such as "body-soul" and "spirit-matter," how it helps contextualise human existence as fully historically, socially, and culturally constituted.²¹³ Ormerod offers the example of gender:

Under the more traditional construct of body-soul, gender was simply a matter of biology (body/animality), and the questions raised in relation to sexual ethics were those of the virtues (soul/rationality) needed to regulate sexuality according to the dictates of reason (e.g. chastity, temperance). Now we are much more aware of the complexity of gender. While biology (vital values) is one important aspect of gender, we also recognize that it also involves issues of social roles (breadwinner, homemaker) built around a division of labour (social values), and the meanings and values (masculinity, femininity) that a culture attaches to gender identity (cultural values). Within such a framework, the moral questions (personal values) surrounding gender become much more complex and more realistic than those framed within the more traditional framework. At the least this illustration calls into question various forms of gender essentialism found within the tradition.²¹⁴

213 For Lonergan's hierarchical and normative scale of values, see Lonergan, *Method in Theology*, 31-2.

214 Ormerod, "The Grace–Nature Distinction and the Construction of a Systematic Theology," 530. Graham Ward follows a similar line of thought in moving away from old dualisms and materialisms; he criticises attempts to (figuratively) recover the body of Christ as gendered Jew: "It is pointless not only because it is a human attempt to give Christianity an empirically verifiable foundation and because the metaphysics implied in believing that project to be possible are profoundly anti-Christian..... It is pointless because the Church is now the body of Christ, so to understand the body of Jesus, we can only examine what the Church is and what it has to say concerning the nature of that body.... The body of Christ is a multigendered body. Its relation to the body of the gendered Jew does not have the logic of cause and effect. John Milbank, Catherine Pickstock, and Graham Ward, *Radical Orthodoxy: a New Theology* (London: Routledge, 1998), 167.

Ormerod then further expands how these values, for Lonergan, not only contextualise human nature but also make the latter permeable to immanent grace without recourse to dualisms or to causality; grace is not an extrinsic addition to human nature but a higher-level integration of human existence:

Human existence is modified (elevated) through its incorporation into the life of God through religious values. Religious values thus transform moral performance, and through this transformation cultures can be shifted and distortions of the social order healed, leading to a just, equitable, and sustainable social order for the good of all.²¹⁵

The role of values, and how they can help contextualise economic behaviour, will be explored in chapter six of this thesis. This will help us understand individual economic behaviour as constitutive of society, rather than as an isolated phenomenon (the view of experimental economics); and it will allow for grace, even if that grace is not observed separately from nature.

Engaging with the Social Sciences

The Impossibility of Natural Theology

Limiting Christian ethics to natural theology is moot in Lonergan's metaphysics because his method encourages the continuous heuristic questioning of methodology. In particular, what it means to be human is not construed solely through observations but through a thoughtful process of dialectic between natural and systematic theology because, ultimately, religious experience both informs and is informed by an intelligent process of enquiry. This is why Lonergan argues that the separation between systematic and natural theology has been problematic historically and why he calls for the two disciplines to be reconciled.

He argues against critics who posit, on the one hand, that systematic theology is little more than philosophy and, on the other hand, that natural philosophy cannot apprehend the Christian God; at the root of his rejection is an implicit belief that any method of enquiry

215 Ormerod, "The Grace–Nature Distinction and the Construction of a Systematic Theology," 532.

cannot solely rely on deductivism but must also require an intellectual, moral, religious conversion. In other words, he proposes that theologians require more than the secular modes of enquiry; they need a profoundly Christian horizon. This, for Lonergan, does not mean dismissing existing modes of enquiry but admitting that Christian theology perceives a different horizon from that of the secular scientist and therefore has its own understanding of methodology.²¹⁶

Lonergan reunites natural and systematic theology in *Method in Theology* through the intelligent embodiment of theological discernment. In order to do so, he calls for a departure from classical deductivist methods in theology, mainly because deduction is too easily disembodied from the religious experience of theologians. For Milbank, the central theological framework of Radical Orthodoxy is participation, in which theology re-envisages cultural spheres.²¹⁷ But whereas Radical Orthodoxy provides a strong critique of modernity and anti-theologies in the social sciences, the movement lags behind the thought of Lonergan and Lonergan scholars in providing effective solutions. In particular, Milbank is quick to criticise the modernist temptation towards nihilism and natural theology, and to historicise that development. But he does not offer a solution beyond placing liturgy at the centre of his participative theology. Lonergan does not dwell on the historical reasons beyond what is necessary, and he offers a method.

Method and Conversion

For Lonergan, systematics “is concerned with promoting an understanding of the realities affirmed in...doctrines.”²¹⁸ Our ways of knowing are affected by context and as a result they change.²¹⁹ The theologian must understand this, and must also realise which ways of knowing,

216 Lonergan, *Method in Theology*, 337-8.

217 Milbank, Pickstock, and Ward, *Radical Orthodoxy*, 3-4.

218 Lonergan, *Method in Theology*, 335.

219 “Man’s transcendent mystery is adoration. But adoration does not exclude words. Least of all, does it do so when men come to worship. But the words, in turn, have their meaning within some cultural context. Contexts can be ongoing. One ongoing context can be derived from another. Two ongoing contexts can interact. Accordingly, while mystery is very different from the problems of common sense, of science, of scholarship, of much philosophy, still the worship of God and, more generally, the religions of mankind stand within a social, cultural, historical context and, by that involvement, generate the problems with which theologians attempt to deal.” Lonergan, *Method in Theology*, 344.

in a given context, are truthful in their representation of being: “the inadequacies of expression [of humanity’s apprehension of God] are corrected by reinterpretation, by so modifying the symbol that undesired meanings are excluded and desired meanings are elucidated.”²²⁰ More precisely, methodology has to be profoundly dialectical.

Lonergan makes a convincing case that method matters for theologians: it is they who are entrusted to talk about religious experience, and their understanding of their own religious experience affects how truthful to being that knowing is, as they communicate it. This requires theologians to root their work in intellectual, moral, and religious conversion aimed at achieving self-transcendence:

Basically, the issue is a transition from the abstract logic of classicism to the concreteness of method. On the former view what is basic is proof. On the latter view what is basic is conversion. Proof appeals to an abstraction named right reason. Conversion transforms the concrete individual to make him capable of grasping not merely conclusions but principles as well.

For Lonergan, the issue is one’s notion of objectivity: in the classical approach, the enquirer seeks an objectivity that is independent of the concrete existing subject. But for Lonergan, “objectivity itself is not reached by what is independent of the concrete existing subject.”²²¹ Rather, it is through “self-transcendence of the concrete existing subject” that objectivity is reached; such self-transcendence is intellectual, moral, and religious conversion. And “to attempt to ensure objectivity apart from self-transcendence only generates illusions.”²²²

More specifically, intellectual conversion is “the elimination of an exceedingly stubborn and misleading myth...that knowing is like looking, that objectivity is seeing what is there to be seen and not seeing what is not there, and that the real is what is out there now to be looked at.... Knowing is not just seeing; it is experiencing, understanding, judging, and believing.”²²³ Moral conversion “changes the criterion of one’s decisions and choices from satisfactions to

220 Lonergan, *Method in Theology*, 344.

221 Lonergan, *Method in Theology*, 338.

222 Lonergan, *Method in Theology*, 338.

223 Lonergan, *Method in Theology*, 238.

values.”²²⁴ Decisions always have an inherently moral dimension: “our choosing affects ourselves no less than the chosen or rejected objects,” it is “up to each of us to decide for himself what he is to make of himself,” and it is a continuing goal for each person “to uncover and root out one’s individual, group, and general bias. One has to keep developing one’s knowledge of human reality and potentiality as they are in the existing situations.”²²⁵ Finally, religious conversion, is “being grasped by ultimate concern. It is other-worldly falling in love. It is total and permanent self-surrender, without conditions, qualifications, reservations. But it is such a surrender, not as an act, but as a dynamic state that is prior to and principle of subsequent acts.”²²⁶ It follows that an intellectually rigorous Christian approach to engaging with empirical economics must go through the embodied discernment of theologians.

Lonergan’s Method in Theology

The main contribution of *Method in Theology* is its exposition of how theology and the (social) sciences can relate to each other and how theologians can navigate this nexus. And whilst this text focuses on history and biblical interpretation, Lonergan foresees the possibility of integrating other social sciences with theology in a similar fashion.²²⁷ The importance of the volume lies therein: that it seeks to avert such metaphysical errors in theology by heuristically questioning method. Lonergan’s objective in *Method in Theology* is, in his own words, to integrate theology “with scholarly and scientific human studies. The aim of such integration is to generate well-informed and continuously revised policy and plans for promoting good and undoing evil both in the church and in human society generally.”²²⁸ Lonergan further believes that such a project is profoundly interdisciplinary and necessitates a pluralistic approach, even if meanings may ultimately differ for the different participants. Finally, the link between *Insight* and *Method in Theology* is that they both call for a self-transcendence that allows for better scientific and theological enquiry by asking hard methodological questions and by providing some answers.

224 Lonergan, *Method in Theology*, 240.

225 Lonergan, *Method in Theology*, 240.

226 Lonergan, *Method in Theology*, 240.

227 See Lonergan, *Method in Theology*, 364.

228 Lonergan, *Method in Theology*, 366.

As highlighted above, there is, for Lonergan, a need for conversion to conduct any such interdisciplinary research. Such research “operates not by the simple process of drawing inferences from premises, but by changing the reality (his own) that the interpreter has to understand if he is to understand others”; it changes “the basic judgments of fact and of value that are found to be not positions but counter-positions.”²²⁹ This does not mean that the unconverted are to be excluded from research, interpretation or dialectic, or that they are to follow different methods, but only that they have different understandings of the self, that is different horizons.²³⁰ The theologian is to discern through his own informed religious experience: “To determine the legitimacy of any development calls for evaluation; one has to ask whether or not the process was under the guidance of intellectual, moral, and religious conversion.”²³¹ The theologian’s role becomes particularly crucial when it comes to discerning the results of the enquiry, as their judgment, according to Lonergan, cannot rely on some disembodied methodological principles, but rather is mediated through their own dynamic structure of rational self-consciousness.

The role of the theologian lies therefore in the interpretation of the results in dialectic with Scripture and Church doctrines, to ultimately point to policies that would serve the common good. The theologian draws from the horizon implicit in religious, moral, and intellectual conversion to determine which are the positions and which are the counter-positions: “in this fashion any ideological intrusion into scholarly or scientific human studies is filtered out,” and through this, the theologian seeks “the elimination of alienation and ideology...to promote the good of society.”²³²

Milbank’s own conclusions in *Theology and Social Theory* bear some similarities but reject proper engagement with secular social sciences. For Milbank, any legitimate social theory is grounded in the practice of the Church; such theory “is first and foremost an ecclesiology, and only an account of other human societies to the extent that the Church defines itself, in its

229 Lonergan, *Method in Theology*, 270-1.

230 Lonergan, *Method in Theology*, 271.

231 Lonergan, *Method in Theology*, 302.

232 Lonergan, *Method in Theology*, 365.

practice, as in continuity and discontinuity with the societies.”²³³ For Milbank, theology provisionally articulates “the framework of reference implicit in Christian story and action,” which is, for him, tied to non-provable beliefs.²³⁴ In other words, a Christian social theory should emanate from members of the Church using the Church as framework. But as Ormerod points out, such an idealisation is misplaced: “the tradition itself is a mix of general and special categories, and these cannot be separated out in some vain hope [of being] left with a ‘pure’ tradition”; the consequence would otherwise be “a supernaturalizing of the natural and the consequent supplanting of social sciences by ecclesiology.”²³⁵

For Lonergan, there is an openness to using some (secular) methods outside the parameters of the Church. At the same time, there is a clear requirement for these observations to be critically discerned by theologians. In other words, theologians do not have to run their own economic experiments but rather should ensure that these are conducted in a methodologically sound approach: “theology is not the full science of man...theology illuminates only certain aspects of human reality [and] the church can become a fully conscious process of self-constitution only when theology unites itself with all other relevant branches of human studies.”²³⁶ Theologians are to engage with a number of disciplines and enter a process of dialectic that will help them build the necessary foundations for theological positions. The process of discernment is taken a step further and is, this time, rooted in intellectual, moral, and religious conversion. The theologian’s enquiry, and his spiritual discipline and authenticity, can only be sustained through spiritual surrender:

[The] emergence [of the gift of God’s love in the realms of common sense and of theory and from the realm of interiority]...is cultivated by a life of prayer and self-denial and, when it occurs, it has the twofold effect, first, of withdrawing the subject from the realm of common sense, theory, and other interiority into a ‘cloud of unknowing’ and then of intensifying, purifying, clarifying, the objectifications referring to the transcendent whether in the realm of common sense, or of theory, or of other interiority.²³⁷

233 Milbank, *Theology and Social Theory*, 380.

234 Milbank, *Theology and Social Theory*, 381.

235 Neil Ormerod, "System, History, and a Theology of Ministry," *Theological Studies* 61, no. 3 (2016): 445, <https://doi.org/10.1177/004056390006100302>.

236 Lonergan, *Method in Theology*, 364.

237 Lonergan, *Method in Theology*, 266.

This exercise, whilst individual, can never be detached from the wider body of the Church. And for Lonergan, there is an implicit understanding that belonging to the Body of Christ is something deeper and truer than simply holding the same beliefs; those in communion with the Church share a common nature: “although conversion is intensely personal...it is only within the social group that the elements accumulate and is only with the century-old traditions that notable developments occur.”²³⁸

For Lonergan, the Church must show more openness and engagement with science, and this would require more profound engagement with the method and experiments of science. Lonergan reckons that the Church’s historical scepticism towards scientific developments has been for two reasons. Firstly, “churchmen had no real apprehension of the nature of these changes.”²³⁹ Secondly, these changes “commonly have been accompanied by a lack of intellectual conversion and so were hostile to Christianity.”²⁴⁰ Nevertheless, a distinction needs to be drawn: “modern science is one thing and the extra-scientific opinions of scientists are another.” For example, Lonergan notes that “among the extra-scientific opinions of scientists up to the acceptance of quantum theory was a mechanist determinism that misrepresented nature and excluded human freedom and responsibility.”²⁴¹ Lonergan’s thought not only appreciates the limitations of (social) scientific interpretations from an ecclesial perspective and points to the temporality of scientific theories but, unlike Milbank, also delineates clearly how theologians can engage with those.

For Matthew Lamb, Lonergan acknowledges how empirical human sciences are not sufficiently objective because data may be a mixed product of authenticity and unauthenticity, and the investigators themselves may affect the study of this data through their personal or inherited unauthenticity.²⁴² For Lonergan, we arrive at such authenticity – or genuineness – through self-transcendence, guided by understandings, judgments, values

238 Lonergan, *Method in Theology*, 269.

239 Lonergan, *Method in Theology*, 317.

240 Lonergan, *Method in Theology*, 317.

241 Lonergan, *Method in Theology*, 317.

242 Matthew L. Lamb, "Generalized Empirical Method and Praxis," in *Creativity and Method: Essays in Honor of Bernard Lonergan, S.J.*, ed. Matthew L. Lamb (Milwaukee, WI: Marquette University Press, 1981). See Lonergan, "The Ongoing Genesis of Methods," 341-51.

and choices conducive of true insights.²⁴³ Lonergan, aware of the dangers of an individualised approach that could depart too strongly from the teachings of the Church, calls theologians to be responsible in their approach and to keep “their own house in order [because of] the influence they may exert on the faithful, and for the influence of theological doctrine may have on church doctrine.”²⁴⁴ Still, Lonergan holds that a shift from the classical approach is more urgent than finding the perfect approach: theologians “will fulfil this responsibility the more effectively, I believe, if they turn their thoughts to the topic of method and if, instead of waiting for the perfect method to be provided to them, they adopt the best available and, in using it, come to discern its shortcomings and remedy its effects.”²⁴⁵

Relativism, as explored in the previous chapter, is not a possibility here; theologians and practitioners are constantly called to heuristically question and improve methodology:

We are not relativist, and so we acknowledge something substantial and common to human nature and human activity; but that we place not in eternally valid propositions, but in the quite open structure of the human spirit – in the ever immanent and operative through unexpressed transcendental precepts: Be attentive, Be intelligent, Be reasonable, Be responsible.²⁴⁶

Theology must engage with the social sciences because these are part of languages and meanings constitutive of society. It needs to do so not following the classicist’s conception of culture as normative and worthy to be imposed on all others, but rather by first acknowledging a multiplicity of cultural traditions. For Lonergan, “in any tradition [the theologian] envisages the possibility of diverse differentiations of consciousness” and “he does not consider it his task either to promote the differentiation of consciousness or to ask people to renounce their own culture.”; instead, “he would proceed from within their culture and he would seek ways and means for making it into a vehicle for communicating the Christian message.”²⁴⁷

243 Lonergan, *Insight*, 499-503.

244 Lonergan, *Method in Theology*, 332.

245 Lonergan, *Method in Theology*, 332.

246 Lonergan, *Method in Theology*, 302.

247 Lonergan, *Method in Theology*, 363.

For Lonergan, the Church is to “to recognize that theology is not the full science of man, that theology illuminates only certain aspects of human reality, that the church can become a fully conscious process of self-constitution only when theology unites itself with all other relevant branches of human studies.”²⁴⁸ This approach clearly departs from that offered by John Milbank. But it does so without falling into some of the obvious pitfalls of a natural theology; it foresees a particular role for theologians as mediating figures between culture and Christianity. In short, through his approach, Lonergan offers what Milbank rejects: a dialectical path between theology and the (social) sciences. But Lonergan’s approach nevertheless demands a very careful consideration of the categories and methodology of the (social) sciences – arguably more than he foresees, as this thesis aims to prove.

What Lonergan proposes in *Method in Theology* is radical: to replace the classical apparatus of theology that depended on past systematic and deductivist thought through an approach that reposes on individual, intelligent, and experiential discernment. This is not to reject past Church doctrines, but to enable those doctrines to enter into a dialectical process with contemporary scientific enquiry (a process also based on an empirical notion of culture).

To focus the exercise, Lonergan’s proposal is to work through categories, some of which are specifically Christian. General categories “regard objects that come within the purview of other disciplines as well as theology,” whilst special categories “regard the objects proper to theology.”²⁴⁹ But in both cases, the working out of those categories pertains to the theologian. In this context, trust can be both a general and a theological category, with the theologian able to address both.

It becomes easier to know what it is we are looking for by redefining (1) what we understand by trust, (2) how we can observe it, and (3) to what extent we can observe it. By exploring the different conceptions of trust in other social sciences, it will become clear that some are irreconcilable with theology, even after substantial dialectic. Ultimately, one notion of trust will need to be chosen and explored, and it will be rooted in the Christian tradition. This is

248 Lonergan, *Method in Theology*, 364.

249 Lonergan, *Method in Theology*, 282.

because we assume the horizons that we seek are rooted in and emanate from a Christian understanding of trust, or in our case, Luke's *pistis*.

The common good becomes a possibility through understanding what theological categories mean; the theologian's task becomes one of "recognizing instances of the intelligible, the true, the real, the good."²⁵⁰ The theologian's work then becomes one of engaging with other disciplines the better to understand theological categories and to inform Christian doctrine and systematic theology. The theologian's role becomes pivotal in that it discerns how empirical data can inform theology and how it can help then communicate ways to practically pursue the common good. As argued at length above, this means that the theologian must engage with the methodology and with the metaphysical and anthropological assumptions of empirical disciplines.

Economics as a Moral Science

Intelligent Economic Decision-Making

Lonergan's work was written prior to the development of experimental economics: his later macroeconomic thought was put together in the early 1980s whilst experimental economics only fully began to emerge in the 1990s. What is more, the field of economics has developed in the decades since the publications of *Insight*. As a result, a contemporary critique such as that of Tony Lawson, which will be explored in the next chapter, is necessary to assess mainstream economics as it is currently practiced today.

As mentioned, Lonergan's contribution to the field of economics is principally in the field of macroeconomics, to which he attended first in the 1940s and only fully returned in the 1980s: his body of work around his essay *For a New Political Economy* belong to the former whilst his *Macroeconomic Dynamics*, together with additional manuscripts, were part of his ongoing

250 Lonergan, *Method in Theology*, 282.

and later thought.²⁵¹ A deeper analysis of his macroeconomic work would be beyond the scope of this thesis, which focuses on question of trust from an empirical perspective. But it is relevant to note that Lonergan puts out a call to both economists and moral theologians to engage with economics as a moral science:

If we are to escape a...fate [where the church lives on in a dark and barbarous age], we must demand that two requirements are met. The first regards economic theorists; the second regards moral theorists. From economic theorists we have to demand, along with as many other types of analysis as they please, a new and specific type that reveals how moral precepts have both a basis in economic process and so an effective application to it. From moral theorists we have to demand, along with their other various forms of wisdom and prudence, specifically economic precepts that arise out of economic process itself and promote its proper functioning.²⁵²

Lonergan adds that whilst physicists think on the basis of indeterminacy, “economists can think on the basis of freedom and acknowledge the relevance of morality.”²⁵³ The rationale for Lonergan’s focus on macroeconomics is one that seeks to construct a viable economic system that enables a rational (understand: intelligent) process for collective survival; for Lonergan, booms and crises are symptoms of a dysfunctional system and ultimately reflect a lack of intelligence on the part of individual decision-makers.²⁵⁴ An overview of what is at work, a macroeconomic model, is thus necessary.

Additionally, economic education should be, for Lonergan, part of any economic system, as Lawrence notes: “Lest the problem of evil be trivialized, enlightened self-interest has to be

251 Lonergan, *Macroeconomic Dynamics*; Bernard J. F. Lonergan, *For a New Political Economy*, ed. Philip McShane (Toronto: University of Toronto Press, 1998). For a particularly sharp overview of his (macro)economic thinking, both historically and in relation to contemporary economics, see Ormerod, Oslington, and Koning, "The Development of Catholic Social Teaching on Economics: Bernard Lonergan and Benedict XVI." See also Michael Gibbons, "Insight and Emergence: an Introduction to Lonergan's Circulation Analysis," in *Creativity and Method: Essays in Honor of Bernard Lonergan, S.J.*, ed. Matthew L. Lamb (Milwaukee, WI: Marquette University Presse, 1981); Philip McShane, "Feature of Generalized Empirical Method and the Actual Context of Economics," in *Creativity and Method: Essays in Honor of Bernard Lonergan, S.J.*, ed. Matthew L. Lamb (Milwaukee, Wisconsin: Marquette University Presse, 1981). For further considerations around the context of Lonergan’s macroeconomic writings, see Michael Shute, "Economic Analysis within Redemptive Praxis: An Achievement of Lonergan's Third Decade," *Lonergan Workshop 14* (1998). For an example of a constructive contemporary engagement with Lonergan’s macroeconomic thinking, see Paul St.Amour, "Lonergan and Piketty on Income Inequality" (Marquette University Lonergan Colloquium, Milwaukee, WI, 22 March 2018 2018).

252 Lonergan, *Macroeconomic Dynamics*, 105.

253 Lonergan, *Macroeconomic Dynamics*, 105-6.

254 Lonergan, *Macroeconomic Dynamics*, 106.

radically transformed from the calculating selfishness...into a rightly ordered self-love open and receptive to the gift of God's love."²⁵⁵ Lonergan rejected the idea of engineering human welfare: he would rather invite people to know, envisaging a vast and long-term educational effort to support a democratic process of economic decision-making. In such an economy, economic science would not utter "counsel to rulers but precepts to mankind, not specific remedies and plans to increase the power of bureaucracies, but universal laws which men themselves administrate in the personal conduct of their lives."²⁵⁶ For Lonergan, a healthy and vibrant economy needs the commitment of a critical mass of people to "the authenticity of attentiveness, intelligence, reasonableness, and responsibility," rather than relying on secularist solutions, which he perceived as "major surrender of intelligence at the speculative level:" "they are collective 'cover stories' or 'rationalization' that trivialize the human problem of evil."²⁵⁷

Lawrence further reports that, in his classes, Lonergan, "often expressed his dissatisfaction with social ethicists' tendency to be content with 'vague moral imperatives' instead of figuring out how moral precepts can be derived from the immanent intelligibility of economic processes."²⁵⁸ Instead, as Lonergan himself writes, the concrete dynamic component of the dialectic of history, and therefore the basis of macroeconomic analysis, is supplied by human individuals and their decisions. As such, economic actions can be at times irrational and as a result contradictory:

The contradiction emerges from the fact that in their choices, [human individuals] may or may not attend to the relevant data, they may try to understand or neglect understanding, they may be reasonable or unreasonable in their judgments, they may be responsible or irresponsible in their decisions, they may be in love with their parents, helpmates and children, with the human community, with God, and on the other hand, they may opt for hatred in one or more of these respects. This dialectic connects immediately with the macroeconomic analysis.²⁵⁹

255 Lonergan, *Macroeconomic Dynamics*, lxxi.

256 Lonergan, *Macroeconomic Dynamics*, lxxi.

257 Lonergan, *Macroeconomic Dynamics*, lxix-lxx.

258 Lonergan, *Macroeconomic Dynamics*, lxxi.

259 Lonergan, *Macroeconomic Dynamics*, 5.

In spite of his interest in human decision-making, Lonergan's thought never took the direction of empirical economics or microeconomics beyond the observations highlighted earlier; his writings on economics focused on macroeconomic theory because, for him, an overall macroeconomic model was necessary before mapping out individual behaviour.²⁶⁰

Economics as a Moral Science

It should be further noted that Lonergan did not use mathematical equations for actual calculations but rather as representative symbols. In particular, in his discussion of the determination of pure competition equilibrium, he notes that "mathematical rigor provides a useful source for preliminary determinations of meaning...but the economic issue [i.e. the determination of equilibria] arises in an ecology in which abstract relationships are complemented by concrete probabilities."²⁶¹

But in the case of economics, for Lonergan, the validation of quantum theory shifted sole reliance on classical approaches to scientific endeavours and legitimised again the use of statistical methods that had been previously dismissed as a cloak of ignorance: "for us quantum theory made it possible to grasp that classical laws are abstract inasmuch as they hold only *caeteris paribus* and that statistical laws provide a natural complement since they can reveal how often other things are likely to be equal."²⁶² In particular, the indeterminism that the quantum shift brought is what appealed to Lonergan, who was eager to depart from

260 In addition to Lonergan's argument for a macroeconomic approach first, an additional view is that there are macroeconomic entities, whether real or constructed (such as GDP) that cannot be reduced to microeconomic entities. For a discussion of the relationship between macroeconomics and microeconomics, see: Kevin Hoover, "Does Macroeconomics Need Microfoundations?," in *The Methodology of Empirical Macroeconomics* (Cambridge: Cambridge University Press, 2001). Kevin Hoover, "Microfoundational Programs," in *Microfoundations Reconsidered: The Relationship of Micro and Macroeconomics in Historical Perspective*, ed. Pedro Garcia Duarte and Gilberto Tadeu Lima (Cheltenham: Edward Elgar, 2012); Brian Epstein, "Why Macroeconomics Does not Supervene on Microeconomics," *Journal of Economic Methodology* 21, no. 1 (2014), <https://doi.org/10.1080/1350178x.2014.886467>; Kevin Hoover, "Is Macroeconomics for Real?," in *The Economic World View: Studies in the Ontology of Economics*, ed. Uskali Mäki (Cambridge: Cambridge University Press, 2001); Alan Nelson, "Some Issues Surrounding the Reduction of Macroeconomics to Microeconomics," *Philosophy of Science* 51, no. 4 (1984); Kevin Hoover, "Microfoundations and the Ontology of Economics," in *The Oxford Handbook of Philosophy of Economics*, ed. Harold Kincaid and Don Ross (New York: Oxford University Press, 2009).

261 Lonergan, *Macroeconomic Dynamics*, 89.

262 Lonergan, *Macroeconomic Dynamics*, 92.

nineteenth-century philosophy of science and its underlying assumptions: “the old [Galilean] determinism with its philosophic implications has to give way to a new, purely methodological view that consists in a developing anticipation of a determinate object.”²⁶³ As will be explored in more depth in the sixth chapter, an even more thorough philosophical shift needs to happen to move away from causal determinism and its corresponding drive to isolate behaviour through the *ceteris paribus* clause. This deterministic approach continues to underpin much of economics in spite of an apparent statistical approach through the use of econometrics.

Similarly, in *For a New Political Economy* written during the Second World War, Lonergan attempts to construe economics as an inherently moral discipline: he seeks to offer an alternative to what he perceives to be a form of authoritarian political economy in Russia, Germany, and Italy that had become utterly undemocratic.²⁶⁴ For him, the answer lies in a scientific generalisation of political economy rather than in the development of economics as an exact science, because “the more economics endeavors to be an exact science, the more incapable it becomes to speak to men, and the greater the necessity under which it lies to treat men the way the exact sciences treat atoms and guinea pigs...; it is very, very, very scientific, but...it is not at all democratic.”²⁶⁵ Nevertheless, Lonergan insists on a dialectic between empirical and theoretical modes of enquiry: “thought and experience are two complementary functions; thought constructs what experience reveals; and science is an exact equilibrium of the two.”²⁶⁶

For Lonergan, political economy ought to be a moral science that cannot solely follow the precepts of the natural sciences; there is something of a Copernican revolution to be attempted: “our aim is to prescind from human psychology that, in the first place we may define the objective situation with which man has to deal, and, in the second place, define the psychological attitude that has to be adopted if man is to deal successfully with economic problems.”²⁶⁷ It follows that exchange processes are what Lonergan understands as

263 Lonergan, *Insight*, 160.

264 Lonergan, *For a New Political Economy*.

265 Lonergan, *For a New Political Economy*, 7.

266 Lonergan, *For a New Political Economy*, 5.

267 Lonergan, *For a New Political Economy*, 42-3.

crystallising psychological and moral attitudes in economic activity. Nevertheless, there is for him an objective reality that is independent of human psychology, “something to which human psychology must adapt itself if economic activity is not to become a matter of standing in a tub and trying to lift it.”²⁶⁸

Lonergan’s macroeconomic analysis is dynamic: it focuses on economic flows, rather than on a static analysis of the economy. The inherent logic between this approach and Lonergan’s sensibilities is clear: flows aggregate the economic decisions made by individuals. And depending on how individuals make those decisions, the entire economy may flourish or decline. At the centre of his theory is the necessity to reach an equilibrium that propels society towards its flourishing.²⁶⁹

Aggregate decisions over time determine economic phases. Such decisions are within the realms of exchange, on the one hand, and value, on the other. For Lonergan, at the root of decisions to exchange, “there is the whole realm of truth and the far larger realm of possible error. There is the stimulus of desire and of fear, of ambition and of passion, of temperament and of sentiment.”²⁷⁰ As noted in the previous chapter and earlier in this one, rational decisions need to be attentive, intelligent, reasonable and responsible; when they lack rationality, the entire economy suffers as a result. It is also worth noting that Lonergan explicitly assumes that values, and the economies on which these are built, have an inherent moral dimension to them; the economy is never value-neutral.²⁷¹

Economic Exchanges and Trust

Whilst it is somewhat of a step between Lonergan’s macroeconomic writings and the argument of this thesis, namely that apprehending theological trust is necessary for theologians when engaging with economics, the common thread is clear: it matters how individuals make economic decisions, and the moral theologian (together with the economist)

268 Lonergan, *For a New Political Economy*, 56.

269 See Lonergan, *For a New Political Economy*, 21.

270 Lonergan, *For a New Political Economy*, 30.

271 Lonergan, *For a New Political Economy*, 30.

is invited to explore what this means in detail, to explore the repercussions of individual decisions on the broader economy. Lonergan argued that economics must function through “a pure economic analysis of exchange untainted by any ideology.”²⁷²

Further, rather than relying on a deterministic model based on a problematic anthropological construct, Lonergan’s macroeconomic model relies on the understanding that individuals are free to make choices (including the choice to trust God and/or others). Lonergan highlights the limitations of so-called necessary deterministic laws in nature and history by highlighting their cognitive and epistemological shortcomings. He does so by articulating the processes inherent in cognitive performance; and he shows how empirical and dialectical methods can disrupt the dichotomies of scientific determinism and voluntarism.²⁷³

It is not difficult to imagine how trust plays an essential part in economic exchanges: for example, trust that the counterpart will pay for the goods or services already received, or trust that the goods are of the quality advertised. An economy without trust is an economy where economic exchanges become impossible: it only takes people to stop trusting in the legal tender, as in the case of hyperinflation, to severely impact the trade of goods and services. Trust needs to be fostered as a societal good; it also needs to be cultivated as an individual and moral good. Inevitably, for Lonergan, this would necessitate educating economic actors about the virtue of trust – for instance, how trust elicits trustworthiness. Understanding trust would benefit not only a theological exercise, but also the entire functioning of the economy. And as we will see, current accounts of trust are problematic: they are likely to generate far-reaching negative consequences for economic actors at large, should policy-makers base their decisions upon them.

Conclusion

The different sections of this chapter explored the centrality of the Incarnation – and the relationship between nature and grace, in particular at the cognitional level – to moral

272 Lonergan, "Moral Theology and the Human Sciences," 311.

273 Lamb, "Generalized Empirical Method and Praxis," 65.

theology, the theologian's conversion and discernment, and the need to take into account the ethical dimension of freely-willed economic decisions. Unless these three prerequisites are met, it will be difficult for the theologian to engage with empirical economics in sufficient depth. This chapter is also a call to theologians to refrain both from making lofty statements about vague moral imperatives, and from naively relying on the propositions of secular philosophies. Lonergan's work ought to challenge any Christian ethicist in his or her approach not only to economics, but also to ethics itself. This chapter has argued that a rejection of the metaphysical event of the Incarnation, or a decision to simply take refuge in moral imperatives, cannot suffice when engaging in the conversation between theology and (experimental) economics.

This chapter has highlighted the very imperative to engage with economics, and in particular the need for a methodology that is not naïve concerning either the limitations of economics or the limitations of Christian ethics. Finally, the necessity to engage with microeconomics and decision-making models has become clear: these must be part of a theologian's engagement with economics, or the theologian risks missing what gears an economy towards its flourishing or towards its demise.

The next chapter will engage with experimental economics in more depth – in particular with its methodology, applying a critical realist critique to the discipline. Such an exercise can only take place constructively once the theologian's task has been specified, which was the purpose of this chapter because the theologian needs to understand what differentiates him or her from other social scientists when studying economic phenomena.

Chapter 4 - A Critical Realist Critique of Experimental Economics

Introduction

I argued in the last chapter that theologians need to hold true to the metaphysical event of the Incarnation when engaging with the world of the empirical and the social sciences; as grounds for an interdisciplinary dialogue, deductivism and moral imperatives are not just insufficient but metaphysically problematic. Similarly, a case was made for theologians to engage with economics, and with individual economic behaviour in particular: intelligent decision-making is necessary for the economy to flourish and therefore the theologian has a role to play in understanding and guiding individuals in their economic choices. If a lack of (moral) intelligence, rather than greed, is the source of undue economic and cultural poverty, then the role of Church teachings and of theologians is not to point fingers at greedy behaviours but rather to encourage more intelligent economic decisions.

Christian ethics needs to apprehend both empirical economic behaviour, and common human behaviours such as trust. Whilst experimental economics understands trust in a problematic way, there has been no rigorous theological critique of experimental economics as yet. Lonergan's *Insight* provides the toolkit to critique some metaphysical and anthropological assumptions underlying empirical science which are problematic from a theological perspective, but his critique of economics as a discipline is indirect: Lonergan offers his own theory and does not delve into minute points of mainstream economics. Additionally, Lonergan's work is focused on macroeconomics and does not provide much of a basis to engage with microeconomics, which is the basis of experimental economics. A theological critique of mainstream economics, and by extension experimental economics, is therefore necessary. This chapter will build towards such a critique by first presenting experimental economics as an empirical discipline. It will then follow through with a philosophical critical realist critique of experimental economics through the work of Tony Lawson, whose work on mainstream economics and its metaphysical limitations is particularly useful for the theological critique that this thesis constructs.

Experimental Economics as an Empirical Discipline

Models vs. Reality

Experimental economics is a branch of economics and remains closely associated with the language of mainstream economics. But, as we will see, it also differs substantially from mainstream economics in its conception of reality: the methodology of experimental economics is inductive, even if still grounded in the hypothetico-deductive tradition; thus its starting points are observable economic behaviours rather than the abstract models that feature prominently in the method of mainstream economics.

In experimental economics, reality is effectively apprehended differently: for mainstream economics, reality can be described and represented through formulae in the same way that gravity can be described mathematically; mainstream economics does not rely on the observation of real human beings to build its models. As highlighted in the second chapter, this effectively puts mainstream economics firmly in the idealist tradition. Experimental economics, on the other hand, uses mathematics to stylize economic behaviours but its model-building exercise relies on the physical reality of individuals. This is why it is in a position to question abstract constructs such as that of the *homo economicus*. And this is where metaphysical tension arises: the constructs of mainstream economics are rooted in the idealist tradition but experimental economics is essentially a form of empiricism. This is where Lonergan's shift to the subject, with its dialectic and informed processes of discernment, can enable a reconciliation – between a classical form of science like mainstream economics, and a statistical approach like that of experimental economics.²⁷⁴

Because experimental economics is an empirical discipline, it aims to collect data from individual economic behaviours as observed in a laboratory setting or in real life situations. It aggregates this data in order to posit economic phenomena, model them, and draw hypotheses that could in principle be used to predict human economic behaviour outside the

²⁷⁴ This will be explored in greater depth in chapter six.

laboratory. It particularly seeks to observe whether participants behave “rationally” or not in a specific situation; the aim is to develop predictive theories of human behaviour.

The experimental models used are in most cases expected to be representative of either the theories they are derived from (internal validity), or of the reality of the wider world (external validity), or both. Experiments like the Trust Game (above, chapter one) are most often conducted in laboratories in the form of computer games where participants interact with each other behind computer terminals with a high degree of anonymity; such programmes are designed to simulate market conditions or specific exchange situations. Other experiments include field experiments, randomised controlled trials (RCTs), and survey experiments.

In the case of laboratory experiments, the route preferred for most of the trust literature, participants may be recruited from representative or random samples of the population, depending on whether the characteristics of individuals are likely to influence data or weaken the external validity of the experiment. For instance, students familiar with economic models may behave in a way that is more likely to validate models because they know what those models are expected to yield. Similarly, different age groups may have different risk aversions, with for instance younger or richer individuals being more willing to take more risk for a long-term reward.

How individual characteristics influence results is likely to be tested as part of the experiment if this dimension is expected to be relevant. And because claims resulting from experiments are expected to be replicable, reruns are unlikely to use the same samples, thereby enabling some degree of external verification even if the new experimenter does not consciously test for such variances when choosing his sample. In such a case, the caveat is, of course, that there might be other variables determined by the population sample that will affect the results.

Randomised controlled trials (RCTs) in particular have in recent years become popular among experimental economists: the rationale is that they test the external validity of a hypothesis through control groups once that hypothesis has been developed in a controlled

environment. RCTs have been used in medicine for decades, typically using two groups, one trialling the new medication and the other on placebo. The rationale is fourfold. Firstly, if the control group is of a sufficient size, RCTs ensure that the effect of the medication is not limited to the small initial group. Secondly, RCTs are conducted to verify that there is no placebo effect; that is, they look for strong causality between the medication and possible healing. Thirdly, RCTs help determine the average treatment estimate (ATE); they measure the average effect of medication. Fourthly, RCTs limit the effect of any possible bias in the selection of initial participants. However, Angus Deaton and Nancy Cartwright argue that RCTs are by no means the universal panacea: as with medication, what ultimately interests us is not the average treatment estimate of an economic policy but rather how it can affect a particular individual given his or her specificities:

Without the structure that allows us to place RCT results in context, or to understand the mechanisms behind those results, not only can we not transport whether “it works” elsewhere, but we cannot do one of the standard tasks of economics, which is to say whether the intervention is actually welfare improving. Without knowing why things happen and why people do things, we run the risk of worthless casual (“fairy story”) causal theorizing and have given up on one of the central tasks of economics and other social sciences.²⁷⁵

As we will see in this fourth chapter, a critical realist approach will demand not only a shift away from controlled experiments but also from RCTs; as highlighted by Deaton and Cartwright, the main issue is that the rationale behind individual economic choices is always inferred by the social scientist and generalised from a group of individuals. What is instead required is a deeper understanding of individual rationales for economic behaviours. Natural experiments, in conjunction with additional socio-scientific methods such as qualitative interviews, would be much more helpful in order to achieve that, but these tend to be the exception; experimental economists prefer to isolate behaviours through laboratory experiments to mimic the approach taken in the natural sciences.

275 A. Deaton and N. Cartwright, "Understanding and Misunderstanding Randomized Controlled Trials," *Social Science & Medecine* 210 (Aug 2018): 18, <https://doi.org/10.1016/j.socscimed.2017.12.005>. For more on experiments and quasi-experiments, see James H. Stock and Mark W. Watson, "Experiments and Quasi-Experiments," in *Introduction to Econometrics* (Harlow: Pearson Education, 2015).

Experimental economics has historically been perceived as tangential to the hypothetico-deductive approach that dominates mainstream economics. Adherents of mainstream economics have generally seen the testing of theory with empirical models as being superfluous as theory was mostly understood to be paradigmatic; reality could never be fully grasped so models had to be abstract. But experimental economics gained increasing respect over time as a discipline that could contribute to the body of economic theory – together with behavioural economics (which more directly relies on behavioural psychology). The attribution of a Bank of Sweden Nobel Memorial Prize in Economic Sciences in 2002 to Vernon Smith, an experimental economist, and Daniel Kahnemann, a behavioural psychologist, for their lifetime contribution to economics marked the recognition by the wider world of experimental economics as a discipline of its own.²⁷⁶ In 2017 and 2019, experimental economists were also recipients of the same prize: Richard Thaler in 2017 for his contribution to the creation of behavioural economics as a field of research, and Abhijit Banerjee, Esther Duflo and Michael Kremer in 2019 for how their experiment-based approach transformed development economics.²⁷⁷

Experimental economics has historically been considered useful for testing existing theory – using experimental tools to test their hypotheses, economists either falsify or confirm their theories along the lines of Popper’s falsification approach. Historically, two programmes of research have been particularly influential in experimental economics: firstly, analysing the properties of market institutions, and secondly, investigating whether individual decision-making behaviour is consistent with rational choice theory.²⁷⁸ In recent years, experimental economists have used more and more field experiments, particularly within development economics. As the body of experiments has grown and the methodology become more sophisticated, some practitioners have begun to consider the field of experimental economics to have its own body of knowledge that is separate, even if not entirely independent, from

276 "The Sveriges Riksbank Prize in Economic Sciences in Memory of Alfred Nobel 2002," news release, 2002, <https://www.nobelprize.org/prizes/economic-sciences/2002/press-release/>.

277 "The Sveriges Riksbank Prize in Economic Sciences in Memory of Alfred Nobel 2017," news release, 2017, <https://www.nobelprize.org/prizes/economic-sciences/2017/press-release/>; "The Sveriges Riksbank Prize in Economic Sciences in Memory of Alfred Nobel 2019," news release, 2019, <https://www.nobelprize.org/prizes/economic-sciences/2019/press-release/>.

278 Robert Sugden, "Experiment, Theory, World: A Symposium on the Role of Experiments in Economics," *Journal of Economic Methodology* 12, no. 2 (2005): 178, <https://doi.org/10.1080/13501780500085943>.

mainstream economics. As a result, these practitioners do not test the theories of mainstream economics, but rather seek to develop their own set of observations about economic behaviour.

Experiments can be models in themselves as much as models derived from theory, and the two are not necessarily interdependent; as Uskali Mäki proposes:

An experiment is an arrangement seeking to isolate a fragment of the world by controlling for causally relevant things outside that fragment... Many theoretical models are ("thought") experiments, and...many ordinary experiments are ('material') models.²⁷⁹ The major difference between the two is that the controls effecting the required isolation are based on material manipulations in one case, and on assumptions in the other.²⁸⁰

Mäki argues that "almost anything can serve as a model of almost anything else," such as "objects, diagrams, drawings, verbal statements, systems of mathematical equations, abstract objects."²⁸¹

With experiments being seen by some practitioners and philosophers as models of their own, the issue of external validity has become increasingly important. As long as experimental economics served the purpose of testing mainstream theory, the focus was to ensure that experimental models were as close representations of theoretical models as possible. As Mäki points out: "if one assumes that experiments are only to test theoretical models, then there is no issue of external validity."²⁸² However, with an increasing desire for experiments to engage with phenomena as they occur in the real world, the focus has been recently more on ensuring that experimental models represent the real world as closely as possible. This desire to focus more on external validity is likely to be a result of two realisations. Firstly, that existing theory offers a finite number of hypotheses; experimenters will observe new phenomena not foreseen by these hypotheses. Secondly, that experiments will produce

279 Uskali Mäki, "Models are Experiments, Experiments are Models," *Journal of Economic Methodology* 12, no. 2 (2005): 303, <https://doi.org/10.1080/13501780500086255>.

280 Mäki, "Models are Experiments, Experiments are Models," 303.

281 Mäki, "Models are Experiments, Experiments are Models," 305.

282 Mäki, "Models are Experiments, Experiments are Models," 310-11.

phenomena that do not coincide with existing theory, especially as experiments become more sophisticated.

However, experimental economics always remains dependent to some extent on mainstream economic theory; its starting point, even if decreasingly important, is economic theory: hypotheses are the scaffolding used to order observable phenomena, and these hypotheses are then tested empirically to see whether the data can confirm the existence of such phenomena as can support the proposed hypothesis. The limitation of such an approach is that the experimenter already knows what to look for and may be biased in the data selected and in how it is interpreted. A similar limitation is of course also true in the case of an inductive approach, where the experimenter has a hunch she will seek to prove. However, the risk that this happens is arguably slightly lower because a hunch is less precise and the experimenter will be more willing to discover any new phenomenon, including those that may contradict initial expectations.

Experiments can produce results that confirm theory, results that refine it, results that contradict it, and more often than not, results that have ultimately little to say about the causal relationships behind the hypothesis they are testing. The latter outcome is in great part due to the difficulty in isolating and controlling causal relationships in a laboratory with the same “strength” that a theory can impose on its models assuming *ceteris paribus* conditions: as Mäki argues, “theoretical models are capable of effecting isolations more stringently than material models. In theoretical modelling, one simply assumes away all disturbances and complications.”²⁸³ But in the laboratory, such abstractions cannot be applied as easily; material experiments cannot control possible interferences as well as thought experiments can. The difficulty in replicating existing theory in an experiment lies in that the experimenter needs to make a number of assumptions about how the theory can be applied in practice. As Arthur Schram points out: “One is always simultaneously testing various auxiliary hypotheses. In an experiment, these auxiliary hypotheses include the assumption that subjects are

283 Mäki, "Models are Experiments, Experiments are Models," 309.

motivated and understand the instructions, and that the theory is applicable to the experimental design.”²⁸⁴

Daniel M. Hausman explores this issue specifically with regard to testing game theory: “One cannot sensibly consider the truth or falsify claims about the number of players, what strategies they can play, what the pay offs of strategy combinations are, or which strategies will be chosen;” instead, “what one tests are specific game theoretic models, rather than game theory itself.”²⁸⁵ This implicitly refers to the Duhem-Quine thesis: it is impossible to empirically test any hypothesis in isolation because the main hypothesis being tested requires one or more auxiliary hypotheses to enable such a test. Again, whilst it is possible in theory to maintain variables *ceteris paribus*, applying such a restriction would require controlling many variables which are not easily isolated or even observable.²⁸⁶ So whilst it can be maintained that individuals are utility maximizing and will therefore make the choice that will maximize their own gains (e.g., in the case of the Prisoner’s Dilemma, minimizing the number of years that they spend in prison), there are a number of assumptions that are made about how this applies (e.g. we assume that the players are not related; otherwise, might they not opt to spend time in prison for themselves, in order to spare a relative from suffering incarceration?).²⁸⁷

Assumptions vs. Reality

Experimental economics relies on a number of methodological assumptions, which although not specifically codified, are followed by most experimenters. Such best practices closely follow those put forward by Vernon Smith: (a) non-satiation – it is assumed that participants always want more, regardless of quantity, such that there is no such thing as having enough;

284 Arthur Schram, "Artificiality: The Tension Between Internal and External Validity in Economic Experiments," *Journal of Economic Methodology* 12, no. 2 (2005): 229, <https://doi.org/10.1080/13501780500086081>.

285 Daniel M. Hausman, "'Testing' Game Theory," *Journal of Economic Methodology* 12, no. 2 (2005): 212, <https://doi.org/10.1080/13501780500086065>.

286 See Schram, "Artificiality: The Tension Between Internal and External Validity in Economic Experiments," 230.

287 Some may however argue that sacrificing oneself for a relative is maximizing another type of utility such as happiness, but this would still include an additional hypothesis.

(b) salience – participants are paid in cash what they have earned in the experiment, therefore rendering the economic decisions they make in the experiment “real”; (c) dominance – experiments seek to observe a singular behaviour that is clearly prevailing when aggregating individual choices; (d) privacy – participants have no way of recognising who they are interacting with in the room; there is full anonymity through the use of computer terminals and neutral names.²⁸⁸ This enables a better comparison within the field of experimental economics, but it also restricts the ability to have inter-disciplinary conversations, in particular with the neighbouring field of behavioural psychology.²⁸⁹

Experimental economics has often focused on testing the existence of the phenomena posited by mainstream economics in the real world, such as rational choice and risk aversion. As Schram explains: “Without theory to guide the experimenter, she must find guidance in the economic world she is trying to study. This might be a reason why external validity has received much more attention in psychology than in economics.”²⁹⁰

Behavioural psychology in contrast has from the start developed its own body of hypotheses inductively, starting with observing data, and from there construing phenomena and hypotheses. However, in recent years, and as the number of economic experiments has turned into a larger set of research, a number of phenomena not predicted by mainstream theory have been observed. Experimental economics, therefore, is increasingly sharing the inductive approach of behavioural psychology, without fully giving up the practice of

288 Schram, "Artificiality: The Tension Between Internal and External Validity in Economic Experiments." See Smith, V. (1982) 'Vernon L. Smith, "Microeconomic Systems as an Experimental Science," *The American Economic Review* 72, no. 5 (1982), <https://www.jstor.org/stable/1812014>.

289 The main differences in experimental approaches include how strictly scripts are followed (economists give written instructions whilst psychologists interact more with their subjects), whether experiments are repeated (economists are bound by the rule of replicability), the use of salient pay (economists pay participants but psychologists do not always do so), and the extent to which the real purpose of the experiment is visible to participants (psychologists will go at greater lengths to hide the purpose of the experiment). See R. Hertwig and A. Ortmann, "Experimental Practices in Economics: a Methodological Challenge for Psychologists?," *Behavioural and Brain Sciences* 24, no. 3 (Jun 2001), <https://doi.org/10.1037/e683322011-032>; Daniel Friedman, A. Cassar, and Reinhard Selten, *Economics Lab: an Intensive Course in Experimental Economics* (London and New York: Routledge, 2004).

290 Schram, "Artificiality: The Tension Between Internal and External Validity in Economic Experiments," 233.

responding to existing mainstream theory. In short, mainstream theory remains the cognitive scaffolding that supports the experimenter's representations and inferences.²⁹¹

For some economists, the long-term goal remains being able to predict human behaviour through mathematical models, with experiments only being a temporary stepping stone towards that goal. As Nick Bardsley points out, engineers have stopped using physical models because mathematical simulations offer a more convenient representation, but this was only after scale models provided sufficient data to confirm mathematical models.²⁹² Increasing reliance on induction is therefore no accident, and as Bardsley explains, "experimental models may be more useful than theoretical ones when the modeler has an intuitive understanding of the target system but is not sure how the mechanisms at work in that system are best described"; "the range of possible actions available to each individual is vastly richer than anything that can be represented in a tractable mathematical model."²⁹³

As will be discussed below in more depth, experimental economics, and arguably economics as a whole, is inherently a social science and cannot be approached in the same way as the natural sciences. The apparent inability to fully represent human behaviour through mathematical formulae, or at least the substantial difficulty of such an approach, points to a possible problematic anthropological construct.

There is also no apparent reason to believe that human behaviour is subject to the laws of mathematics. Mathematics is appealing because of its internal congruency, yet testing human behaviour on the basis of mathematical formulae is problematic at two levels. First, there is no reason to believe that human behaviour can be reduced to mathematical formulae. Secondly, mathematics itself cannot be empirically tested and any testing of mathematics would be tautological since mathematics only offers synthetic propositions. As a result, a strong assumption is made that human behaviour follows mathematical rules and that behaviours can be quantified and compared. Of course that very assumption, which is

291 Francesco Guala, "Economics in the Lab: Completeness vs. Testability," *Journal of Economic Methodology* 12, no. 2 (2005), <https://doi.org/10.1080/13501780500086024>.

292 Bardsley, *Experimental Economics : Rethinking the Rules*, 194.

293 Bardsley, *Experimental Economics : Rethinking the Rules*, 190.

essentially an auxiliary hypothesis, cannot be easily falsified; it can only be tested for internal congruency. Yet it bears great weight in how economic experiments are conducted.

The Metaphysics of Experimental Economics

The above account will have clarified that the prime difference between mainstream economics and experimental economics is their respective methodologies: whilst the former relies on a hypothetico-deductive approach, the latter is more inductive. The divide between the two fields is a respective orientation towards, on the one hand, a pure and internally congruent approach that relies on mathematics, and on the other hand, a desire to find the truth out of real stuff.

For mainstream economics, truth is primarily located in the internal congruence of mathematics and is best expressed through formulae; the critique of this approach will question the extent to which the laws of mathematics apply to human behaviour. For most empirical approaches, truth ultimately has to correspond to what is observed rather than being self-congruent. But where ultimately truth lies, what forms it takes, how it can be recounted, and the extent to which it is observable cannot be answered straightforwardly. As Mäki argues: "When talking about economic experiments, we need to be somewhat more relaxed about the meaning of 'material' than when referring to experiments in physics or chemistry. The extension of 'material' must be taken more broadly than just pertaining to matters of physical matter."²⁹⁴

In the case of pure economic theory, models are made of economic variables and those can be isolated. In that view, they constitute facts on which hypotheses are built, and these are the foundations on which theories can be based, and such theories are assumed to be true. However, in the case of empirical models, variables cannot so easily be isolated. As a result, any attempt to ascribe truth to a particular theory cannot be as easily falsified, and an assumption has to be made that that particular theory is true.

294 Mäki, "Models are Experiments, Experiments are Models," 312.

Reality, including in the case of economic behaviours, can be only partially observed through events that are constructs; only raw data before it is selected is devoid of interpretation, which arguably does not exist as soon as it is observed. Interpretation cannot be easily evaded. And these events can only be perceived to be true if certain methodological and epistemological assumptions are made. For instance, I might observe what I consider trust in an economic exchange, but how I understand trust will have an impact on how I construct a particular event and which data I select to construe it. Additionally, how I believe I can observe trust and the extent to which I believe trust can be observed will impact the theory I use because it will have methodological and epistemological assumptions attached to it.

Experimental economics is closer to being a social science than a natural science: it is easier to clean a laboratory tube and render it sterile when conducting a chemical experiment than it is to isolate clean economic behaviours in a laboratory experiment. The laboratories of experimental economics fail to take away the noise that is inherent to any human behaviour, and auxiliary hypotheses that relate to numerous uncontrollable factors. For instance, how trust is individually expressed in an experiment is bound to be a function of the individual past experiences of participants, their learnt behaviours, social conventions, etc. An assumption will have to be made about how trust is generally expressed, thereby creating a norm from which individual expressions of trust will deviate; and any hypothesis, in mathematical form or not, will impose this norm.

In such a case, truth is never expressed perfectly unless it is assumed that the norm itself is the truth from which individual behaviours deviate. And this would be making a very strong assumption about mathematical models as normative in describing economic behaviour. Additionally, assuming that all human behaviours, however complex, can be ultimately reduced to mathematical formulae begs the question of how human freedom is construed in light of such an assumption.

As many would argue, this kind of noise is the reason that precision and ability to predict individual behaviour is so much lower for economic models than for models in the natural sciences; some philosophers of science however argue that the social sciences cannot on principle be predictive because they seek to observe very different ontological objects.

Mary S. Morgan defends the latter approach: “We are more justified in claiming to learn something about the world from the experiment because the world and experiment share the same stuff. In contrast, inference from the model experiment is much more difficult as the materials are not the same – there is no shared ontology, and so the epistemological power is weaker.”²⁹⁵ In other words, experiments are more likely to produce meaningful results because their underlying material is real, i.e. human beings, whereas the “material” of economic models are mathematical formulae.

Experimental economics has arguably much in common with psychology: it seeks to explain human behaviour and faces similar hurdles in describing truth adequately and precisely. There is therefore a danger that economists want to see their science on par with other natural sciences and therefore will demand the reducibility of human behaviours to mathematical formulae, regardless of whether these are a true representation of reality. Robin Cubitt argues that at the very least much judgment is needed when drawing parallels between mathematical models and human behaviour:

One might naively think that the domain of a theory is just “what the theory is about” and that for a given theory, this will be obvious. In fact, it is not always obvious. A possible starting-point is to try to identify what the theory is about from its formal objects or ontology. As these are internal to the theory and, in the case of economics, are often mathematical concepts, they may not straightforwardly exist in the world. So, there will usually (perhaps always) be judgment involved in specifying what phenomena they could correspond to.²⁹⁶

There is a limitation to such a sense of external validity. Cubitt uses the analogy of a monastic community in describing the relationship between human behaviour in the laboratory and reality: “These are real societies and so within the subject matter of social science. However, as Christian monasteries are a tiny part of contemporary society, the study of them is not important for the study of modern society unless we learn something from it about the social world outside the monastery.”²⁹⁷

295 Mary S. Morgan, "Experiments Versus Models: New Phenomena, Inference and Surprise," *Journal of Economic Methodology* 12, no. 2 (2005): 323, <https://doi.org/10.1080/13501780500086313>.

296 Robin Cubitt, "Experiments and the Domain of Economic Theory," *Journal of Economic Methodology* 12, no. 2 (2005): 198-9, <https://doi.org/10.1080/13501780500086040>.

297 Cubitt, "Experiments and the Domain of Economic Theory," 198.

Additionally, there is an inherent set of norms that individuals follow but these are internalised and individualised norms that are unlikely to be entirely captured by purely mathematically based models. In the case of a Christian monastic community, individual monks will probably follow the Rule of St Benedict and derive some norms from the Bible, both of which require interpretation. This means two things. Firstly, that unless the experimenter has an understanding of the sources from which monks derive their behavioural choices, she is unlikely to construct models that take into account what influences their behaviour; if she solely sought to use a rational choice model, she may validate a hypothesis because there is enough compliant data to confirm the phenomena she is looking for. However, this in itself makes no appraisal of the explanatory power of rational choice theory in relation to alternative theories, even if it appears high. In other words, using a rational choice model may give an explanation to what is going on in a monastery, but this may not in itself be what actually goes on. Ideally, the language used to describe the phenomena need to be as closely related as possible to that which guides the subjects of its observations.

Secondly, for the monks, the norms that influence their behaviour are based on the Rule of St Benedict and the Bible; these norms are not the same as the ones implicit in the models used by the researchers. As a result, models, which are inherently normative, compete epistemologically and can influence the choice and treatment of data, and not only ex-post in the interpretation of the data. If I am looking to explain an act of altruism, rational choice theory and a theological account of charity, such as St Benedict's rules on hospitality, the explanatory power of both accounts will depend on how they fit the norms followed by the monks. More importantly, if the mindset of individuals is guided by rational choice theory, then its explanatory power is likely to be higher: if I have been brought up believing that rational choice theory is the truth, then I am more likely to follow it and act in accordance to it. But if I have been brought up with a different understanding of charity, and I have been formed through the rule of St Benedict and I read the Bible daily, how I act will inherently be different from someone who has never heard of those. Therefore, imposing a rational choice model on my behaviour as having the highest epistemological power would be blind to the normative aspect of models.

Economics and Reality: Tony Lawson's Critical Realism

The Case for Critical Realism

Experimental economics, as argued above, remains a rather faithful bedfellow of mainstream economics, even if it flirts with the epistemological approaches of other disciplines. More specifically, their respective methodologies differ but they share both a common language (e.g. when talking about rationality and self-seeking behaviour) and common methodological postulates (a similar understanding of reality through methodological assumptions such as causality, atomism, and the reducibility of human behaviours to mathematical formulae).

As such, experimental economics cannot be completely detached from mainstream economics, either in its categories or its methodological foundations. Experimental economics would make little sense if it existed completely on its own: it would inherently tend towards a constructivist epistemology and would not account for what cannot easily be observed or understood. A hypothetico-deductive approach can be systematic and universal, whereas a constructivist epistemology leaves too many gaps unexplained. Solely relying on the empirical would be like trying to build a house without scaffolding.

Mainstream and experimental economics, as we will see below, share the same root problem: methodological flaws that lead to a reductivist construction of reality. Critical realism as expounded by Roy Bhaskar and expanded for economics by Tony Lawson, provides a way to explore those limitations of mainstream and experimental economics; it stands in contrast both to positivism (which restricts the objects of scientific knowledge to directly experienced events) and to idealism (which restricts the objects of scientific knowledge to the linguistic and conceptual resources of the scientific community).²⁹⁸

Critical realism has historically been associated with the work of Bhaskar (although he never developed the term critical realism in his own work or explicitly associated himself with such a school). The term itself, Bhaskar recounts, is the elision of transcendental realism and critical

²⁹⁸ Paul Lewis, "Metaphor and Critical Realism," in *Critical Realism in Economics: Development and Debate*, ed. Steve Fleetwood (London and New York: Routledge 1999), 83.

naturalism with “‘critical’, like ‘transcendental’ [suggesting] affinities with Kant’s philosophy and ‘realism’ indicating the differences from it.”²⁹⁹ As will be explored at the end of this chapter, Lonergan and Bhaskar share many critical realist views, even if they arrived at them by different paths.

In contrast to idealism, Bhaskar’s critical realism wants to avoid the epistemic fallacy that follows the conflation of “the real world with the conceptual and linguistic resources in terms of which scientists conceive of it.” Idealism fails to admit “the need to refine theoretical terminology in response to experimental evidence.”³⁰⁰ Similarly, against positivism is a desire to allow the development of terms and explanations that reach beyond the limitations imposed by proven concepts:

It is important that the senses of terms are not rigidly defined if the theory is to be flexible enough to permit reference to entities whose essential properties are as yet unknown, and thus to facilitate the accommodation of linguistic categories to as yet only partially understood features of the world.³⁰¹

There is a transcendental element within critical realism, an element which can be understood as a move away from positivism, but critical realism and transcendental realism remain clearly distinguished. Transcendental realism is concerned with establishing a priori or necessary truths about the world. Whilst Kantian transcendentalism is concerned with what is true a priori, transcendental realism seeks to establish what is true empirically or a posteriori.³⁰² Further, for Lawson, “the transcendental method of enquiry is conceptually distinct from the individualist and idealistic mode or form in which Kant framed his own specific transcendental enquiries.”³⁰³ Transcendental realism can thus be understood as a middle path between empiricism and relativism:

299 Roy Bhaskar, "General Introduction," in *Critical Realism: Essential Readings*, ed. Margaret Archer et al. (London and New York: Routledge, 1998), ix.

300 Lewis, "Metaphor and Critical Realism," 97.

301 Lewis, "Metaphor and Critical Realism," 96.

302 Stephen D. Parsons, "Why the 'Transcendental' in Transcendental Realism?," in *Critical Realism in Economics: Development and Debate*, ed. Steve Fleetwood (London and New York: Routledge, 1999), 154.

303 Tony Lawson, "Critical Issues in *Economics as Realist Social Theory*," in *Critical Realism in Economics: Development and Debate*, ed. Steve Fleetwood (London and New York: Routledge, 1999), 211.

Instead of asking the epistemological question “how can we scientifically know about the world?,” [transcendental realism] asks the ontological question: “what must the world be like if we are to take seriously what science seems to reveal about the world?”³⁰⁴

However, critical realism distances itself from transcendental realism by taking into account the distinctive nature of the objects of social science. These objects are historically contingent, and their underlying structures, powers and mechanisms can change over time and through (often unconscious) human agency. In other words, social structures are not independent from those studying them; they are in fact open in that there is no way of restricting causal influences to generate a closed system.³⁰⁵ A realist approach to the social sciences must therefore also be critical: “the material world as the object of knowledge-claims cannot be conflated with the subjects of knowledge-claims.”³⁰⁶ In particular, knowledge can never fully be independent from events:

Knowledge claims about aspects of social phenomena can lead to agents re-shaping the material conditions of social phenomena, with intended and unintended consequences that are again available for interpretation and refining knowledge claims. Hence, logical deduction is a misleading pattern or template for researchers to draw upon in making and assessing knowledge claims. Rather, inferences will not entail conclusions fully.³⁰⁷

Whilst critical realism is methodological in its orientation, it is not a methodology per se; it is rather concerned with a philosophical investigation into the scientific character of economics whilst not specifying the proper relationship between empirical evidence and scientific theories.³⁰⁸ Nevertheless, critical realism distances itself from positivism:

304 Paul Downward, John Finch, and John Ramsay, "Seeking a Role for Empirical Analysis in Critical Realist Explanation," in *Applied Economics and the Critical Realist Critique: A Critical Realist Approach*, ed. Paul Downward (London and New York: Routledge, 2003), 53.

305 Bernard Walters and David Young, "Critical Realism Methodology and Applied Economics," in *Applied Economics and the Critical Realist Critique*, ed. Paul Downward (London and New York: Routledge, 2003), 54.

306 Downward, Finch, and Ramsay, "Seeking a Role for Empirical Analysis in Critical Realist Explanation," 91.

307 Downward, Finch, and Ramsay, "Seeking a Role for Empirical Analysis in Critical Realist Explanation," 91-92.

308 D. Wade Hands, "Transforming Methodology: Critical Realism and Recent Economic Methodology," in *Transforming Economics: Perspectives on the Critical Realist Project*, ed. Paul Lewis (London and New York: Routledge, 2004), 286.

Critical realism remains a normative philosophical approach – it does specify the ontological features that an adequate social science *ought* to include – and in that sense it is contrary to various approaches (particularly sociological approaches) within contemporary science theory that have abandoned normative considerations in favor of a purely *descriptive* approach to scientific knowledge, but this normativity is substantially different than the normativity that emerges from rules-based philosophy of science. There are normative aspects to critical realism, but it does not specify methodological rules that individual scientists must follow in order to obtain epistemically justified scientific knowledge.³⁰⁹

As mentioned above, Bhaskar and Lonergan share a number of critical realist views, and a rejection of positivism is the first such commonality. Christopher Friel provides a very helpful comparison between the thought of Lonergan and Bhaskar.³¹⁰ Friel notes the following “convergence in two critical realists regarding just one topic: that a critique of empiricism can be launched by considering the intelligibility of experiment:”³¹¹

Just as Bhaskar refuses to identify the regularities of constantly conjoined events with laws, so Lonergan has an understanding of law as something distinct from schemes of recurrence. Lonergan speaks of classical laws (for example, force is the product of mass and acceleration) as abstract but there is a sense in which schemes are concrete. Lonergan adopts the distinctive terminology of “schemes” (and also “residues”) because his account emerges from his cognitional theory.³¹²

For Friel, the main trademark of Lonergan remains his cognitive theory as foundational to the rest of his thought: “To put Lonergan’s point as succinctly as possible, an appropriate epistemology ought to yield a major premise to the effect that we know the real if we understand correctly. Lonergan insisted that this was the key to science....This explains why he gave much attention to the act of understanding, insight.”³¹³ Paul St. Amour further highlights how Lonergan implicitly embraces a critical realist position by rejecting both idealism and naïve realism in his theory of cognition. Lonergan rejects both idealism and naïve

309 Hands, "Transforming Methodology: Critical Realism and Recent Economic Methodology," 293.

310 Christopher Friel, "Lonergan and Bhaskar: The Intelligibility of Experiment," *The Heythrop Journal* 60, no. 1 (2019), <https://doi.org/10.1111/heyj.12162>. Friel even notes the possible indirect influence of Lonergan upon Bhaskar’s work. Since Bhaskar and Philip McShane both had the same doctoral supervisor (Rom Harré, Oxford), and McShane’s engagement with *Insight* is evident in his doctoral thesis (later published as *Randomness, Statistics and Emergence*, and also cited later in this thesis) it is possible that Lonergan’s thought came to influence Bhaskar.

311 Friel, "Lonergan and Bhaskar: The Intelligibility of Experiment," 70-1.

312 Friel, "Lonergan and Bhaskar: The Intelligibility of Experiment," 67.

313 Friel, "Lonergan and Bhaskar: The Intelligibility of Experiment," 74.

realism because they portray objectivity as neither experiential, nor normative, nor fully attainable through judgment:

Lonergan appropriated the modern turn to the subject and explicated a method of self-appropriation which disclosed idealism to be performatively incoherent with respect to what occurs in each and every act of judgment, an act that can itself be rationally verified as grasping the real. Hence a dogmatic realism is not only unsatisfactory but also unnecessary. Self-appropriation discloses idealist immanentism to be incoherent because it involves a denial of the grasp of the unconditioned that occurs in every act of judgment. As no person who has attained this self-knowledge can self-consistently remain an idealist, the need to respond to idealism in a dogmatic manner is [also] obviated.³¹⁴

In chapter six, we will discuss in greater detail the philosophical and methodological differences between Lonergan and the critical realists Bhaskar and Lawson. In this chapter, we will go on to explore Lawson's specific methodological critique of economics. We will remain mindful of Lonergan's challenge that both the economist and the theologian must attend to their own cognitive processes and to the inherent moral dimensions of engaging with the empirical (a point that Bhaskar and Lawson do not explore).

Reality

Bhaskar confronts what he describes as the epistemic fallacy, whereby "ontic questions can always be transposed into an epistemological key, i.e. that statements about being either just are or may always be parsed as statements about knowledge."³¹⁵ He argues against what is the flattening, or limitation, of the real (and actual) to the empirical.³¹⁶ Instead, he develops the case for an approach that goes beyond empirical realism in two ways. Firstly, what is observed cannot be the limit of the ontic possibilities of any object, e.g. the scientist expecting the apple to fall may fail to consider the possibility that someone may just grab it and subject it to other forces because he is unable to observe or predict such eventualities. Similarly, some events are difficult to predict, if at all, even when the mechanisms behind them are very real and can lead to dire consequences; the 2008 financial crisis is such an example.

314 St. Amour, "Lonergan and Gilson on the Problem of Critical Realism," 589.

315 Roy Bhaskar, *Scientific Realism and Human Emancipation* (Brooklyn, NY: Verso, 1986), 6.

316 On the difference between the real and the actual, see below.

Additionally, there may be objects that cannot be observed, for instance angels in the Christian tradition, which are in that tradition considered to be real.

In order to achieve a richer description of reality, Bhaskar develops a model that divides it into three domains: the real, the actual, and the empirical. Tony Lawson defines these as follows: (a) the empirical is constituted of experience and impressions, (b) the actual is actual events and states of affairs in addition to the empirical, and (c) the real is structures, powers, mechanisms and tendencies, in addition to actual events and empirical experiences. For example, not only can a leaf fall to the ground (the actual) but we can experience it as such; we can observe its fall (the empirical). A leaf can fall without us observing, with the actual not necessitating the empirical. Similarly, we cannot observe mechanisms such as gravity that will have contributed to the leaf falling but the existence of gravity is undeniable (the real). Furthermore, gravity exists even if we do not observe any leaf falling.³¹⁷

This extension and stratification of reality challenges a limited scientific realism whereby reality is exhausted by atomistic events and their constant conjunctions. Reality, then, is far more than what is observable and or deducible, and begs for an acknowledgement that we cannot possibly grasp or understand all that surrounds us. This transcendental element in critical realism rests on the idea that “the world is composed not only of events and states of affairs and our experiences or impressions, but also of underlying structures, powers, mechanisms and tendencies that exist whether or not detected, and govern or facilitate actual events.”³¹⁸ In this ecology, “the noted three domains [are] ontologically distinct and irreducible (the real cannot be reduced to the actual nor the latter identified with the empirical).”³¹⁹ For Lawson, transcendental realism calls for a richer use of methods and language to encompass a reality we cannot easily observe or reduce to (mathematical) laws; it often relies on analogies and metaphors.³²⁰

317 Tony Lawson, *Economics and Reality* (London and New York: Routledge, 1997), 22.

318 Lawson, *Economics and Reality*, 21.

319 Lawson, *Economics and Reality*, 22.

320 Lawson, *Economics and Reality*, 24.

Reality, then, consists of powers, structures, and tendencies, which are not easily observable, let alone empirically inferable. Lawson thereby proposes the following constituents of a richer ecology where complex things, given their structures, possess certain powers, which are “potential, capacities, or abilities to act in certain ways and/or to facilitate various activities and developments.”³²¹ Lawson explains that powers exist independently of whether they are exercised or not:

The bike can facilitate a ride even though it always sits in the back of the shed; the gunpowder has the power to cause damage even if it is never ignited; the language system makes a conversation possible even where people choose not to speak. In many cases we can infer something of a thing’s potential from a knowledge of its structure. Certainly a good deal about the powers or capabilities of rockets, planes, bridges and parachutes are inferred before any particular one is built and subsequently “tried out.”³²²

In turn, a mechanism is “a way of acting or working of a structural thing”: bicycles and rockets that work in certain ways because they can have the power to do so; “mechanisms then exist as causal powers of things.”³²³ Finally, tendencies are “potentialities which may be exercised or in play without being directly realised or manifest in any particular outcome.”³²⁴ Such tendencies are deeply rooted in reality, and are unconditional because they can be non-actual and non-empirical; “it is not a statement of logical necessity subject to *ceteris paribus* restrictions, but a statement of natural necessity without qualifications attached.”³²⁵ These are powers that are exercised whatever events follow; “it is for example about the gravitational field which acts on the pen in my hand and continues to do so irrespective of whether I toss the pen in the air, continue to write with it, or drop it in a vacuum.”³²⁶

The mechanism of tendencies and causal structures can only be reduced to causal laws if we accept that theory is independent of the reality that it seeks to describe. We acknowledge thereby that our knowledge is inherently limited and that we need to make assumptions. But this also means that the reality we seek to describe is ultimately independent of our

321 Lawson, *Economics and Reality*, 21.

322 Lawson, *Economics and Reality*, 21.

323 Lawson, *Economics and Reality*, 21.

324 Lawson, *Economics and Reality*, 23.

325 Lawson, *Economics and Reality*, 23.

326 Lawson, *Economics and Reality*, 23.

knowledge. Therefore we can only talk of the laws of motion as powers rather than universal law; real events will encompass much more than the laws of motion.

Therefore, what most of the experimental methods can produce is always the product of human intervention; universal laws are confused with powers and they are set up so that these powers, rather than real events, are being tested: "most of the constant-event conjunctions which are held to be significant in science in fact occur only under the restricted conditions of experimental control."³²⁷ As Downward, Finch and Ramsey observe: critical realists argue that "empirical research that draws upon econometrics is fundamentally flawed because, for example, of its authors' presumption that general laws can be manifest from co-variations established from data."³²⁸

It becomes clear that in terms of internal vs. external validity, critical realism would privilege external validity; it would avoid laboratory conditions and start from observations as occurring in nature. However, Lawson's approach, as we will further explore below, still gives room to experimental work: experimental activity then is less about recreating a rare situation than an "intervention designed to bring about those special circumstances under which a non-empirical law, a mechanism or tendency, can be identified empirically."³²⁹ In other words, whilst it is on the one hand possible to infer some universal insights from natural experiments, critical realism would argue that the empirical in the social sciences is never detached from a particular time-space specific interpretation.

Open and Closed Systems

A particular issue with mainstream economics that Lawson exposes is "regularity determinism," i.e. "for every economic event or state of affairs y there exists a set of events or conditions $x_1, x_2 \dots x_n$ such that y and $x_1, x_2 \dots x_n$ are regularly conjoined under some (set of) formulation(s)."³³⁰ As explored above in the case of experimental economics, the observation

³²⁷ Lawson, *Economics and Reality*, 27.

³²⁸ Downward, Finch, and Ramsay, "Seeking a Role for Empirical Analysis in Critical Realist Explanation," 89.

³²⁹ Lawson, *Economics and Reality*, 28-9.

³³⁰ Lawson, *Economics and Reality*, 98.

of causal relationships requires firstly, the reduction of phenomena to particular variables, and, secondly, their isolation within a closed system.

It is this necessity for closed systems that Lawson criticises, and which he attacks on two fronts: intrinsic closure and extrinsic closure.³³¹ Intrinsic closure is constituted of two fallacies. Firstly, the assumption of intrinsic constancy, i.e. “that the internal, or intrinsic structure of any (delineated state of any) individual of analysis [is] constant:” I am constant, without openness to acting differently from what an outside observer would expect; I am predictable. Secondly, the assumption of reducibility: who I am and how I act can be atomised and detached from my environment; I am inherently something reducible, and therefore ultimately, it is possible to attribute my behaviours uniquely to me rather than what Lawson would see as an interaction between who I am and my environment. As a result, “the conditions of intrinsic constancy and reducibility are both automatically satisfied if any and every relevant individual is characterised atomistically, as in effect lacking intrinsic [i.e., internal] structure.”³³²

Extrinsic closure, by contrast, is the assumption that “only the explicitly elaborated conditions $x_1, x_2 \dots x_n$ have a systematic, non-constant, influence on the outcome event y in question.”³³³ This issue is one well known to experimental economists in that they must make an assumption about what variables influence a particular object; limit the realm of observation to those variables; and then assume that those variables always influence that object. It may be that some variables influence an object at certain times, but not others. Trying to infer constancy means that the real is reduced to the observable, when there are in fact structures at play that are more complex than what the empirical and the actual can confer. What brings the leaf down from the tree may be gravitational force but it may be wind, a child jumping to pull it down, or even an earthquake; to seek to integrate all these variables into a formula would be nonsensical, yet they are all very real possibilities, and these possibilities are subject to forces beyond what can be easily observed or deduced.

331 Lawson, *Economics and Reality*, 98.

332 Lawson, *Economics and Reality*, 98.

333 Lawson, *Economics and Reality*, 99.

Lawson further develops this argument at the level of anthropology and of the assumptions made about the ontology of individuals, flattening it to the epistemological. For him social atomism is a form of reduction, a methodological individualism whereby “economic events and states of affairs are always to be explained by deducing them from and only from conjectured principles governing the behaviour of actual individuals, or, as in macroeconomics, of idealised ‘average’ individuals, and ‘descriptions’ of their situations.”³³⁴

Comorbid with methodological individualism is the disregard for social structures because these do not easily fit into such a reductionist ecology; as Lawson explains, social structures “are manifest in, but irreducible to, the events or actions they facilitate. The actions of (intentional) conformers and (intentional) rebels alike presuppose the pre-existence (and so relative autonomy), and causal efficacy (and so reality), of social rules as something irreducible to human agency and action.”³³⁵ Again, we cannot escape the normative, the socially constructed nomological: individuals do indeed take sets of positions that are associated with obligations, rights, and duties.³³⁶

Individuals and Society

Individuals can never be understood away from their environment and their relationships. A football commentator can for example focus for a short while on a particular player, but his or her actions can only be understood in the context of the rest of the team, of the rules of the game, past games, experience gained, and so on. But at a deeper level, there is also the ability of that particular player to affect how the rest of the team functions, to reinforce a certain understanding of the rules, to create or limit new possibilities in future games. Lawson explains this at a more theoretical level:

If it is the dependency of [social] structures upon human agency that marks them out as being social, it is their ability, in turn, to make a difference to (to enable as well as to constrain) physical states, or actions, that (just as with non-perceivable objects of

334 Lawson, *Economics and Reality*, 159.

335 Lawson, *Economics and Reality*, 162.

336 Lawson, *Economics and Reality*, 164.

the natural realm such as gravitational and magnetic fields) establishes that they are real....Human agency and social structure then presuppose each other.³³⁷

Individuals can never be reduced to being separate from their environment; Lawson thereby nails the coffin on the atomistic assumption of mainstream and experimental economics. But beyond that, and more importantly, he also advances that we are both a product of our environment, and constantly actively changing it.

This means that when we conduct experiments, we are not simply looking objectively as if we were in the audience but, rather, we influence the experiment as if we were on the stage. Further, we limit the possibilities of the storyline because we are looking for some specific scenarios; the actors are arguably not fully free but too easily coerced into certain roles: “the activity of experimental control has indicated that human capabilities and institutions must be recognised as of a kind to facilitate the manipulation of aspects of reality so that the latter may be more readily assessed/revealed.”³³⁸

Epistemology is influenced by the interaction between human agency and social structures. Equally, the discourse of the actors and the language of the researcher must coincide for the experiment to make sense. And that language is never neutral; the experiment becomes inherently normative because there is a chosen discourse that sets certain expectations which are dependent on that interaction between human agency and social structures.

Again, if the general discourse is that people are rational then I will inevitably seek to observe this, rather than to look for another type of behaviour that has no word for it; rationality becomes the expectation, and offering an alternative might prove difficult if such beliefs are constantly socially reinforced. Lawson draws the parallel between our anthropological constructs and our methodology in economics:

In contemporary economics the (usually implicit) social landscape is marked by determinism instead of transformative intentional agency, stasis rather than change, extentionalism (formulated by Hume as the doctrine that events are everywhere

337 Lawson, *Economics and Reality*, 32.

338 Lawson, *Economics and Reality*, 39.

“loose and separate, conjoined but never connected”) rather than internal-relationality, actualism rather than openness, depth and emergence, and monovalence to the exclusion of negativity.³³⁹

We are taught to look for determinism, and we are too easily blind to the limitations of that approach because we have never known anything else. Lawson proposes rather that “any economic laws must be interpreted as tendencies that are manifest as strict event regularities only very rarely, usually in conditions where they are consciously brought about.”³⁴⁰ He proposes moving away from the sticky concepts and laws that are expected to hold at all times to something that is less readily and constantly observable; a more flexible understanding of reality can be reached by “acknowledging a realm of structures and mechanisms which are irreducible to actual phenomena including human activities, but which govern, facilitate, produce and/or condition them; the determinism of positivism”.³⁴¹ Lawson uses the parallel of the highway code that “facilitates safe driving, without determining the journey taken” and “the market mechanism [that] facilitates buying and selling without necessitating any purchase.”³⁴²

With the avoidance of a positivist determinism that reduces laws to predictive axioms, the type of social science that can then be sought is one that is “centred upon the intentionality of human agency and [involves] a recognition of the reality and relative autonomy of action-conditioning social structure, [which] amounts to an acknowledgement of the irreducibility of society to nature.”³⁴³ Whilst it may not be possible to observe the actors at a distance, it is possible to not coerce them into specific scenarios: this entails letting the scenes unfold without expecting a particular scenario, i.e. not to test whether a particular scenario happens, but to think, after the end of the show, what story the actors were telling. That story, of course, is intelligible exactly because it is in the same language as the spectator’s, but it is never neutral. The normativity of language is granted, but what is really important is not to let certain words in that language determine the outcome of the play: monks may display some (self-interested) rationality in their behaviour, but to limit the meaning of their actions

339 Lawson, *Economics and Reality*, 65.

340 Lawson, *Economics and Reality*, 32.

341 Lawson, *Economics and Reality*, 38.

342 Lawson, *Economics and Reality*, 38.

343 Lawson, *Economics and Reality*, 63.

to that specific behaviour would lead to the construal of a rather odd monastery – a construal quite different from the reality.

Individuals are not reducible, and society is more than an aggregation of individuals and their interactions. According to Lawson, society is a system that is “best conceived of as a structured process of interaction” which remains ontologically real even if indistinguishable from individuals:

Because social structure is drawn upon in, and so presupposed by, [intentional] action [,] it must pre-exist it. Because it makes a difference to action and so to the states of affairs brought about, it must be real...; [it] cannot be regarded as the mere creation of individuals. The subjectivist/voluntarist reduction of structure to agency then must be rejected. At the same time, if the human race were to disappear tomorrow social structure would disappear along with it.³⁴⁴

It is in such a social structure that we find institutions, which are “a social system that [have] been found to be (relatively) enduring.”³⁴⁵ Similarly, a social group or collectivity can be understood “as consisting in, or depending upon, or as a set of people distinguishable by, their current occupancy of a specific set of social positions.”³⁴⁶ It is within the dynamic of such social structures that we can understand freedom and choice more clearly.

Freedom and Choice

In his already complex ecology, Lawson introduces a further set of useful anthropological concepts specifically relating to decision-making. For him, we possess or bear powers, abilities and capabilities: this is our human agency enacted through intentionality. Actions, in turn, are caused by beliefs in relation to practical matters of life. For Lawson, we can make choices,

344 Lawson explains that in his view, “most accounts in economics that explicitly focus upon the agency-structure relation veer towards one or the other or both of...two...poles. That is either (1) structure is reduced to (is conceptualised as the mere creation of) individuals, or (2) agency is reduced to (is conceived of as being totally determined by) external, coercive structure.” Lawson, *Economics and Reality*, 167.

345 Lawson, *Economics and Reality*, 165.

346 Lawson, *Economics and Reality*, 165.

which are powers “possessed by each individual whereby, in any situation, he or she could really have acted other than he or she did.”³⁴⁷

Lawson argues that we influence our environment as much as we are influenced by it. The interaction between the physical (neurological) aspect of decision-making and the physicality of society is real. He argues that “if intentionality and choice are causal and so real, there is also a case for supposing that they are not reducible (even in principle) to some more basic (e.g. physico-chemical or neurophysiological) set of mechanisms or principles of organisation.”³⁴⁸ Individual actions, and therefore reasons, intentions and choices causally can affect physical matter; this means that if certain material or physiological states would not have arisen without intentionality and choice, those states cannot be reduced to the purely physical. In other words, changes in physicality can be attributed to choice and intentionality because physicality could not have causally changed by itself without those.

Hence, the physicality of individuals and society cannot be completely detached from social constructions; atomistic individuals are not physically fully autonomous as if they existed in a vacuum. Freedom of choice exists relative to a certain framework; this framework cannot be separated from acquired knowledge, both at individual and society level, as well as the (physical) possibilities and limitations of individuals and society. We are socially situated, and therefore “human rationality...must be constructed as a capacity rather than an actuality [and] is very much of a situated sort.”³⁴⁹

In terms of empirical approach, this means that the “subject and context of analysis will bear on the analytical and the criteria that are appropriate.”³⁵⁰ Whilst Lawson develops his ecology at an abstract level he also gives some clues as to a number of approaches that are empirical in their nature.

347 Lawson, *Economics and Reality*, 174.

348 Lawson, *Economics and Reality*, 175.

349 Lawson, *Economics and Reality*, 187.

350 Lawson, *Economics and Reality*, 191.

Empirical Anchor Points

The key leitmotif of Lawson's approach to the world of the empirical is that it is necessary but that it should also not be totalising; he rejects both empiricism and the deductive approach. He proposes three anchoring concepts in order to apprehend ontological objects in the social realm: abstraction, semi-regularities, and differentials.

Abstraction can be best described as a temporary focus. As in the above example, we focus on the performance of a particular player in a football match, without ever forgetting that his actions are influenced by the rest of the team, by the rules of the match, and by traditions of practice, and that they also influence how others play, maintain existing rules, and develop the practice. Lawson argues that this exercise is inherently contrastive: "we have seen that in accounting for some social phenomena the aim could not be to provide its complete causal history. Rather, we can only aim to identify one (set of) causal mechanism(s)." ³⁵¹ This means contrasting at least two situations where the same outcome was expected but where this did not happen, in order to identify at least one mechanism in operation in a particular set of situations.

Semi-regularities, in turn, are Lawson's main methodological defence against causal determinism, i.e. if x then always y. Lawson recognises that individuals as much as societal structures have certain tendencies, which they likely mutually reinforce. In that sense, both have possibilities and limitations, which then in turn bear on the other. I may be able to lie to various degrees, but depending on what kind of society I live in, the social structures may provide more or less affordances for me to lie, and may shape what kinds of lies I might tell. I may or may not be a good liar, but the fact that I might live in a police state will have an influence on how and when I lie. Through this, practices will be formed.

Therefore, to say "people lie more in police states" cannot be a causal deterministic function of the $f(x) = y$ type where x is "how much control over people's lives does the (police) state have" and y is "how much people lie." This is because y also reinforces x, i.e. people lying

³⁵¹ Lawson, *Economics and Reality*, 209.

makes the police state want to control them more. In addition, y is determined by individual factors that simply cannot be aggregated, i.e. some people are better liars than others through nature and nurture. The only way to construct some relationship between x and y is to observe semi-regularities. In the case of the police state – lying relationship, several police states would need to be observed as well as several individuals in each, ideally in different eras.

It is possible to see whether semi-regularities hold through some level of abstraction by using differentials. These are naturally occurring scenarios that present many similarities where it is possible to observe whether certain factors can help explain certain outcomes. For instance, one may compare two individuals executing the same task but the first one is paid whilst the second one does it voluntarily. The idea behind semi-regularities is that even if the paid individual performs better, there can be competing explanations other than a strict causal relationship between pay and performance: for instance, the first individual may be more resilient to stress from home life or generally in better health. Experimental economics will seek a direct causal relationship between specific variables and outcomes, whereas the concept of semi-regularities encompass more discrete possibilities: it may be pay affecting performance in one instance, but stress at home and health affecting performance in other instances. In short: strict causal relationships cannot be drawn easily and the social scientist is instead invited to look at the particulars of situations in more details. This is why, for Lawson, if partial event regularities “are seen to be fundamental to social science properly interpreted and facilitative of likely successes,...they are nevertheless inadequate to the (misconceived) requirements of mainstream economics.”³⁵²

Epistemological success then is not something that can be understood as strictly as in mainstream economics, and this is so for two reasons. Firstly, the social realm is composed of potentially many countervailing factors at play, at any one time or sporadically, with varying strength.³⁵³ Secondly, constancy is unlikely when human beings choose their course of action; social mechanisms are dependent on transformative human agency.³⁵⁴

352 Lawson, *Economics and Reality*, 218.

353 Lawson, *Economics and Reality*, 218.

354 Lawson, *Economics and Reality*, 219.

As a result, the world of the empirical can only make a partial contribution to understanding human behaviour because it is epistemologically limited in time and space. Lawson (re)sets the role of the empirical to enabling applied explanations, which are characteristically resolute: the objective of empirical study is to resolve conjunctions or complexes, and re-describe them and their components, though retrodiction, that is, by determining possible antecedents and their components and by eliminating possible causes. He gives the following example: “if we attribute weather pattern x to a particular combination of (already understood) causal mechanisms y, it is necessary to determine (retrodict) the conditions for y and then to check empirically whether these conditions actually obtained.”³⁵⁵ More simply put, experiments are a tool to test specific causal mechanisms within a wider theory; experimentation is not a full methodology in its own right for building theory.

A Critical Realist Reading of Experimental Economics

As explored above, critical realism as set out by Lawson deeply questions the fundamentals of mainstream economics and, by extension, of experimental economics. Lawson himself only briefly addresses the field of behavioural/experimental economics and critiques it for being “mostly a deductivist modelling endeavour thus presupposing the usual systems of isolated atoms [where] atomistic agents continue to maximise a preference relation over some space of consequences where any solution typically involves standard equilibrium concepts.”³⁵⁶ Lawson does not go much further in his critique of the discipline itself. He observes that an empirical approach to social economics need not be so formalistic; it should also be contrastive, interest laden and critical. He insists that economics must contain a significant empirical component.³⁵⁷

Based on the review of Lawson’s contribution above, it becomes clear that the methodology of experimental economics would need to be revised. Firstly, a rejection of an atomistic

355 Lawson, *Economics and Reality*, 221.

356 Edward Fullbrook, *Ontology and Economics: Tony Lawson and his Critics* (London: Routledge, 2009), 105.

357 Tony Lawson, “Economic Science without Experimentation,” in *Critical Realism: Essential Readings*, ed. Margaret Archer et al. (London and New York: Routledge, 1998), 165.

understanding of individuals is necessary and an emergent model should be favoured, in which abstraction is used selectively.

Secondly, causal determinism is to be entirely dropped and replaced by more careful orthogonal analysis and ex-post explanations. An orthogonal approach requires looking in real life for very similar situations where the number of possible determinants that differ between the situations is kept as low as possible. Looking for semi-regularities in particular requires a higher number of comparable situations before any observation can be made about the tendencies of particular objects. If we want to know about the efficacy of a particular fertiliser, a number of situations need to be assessed beyond using a field with the fertiliser and another without that fertiliser. It may be necessary to have a set of fields with different characteristics to see whether the fertiliser constantly shows improved yields. The human intervention should be restricted to the (non-)application of fertiliser on fields, rather than trying to create two fields with the same properties.

Thirdly, modelling based on hypothetico-deductivist models should be rejected, real-life situations should be favoured over laboratory-based experiments; this could possibly approximate some qualitative methods. Finally, a departure from mathematisation will be necessary to avoid restricting behaviour to a set of formulae.

Experimental economics' atomistic approach in itself does not deny that individuals influence others; the very basis of game theory for instance is the idea that individuals make decisions based on possible future decisions by other players. However critical realism goes deeper than this in that decisions are never separated from how society constructs its own reality; individuals cannot be atomised because they are not fully distinguishable from their environment:

We regularly act in many habitual ways simultaneously. It thus seems to follow...that an individual, in part, comprises a complex structure of (durable if also transposable) dispositions. This structure is one which, following Bourdieu, we might refer to as the habitus. And because many dispositions to act in habitual fashion endure, the habitus ...ensures the heavy weight of the past in the present, and helps account for the noted fact that we can achieve many things almost at once. It enables us to negotiate a

number of obstacles in a manner that would be impossible if we had to reflect upon them all.³⁵⁸

An individual is influenced by and contributes to her habitus, and therefore cannot be observed in isolation from it; at most her actions can be abstracted but not isolated from society, and to draw conclusions without referral to the emergent relationship between individual and society is ultimately absurd. If an individual plays football, it is assumed that the decision she takes are somehow related to the rules of the game and how these are played out by others. If that individual plays football according to the rules of cricket, her actions might make sense on their own but not when in a football match with other players; most likely, they will make no sense at all.

As a result, any form of empirical enterprise must take into account the environment, and therefore the (implicit) language and norms of the individuals observed. Such enquiry must be guided by the environment and revise its starting points accordingly. As such, “the vital arena of investigation is the connection between the knowledge claims of agents in their contexts and how these relate to the knowledge-claims of researchers.”³⁵⁹ It follows that institutional and behavioural contexts are necessary to satisfactorily explain agent belief and action.

Still, a dialectical approach, in particular the one advocated by Lonergan (which will be explored in the sixth chapter), can play a role in inferential procedures: not so much to establish event regularities and falsify universal laws, but rather to complement and corroborate knowledge-claims. In particular, “any statistical analysis depends upon the researcher formulating categories from the different types of data collated during primary investigation in particular contexts.”³⁶⁰

A critical realist approach to experimental economics would reject the a priori reducibility of economic behaviour to mathematical formulae. Mainstream economists make two types of arguments on behalf of using mathematical formulae. Firstly, all such economists would argue

358 Tony Lawson, *Reorienting Economics* (London and New York: Routledge, 2003), 45.

359 Downward, Finch, and Ramsay, "Seeking a Role for Empirical Analysis in Critical Realist Explanation," 104.

360 Downward, Finch, and Ramsay, "Seeking a Role for Empirical Analysis in Critical Realist Explanation," 103.

that mathematics is the only way to aggregate behaviours and process large quantities of data. Secondly, many would affirm that natural laws determine the action of human beings, and that these can be boiled down to mathematical formulae as they are in physics. Lawson dispenses with the second argument immediately: at the root of his discomfort with mathematics in economic theory is the epistemic fallacy, namely the flattening of the ontological to the epistemological: our understanding must not be limited to the Procrustean bed of our mathematical formulae. Therefore the second argument can be dismissed from a critical realist perspective.

However, some concession can be made to the argument that mathematics is helpful in aggregating behaviour and particularly useful when seeking to process large quantities of data. As a result, the critique can be more differentiated: if mathematical models are used to predict human behaviour, they do not have sufficient explanatory power to do so. However, mathematical formulae, as much as anthropological, psychological, or social models, can provide a way to describe and explain economic behaviour. If mathematical formulae can be metaphorical (as with Lonergan), they then provide a particular way to stylize data and reduce it to concise concepts – a useful move at the theoretical level. However, the formula can never be anything else than a vantage point; it cannot be one's sole epistemological tool.³⁶¹

In sum, a critical realist approach to empirical economics must depart from an atomistic approach; it does not exclude abstraction, but it must be strongly aware of the relationship between individual and society. It must also be backward looking and be more careful in seeking explanations, therefore drawing from real life situations and taking an orthogonal approach to define semi-regular relationships and effects. Additionally, it must take an approach that is not dependent on a particular theory, and certainly not mainstream theory, but rather develop its own set of models, which may well at times contradict mainstream economics. Finally, it must take a pluralist approach to experiments, which is to say, it must treat mathematical formulae in the same way as explanations stemming from anthropology, psychology or sociology; mathematics cannot have the same privileged position as in the natural sciences.

361 Downward, Finch, and Ramsay, "Seeking a Role for Empirical Analysis in Critical Realist Explanation," 100.

Critical Realism and the Possibility of Ethics

As explored in the second chapter, one of the clear limitations of experimental economics from a theological perspective is the lack of a moral dimension in the study of economic behaviour; the discipline is self-perceived as positivist. The possibility of the ethical in critical realism (not least due to the fact that both Bhaskar and Lonergan draw from Aristotle, directly or indirectly through St Thomas), makes it possible for the theologian to draw substantially from critical realist economic theory, or at least much more than from mainstream or experimental economics.

Bhaskar's own vision is that of a eudaimonistic society, in which possibilities are treated as right subject only to the constraints imposed by nature; such a society "would be an open one in which it would be up to the totality of concretely singularized individuals to decide what to do with their freedoms," a society where dialectic would play a central role as a "process of absencing constraints on absencing absences (ills, constraints, untruths, etc.)."³⁶² Bhaskar's ethics is one where morality is independent of us but can be discovered by us. And as observed by Andrew Collier, "Bhaskar's idea...that all ills can be seen in absences, echoes the Augustinian principle that being as being is good and evil is a negation or privation of beings."³⁶³

Lawsons' critical realism acknowledges the existence of a moral dimension but grounds that dimension in naturalism:

The possibility of moral theorizing, grounded in a recognised human nature, is acknowledged; a conception is sustained which recognises the existence of rights of all human beings as human beings, by virtue of a common nature grounded in our biological unity as a species. Of course, it is also recognised that this common nature is always historically and socially mediated.³⁶⁴

362 Bhaskar, "Dialectical Critical Realism and Ethics," 687.

363 Andrew Collier, "Realism and Formalism in Ethics," in *Critical Realism: Essential Readings*, ed. Margaret Archer et al. (London and New York: Routledge, 1998), 696.

364 Lawson, "Critical Issues in *Economics as Realist Social Theory*," 243.

Grounding ethics within a historically and socially mediated habitus echoes Bhaskar's own take:

In the ongoing process of science, as deeper levels and wider shores of reality come to be known and reknown, historically situated objects make ontic (being – expressive) claims about a reality which transcends their situation, in a dialectic which affords objective grounds for inevitably local choices.³⁶⁵

The critical realism of Bhaskar and Lawson is therefore problematic to theologians on two levels. Firstly, it is naturalistic. The uncaredful and unsystematic reader of Lonergan, as highlighted in the past chapter, will already have accused him of naturalism: according to such a critic, individuals would not actually need grace to come to an understanding of the ethical if all they have to do is to keep asking the right questions. Yet grace plays a crucial role in Lonergan's cognitional framework, as explored in the previous chapter and as exemplified in *Method in Theology* and in the centrality of conversion.

Secondly, and from a theological perspective, truth as incarnated in Christ is eternal. And even if aspects of the language are historically situated, the inherent truthfulness of Scripture has not changed. As a result, for the theologian truth is not just historically situational. Again, this is why the Incarnation is paramount to the theologian's task and determines his approach; this particular metaphysical event, as we explored earlier in the previous chapter, is not determined by contingent temporal or spatial considerations, even if it took place in a particular place and time.

This further applies to the description in Acts of the early Christian community explored in the first chapter: it can be deemed epistemologically truthful and grounded in an ontic reality because the community did exist, even if it has been very much stylized as a witness to a newly gained ontological possibility. Indeed, whilst the genre of narrative chosen by the author of Luke-Acts is different from one than would be normally used for a contemporary account of such a community, Luke's account seeks to highlight a different level of reality than what a contemporary factual account would seek to do. More specifically, the construct of

365 Bhaskar, *Scientific Realism and Human Emancipation*, 92.

trust could not have been pursued in any other way than through this particular mode of narrative; a purely historical and factual account – i.e. through a purely non-transcendental historical-critical or socio-critical Biblical hermeneutic – would miss a crucial teaching from Luke-Acts.

Equally, the epistemological truthfulness of Acts cannot simply be applied to situations that are similar: it would make little sense to seek to recreate a community of goods as described in Acts because there are too many uncontrollable variables. This is why a deontological framework makes little sense in the construction of ethics; as with Hollis' Kantian football team, members of such a community would be quickly faced with unexpected situations, requiring them to depart from moral imperatives and enter conditionality. Additionally, we could indeed not predict that if people followed the example laid out in Acts, the result would be the same as what is described in Acts because that would be inherently deterministic and deprive individuals of their free will.

Critical realism allows theology to engage with economics in a way that is neither self-contained and insensitive to reality nor naïve, in particular with regard to the epistemological limitations of the social sciences; critical realism is ultimately a meta-methodology that can enable both theology and empirical approaches to economics to interact in a constructive dialectic. But the goal of this thesis is not to advocate a critical realist theology per se; I simply highlight the pertinence of critical realist thought in its critique of experimental economics, noting the similarities between Lonergan's general empirical method and Bhaskar's and Lawson's critical realism. The method adopted in this thesis is clearly embedded in Lonergan's thought and work, and its implications for engaging with empirical economics will be fully explored in the final two chapters. But, as we have seen in the previous chapter and will further grasp in the seventh chapter, Lonergan's method by itself remains too general and requires further methodological specialisation and granularity to critique a discipline such as experimental economics; the thought of Lawson, as explored above, provides such granularity without compromising a Lonerganian approach.

Conclusion

This chapter has explored the anthropological and metaphysical shortcomings of experimental economics by first laying out the methodology of experimental economics and then subjecting it to a critical realist critique derived from the work of Tony Lawson. The extent to which experimental economics is a bedfellow of mainstream economics became clear. This included its disregard of the emergent relationship between individual and society, which calls for a non-laboratory based empirical approach that also invites qualitative input from the participants (at least to corroborate the hypotheses developed). Additionally, the necessity to accumulate more real-life data to enable an orthogonal approach became clear, as this would help us to observe (among other things) the semi-regular relationships and effects which are currently short-circuited in economic explanation to the level of deterministic relationships. Finally, any empirical approach cannot be held hostage to a desire to stick to mathematical models if these are not truly representative of individual choice-making.

It also became clear how experimental economics remains normatively embedded in mainstream economics through some of its assumptions, that is, the auxiliary hypotheses needed for building its main hypotheses. Foremost among these are rational choice and utility maximisation. However, in and of itself, empirical economics does not need the normative aspect of mainstream economics; it could rely on alternative auxiliary and main hypotheses instead of those put forward by mainstream economics. These alternative hypotheses could for instance include a different understanding of how trust functions, as I have explored in the first chapter. Theology, in its normative function, can put forward such auxiliary hypotheses as well as posit its own main hypotheses.

The main challenge for theology as a discipline then is to be both normative and inductive at the same time in its conversation with experimental economics: normative because theology would be competing with mainstream economic theory in positing main and auxiliary hypotheses; inductive because, like experimental economics, theology would seek to describe how individuals ought to behave economically, even if affected by sin through irrational decisions. This in turn will push theology into a difficult but constructive tension

between internal validity (i.e., how empirical models can remain faithful to the Christian tradition) and external validity (i.e., how well those are representative of the wider society). Theology, if able to combine normative and inductive insights, would be in a stronger position to put more flesh on the Church's teachings – truly, even if imperfectly, incarnated in daily life.

The seventh and last chapter will offer such a dialectical approach, as suggested by Lonergan, which will provide solutions to the above shortcomings of experimental economics. But before such an approach is developed, rectifying those shortcomings from a theological perspective, it is necessary to review examples of the experimental literature on trust. This will help us to see how the limitations discussed in this chapter effectively impact the research conducted by experimental economics, as well as the impact of those limitations on people's everyday lives. This will be the focus of the next chapter.

Chapter 5 - Experimental Literature on Trust: Insights and Limitations

Introduction

The last chapter explored the theoretical limitations of experimental economics using Tony Lawson's critical realist critique of economics. We also saw how much commonality there was between the thought of Lonergan and Lawson because they are both rooted in critical realism. Yet, we observed that Lawson's critique ultimately lacks an objective ethical dimension, which is possibly the most crucial tenet of Lonergan's thought. This ethical dimension will now regain centre stage in this and the following chapters, since a key theological contribution of this thesis is to consider the moral dimension of trust as a sine qua non condition to the task of any theologian engaging with empirical economics.

This chapter reviews and critiques key examples of the experimental literature and provides an in-depth overview of the insights gained by the discipline on trust, as well as highlighting that discipline's limitations in apprehending trust. The Trust Game will first be reintroduced, because of its pivotal role in experimental research on trust, because of the way it casts doubt on mainstream economic theory, and because of the way it has influenced the subsequent literature.

The chapter will critique how trust is apprehended in the field of experimental economics by reviewing four key areas of research: firstly, the construction of trust, and the differentiation of trust from reciprocity and altruism; secondly, objective characteristics of the trustor and trustee that impact the trustor's decision to trust; thirdly, the impact of individual perception of risk and psychological biases on the decision to trust; fourthly, the relationship between the methodology of games and the outcomes and insights gained from the experiments. The next chapter will, in turn, explore in more depth how a theological account of trust can enrich the limited understanding of trust exhibited in the existing experimental literature, and how such an account can be the basis for future empirical research.

Literature Review

Initial Critique of the Trust Game

The Trust Game was introduced early in this thesis to illustrate how trust is construed differently in theology and experimental economics. In the second chapter, Lonergan's *Insight* enabled a critique of how the category of trust was construed in experimental economics and why this differs profoundly from a theological account. In the fourth chapter, the methodology of experimental economics itself was reviewed in greater detail. Both chapters are complementary because both category and methodology are tied to a particular discipline, and a theological engagement with a particular object (in this case trust) needs to take this into account; again, the theologian cannot be naïve about the implicit assumptions made by other social sciences. With a toolkit in place to address both categorical and methodological limitations, it is worth now returning briefly to the Trust Game because that game has profoundly shaped the later studies that will be explored in this chapter. In other words, the insights and limitations gained by later studies find their roots in the Trust Game; either that further explore questions left unanswered in that experiment, or they react to its approach and suggest a different method for observing trust.

As it will have become clear in the past few chapters, experimental economics is rooted in determinism and the Trust Game is no exception: the game is designed in a way that would expect Players A not to send any money to Players B because that is what the Nash equilibrium would predict. The fact that individuals still choose to trust goes against the initial expectation of rationality, but the authors are quick to seek a rational explanation for this unexpected behaviour. This, in turn, explains many later studies, namely the endeavour to rationalise the act of trusting by seeking variables that would trigger trusting behaviour; since the Trust Game, experimental economists (and to some extent experimental psychologists) have embarked on a reverse-Pavlovian mission to discover what made people trust.

In the Trust Game, most Players A deviated from the prediction of mainstream economic theory. The implicit questions that were then asked by Berg, Dickhaut and McCabe were: (1)

What is the rationale for this behaviour? and (2) What is its mechanism? But rather than exploring deviations from the expected outcome, the authors – and other experimental scientists after them – sought to recast theory in a way that the trust showed by Player A would help predict the behaviour of Player B. This is why they wanted to observe whether information about past games (so-called social history) would influence trust and trustworthiness. In other words, rather than seeking to understand why people trusted, the game was recast in light of a linear deterministic model, whereby there is a linear relationship between trust and reciprocity.

Yet the variation in behaviours in the study is substantial, and whilst patterns are observable, the theory proposed fails to predict many individual choices. This is precisely where determinism is problematic: some behaviours cannot be explained through linear causality. These may simply be irrational (that is, they make no sense), but experimental economists still try to explain them because of the need to affirm deterministic causality; otherwise, the metaphysical assumptions experimental economics fall apart the entire methodology is undermined. The root problem here is that trust is constructed as a rational-calculative move expecting future reciprocity, and that the expected behaviour remains one of risk measurement; this approach lacks both an ethical dimension and a consideration of the possibility that individuals may act irrationally. The possibility that behaviour is being governed by social norms (highlighted by Berg, Dickhaut and McCabe), is pursued in more detail in later experiments, yet even this factor is construed as a determinant of utility-maximising behaviour: ³⁶⁶ the ethical becomes purely instrumental, which is highly problematic from an approach that would follow Lonergan's thought. Again, human beings are portrayed mechanistically; there is no freedom of choice that allows for the good to emerge, there is no knowing-what-is-right-and-choosing-or-refusing-to-act-on-it.

Additionally, irrational behaviour, whether as a lack of sufficient information, or as an inability to process information correctly, or even as a knowing of the rational response but refusing to act on it, is not discussed at length in the article, for the simple reason that not enough evidence would be available to corroborate and test any such hypotheses. This highlights

³⁶⁶ Berg, Dickhaut, and McCabe, "Trust, Reciprocity, and Social History," 132.

prima facie the necessity for more studies that isolate further specific aspects of behaviour, which is the route that was subsequently pursued by other researchers. However, as we will see, isolating and reproducing similar, if not identical, conditions does not always lead to the same results, and these variations remain unexplained. (However, field experiments with more context have been shown to make strong contributions on these questions, not the least by borrowing from sociological and anthropological theory.)

This in turn poses the question whether isolation and strict causality are helpful in researching economic behaviour, or whether a looser approach based on in-situ observations with the support of further social scientific theories may help shed further light on trust. This is a question that will be addressed in more depth in the final chapter, but it is worth noting that few experimental economists have pursued a substantially different methodology to that of Berg, Dickhaut and McCabe.³⁶⁷

Finally, the Trust Game understands rationality in a specific way, that is: individuals are self-interested. But as explored with Lonergan, rationality can be understood differently and can incorporate an ethical dimension. Clearly, the behaviour that would make both individuals best off is one where (a) Player A transfers all his wealth to Player B, which will be tripled, and (b) Player B returns half of all the money that he received. This is the optimum outcome, whereby two goods, namely trust and reciprocity, are chosen by both players. Any deviation from this optimum would be, for Lonergan, irrational because it ultimately makes no sense; it is not that it cannot be explained, but that it ultimately makes them both poorer and therefore is illogical. The ethical dimension, from the perspective of Lonergan, is clear. It would be inherently sinful not to want to optimise income for both players; this makes cooperation a good, and therefore trust and reciprocity should be regarded as virtuous dispositions: ones that ought to be exercised especially in the face of uncertainty.

The starting point of experimental economists is that individuals are self-interested. Yet this assumption remains unproven and cannot be a reasonable basis for research. It may

³⁶⁷ In contrast, within other fields, non-experimental economists have borrowed from the trust game to conduct their anthropological studies.

therefore be crucial from a research perspective to adopt a different anthropology as a starting point and test whether that anthropology has greater explanatory powers; the last chapter will explore how the concept of trust as a virtuous disposition can indeed be researched empirically. Yet the article published by Berg, Dickhaut and McCabe not only put trust on the map of experimental economists; it also defined much of how further empirical studies were conducted: the trust game became the focal point to study trust, and whilst it was critiqued, no alternative game designs (other than the pre-existing Prisoners Dilemma and Dictator Game), were adopted en masse to mitigate its limitations.³⁶⁸

Further studies conducted on trust by experimental economists can be characterised as seeking to achieving several objectives: differentiating the category of trust from reciprocity and altruism; deepening the understanding of how trust and trustworthiness relate; determining whether objective characteristics of players affect outcomes; assessing how individual perception, psychological biases, or human biology affect behavioural choices and economic behaviour; and evaluating how methodology impacts the results.

Before developing a differentiated approach to empirical economics in the final two chapters, it is therefore worth reviewing further aspects of experimental work, in order to demonstrate how that work calls for a richer understanding of trust and for a correspondingly richer methodology to observe it. Whilst a full taxonomy of every single experimental study discussing trust would be near-impossible within the length of this thesis, the following literature review highlights key studies in experimental economics as well as different examples of methodological approaches and their limitations.

Trust vs. Reciprocity and Altruism

The construct of trust in the initial Trust Game, as we saw, was construed out of the game's framework and determined by it. Whether it was truly trust that was observed or a combination of other dynamics was one of the questions that came out of the Berg, Dickhaut and McCabe experiments. In particular, Marius Brühlhart and Jean-Claude Usunier sought to

³⁶⁸ On the Dictator Game, see the section below.

determine whether the first move in the trust game could be a case of altruism rather than trust; the rationale is that the first player could feel compelled to share his or her wealth with the second player rather than act out of expectation of reciprocity.³⁶⁹ To assess whether this is the case, Brühlhart and Usunier adapted the trust game such that the second movers are categorised as “rich” and “poor,” and communicated as such to the first mover. The idea is that first movers would be more compelled to share their wealth with poorer counterparts than with richer ones. However, the study found that first movers were not motivated by the economic standing of their counterpart and therefore altruism was not a component in the decision made by first movers; rather it was more likely the expectation of reciprocity.

That study echoed findings made by James C. Cox.³⁷⁰ The approach taken in his experiment sought to untangle the concept of trust from reciprocity, criticising earlier papers for their experimental designs and citing “the single-game experimental designs used to generate the data in the experiments” as the source of the difficulty because they “do not discriminate between actions motivated by trust or reciprocity and actions motivated by other-regarding preferences characterized by altruism or inequality aversion that [are] not conditional on the behavior of others.”³⁷¹

For Cox, trust is “inherently a matter of the beliefs that one agent has about the behavior of another. An action that is trusting of another is one that creates the possibility of mutual benefit, if the other person is cooperative, and the risk of loss to oneself if the other person defects.”³⁷² In other words, trust needs to expect reciprocity, to benefit the self (and possibly the other), in order to be enacted; trust is then maintained by the actualisation of that reciprocity. In the experiment, Cox goes on to demonstrate that it is the expectation of reciprocity, rather than an intrinsic desire for fairness, which increases the willingness to trust and therefore to transfer monetary amounts between players.

369 Marius Brühlhart and Jean-Claude Usunier, "Does the Trust Game Measure Trust?," *Economics Letters* 115, no. 1 (2012), <https://doi.org/10.1016/j.econlet.2011.11.039>.

370 James C. Cox, "How to Identify Trust and Reciprocity," *Games and Economic Behavior* 46, no. 2 (2004), [https://doi.org/10.1016/s0899-8256\(03\)00119-2](https://doi.org/10.1016/s0899-8256(03)00119-2).

371 Cox, "How to Identify Trust and Reciprocity," 262.

372 Cox, "How to Identify Trust and Reciprocity," 263.

Three different experiments were run consecutively. The first one was identical to the Trust Game conducted by Berg, Dickhaut and McCabe, whilst the second (treatment B) and third (treatment C) sought to differentiate the sources of individual motivations from the first experiment. Treatment B was a Dictator Game where the second-movers could not return any amount, meaning that the first mover did not expect any reciprocity and was therefore left to decide how much their counterpart should receive (= whatever amount would be transferred, multiplied by 3). For Cox, first movers in the second experiment were solely motivated by altruistic other-regarding motives because they had no need to trust that the other would reciprocate since they could not. The results of the first two experiments were an average \$5.97 and \$3.63 respectively, suggesting that a difference of \$2.34 indicated the amount individuals were willing to risk by trusting their counterpart and expecting some return.

In the first treatment, out of 32 participants, six first movers did not transfer any money, in line with the expected Nash equilibrium, seven sent exactly \$5. Two of the second movers who received \$15 (i.e. 3x \$5) kept all the money, four returned more than they were sent, and one sent back less than they had received (\$3). Two first movers sent more than \$5 but less than \$10, and one of them receive back nothing whilst the other received more than he had been sent. Finally, 13 first movers sent their entire endowment, \$10, with one second-mover returning exactly \$10, four nothing, three returned \$20, one \$17, and the remaining three between \$1 and \$9. There was therefore considerable variability in behaviour between players.³⁷³

In treatment C, a modified Dictator Game, only second movers could send money, and therefore are not motivated by wanting to reciprocate on the first mover's move. The endowment of the first movers is the money that they did not send in the first experiment and the second movers are given three times what was transferred by the first mover in treatment A. Second movers are unaware of the calculation behind their endowment and their counterpart's, only the absolute difference between their respective endowments. The

³⁷³ The disparity between individual amounts already highlights that averages may not be helpful in drawing conclusions. Rather, aggregating results is an epistemological move that ultimately negates individual free will in order to fulfil the demands of rational choice theory.

experiment therefore tested unconditional other-regarding preferences (altruism). The gap between the amounts returned in the first and third experiments, for the author, differentiates between reciprocity and altruism. The absolute difference between the two experiments amounted to \$2.88: whilst individuals were willing to transfer back \$4.94 on average if respondents had trusted them to reciprocate, they transferred back only \$2.06 to even out the first mover's endowment if there was instead no trust to reciprocate on, and the move relied on altruism only (an unconditional other-regarding preference).

The conclusion offered by Cox highlights the difficulty of fully disentangling altruism from self-interested behaviour in daily economic behaviour; one could note that rational behaviour extends beyond self-interest and encompasses a moral element, even if that is affected by the perception of the other's previous behaviour. Whilst Cox's study proves very useful in showing the complexity that individuals face when making economic decisions, it does not go into more detail about the idea of rationality. The study does not conduct interviews to find out the motivation of each player for the same design reasons as the trust game developed by Berg, Dickhaut and McCabe. Additionally, given the variation in behaviour, it is not clear whether altruism and reciprocity are co-incident.

A few years after Cox's landmark study, but without referring to it, Toshio Yamagishi et al. published a study seeking to separate trust from cooperation; they concluded that cooperation leads to trust rather than the other way round because players learn to trust by observing whether their counterparts tend to cooperate or not.³⁷⁴ According to this construct, first players take a risk but may not trust the other player per se; for the authors, trust is something learnt rather than inherent. Whether trust or cooperation comes first is effectively a chicken-and-egg situation, but as we will see later, most authors understand trust to precede any action. The Yamagishi study is particularly helpful in highlighting how trust can be solidified, namely not only through repetition of cooperation but also through the matching of individuals who perceive themselves as trusting.

374 Toshio Yamagishi et al., "Separating Trust from Cooperation in a Dynamic Relationship," *Rationality and Society* 17, no. 3 (2016): 275, <https://doi.org/10.1177/1043463105055463>.

Yamagashi et al. constructed a series of experiments using a repeated set of Prisoner's Dilemmas between the same players. A first treatment allowed players to decide whether to take a risk or not. A second treatment enabled players to increase or decrease the amounts they could gain or lose, depending on whether they trusted their counterpart based on previous exchanges. The main difference with the investment game developed by Berg, Dickhaut and McCabe is the fact that both players had to make a choice co-currently rather than one after the other, meaning that none of the players could reciprocate based on the first player's move.

As the games were repeated between the same players, the level of trust increased.³⁷⁵ Similarly, when players were separated into two groups through self-selection a few weeks before the experiment ("high-trusters" and "low-trusters"), a clearer pattern appeared: repetition crystallised the level of trust between players. "It appears that the ability to separate players' behavioral choices from the amount of trust they place in the other player increases the likelihood of mutual cooperation, especially when high trusters play each other."³⁷⁶

This echoed similar but much earlier findings through repeated Prisoner's Dilemmas and Dictator Games by Marcello Gallucci and Marco Perugini, where participants were considered to base their choices on a common norm of reciprocity and as reflective of a basic internal motivation (rather than as a set of purely self-interested calculations).³⁷⁷ Gallucci and Perugini found that participants "do not appear to strive to end up in a situation with an even outcome, but they do seem to react to the value of others' behaviour, almost independently of their own past behaviour" and that "the relation between previous and present choices appeared

375 Worth noting was that one of the experiments was conducted in both the United States and Japan, and the differences in results showed that Americans are more disposed to taking risks than Japanese, highlighting the possible effect of culture and cultural norms on trust. See also Pedro Dal Bó and Guillaume R. Fréchet, "The Evolution of Cooperation in Infinitely Repeated Games: Experimental Evidence," *American Economic Review* 101, no. 1 (2011), <https://doi.org/10.1257/aer.101.1.411>.

376 The participants were asked to agree or disagree with two statements: "most people are basically honest" and "most people are trustworthy." Marcello Gallucci and Marco Perugini, "An Experimental Test of a Game-Theoretical Model of Reciprocity," *Journal of Behavioral Decision Making* 13, no. 4 (2000): 288, [https://doi.org/10.1002/1099-0771\(200010/12\)13:4<367::aid-bdm357>3.0.co;2-9](https://doi.org/10.1002/1099-0771(200010/12)13:4<367::aid-bdm357>3.0.co;2-9).

377 Gallucci and Perugini, "An Experimental Test of a Game-Theoretical Model of Reciprocity."

to be explained by a common cause (reciprocity), more than one being a consequence of the other."³⁷⁸

For Yamagishi et al., trust is "an act that voluntarily exposes oneself to greater positive and negative externalities by the actions of the other(s);" it encompasses a quasi-ethical dimension. Cooperation is "an act that increases the welfare of the other(s) at some opportunity cost where the former is greater than the latter."³⁷⁹ The authors go on to construct "welfare = trust x cooperation," with the rationale being that "trust multiplies the beneficial effect of cooperation, the more one trusts the other, the more beneficial the other's cooperation."³⁸⁰ The authors argue that "while maximal social welfare is possible only with mutually trustful cooperation, trust emerges from initial cooperation without trust...[because] actors must first signal their trustworthiness by unconditional cooperation, but must also begin slowly by gradually and cautiously increasing their level of trust in the others" since "when and only when their initial low trust is rewarded with cooperation can they begin to trust more."³⁸¹ For the authors, mutual trust emerges through continual risk-taking, and "once mutually trustful cooperative relation emerges,...it is self-sustaining because it is difficult to replicate it in other relationships."³⁸² Nevertheless, rather than observing a rational-ethical dimension, the authors revert to the same old homo economicus paradigm: "Given uncertainty inherent in any new exchange relationship, it would be utterly irrational for self-interested actors to defect in a self-sustaining cooperative relationship."³⁸³

The authors therefore conclude that society can benefit from encouraging cooperation between its members, without initial trust and over the long-term; they ask, "How can we as a society build institutions to encourage initial cooperation without trust, so that mutually trustful cooperative relationships can eventually emerge, which the society will then not have to monitor and policy?"³⁸⁴ The conclusion is an interesting ethical proposition, but it does not engage more with the moral choices faced by individuals. Rather, it somewhat

378 Gallucci and Perugini, "An Experimental Test of a Game-Theoretical Model of Reciprocity," 285.

379 Yamagishi et al., "Separating Trust from Cooperation in a Dynamic Relationship," 277.

380 Yamagishi et al., "Separating Trust from Cooperation in a Dynamic Relationship," 278.

381 Yamagishi et al., "Separating Trust from Cooperation in a Dynamic Relationship," 304.

382 Yamagishi et al., "Separating Trust from Cooperation in a Dynamic Relationship," 304.

383 Yamagishi et al., "Separating Trust from Cooperation in a Dynamic Relationship," 304-5.

384 Yamagishi et al., "Separating Trust from Cooperation in a Dynamic Relationship," 305.

paternalistically limits the good of trusting relationships to something inherently instrumental, something beneficial to the (economic) welfare of the entire society.

Beyond the experiments' methodological finesses, the construction and categorisation of trust is worth noting. It would be the standard position to disagree with the complete separation of risk-taking and trust, advocating instead that risk-taking is one constituent of trust; but the set of experiments conducted by Yamagashi et al., and Gallucci and Perugini highlights how a different perception of trust can challenge existing games and their results. In other words, how we understand and construct trust has a tremendous impact on methodology. A theoretical choice has to be made about what trust means before an experiment can be conducted, with the possibility that stronger results emerge with a better understanding of what trust actually is. To reiterate a Lonerganian and critical realist critique of mainstream economic thought, the experimental economist needs to be particularly careful to avoid flattening the ontological through the epistemological; he or she needs to instead refine the exercise before drawing rapid conclusions that happen to fit with the epistemology du jour.

The section above reviewed experiments that sought to answer whether it was always trust being enquired after, and what kind of trust was being observed. Instead of a clear separation between trust and altruism or reciprocity, it became clear instead that the category used frames the experiment and, ultimately, drives the results. This is a clear first limitation with experimental economics. The following section reports on a different set of experiments, concerning whether signals of trustworthiness can predict trust; as we will see, this hypothesis, and the methodology that accompanies it, proves difficult to substantiate. This suggests even further limits to the explanatory power of both a calculative and a deterministic understanding of trust.

Trust and Signalling

One focus of experimental studies on trust is the perceived trustworthiness of counterparties, i.e. what is it about our counterparts that makes us trust them. The experimental literature

explored above provides limited evidence that individuals are purely, if at all, calculative in their choices. Drawing on other social sciences is therefore necessary to deepen our understanding of trust. A number of key studies, which will be explored below, have sought to clarify the extent to which personal characteristics affect the behaviour of trustors and trustees. This will pave way to exploring how trust needs to be understood as a virtuous disposition rather than simply as the product of a self-interested calculation.

A study conducted by Avner Ben-Ner and Freyr Halldorsson examines what characteristics might determine trust and trustworthiness.³⁸⁵ They tested for two types of factors through the trust game: (1) factors determined at birth and during childhood (gender, age, ethnicity, birth order, and personality and mental ability) and (2) views, attitudes, social preferences, values and beliefs as ascertained through an attitudinal survey.³⁸⁶ A number of observations were made: firstly, the only correlation found between trusting behaviour and personality is an underlying unconditional kindness; there was no correlation between trusting behaviour and risk attitudes, optimism, skewed perceptions of whether good or bad things tend to happen, the expectation that others cheat, or even faith in God. Unconditional kindness explained on average 40% of the amount trusted by A to B, and the authors hypothesise that “it is possible that some of the rest of the amount sent is explained by an investment motive felt by people who want to make money and are willing to trust their counterparts.”³⁸⁷ They observed that part of the amount sent is explained by gender, with men sending more than women; the experiment does not come to a conclusion as to why, but we will see that further studies explore this aspect in more depth as it has been a recurring observation. Interestingly, the authors noted no significant correlation between how the participants responded to the attitudinal surveys and their trustworthiness, except for the measure of agreeableness as a predictor of how much B would return to A. This in itself shows the difficulty of correlating

385 Avner Ben-Ner and Freyr Halldorsson, "Trusting and Trustworthiness: What are They, How to Measure Them, and What Affects Them," *Journal of Economic Psychology* 31, no. 1 (2010), <https://doi.org/10.1016/j.joep.2009.10.001>.

386 The General Social Survey was used, which is a standardised questionnaire developed in 1972 by the University of Chicago and remains used to this day to assess societal perceptions of policy issues in the US and on a yearly basis – see <http://gss.norc.org>.

387 Ben-Ner and Halldorsson, "Trusting and Trustworthiness: What are They, How to Measure Them, and What Affects Them," 76.

personality traits to trusting behaviour because there may, in fact, not necessarily be a constant causal relationship between the two. However, this latter possibility is not explored.

Aurélié Bonein and Daniel Serra focused their experiment on whether gender information about a player's counterpart influences trust and trustworthiness.³⁸⁸ They found that gender information had a limited influence on trust behaviour: men send an average of 45.53% of their initial endowment when their counterpart is a man and 46.66% when it is a woman, and women send 46.08% to men and 47.11% to women.³⁸⁹ However, they find that when it comes to trustworthiness, there is a gender bias: men send back on average 19.32% to men and 9.53% to women, and women return 25.79% to women and 14.57% to men.³⁹⁰ They conclude that trustworthiness is mainly explained by the amount received, and therefore the desire to reward a trust granted; they discount the notion that trustworthiness is built on a sense of intrapersonal trust.³⁹¹

This observation resonates with other studies, such as Ellen Garbarino and Robert Slonim, and Buchan et al.³⁹² Using a broader population sample than most studies, Garbarino and Slonim found that "while trusting gender differences are robust across age, with women less trusting than men, reciprocating behavior is not robust across age; gender differences in reciprocating behavior depend on age and amounts received in a complex manner."³⁹³ As with Bonein and Serra, the amount received is correlated with the percentage returned. However, Garbarino and Slonim show that women are much more sensitive to the amount received than men, except in the case of older subjects.³⁹⁴ Finally, they find that a bias to trust

388 Aurélié Bonein and Daniel Serra, "Gender Pairing Bias in Trustworthiness," *The Journal of Socio-Economics* 38, no. 5 (2009), <https://doi.org/10.1016/j.socec.2009.03.003>.

389 Bonein and Serra, "Gender Pairing Bias in Trustworthiness," 784.

390 Bonein and Serra, "Gender Pairing Bias in Trustworthiness," 785.

391 Bonein and Serra, "Gender Pairing Bias in Trustworthiness," 786.

392 Ellen Garbarino and Robert Slonim, "The Robustness of Trust and Reciprocity across a Heterogeneous U.S. Population," *Journal of Economic Behavior & Organization* 69, no. 3 (2009), <https://doi.org/10.1016/j.jebo.2007.06.010>. and Nancy R. Buchan, Rachel T. A. Croson, and Sara Solnick, "Trust and Gender: An Examination of Behavior and Beliefs in the Investment Game," *Journal of Economic Behavior & Organization* 68, no. 3-4 (2008), <https://doi.org/10.1016/j.jebo.2007.10.006>.

393 Garbarino and Slonim, "The Robustness of Trust and Reciprocity across a Heterogeneous U.S. Population," 226.

394 Garbarino and Slonim, "The Robustness of Trust and Reciprocity across a Heterogeneous U.S. Population," 236.

women and older subjects is not justified.³⁹⁵ In their study, no other socio-economic factor (education, income, ethnicity, employment status, religiosity) bears significantly on behaviour.

The analysis conducted by Nancy R. Buchan, Rachel T.A. Croson and Sara Solnick casts trust as instrumental rather than purely calculative: they find that one trusts in the expectation of receiving positive treatment in return.³⁹⁶ Buchan et al. observe no gender discrimination: men expect as much from women as from other men, and vice-versa. However, they contend that “males seem to trust more because they expect more in return.”³⁹⁷

The authors also identify the effect of a sense of obligation on behaviour: they observe strong influence of gender on the degree of sensed obligation, with women feeling more obligated to trust than men, but tending to send less money than men. They resolve this apparent paradox by suggesting that “those who feel obligated are more likely to send something” whilst “greater obligation is associated with sending less.”³⁹⁸ The effect of norms on human behaviour is therefore salient, and the authors conclude that “women viewed the economic exchange communally and empathetically, in line with social role theory.”³⁹⁹

From the experiments explored above, it appears that the amount sent by the trustor is interpreted by the trustee as an actual token of trust. It is possible that trustees expect to be trusted and therefore punish trustors by returning a lesser amount if this not the case. In other words, trustees perceive trust as a good and distrust as something that should not be rewarded; again, such a judgment call implicitly attributes a moral dimension to trust and the acts that follow upon it. The other side of the coin, as highlighted by a number of studies presented below, is that trusting behaviour is strongly correlated with altruism; it is not just trustees but also trustors who place a moral value on trusting, above and beyond self-interested calculations.

395 Garbarino and Slonim, "The Robustness of Trust and Reciprocity across a Heterogeneous U.S. Population," 237.

396 See John Orbell, Robyn Dawes, and Peregrine Schwartz-Shea, "Trust, Social Categories, and Individuals: The Case of Gender," *Motivation and Emotion*, 18 (1994), 109-28.

397 Buchan, Croson, and Solnick, "Trust and Gender," 473.

398 Buchan, Croson, and Solnick, "Trust and Gender," 474.

399 Buchan, Croson, and Solnick, "Trust and Gender," 474.

Nava Ashraf, Iris Bohnet and Nikita Piankov's study echoed the observation made earlier by Ben-Ner and Halldorsson on unconditional kindness affecting trustworthiness; they also use a similar design.⁴⁰⁰ By conducting the same studies in three different countries (United States, Russia and South Africa), Ashraf et al. observed some low trusting behaviour on the part of non-whites in South Africa but not in the US: "It is the groups that historically felt discriminated against, which are less likely to trust.... At the beginning of the 21st century, such discrimination is more prevalent in South Africa than in the United States."⁴⁰¹ Whilst trust in their paper is implicitly considered to be a good thing, the authors do not venture beyond mentioning this hypothesis connecting endured discrimination and distrust; this highlights the difficulty experimental economists seem to feel towards delving deeper into ethical or anthropological reasoning.

Ashraf et al. conclude that "trust is based on beliefs of trustworthiness and on unconditional kindness; trustworthiness is related to unconditional kindness and reciprocity. Expectations of trustworthiness account for most of the observed variance in trust and unconditional kindness for most of the explained variation of trustworthiness behaviour."⁴⁰² However, more striking is their conclusion on why people consciously choose to trust:

Our design allowed us to solve one of the important trust puzzles, namely that people trust even though hardly anyone makes money by doing so. We found that generally, people are aware of this. They trust even though they know it does not pay monetarily. They enjoy the act of trusting and being kind to others, even to anonymous strangers. If these psychological returns of trust are taken into consideration, people may not make a bad investment when trusting.⁴⁰³

The conclusion is underpinned by the idea that individuals can maximise their utilities through other factors than money. Whilst it would be true that this conclusion very much plays into reducing individual choice making to mathematical formulae, it can also point to something

400 In this particular study, an individual's choices in the dictator game and in the trust game are observed for any correlation. Nava Ashraf, Iris Bohnet, and Nikita Piankov, "Decomposing Trust and Trustworthiness," *Experimental Economics* 9, no. 3 (2006), <https://doi.org/10.1007/s10683-006-9122-4>. The authors cite Alberto Alesina, and Eliana La Ferrara, "Who Trusts Others?," *Journal of Public Economics*, 85 (2002), 207-34.

401 Ashraf, Bohnet, and Piankov, "Decomposing Trust and Trustworthiness," 201.

402 Ashraf, Bohnet, and Piankov, "Decomposing Trust and Trustworthiness," 204.

403 Ashraf, Bohnet, and Piankov, "Decomposing Trust and Trustworthiness," 204.

deeper, namely that individuals choose to trust to establish an ongoing trusting relationship as a good in and of itself. But again, the ethical dimension is typically not considered or discussed even if, as I will argue below, the evidence calls for it.

A similar study was conducted independently of the results of Ashraf et al. by Chaudhuri and Gangadharan through a within-subjects experiment with both a trust and a dictator game.⁴⁰⁴ As with Ben-Ner and Halldorsson, Ananish Chaudhuri and Lata Gangadharan find that “men are more trusting than women but there are no significant gender differences in reciprocal behaviour.”⁴⁰⁵ The authors also found that “trustworthiness in the trust game implies trust but not vice versa. Trustworthy subjects are also more generous in the dictator game.”⁴⁰⁶ Additionally, the expectation of a return is strongly correlated with the amount sent. In other words, expectations of equal treatment play a strong role in the decision to trust, especially if an individual is him- or herself trustworthy. In this light, it seems that reducing trust to a purely calculative move is erroneous, and that individuals have a broader understanding of the good that trust can enable.

Further studies have been conducted that seek to observe the effect of establishing relationships on trust. One in particular, conducted by Marco A. Janssen seeks to observe whether learning to recognise the identity and trustworthiness of one’s counterparts affects trusting behaviour in a one-shot Prisoner’s Dilemma.⁴⁰⁷ The rationale for using the Prisoner’s Dilemma is that the expected outcome is defection on both sides, underlying the lack of trust between two parties. However, by repeating the procedure with varying counterparts and helping participants identify their counterparts through a series of symbols paired with them, Janssen demonstrates that cooperation emerges, in spite of what would be predicted by the Nash equilibrium. Janssen’s conclusion is on the effect of multiple games, but the sample size on trusting behaviour is also particularly salient: “Even when the initial population is

404 In within-subject experiments, every single participant is subjected to every single treatment, including the control. Ananish Chaudhuri and Lata Gangadharan, "An Experimental Analysis of Trust and Trustworthiness," *Southern Economic Journal* 73, no. 4 (April 2007 2007), <http://www.jstor.org.ezphost.dur.ac.uk/stable/20111937>.

405 Chaudhuri and Gangadharan, "An Experimental Analysis of Trust and Trustworthiness," 959.

406 Chaudhuri and Gangadharan, "An Experimental Analysis of Trust and Trustworthiness," 959.

407 Marco A. Janssen, "Evolution of Cooperation in a One-Shot Prisoner's Dilemma Based on Recognition of Trustworthy and Untrustworthy Agents," *Journal of Economic Behavior & Organization* 65, no. 3-4 (2008), <https://doi.org/10.1016/j.jebo.2006.02.004>.

dominated by selfish individuals, the evolution drives the model towards agents with a level of other regarding preferences that enables a high level of cooperation."⁴⁰⁸

In a set of experiments conducted by Gary Charness, Ninghua Du and Chun-Lei Yang, the reputation of the trustee, both as a trustor and a trustee, has a positive effect on the amount entrusted: "providing information on the trustee's past behavior as the trustor is equally effective as a reputation...even though the immediate payoff for trusting is poor."⁴⁰⁹ For them, "this confirms the role of indirect reciprocity as a strategic notion based on reputation, whereby pro-social actions by one person towards a second person are sanctioned by a third party."⁴¹⁰ But the authors are quick to deduce that it is a strategy underpinned by calculated self-interest: "even though it does not directly pay to trust in our history of trust treatment, the gain one receives from establishing a reputation for trusting outweighs this immediate cost, as we find a positive relationship between an individual's trust rate and her average payoff [when she shows a history of high trust]."⁴¹¹ However, this conclusion is an example of how behaviour is very quickly reduced by experimental economists to calculative self-serving strategies. And whilst it is possible that there is an incentive to build a reputation by appearing to be both trusting and trustworthy, it is equally possible that individuals consistently showing a trusting behaviour do so for other reasons, notably intrinsic or social expectations, and that there is a strong ethical dimension to trusting, as hinted at by the results of other experiments.

Another strand of research relevant to the study of trust has been to observe animal behaviour to assess the extent of a biological imprint in trusting attitudes and decision-making.⁴¹² One particular study is that of Robert Kurzban and Frans B. M. de Waal, the later

408 Janssen, "Evolution of Cooperation in a One-Shot Prisoner's Dilemma Based on Recognition of Trustworthy and Untrustworthy Agents," 469.

409 Gary Charness, Ninghua Du, and Chun-Lei Yang, "Trust and Trustworthiness Reputations in an Investment Game," *Games and Economic Behavior* 72, no. 2 (2011), <https://doi.org/10.1016/j.geb.2010.09.002>.

410 Charness, Du, and Yang, "Trust and Trustworthiness Reputations in an Investment Game," 361.

411 Charness, Du, and Yang, "Trust and Trustworthiness Reputations in an Investment Game," 373.

412 For a more theoretical approach to an evolutionary reading of trust, see Patrick Bateson, "The Biological Evolution of Cooperation and Trust," in *Trust: Making and Breaking Cooperative Relations*, ed. Diego Gambetta (Oxford: Basil Blackwood Ltd, 1988).

of whom conducted experiments with chimpanzees.⁴¹³ Both approaches rely on the evolutionary theoretical premise that trust is necessary to survive, else it would not have stood the test of time. The question is, in the words of Kurzban “how natural selection could have fashioned adaptations designed to deliver benefits.”⁴¹⁴ Kurzban advances that “it is probable that the life history of our hominid ancestors, especially the hunting of large game, made possible the gains in trade that are necessary for reciprocal altruism to lead to the emergence of adaptations for conferring benefits on others” and that “because many more exchanges are possible if trade is nonsimultaneous, there are advantages to being willing to enter into an exchange relationship without receiving immediate reciprocation.”⁴¹⁵ Such cooperation might have left individuals vulnerable to exploitation, but “the threat of punishment, or at least the cutting off of subsequent exchange relationships, might have been sufficient in receiving reciprocation”; for the authors, “this constellation of adaptations, cognitive systems designed to decide whether and when one ought to enter an exchange as the first mover, led to the phenomenon of trust.”⁴¹⁶ But more strikingly, the authors note that economic theory may provide a very useful epistemology to explain human development:

The evolutionary approach does not imply that humans are “rational” in the traditional economic sense. Rather, it suggests that the process of natural selection generated cognitive systems and decision rules that led to fitness outcomes greater than those of alternative designs over evolutionary time. If this is the case, the game-theoretic principles developed by biologists and economists represent valuable tools for generating hypotheses about the design of the human mind.⁴¹⁷

It is worth noting the extent to which game-theoretic principles can pervade science. The risk of epistemological fallacy here is not to be underestimated: as with Abraham Maslow’s quip, “I suppose it is tempting, if the only tool you have is a hammer, to treat everything as if it were a nail.”⁴¹⁸

413 Robert Kurzban, “Biological Foundation of Reciprocity,” in *Trust & Reciprocity: Interdisciplinary Lessons from Experimental Research*, ed. Elinor Ostrom and James Walker (New York: Russel Sage Foundation, 2003); Frans B. M. de Waal, “The Chimpanzee’s Service Economy: Evidence for Cognition-Based Reciprocal Exchange,” in *Trust & Reciprocity: Interdisciplinary Lessons from Experimental Research*, ed. Elinor Ostrom and James Walker (New York: Russel Sage Foundation, 2003).

414 Kurzban, “Biological Foundation of Reciprocity,” 121.

415 Kurzban, “Biological Foundation of Reciprocity,” 121-2.

416 Kurzban, “Biological Foundation of Reciprocity,” 122.

417 Kurzban, “Biological Foundation of Reciprocity,” 122-3.

418 Abraham H. Maslow, *The Psychology of Science: a Reconnaissance* (New York: Harper & Row, 1966), 16.

De Waal observes that chimpanzees who have groomed another more likely to receive a share of food, although returning a later favour for an earlier food-share through grooming is insignificant.⁴¹⁹ As a result, he proposes a more balanced and tentative view on reciprocity than Kurzban: “the present data are perhaps best interpreted as support for the existence of a service economy among chimpanzees,” and “reciprocal altruism may be part of this economy and may have been instrumental in its evolution, but the economy covers a much wider range of phenomena than those traditionally defined as ‘altruistic.’”⁴²⁰

The above experiments provide interesting examples of how nature may play a role in our decisions to trust. However, given the complexity of trusting, and in particular the cognitive components that accompany such a decision, such an approach can be a best only part of the puzzle, and limited in its contribution: as observed, it easily falls back on broad assumptions and risks falling into epistemic fallacy. Rather, a more detailed study of personal subjectivity can help make more sense of (individual) decisions to trust.

Overall, studies seem to support two points: that trust coincides with a sense of altruism (Cox’s initial claim), and that trustworthiness is linked with agreeableness. For trustees in particular, it appears, trust is a good, and failure to be the recipient of high trust leads to retribution in the form of a lower proportion returned. The existence of trust, it is clear, cannot simply be determined by the characteristics of the truster or the trustee, whether socio-economical or even biological, but rather by the quality of the interaction itself. Therefore, the relevance of chimpanzee behaviour is limited in our inquiry because it is almost impossible to draw parallels without the ability to compare subjective perceptions between the two species. Such a disposition to trust cannot solely be determined by nature or nurture.

419 $z = 3.31$, $p = .0005$, one-tailed. de Waal, "The Chimpanzee's Service Economy," 135-8.

420 In particular, “female sexual proceptivity, for example, is most likely an important currency in the chimpanzee’s service economy..., although no one would argue that a female’s willingness to mate reduces her fitness or constitutes cooperative behavior in the usual sense. The concept of ‘service’ or ‘favor’ does cover such behavior and permits a broader perspective on the psychological mechanisms underlying reciprocal exchange in primates.” de Waal, "The Chimpanzee's Service Economy," 141.

The above section will have shown that trust is less a function of the counterpart's perceived trustworthiness than is posited by mainstream economic theory: a construal of trust as calculative, self-interested, and determined by signals of trustworthiness seems to be a poor fit to reality. This is in spite of the fact that experiments were set-up specifically to observe such phenomena (see the first section). Instead, it seems that participants in these experiments exhibit tendencies to trust. Therefore, it is worth exploring in section why that may be, and how psychosocial traits can possibly affect trusting behaviour.

Risk Perception and Psychological Biases

More recent experimental literature on trust has begun to see a blurring of the lines that used to delineate experimental economics from experimental psychology: the interest in more subjective perceptions and the role of emotions, and a perceptible departure from the traditional homo economicus model, all have pushed trust research towards convergence with the field of psychology. This burgeoning interdisciplinarity should not be surprising given the complexity of trust as a concept and the difficulty that comes with observing it: whilst the methods and some of the underlying assumptions between the two disciplines continue to differ, there is an increasing realisation, from some researchers at least, that one approach and one field cannot possibly capture everything about trust. A phenomenon of emergence seems to appear, highlighting how a more complex metaphysical framework is necessary than what one particular discipline can offer, even if the field of experimental economics continues to produce valuable findings. Seemingly irreconcilable and at times perplexing results, and the difficulty of explaining those with a classical framework, have begun to show the cracks in the methodology of experimental economics.

A recent review conducted by Isabel Thielmann and Benjamin E. Hilbig provides a useful overview concatenating findings from both experimental economics and experimental psychology.⁴²¹ The authors derive the following two observations from the literature: "(a) trust behavior is a function of multiple situation and person characteristics and (b) individual

421 Isabel Thielmann and Benjamin E. Hilbig, "Trust: An Integrative Review from a Person–Situation Perspective," *Review of General Psychology* 19, no. 3 (2015), <https://doi.org/10.1037/gpr0000046>.

differences in trust behavior result from a combination of relatively distinct personality traits."⁴²² They suggest a model of trust constituted of three main determinants: (i) attitude toward risky prospects, (ii) trustworthiness expectations, and (iii) betrayal sensitivity; trust behaviour is dependent on those three determinants. The first determinant, attitude toward risky projects, captures "an individual's general attitudes toward uncertainty (i.e. risk aversion) and potential losses (i.e., loss aversion)" and his or her willingness to trust another.⁴²³ Trustworthiness expectations are based on cues, prior trust experiences, and social projection; "trust cues are pieces of evidence available in the environment...[that] can refer to the situation at hand...or the trustee's person...[whilst] prior trust experiences mirror an individual's learning history in similar situations [and] social projection implies that a trustor's own trustworthiness...might be a source of trustworthiness expectations."⁴²⁴ Finally, betrayal expectations denote "the way an individual perceives the severity of a loss resulting from betrayal," which for the authors "arguably relates to trait forgiveness."⁴²⁵

Thielmann and Hilbig take a subjective approach to trust; the focus of their research is why a particular individual trusts in a particular situation but not in others; this is a clear departure from the one-size-fit-all approach of experimental economics. The premise is that our psychological biases, and our perception of risk, greatly affect our decisions. Because we are presented with choice under uncertainty, the information we can access is inherently limited and we rely heavily on our perceptions, not least our perception of risk, even if the risk we take to trust someone is not the same as a pure gamble.⁴²⁶ In a previous report, Thielmann argued that "despite the long history of trust-related personality research...the (basic) trait determinants underlying these individual differences in trust are not yet sufficiently clarified."⁴²⁷

422 Thielmann and Hilbig, "Trust," 250.

423 Thielmann and Hilbig, "Trust," 253.

424 Thielmann and Hilbig, "Trust," 254.

425 Thielmann and Hilbig, "Trust," 254.

426 Daniel Houser, Daniel Schunk, and Joachim Winter, "Distinguishing Trust from Risk: An Anatomy of the Investment Game," *Journal of Economic Behavior & Organization* 74, no. 1-2 (2010), <https://doi.org/10.1016/j.jebo.2010.01.002>.

427 Isabel Thielmann and Benjamin E. Hilbig, "Trust in Me, Trust in You: A Social Projection Account of the Link between Personality, Cooperativeness, and Trustworthiness Expectations," *Journal of Research in Personality* 50 (2014): 61, <https://doi.org/10.1016/j.jrp.2014.03.006>.

Bill McEvily, Joseph R. Radzevick, and Roberto A. Weber explored the relationship between attitudinal and behavioural measures. They demonstrated that holding constant the target of trust, rather than aggregating results, showed a strong relationship between the two, and supported the view “widely held in other social sciences, that trust is often best conceived as a property of specific trustor-trustee interactions, as opposed to a stable, relatively invariant trait of the person placing trust.”⁴²⁸ They argued that a more subjective approach would bear more significant results as has been used in experimental psychology.

A further set of experiments showing the limits of the historical approach of experimental economics was conducted by Detlef Fetchenhauer and David Dunning, who showed how the behaviour of participants was paradoxical and in no way rational as understood by economists: individuals consistently underestimated the trustworthiness of their counterparts, yet chose to trust them on average more than what would have been rational according to their assessment of their counterpart’s trustworthiness.⁴²⁹ In that sense they, they trusted their counterpart too much given their assessment, but too little given that individuals are generally more trustworthy than people assess on average. (Participants underestimated the trustworthiness of their peers by 35%, yet around 30% of participants trusted their peers in spite of a high level of cynicism and tendency towards risk aversion).⁴³⁰

The authors conclude that, “whether defined in a strong or weak sense, participants’ decisions differed from what we would term as rational.”⁴³¹ In a parallel experiment, the authors observed that individuals were much more risk averse in a lottery setting, i.e. where the outcome was not decided by another human being but purely by chance. The authors turn to emotions to explain the participants’ behaviour and suggest that “people might feel embarrassed when they have to signal their distrust to another person.”⁴³² As a result of this paradox, they come to make a number of observations about the future of the study of trust:

428 Bill McEvily, Joseph R. Radzevick, and Roberto A. Weber, "Whom Do You Distrust and How Much Does It Cost? An Experiment on the Measurement of Trust," *Games and Economic Behavior* 74, no. 1 (2012): 297, <https://doi.org/10.1016/j.geb.2011.06.011>.

429 Detlef Fetchenhauer and David Dunning, "Do People Trust Too Much or Too Little?," *Journal of Economic Psychology* 30, no. 3 (2009), <https://doi.org/10.1016/j.joep.2008.04.006>.

430 Fetchenhauer and Dunning, "Do People Trust Too Much or Too Little?," 269.

431 Fetchenhauer and Dunning, "Do People Trust Too Much or Too Little?," 269.

432 Fetchenhauer and Dunning, "Do People Trust Too Much or Too Little?," 274.

The fact that participants expressed too little trust on the “cognitive level” (i.e. overpredicting the percentage of their peers who would respond to trust in a greedy way), but exhibited too much trust on the behavioral level (i.e. handing over their money to a stranger even when they believed it was quite likely that the stranger would pocket it), carries many implications for how trust should be studied by economists and psychologists alike.... Researchers usually infer participants’ expectations from their behavior (much like old-school behaviorists used to assume an organism’s representation of a stimulus by its overt responses toward it). That is, if Ned hands Stacy his \$5, that must mean that he thinks there a high likelihood that Stacey will respond by returning that money with a profit. After all, why else would Ned turn over that money?⁴³³

The authors then argue against an approach that simplifies decisions to trust to two factors, namely the value of the outcomes and the probabilities associated with those outcomes, citing that many of their participants “believed that it was more likely than not that they would receive no money back from the stranger they were assigned to, yet they handed their money over” anyway, thereby defying an analysis based simply on value (v) and probability (p).⁴³⁴ They also note that “participants chose to trust a stranger even though, given the same p and v, they refused to participate in a comparable lottery.”⁴³⁵ They conclude that “researchers investigating trust behavior should not merely assume that they are able to determine the expectations people have of their peers from merely observing their behavior. Instead those expectations must be directly measured, not merely inferred.”⁴³⁶

The above study is another nail in the coffin of the assumption that individuals are rational in the sense that they are calculative to maximise their utility as represented by money; the rapprochement between experimental economics and experimental psychology highlights the complexity of observing trust and the need to develop a more complex model of decision-making. It is difficult to ignore Lonergan’s “be attentive, be intelligent, be reasonable, and be responsible”: individuals firstly struggle to know reality in its truthfulness, but however close to reality their conclusion may be, how they act on it may still be irrational, and rationality is evidently something else than sheer utility-maximising.

433 Fetchenhauer and Dunning, "Do People Trust Too Much or Too Little?," 274-5.

434 Fetchenhauer and Dunning, "Do People Trust Too Much or Too Little?," 274.

435 Fetchenhauer and Dunning, "Do People Trust Too Much or Too Little?," 274.

436 Fetchenhauer and Dunning, "Do People Trust Too Much or Too Little?," 274-5.

In the same vein, several more studies assessed how individual risk preferences affect our decision to trust others. Fetchenhauer and Dunning published a further study detailing the paradoxical difference in behaviour by individuals facing similar risks in a trust game and in a lottery setting.⁴³⁷ With a 46% probability of receiving their money back, 54.3% of participants decided to trust their counterparts vs. 28.6% who took a chance the lottery; with an 80% chance, 70% decided to trust their counterpart and 77.5% took part in the draw. Further, only 50% of participants who chose not to gamble on the lottery decided to take a risk in the trust game, and 73.2% of gamblers took a risk in the trust scenario. In other words, facing the same risk, individuals chose to trust a human counterpart in the trust game more easily than relying on chance. The authors conclude with a number of salient observations, namely that the decision to trust is not just a decision about risk: when the odds of winning were changed, these did not significantly impact the participant's decision to trust their counterpart; but the same change in odds had a stronger and significant impact on the same participant's decision to gamble. The authors confirm that "trust decisions cannot be regarded as merely decisions under risk and uncertainty."⁴³⁸ They conclude that however future research may seek to answer the question of why people take more risks with other people than with nature, their research "does echo the common psychological finding that the shape of people's behavior rests on situation details or circumstances that are, at first, seemingly small or not obvious" and that "changes in the situation structure of how people may express their trust may turn out to be a major determinant of whether people choose to do so."⁴³⁹

Additional studies have focused on the personality traits that coincide with trusting and trustworthiness, as well as on subjective perceptions of situations and counterparts rather than on more objective characteristics such as age and gender. Thielmann and Hilbig found that the main personal character trait correlating with trustworthiness is unconditional

437 Detlef Fetchenhauer and David Dunning, "Betrayal Aversion Versus Principled Trustfulness—How to Explain Risk Avoidance and Risky Choices in Trust Games," *Journal of Economic Behavior & Organization* 81, no. 2 (2012), <https://doi.org/10.1016/j.jebo.2011.07.017>.

438 Fetchenhauer and Dunning, "Betrayal Aversion Versus Principled Trustfulness—How to Explain Risk Avoidance and Risky Choices in Trust Games," 538.

439 Fetchenhauer and Dunning, "Betrayal Aversion Versus Principled Trustfulness—How to Explain Risk Avoidance and Risky Choices in Trust Games," 540. The authors cite Lee Ross, and Richard E. Nisbett, *The Person and the Situation: Perspectives of Social Psychology* (Philadelphia: Temple University Press, 1991).

kindness ($r = 0.33$ at $p \leq 0.001$); there were weaker correlations with positive reciprocity and negative reciprocity (each $r = 0.19$ at $p \leq 0.10$).⁴⁴⁰ They validate earlier findings by Ben-Ner and Ashraf, and question the belief that individuals reciprocate on a tit-for-tat basis.⁴⁴¹

In effect, an individual's underlying personality arguably plays a larger role *ceteris paribus* than the particular situation in which they find themselves; there is therefore a strong argument against treating individuals as all the same mathematical function. Furthermore, whilst Thielmann and Hilbig retain an approach that determines personality traits through regressions, and therefore assumes causal determinism, the direction they take moves beyond the assumption that all individuals are rational in that they are looking to maximise their returns; money, it seems, is not necessarily a good sought for itself.

Additional findings focus on individual psychological factors. Li Huang and J. Keith Murnighan show how subliminal messages may active trusting behaviour, highlighting how trust can emanate before and beneath conscious awareness. Alexandra Mislin, Lisa V. Williams, and Brooke A. Shaughnessy manipulated the trustor's mood and found that happier individuals trusted more and financial incentives were more effective in a state of happiness.⁴⁴² Another example is Christine Anderl et al. who, studying the effect of how social anxiety impairs interpersonal relationships, found that "individuals high in social anxiety showed reduced reciprocal, but intact trustful giving."⁴⁴³

In a review of existing literature, David Dunning, Detlef Fetchenhauer and Thomas M. Schlösser find that "the emotions people report feeling about trusting versus withholding

440 Isabel Thielmann and Benjamin E. Hilbig, "The Traits One Can Trust: Dissecting Reciprocity and Kindness as Determinants of Trustworthy Behavior," *Pers Soc Psychol Bull* 41, no. 11 (Nov 2015), <https://doi.org/10.1177/0146167215600530>.

441 Ben-Ner and Halldorsson, "Trusting and Trustworthiness: What are They, How to Measure Them, and What Affects Them." And Ashraf, Bohnet, and Piankov, "Decomposing Trust and Trustworthiness."

442 Li Huang and J. Keith Murnighan, "What's in a Name? Subliminally Activating Trusting Behavior," *Organizational Behavior and Human Decision Processes* 111, no. 1 (2010), <https://doi.org/10.1016/j.obhdp.2009.10.002>; Alexandra Mislin, Lisa V. Williams, and Brooke A. Shaughnessy, "Motivating Trust: Can Mood and Incentives Increase Interpersonal Trust?," *Journal of Behavioral and Experimental Economics* 58 (2015), <https://doi.org/10.1016/j.socec.2015.06.001>.

443 Christine Anderl et al., "Reduced Reciprocal Giving in Social Anxiety - Evidence from the Trust Game," *Journal of Behavior Therapy and Experimental Psychiatry* 59 (Oct 24 2017): 12, <https://doi.org/10.1016/j.jbtep.2017.10.005>.

trust predict their decisions much more strongly than the emotions they attach to the potential outcomes.”⁴⁴⁴ Again, the authors note that this has substantial bearing on the methodology necessary to study trust, and they critique approaches in experimental economics where trust is considered purely instrumental and focused on expectation of outcomes:

Key to this [form of] economic analysis is the notion that people trust because they are concerned, first and foremost, with the outcomes their trust might bring about. They are concerned about the likelihood that their trust will be reciprocated, as well as the size of the benefit they can potentially gain. In effect, their decisions to trust are consequentialist and instrumental. People do not decide to trust as an end in itself, but rather as a means toward some goal (e.g., more money) they would like to attain. This consequentialist and instrumental treatment of trust is transparent in economic thought.⁴⁴⁵

The authors note a similar issue with experimental psychology:

[Additionally], the very measurement of individual differences in trust within psychology focuses primarily on expectation.... Our work, however, suggests that decisions to trust strangers in the laboratory are not necessarily driven by such economic factors as expectation and the size of the potential benefit. To be sure, these factors do influence decisions to trust, but the influence is rather meager in strength, and people’s decisions often fail to follow the logic of an economic, instrumental analysis.⁴⁴⁶

Dunning et al., who had previously highlighted the paradox of people trusting too much according to their expectations but too little when considering the likelihood of their counterparts reciprocating, explore a number of possible directions for future research. Firstly, they observed that immediate emotions, particularly about keeping the money, strongly predicted who would trust versus who would not.⁴⁴⁷

444 David Dunning, Detlef Fetchenhauer, and Thomas M. Schlösser, "Trust as a Social and Emotional Act: Noneconomic Considerations in Trust Behavior," *Journal of Economic Psychology* 33, no. 3 (2012): 686, <https://doi.org/10.1016/j.joep.2011.09.005>.

445 Dunning, Fetchenhauer, and Schlösser, "Trust as a Social and Emotional Act," 688.

446 Dunning, Fetchenhauer, and Schlösser, "Trust as a Social and Emotional Act," 688.

447 T. Schlösser et al., *Is Trust Driven by Efficiency: Effects of Mutual Gain on the Decision to Trust*, 2011, University of Cologne, Unpublished manuscript.

They also observed that anticipated emotions “failed to predict who would trust versus who would not, even though participants were remarkably accurate in predicting the emotions they would feel once those trust games were played and their outcomes revealed.”⁴⁴⁸ More strikingly, even if they stick to a causal framework, the authors posit that emotions and calculations about outcomes have processes of their own, and are therefore co-incidental rather than correlated: they argue that emotions felt whilst evaluating the potential outcomes of their actions do not “matter as much as how people feel directly about the actions they have to choose between, not the outcomes those actions may produce.”⁴⁴⁹ Exploring this phenomenon further, they argue that “if reports of immediate emotions were mere justifications of trust decisions reached via other means, one would expect immediate emotions attached to giving the money to be correlated with those emotions associated with keeping it”; rather, “emotional reports for either action, keeping versus giving, were uncorrelated in both studies,” suggesting they were potentially independent inputs into the decisions participants would make, and that “immediate emotions were also generally uncorrelated with the anticipatory emotions that participants expressed.”⁴⁵⁰

Additionally, and as reviewed in other studies, Dunning et al. confirm that other elements affect the decision to trust, such as norms, signals, and the relationship status.⁴⁵¹ Their conclusion highlights very well the current limitations of experimental economics and psychology, and underlines the need to consider trust as something inherently dynamic:

In sum, our research suggests that any narrow analysis of trust, as measured in laboratory economic games as well as in real life, would be misplaced. Trust appears to hinge on any number of dynamics, and our work is only beginning to specify what those dynamics might be. Traditional treatments of trust assume that people are focused, first and foremost on the potential outcomes of their actions - and we concede that people’s expectations about whether their trust will be reciprocated, and well as the potential size of the gain if their trust is reciprocated, does hold sway over their decisions.⁴⁵²

448 Dunning, Fetchenhauer, and Schlösser, "Trust as a Social and Emotional Act," 690.

449 Dunning, Fetchenhauer, and Schlösser, "Trust as a Social and Emotional Act," 690.

450 Dunning, Fetchenhauer, and Schlösser, "Trust as a Social and Emotional Act," 690.

451 Dunning, Fetchenhauer, and Schlösser, "Trust as a Social and Emotional Act," 691.

452 Dunning, Fetchenhauer, and Schlösser, "Trust as a Social and Emotional Act," 692.

However, we increasingly assert that concerns about outcomes are only part of the story about why people trust. Trust is not merely an instrumental or economic decision. It is also expressive, in that concerns about the act itself appear to matter a great deal. People's decisions to trust are best predicted by the emotions they attach to the action itself rather than by emotions they attach to possible outcomes. People are more likely to trust if there is an ongoing relationship – no matter how fleeting, minimal, or anonymous – with a counterpart than when no relationship exists, even though the odds and potential payoffs of trusting are the same under both circumstances.⁴⁵³

The more recent body of work from both experimental economics and experimental psychology reviewed in this section highlights both the need for a richer understanding of decision-making (not the least the importance of emotions, perceptions, and values) and the necessity to develop research methods to encapsulate those understandings. This section will have reinforced conclusions drawn earlier in this chapter that a construal of trust as purely calculative, self-interested and determined by the perceived trustworthiness of others is a poor explanation of what trust is: clearly, psycho(-social) elements play a greater part than assumed by mainstream economic theory. The next and final section will explore alternative methodological approaches to studying trust; it will echo the first section in that not only the category of trust but also the method pursued in studying it affects our observation and understanding of trust.

Alternative Methodological Approaches

One of the concerns of experimental economists is to ensure that behaviours can be isolated from uncontrolled variables, which explains their focus on laboratory experiments. Whilst the advantages of the approach are clear, namely that it is the most economical approach to test for different variables, it also presents risks: firstly, that of having little resemblance to reality, and secondly, that of having the results unduly shaped by the set-up of the experiment.⁴⁵⁴ This section will explore the extent to which mainstream and alternative methodologies affect the observations made, bearing in mind that every experimental economist will still have his or her own metaphysical and epistemological assumptions.

453 Dunning, Fetchenhauer, and Schlösser, "Trust as a Social and Emotional Act," 692.

454 For an in-depth discussion of those issues, see Nancy Cartwright and Jeremy Hardie, *Evidence-Based Theory: a Practical Guide to Doing It Better* (New York: Oxford University Press, 2012).

Noel D. Johnson and Alexandra A. Mislin collected data from 162 replications of the trust game involving over 23,000 participants.⁴⁵⁵ Their key findings were that, firstly, “the amount sent in the game is significantly affected by whether payment is random, and whether play is with a simulated counterpart”; secondly, “trustworthiness is significantly affected by the amount by which the experimenter multiplies the amount sent, whether subjects play both roles in the experiment, and whether the subjects are students”; thirdly, they found “robust evidence that subjects send less in trust games conducted in Africa than those in North America.”⁴⁵⁶

A number of tentative observations can be made about these findings. Firstly, as observed by Fetchenhauer and Dunning, people will behave differently if faced with trusting a counterpart or taking part in a lottery, offering more trust in a person for the same odds of a return.⁴⁵⁷ The interpersonal aspect of the transaction matters, but it is still not clear why; this will remain a focus for future research. Secondly, why people reciprocate has so far been linked to unconditional kindness (as noted by Ben-Ner and Halldorson, and Ashraf et al.); if so, it may be more a function of personality than characteristics, or of a sense of fairness (i.e. people will send more if they feel trusted). Thirdly, as observed most starkly by Ashraf, the propensity to trust is affected by cultural factors; there is, in addition to individual psychological biases, a set of cultural differences that will affect how and when trust is extended.⁴⁵⁸ There is therefore, to some extent, a cultural aspect to trust, and the one-size-fit-all homo economicus is again a simplistic reduction; a more nuanced approach is necessary, making the input of sociology and anthropology key to the further study of trust in the context of economic exchanges.⁴⁵⁹

455 Noel D. Johnson and Alexandra A. Mislin, "Trust Games: A meta-analysis," *Journal of Economic Psychology* 32, no. 5 (2011), <https://doi.org/10.1016/j.joep.2011.05.007>.

456 Johnson and Mislin, "Trust Games," 865.

457 Fetchenhauer and Dunning, "Do People Trust Too Much or Too Little?."

458 Ashraf, Bohnet, and Piankov, "Decomposing Trust and Trustworthiness."

459 See for instance Anthony Pagden, "The Destruction of Trust and its Economic Consequences in the Case of Eighteenth-Century Naples," in *Trust: Making and Breaking Cooperative Relations*, ed. Diego Gambetta (Oxford: Basil Blackwell Ltd, 1988); Diego Gambetta, "Mafia: the Price of Distrust," in *Trust: Making and Breaking Cooperative Relations*, ed. Diego Gambetta (Oxford: Basil Blackwell Ltd, 1988); Keith Hart, "Kinship, Contract and Trust: the Economic Organization of Migrants in an African City Slum," in *Trust: Making and Breaking Cooperative Relations*, ed. Diego Gambetta (Oxford: Basil Blackwell Ltd, 1988); Edward H. Lorenz,

The review conducted by Johnson and Mislin does not take account of research in experimental psychology since May 2011 (when their article was received in revised form), and pre-dates findings that have brought to light individual psychological biases. In that regard, their key findings are a very good example of the results produced through epistemologies grounded in the earlier approach in experimental economics. This is not a call to completely dismiss those but rather to relativise them in view of different approaches developed later.

Håkan Holm and Paul Nystedt conducted an experiment to test whether participants would behave differently if they were not in the same building; they found that the results corresponded to those found in a classroom setting.⁴⁶⁰ They also tested whether real financial incentives had an actual effect on participants' choices, and observed that whilst trustees did not behave differently, trustors did, and in fact trusted more with financial incentives than without. Finally, they found that the removal of financial incentives saw a strong correlation with survey trust: later studies taking a more individual and psychological approach saw that individuals tended to trust more when the transaction was with a real counterpart than with a lottery, which is likely to explain why trustors behaved differently than what they reported in surveys or if they were in a purely hypothetical situation. In other words, it was the situational emotion that predicted trusting behaviour, as proposed by Dunning et al.⁴⁶¹ Again, we find that a differentiated epistemology as proposed by later studies in experimental psychology helped shed light on behaviour; the importance of methodology and of assumptions strengthen the critical realist argument that a multi-disciplinary approach is necessary for a richer contouring of the ontological.

"Neither Friends nor Strangers: Informal Networks of Subcontracting in French Industry," in *Trust: Making and Breaking Cooperative Relations*, ed. Diego Gambetta (Oxford: Basil Blackwell Ltd, 1988).

460 Håkan Holm and Paul Nystedt, "Trust in Surveys and Games – A Methodological Contribution on the Influence of Money and Location," *Journal of Economic Psychology* 29, no. 4 (2008), <https://doi.org/10.1016/j.joep.2007.07.010>.

461 Dunning, Fetchenhauer, and Schlösser, "Trust as a Social and Emotional Act."

Gary Charness, Ramón Cobo-Reyes, and Natalia Jiménez tested for the effect of the possibility of third party intervention on trusting behaviour in the trust game.⁴⁶² Such a third-party's material pay would not be affected by the decisions made by the other participants but could in effect punish an overly selfish responder. In an additional treatment, the third party could also reward a trustor who received little money back from the trustee. They observed "a strong and significant effect of third-party punishment in both punishment regimes, as the amount sent by the first mover is more than 60% higher when there is the possibility of third-party punishment", and found that "responders return a higher proportion of the amount sent to them when there is the possibility of punishment," with this proportion slightly higher when reward is not feasible; additionally, "third parties punish less when reward is feasible, but nevertheless spend more on the combination of reward and punishment when these are both permitted than on punishment when this is the only choice for redressing material outcomes."⁴⁶³

The results arguably highlight the role of expectations and social norms on human behaviour, again highlighting that there is a possible societal consensus, or even a weak form of social contract: individuals failing to abide by it are punished to further encourage the preservation of that good. The separation from intrinsic and extrinsic motivations may prove to be problematic if we consider human beings to be social animals: societal norms shape us, we make them our norms to some extent at least, and then we expect others to follow them equally. It is also likely that emotions play a role, in particular fear, impacting decisions without fully making them rational and calculative. Again, a more complex anthropological model is necessary to fully understand trust, one that allows for a certain amount of possible irrationality in view of the impact that emotions can have. Interestingly, the authors do not consider this possibility, again highlighting the limits of earlier experimental studies solely based in the discipline's own framework and ignoring possible contribution from other fields (psychology in particular).

462 Gary Charness, Ramón Cobo-Reyes, and Natalia Jiménez, "An Investment Game with Third-Party Intervention," *Journal of Economic Behavior & Organization* 68, no. 1 (2008), <https://doi.org/10.1016/j.jebo.2008.02.006>.

463 Charness, Cobo-Reyes, and Jiménez, "An Investment Game with Third-Party Intervention," 18.

Ananish Chaudhuri, Yaxiong Li, and Tirnud Paichayontvijit further showed that goal framing, that is informing individuals about the full context of their choices, had a substantial impact on the level of trustworthiness.⁴⁶⁴ Even the order of the text had an influence on the participants' behaviour. With no further indications of the possibilities of the game (that is, without highlighting what happens when players cooperate and when they do not), the average amount transferred over 10 rounds was \$2.56. When the instructions were read out to the entire group together, the average rose to \$4.39. Finally, when the full possibilities were explained and communicated to all, the average rose to \$6.15, and further to \$6.75 when the risk of not cooperating was highlighted last in the instructions, compared to \$5.63 when the risk was explained first. At no point were the words trust or trustworthiness used.

Chaudhuri et al. conclude timidly: "The evidence presented...suggests that researchers studying issues related to social preferences should pay attention not only to structural features of the game, but also to its presentational aspects."⁴⁶⁵ However, the implications of those findings are likely to be deeper, namely that cognitive triggers can greatly affect behaviour, possibly because of the emotions elicited through wording. Such elicitation may also trigger a heightened sense of the normative or a perceived good. Again, the current frameworks do not really address such possibilities and therefore call for a differentiated methodology to encompass them.

This conclusion further applies to a study conducted by Avner Ben-Ner, Louis Putterman and Ting Ren who compared amounts sent and returned in three different treatments: one as per the standard trust game, i.e. without any communication between the players, one with the opportunity to communicate intentions prior to the actual exchange through a matrix highlighting different amounts, and one where participants could chat in advance of the exchange.⁴⁶⁶ At all times, participants could not identify each other and therefore still had the opportunity to let down the other party with complete impunity. The increase in trusting was

464 Ananish Chaudhuri, Yaxiong Li, and Tirnud Paichayontvijit, "What's in a Frame? Goal Framing, Trust and Reciprocity," *Journal of Economic Psychology* 57 (2016), <https://doi.org/10.1016/j.joep.2016.09.005>.

465 Chaudhuri, Li, and Paichayontvijit, "What's in a Frame? Goal Framing, Trust and Reciprocity," 129.

466 Avner Ben-Ner, Louis Putterman, and Ting Ren, "Lavish Returns on Cheap Talk: Two-Way Communication in Trust Games," *The Journal of Socio-Economics* 40, no. 1 (2011), <https://doi.org/10.1016/j.socec.2010.09.009>.

remarkable: trustors sent \$9.21 on average after chatting, over \$7.71 with only numerical communication and \$7.66 with no communication. Trustworthiness also increased: second-movers returned on average 56% of the amount they received with full communication, compared to 49% with numerical communication only, and 43% without communication.

The authors advance two explanations. Firstly, “most subjects are inclined to keep their word, once given, at least when amounts of the sorts at stake here are on the table” and that “most have either preferences that permit self-commitment (for instance, disutility from lying, breaking their word, or letting down others’ expectations), a tendency towards reciprocity, fairness preferences, or more than one of these.”⁴⁶⁷ A second possibility is that “exchange may also have reassured subjects that their counterpart was a real person, not a programmed computer, and it may have imparted not just intellectual but also psycho-social ‘realness’ to the counterpart, adding force to self-commitment.” The authors also note that their regressions showed the following: “an express verbal pre-play agreement increased sending by trustors”; “not-quite-significant indications that these agreements also increased adherence to the proposal by trustees;” and “explicit expressions of assurance by trustees [were] associated with their returning a larger proportion.”⁴⁶⁸

Again, communication, and the sentiments it can elicit, affect behaviour and strengthen the proposition that individuals are not so much rational but rather in greater part emotive and relationship-oriented. Similarly, Daniela Di Cagno and Emanuela Sciubba found that “profits that subjects make in the trust game are higher in the presence of social interaction, and significantly so when network formation informs the decision of whom to trust.”⁴⁶⁹ Acedo similarly found that pre-existing personal trust fostered cooperation among participants in an iterative prisoner dilemma, highlighting the limitations of traditional trust games in admitting trust as an “affectively motivated loyalty, which makes the individuals mutually committed

467 Ben-Ner, Putterman, and Ren, "Lavish Returns on Cheap Talk: Two-Way Communication in Trust Games," 12.

468 Ben-Ner, Putterman, and Ren, "Lavish Returns on Cheap Talk: Two-Way Communication in Trust Games," 12.

469 Daniela Di Cagno and Emanuela Sciubba, "Trust, Trustworthiness and Social Networks: Playing a Trust Game when Networks are Formed in the Lab," *Journal of Economic Behavior & Organization* 75, no. 2 (2010): 156, <https://doi.org/10.1016/j.jebo.2010.04.003>.

and willing to accept vulnerability because of positive expectations about each other's behaviour" rather than a simple expectation about another's behaviour.⁴⁷⁰

Field studies further bring the benefit of social context, and can explore some specific relational aspects of interpersonal trust in more depth. For instance, in the setting of rural South Africa and Namibia, Björn Vollan conducted a set of experiments to determine the effect of friendship and kinship on trust relations, and observed the effects of third party punishment on those relationships.⁴⁷¹ He found that only the first player's sending behaviour, rather than the second player's returning behaviour, is affected by kinship between the two participants; he advances that this serves as some evidence that trust becomes more akin to altruism. He also suggests that punishment "reinforces calculative reasons of trust and trustworthiness in relation to villagers and friends, but crowds out altruistic motives towards family members" and that "we can assume that altruism is highest among family members. In the end, sending behaviour among family members is very likely to be influenced by altruism."⁴⁷² He concludes that "for family members, trust converge(s) to altruism while among friends it is still based on expectations."⁴⁷³

The finding worth noting is the fluid nature of the concept of trust, as observed in a real context: it means more of one thing with a particular set of people, and something else with another group of individuals. Such an observation would have been more difficult to make in a laboratory setting. This also highlights the difficulty of defining trust as a constant function. Rather, trust is something contextually influenced but not determined: in the experiment conducted by Vollan, over a third of participants still cheated when interacting anonymously with a family member.⁴⁷⁴ The relational context is likely to frame the possibilities when

470 C. Acedo and A. Gomila, "Trust and Cooperation: a New Experimental Approach," *Annals of the New York Academy of Sciences* 1299 (Sep 2013): 77, <https://doi.org/10.1111/nyas.12142>.

471 Björn Vollan, "The Difference between Kinship and Friendship: (Field-) Experimental Evidence on Trust and Punishment," *The Journal of Socio-Economics* 40, no. 1 (2011), <https://doi.org/10.1016/j.socec.2010.10.003>.

472 Vollan, "The Difference between Kinship and Friendship: (Field-) Experimental Evidence on Trust and Punishment," 24.

473 Vollan, "The Difference between Kinship and Friendship: (Field-) Experimental Evidence on Trust and Punishment," 24.

474 Vollan, "The Difference between Kinship and Friendship: (Field-) Experimental Evidence on Trust and Punishment," 24.

trusting a counterpart but not to determine them. More situational experiments are needed to further study such phenomena.

In another field experiment, Olof Johansson-Stenman, Minhaj Mahmud, and Peter Martinsson measured levels of trust in rural Bangladesh by having participants fill a survey on trust and then by observing their behaviour in a trust game.⁴⁷⁵ They found that “the appearance of trust or trustworthiness may sometimes simply be a reflection of long-term self-interest, derived from the fact that one important stated motive for both sending and returning money was that people believed that they would be punished, either during their lifetime or in an after-life, if they acted too selfishly in the trust game.”⁴⁷⁶

A particular finding is worth discussing in view of after-life beliefs: “Those who send based on the trust motive send significantly less if they expect that the receiver will return less, which makes sense and is consistent with [existing literature]. For those who send based on a non-trust motive, on the other hand, we find that those who expect less in return actually send more.”⁴⁷⁷ The authors observed that the proportion sent is the lowest for those who reported they send the money for financial gains, which they coin the “pure trust motive.”⁴⁷⁸ The authors discuss the possible effects of beliefs in after-life: “A strong driving force for many senders and receivers seems to be fear of punishment, either in this life or after this life; this alternative was chosen by about half of all senders and receivers who sent/returned non-zero amounts.”⁴⁷⁹ As a result, they conclude that the fear of punishment plays a substantial role:

Taken together, our results support previous findings...that other-regarding behavior, beyond reciprocity in the second stage, seems to influence behavior in trust games. Moreover, although there is a great deal of experimental evidence that decisions in trust games can be affected by punishment concerned..., our findings provide evidence of another kind of an ultimately selfish motive, namely of people acting to

475 Olof Johansson-Stenman, Minhaj Mahmud, and Peter Martinsson, "Trust, Trust Games and Stated Trust: Evidence from Rural Bangladesh," *Journal of Economic Behavior & Organization* 95 (2013), <https://doi.org/10.1016/j.jebo.2011.06.022>.

476 Johansson-Stenman, Mahmud, and Martinsson, "Trust, Trust Games and Stated Trust," 287.

477 Johansson-Stenman, Mahmud, and Martinsson, "Trust, Trust Games and Stated Trust," 294.

478 Johansson-Stenman, Mahmud, and Martinsson, "Trust, Trust Games and Stated Trust," 290-1.

479 Johansson-Stenman, Mahmud, and Martinsson, "Trust, Trust Games and Stated Trust," 291-2. For an account by an atheist evolutionary biologist looking to rationalise religion, see Dominic Johnson, *God is Watching You: How the Fear of God Makes Us Human* (Oxford: Oxford University Press, 2016).

avoid being punished in the long run, i.e. outside the experimental context. This is something that could have hardly been observed from revealed behavior alone.⁴⁸⁰

The commentary is worth unpicking: the belief is construed as some predictor of behaviour, or rather correlates with a particular worldview and personality that can help predict moves in the trust game. However, as highlighted, this does not solely apply to religious participants; the above literature review will have highlighted many more possible reasons why it could be that people trust more, not the least of them affective and immediate ones. Nevertheless, the authors apprehend something that is usually difficult to observe in laboratory experiments, namely a dynamic that goes beyond the classroom but is not necessarily a fixed norm. This, I would argue and will develop below, may well be a disposition, which may at times be effective but at others not; dispositions are less related to a static belief, but they do influence the ways we process information. So it could be that knowledge of ethically desirable outcomes influences, but does not determine, choices. The disposition at play could be an ethical framework that helps make sense of the information, and indicates possible desirable outcomes, with the choice to trust or not to trust undetermined but still contingent on a particular perception of the reality. The usefulness of field experiments is clear: they help us grasp the fuller context surrounding trusting decisions; they invite us to consider theories from other social sciences, potentially competing explanations that are otherwise easily avoided through laboratory experiments.

Finally, a study worth mentioning in terms of methodology is Pamela Lenton and Paul Mosley who argue that “trust can be incentivised by measures which increase the ability of trusters to protect themselves against risk.”⁴⁸¹ The positioning of the study is problematic because it is unlikely that it is trust that is being observed: the definition used by the authors, namely a

480 Nevertheless, the authors remain tentative in their conclusion: “This may reflect that in both major religions in Bangladesh, Islam (88 percent of the population) and Hinduism (11 percent), people believe that they will be judged after death.... It should be noted that this motivation is probably not unique to Bangladesh, or even to the Muslim and Hindu worlds. For example, Christians also believe in two different outcomes after death.... Yet, as noted by a referee, it is not obvious that the importance of the punishment motive is primarily driven by after-life consideration. Indeed experiments among atheists in Russia...also show that people trust and reciprocate to a large extent. Thus, it is possible that this motive reflects some kind of broader internalized norm.” Johansson-Stenman, Mahmud, and Martinsson, "Trust, Trust Games and Stated Trust," 291-2. The authors cite inter alia Charness, Cobo-Reyes, and Jiménez, "An Investment Game with Third-Party Intervention.", as reviewed in this chapter.

481 Pamela Lenton and Paul Mosley, "Incentivising Trust," *Journal of Economic Psychology* 32, no. 5 (2011): 890, <https://doi.org/10.1016/j.joep.2011.07.005>.

“willingness to commit resources to an individual of whom we have no previous knowledge” truncates the idea of vulnerability normally present in the definition of trust.⁴⁸² Then, if the risk associated with trusting another individual can be insured through a monetary contribution, it is arguably not trust but solely a financial transaction without vulnerability to another human being (for our purposes, vulnerability is the hallmark of trust). In that sense, the idea that trust can be incentivised defeats its very purpose: trust means a certain amount of interpersonal vulnerability, and such interpersonal vulnerability cannot actually be incentivised monetarily. With the risk effectively reduced through an insurance mechanism, trust is not really trust, and the entire construct appears to be lacking common sense. Bill McEvily, Joseph R. Radzevick and Roberto A. Weber argued that such a measure is distrust and is observed through “the costs individuals are willing to bear to eliminate their vulnerability to a counterpart”; their own experiment showed that, in fact, “this measure [has] no relationship with risk attitudes, and very little relationship with altruism.”⁴⁸³ And as reviewed previously, altruism has been found to be co-incidental with trust, de facto further undermining the construct of trust proposed by Lenton and Mosley.

The example of the study by Lenton and Mosley also highlights once more the problematic of an epistemology that is quasi-ideological; in this case it is simply absurd because it is taken to great lengths, but it also shows how some of the implicit anthropological assumptions made by the authors are reductive, and how the method that follows becomes blind to a broader reality studied by other experimentalists.

Conclusion

This chapter asked whether the current approach in experimental economics is adequate in representing trust and whether the epistemology of the discipline could provide a truthful account of reality. The answer to this question is negative: what was explored theoretically in the first four chapters was highlighted through pertinent examples of experimental literature

482 Lenton and Mosley, "Incentivising Trust," 891.

483 McEvily, Radzevick, and Weber, "Whom Do You Distrust and How Much Does It Cost? An Experiment on the Measurement of Trust," 297.

on trust; the anthropological construct of experimental economics reduces human beings to utility-maximising mathematical equations. In particular, an individual's ability to make unexpected choices is seen as either an irrational or unexplained deviation from the predicted norm, which calls for further research, rather than as the exercise of an individual's freedom of choice. Additionally, individual cognitive processes have been ignored by experimental economics and only somewhat acknowledged by experimental psychology; what is needed is research that can fully retrace how and on what basis individuals make the decision to trust. Currently, experimental economists only infer reasons why individuals make certain decisions, based on their predictive models which are focused on utility maximisation.

Furthermore, and as explored through Lonergan, a free choice may be irrational and what is irrational cannot be explained through current approaches; this is mainly because the cognitive processes are not explored. Experimental economics does not allow for exploring irrational choices as they cannot be mathematically expressed through an equation. Additionally, experimental economics tends either to move toward empiricism (when it seeks to develop its own body of theory), or to fall back on neoclassical assumptions. It can only seek to prove these right or wrong, rather than to radically question them and offer an alternative theory. In short, and as argued previously, experimental economics is a bedfellow of neoclassical theory, even if at times an uneasy one. It is therefore constrained in its ability to look for explanations other than what the body of economic theory currently offers.

More importantly, from a theological perspective, experimental economics lacks something fundamental, namely an ethical dimension: at the root of this is an understanding of rationality that is reduced to utility-maximisation. However, as explored in the second chapter, human beings make choices that, over time, materialise their values, and these values can constitute societal progress or dismantle it. Ethics is intrinsic to the free (if at times contingent) choices that we make. This, in turn, calls for the theologian to discern what constitutes the good, relying on the dialectical observation of human behaviour, contributing to the body of Church ethics, bearing in mind the possibilities and limitations of human behaviour. How the theologian approaches this in practice will be the focus of the seventh chapter. However, before such an exercise can take place, it is necessary in the next chapter to explore further some theological considerations for any engagement with empirical

economics. Learning from the limitations of existing literature, it is necessary to lay the basis for a constructive theological engagement with the empirical study of individual decision-making.

Chapter 6 - Reinterpreting the Empirical and the Turn to the Subject

Introduction

The previous chapter highlighted the main shortcomings of the experimental literature on trust. It became clear how the discipline's problematic metaphysical and anthropological assumptions affected the outcome of its research. Its explanatory power also appeared self-limited and tended to flatten its construal of trust. As argued at length, this is not only problematic from a critical realist perspective but also from a theological one: because truth has been incarnated, its ontological-cognitive quality is ultimately what determines (theological) categories. This stands in stark contrast to the construct of trust in experimental games.

Indeed, only allowing the epistemological to define categories has ethical consequences, for two interrelated reasons. The first reason is that the epistemology of experimental economics does not allow for the ethical because it seeks to adhere to a self-perceived positivism. Secondly, it does not allow for the ethical because the methodology itself, rather than the converted enquirer, drives the research process. This results in a blindness to the emergence of the ethical. In other words, a process driven by methodology followed to the letter, rather than by cognitive processes infused by conversion, absolves the researcher from enquiring into the ethical dimension: the ethics of his or her work, and the ethics of the object(s) and events under study. Building on the third chapter, we will see that this is the second reason that ultimately requires the theologian to participate in an interdisciplinary enquiry. In the case of trust, not only must researchers be clear about their theological (or philosophical) understanding of trust, they must also be open and prepared to discern trust in the empirical data, even if they rely more on common sense than scientific insight.

Three working assumptions are necessary to pursue a theological engagement with empirical economics on trust. Firstly, trust ought to be constructed as an ethical good; trust needs to

be considered a personal virtue and, by extension, a societal value to be fully grasped from a theological perspective. Portraying trust as a rational utility-maximising behaviour is not only reductive, but as experimental studies also show, this approach continues to fail in fully explaining human behaviour. Whilst practitioners of experimental economics appear to remain stubborn in that they seek to refine the utility-maximising framework, this chapter and the next will lay the groundwork to show how departing from that model to admit the possibility of ethics is not just helpful but necessary in explaining human behaviour.

Secondly, not only assuming the existence of God but also drawing on Scriptures to apprehend God's attributes has a profound effect on categories such as trust: assuming an incarnate and benevolent God who can be trusted vs. not assuming his existence will impact both how we construct trust and the extent to which we put trust into practice by relying on others for reciprocal behaviour. For Lonergan, as explored in the third chapter, the starting point is a theological category and the exercise therefore begins with (Biblical) hermeneutics in order to define trust. Furthermore, as we will see, any theologically informed empirical research will need to account for grace (in relation to Lonergan's empirical "residue").

Thirdly, following on the second point, a socio-scientific method that solely uses observations as a starting point simply cannot be reconciled with a theological approach: theology assumes truths that cannot be observed or proven, not least the reality of an incarnate and benevolent God. This arguably also applies to the self-interest paradigm ubiquitous in economic theory; the previous chapter highlighted how any claim of proof requires very strong assumptions. Any new methodology developed will therefore need to admit several different assumptions, which no doubt traditional experimental economists would have profound difficulty with, but which will have a profound impact on how we study trust. This is particularly the case for refuting the idea that natural and supernatural are to be considered fully separate categories.

As explored in the third chapter, for Lonergan, a theological approach does not exclude the world of the empirical; in fact, it welcomes it, under the condition that all things are subject to discernment before we allow them to inform our doctrines. There is an inherent dialectic between the theologian's task and that of the social scientist – a dialectic that could help

experimental economists question their current approach and build a more comprehensive framework and methodology.

This chapter will show that not only the methods that we use, but also the categories that we observe, can be intrinsically moral, and that methodology and categories are intimately intertwined and mutually dependent: on the one hand, we need to know what we are looking at in order to devise an appropriate methodology, and on the other hand, methodology profoundly shapes (and limits) what we can observe. It is crucial to devise a holistic approach from a theological perspective and Lonergan's dialectical approach will provide the necessary toolkit: it offers a clear alternative to the deterministic models of experimental economics by allowing for ethics and freedom of choice. It will enable a full theological critique of the experimental literature and provide the basis for methodological recommendations that will be explored in the next chapter.

Reinterpreting the Empirical

The Empirical as Starting Point of the Human Sciences

In *Moral Theology and the Human Sciences*, Lonergan observes that "human science as science is subject to an empirical principle."⁴⁸⁴ Such a principle "does not imply the behaviourist principle, which would confine human psychology to the methods available in animal psychology," nor does it "imply the positivist principle which overlooks the a priori contained in man's question for intelligence, for reflection, for deliberation."⁴⁸⁵ It is clear that Lonergan advocates an empirical starting point to the human sciences but equally rejects the notion that the correct judgment of the object can be detached from the subject's observation: as we will explore below, he argues that it is indeed the proper discernment of the social scientist that gives meaning to data, and that no method can claim to be completely objective. Instead, the moral theologian and the social scientist are called to continuously

484 Lonergan, "Moral Theology and the Human Sciences," 302.

485 Lonergan, "Moral Theology and the Human Sciences," 302.

improve their own (ethics of) research – through relying on a systematically dialectical approach, rather than on some particular method.

The main issue with experimental economics is that no clear rules, only tendencies, can be inferred from economic behaviour. Arguably, the laws of science are all tendencies, more or less bound by mathematical parameters. All things are more or less mathematically modellable, and all mathematical and statistical models are only heuristic guides. But how good mathematical and statistical models are in describing tendencies depends on the discipline: Newtonian physics proved successful in using classical methods for prediction and quantum physics proved successful in using statistical methods for prediction. As we saw in the previous chapter, however, applying similar methods to human economic behaviour is not matched with similar predictive powers. Additionally, the way the experiments are built restricts the ability to observe the emergence of behavioural tendencies when conducting statistical analysis. Finally, the reduction of individual behaviour to mathematical formulae obviates the role of ethics, let alone that of theology. But as argued at length, trust and economic behaviours are inherently moral. This is why it is necessary to question and review how empirical studies of economic behaviour are conducted.

The shift from classical to empirical economics has indeed enabled the development of new and more accurate theories because experiments have attended to statistical residues (i.e. deviations from the expected Nash equilibrium of no trust) that did not fit into classical theories. How experimental economists treat statistical residues could provide the basis for expanding research to the methods of other disciplines. But, as observed in the previous chapter, experimental economists tend to disregard outliers as irrational deviations from classical laws, however useful they might be for advancing inter-disciplinary social scientific research. Lonergan's thought is relevant in this context not because he offers a different statistical method to what is used by experimental economists (in fact, he does not). Rather, his work is relevant because he encourages a more astute use of statistics: in *Insight* and elsewhere, Lonergan favours attending to outliers through a more comprehensive approach.

Evolution as Paradigm

To begin illustrating key differences in approach between experimental economics and what Lonergan would envision, we can consider Lonergan's and Philip McShane's approach to the theory of evolution. Evolutionary theory represents a paradigmatic shift in scientific thinking because it undermines the notion of determinism.⁴⁸⁶ Random elements play a key role in evolution that could not possibly be reduced to pure causal determinants of the type of $f(x) = y$:

It is not difficult to discern in Darwin's natural selection of chance variations a particular case of a more general formula. For it is not the single isolated variation but rather a combination of variations that is significant for the evolutionary process. Again, while such combinations of variations may be attributed to chance, in the sense that the biologist is concerned, not with efficient causality, but with an immanent intelligibility, still what is significant for evolution is the probability of emergence of such combinations of variations, and not the nonsystematic divergence from their probability which is our meaning of the name "chance." Finally, as chance variation is an instance of probability of emergence, so natural selection is an instance of probability of survival.⁴⁸⁷

The parallel with Bhaskar's and Lawson's critical realism becomes clear: "nature effects...selection, not with the exact predictability of the changing phases of the moon, but only by a general tendency that admits exceptions and that increases in efficacy with the increase of numbers and the prolongation of time intervals"; "natural selection means survival in accord with the probabilities."⁴⁸⁸ Inherent to this line of thought is one substantial claim, namely that evolution cannot be predicted; all we can infer from evolution are tendencies, not rules of the classical-Galilean sort. As McShane argues:

486 At the same time, thinkers like Richard Dawkins seek to reduce evolutionary processes to predictable processes. But this is one particular interpretation of evolution, and as Mary Midgley points out, "Darwin himself denied [that] natural selection is the sole and exclusive cause of evolution, [thus] making the world therefore, in some important sense, entirely random." Mary Midgley, "Designs on Darwinism," *The Guardian* (London), 6 September 2005, <https://www.theguardian.com/science/2005/sep/06/religion.news>; Richard Dawkins, *The Selfish Gene*, 3rd ed. (Oxford: Oxford University Press, 2006). See also Mary Midgley, *Evolution as a Religion*, 2nd ed. (London: Routledge, 2002).

487 Lonergan, *Insight*, 155.

488 Lonergan, *Insight*, 155.

The concrete process of evolution...involves a set of levels of non-systematic or random processes: for such a complex process the granting of knowledge of initial conditions and laws would enable one at best to tackle the impossible task of piecemeal deduction....And the best that one can do towards an integrated view is to establish a schedule of probabilities for the immediate course of events at that stage.⁴⁸⁹

It is with this particular understanding of probabilities that Lonergan's approach to statistics needs to be understood, namely that they cannot be used to deduce a law of the Galilean sort, let alone predict future behaviour; they merely state the probability of deviation from an expected outcome. Thus, in the case of the Trust Game (ignoring all its methodological shortcomings), the only learning that can be truly inferred is the distribution of probabilities that the trustor and the trustee will transfer a particular amount. Yet experimental economists, whilst likely unwilling and unable to predict individual behaviour (or, at the most, at an aggregate level), would nevertheless try to do so if they could identify the hidden variables at the root of each person's individual response. But it appears that their experiments cannot explain individual behaviour without a fuller understanding of the cognitive processes at play and no predictions can be made about future behaviour, only highlighting tendencies – which may or may not be reproduced in following games.

Instead, what Lonergan suggests is a more authentic engagement with method in the sciences. In particular, he calls on scientists to realise that the possibility of emergence, which we will explore below, ought to be taken more seriously; that they should avoid reductivism in their discipline and epistemology. Forcing classical frameworks and discarding statistical residues as irrational deviations means that experimental economists are not attending to the possibility of emergence.

Emergence

McShane explores Lonergan's concept of emergence in *Randomness, Statistics and Emergence*. For McShane, what does not fit in a statistical explanation of one kind is to be

⁴⁸⁹ Philip McShane, *Randomness, Statistics and Emergence* (Dublin: Gill and Macmillan Ltd, 1970), 246-7; Lonergan, *Insight*, 148-51.

associated with the emergence of a higher kind, requiring a distinct level of investigation and distinct scientific disciplines:

Not only is there the randomness of certain mathematical series, but each particular science involves a new level and type of randomness. Each science therefore provides scope for statistical investigation within it, a statistical investigation which is not entirely reducible through the acquisition of causal knowledge.⁴⁹⁰

Hence, the linear regressions used in econometrics and experimental economics are often not an appropriate methodology if we are looking for emerging probabilities. Rather, different types of events will need to be considered of different kinds when statistical analyses are conducted, and therefore may require the epistemology of different disciplines to better grasp phenomena. Finally, some events become discernible only once some of the recurring patterns have been observed. In short, experimental economics fails to recognise the emergence of patterns that its own methods cannot apprehend, at times discarding random events that could be explained at a higher level (e.g. through psychology). Seemingly random deviations in economic experiments should therefore be granted proper attention or the experimental economist is not doing a proper job.

The insightful enquirer, then, attends to events of all kinds and discerns the appropriate method for each kind, most likely through much to-and-fro between hypotheses. In particular, a statistical method identifying patterns cannot necessarily imply determinism: “the rabbit has no determinate mate, nor has it a determinate burrow to run to, nor has its diet the fixity of a medical prescription. But regularly it eats, mates and runs for cover.”⁴⁹¹ As highlighted previously, the determinist move is already problematic in the context of evolutionary theory, whereby the intrinsic ability of a species to survive becomes the definite explanation rather than randomness and chance.

The same is true of human behaviour in the context of trust; how experimental economics uses statistical methods is limiting because it seeks to provide a determinist explanation that is normally the remit of classical laws. Instead, random elements in economic experiments

490 McShane, *Randomness, Statistics and Emergence*, 203.

491 McShane, *Randomness, Statistics and Emergence*, 227.

should be an indication that a different methodological approach, epistemology or even discipline is required to apprehend human behaviour. To date, only the blurring of lines with experimental psychology – and its own methods and assumptions – enables experimental economists to depart from explanations that fail to sufficiently and appropriately explain human behaviour. Therefore, any alternative or complementary methodology for experimental economics must address this shortcoming.

Empirical Residues

Beyond the statistical residues that one finds in experimental economics, Lonergan also foresees an empirical residue that cannot be captured through either statistical or classical approaches. According to Lonergan, the empirical residue “(1) consists in positive empirical data, (2) is to be denied any immanent intelligibility of its own, and (3) is connected with some compensating higher intelligibility of notable importance.”⁴⁹² Empirical residues have an objective existence but only become intelligible when “transcended by an unrestricted act of understanding.” Whilst remaining “unexplained by the particular sciences,” such empirical residues “partly are understood in cognitional theory and metaphysics and ultimately are accounted for by God’s creative decision.”⁴⁹³ Although Lonergan does not provide examples himself, we can imagine such empirical residues as acts of free will infused by grace.

The empirical residue “possesses no immanent intelligibility of its own [and] is left over without explanation even when a science or group of sciences reaches full development.”⁴⁹⁴ Finally, “the empirical residue grounds the manifold of the potential good, and inasmuch as it stands under world order, it possesses the value that accrues to the contingent through the reasonableness of the freedom of a completely wise and good being.”⁴⁹⁵ In other words, for Lonergan, some residues cannot be fully comprehended, not because they cannot be apprehended (e.g. through dreams or common sense) but because the meaning that they

492 Lonergan, *Insight*, 50. See also Hugo A. Meynell, *An Introduction to the Philosophy of Bernard Lonergan* (London: Macmillan, 1976), 15.

493 Lonergan, *Insight*, 686.

494 Lonergan, *Insight*, 686.

495 Lonergan, *Insight*, 686.

give cannot be solely understood through a statistical approach, let alone a classical one.⁴⁹⁶ Rather, the meaning they give is only to be found in the freedom that comes with an unconstrained mind, which is obtained, in part but never fully, through the pursuit of empirical human sciences and the dialectic that ensues in understanding events. McShane makes the link between (Lonergan's) cognitive theory and random events: "Randomness is defined in relation to human knowing, the real is defined in relation to correct human knowing, in relation to an affirmative answer to the question, 'Is it so?,' and so the exclusion of real randomness can only be discussed in relation to the development of correct human knowing."⁴⁹⁷

But at a deeper level, the empirical residue is about God's co-participation in all things (as with the event of the Incarnation explored in the third chapter), something experimental economics and the human sciences do not allow for because of their naturalistic framework. In particular, human behaviour cannot simply be reduced to the current naturalistic framework of experimental science because this assumption is theologically unacceptable: the necessity of grace (and God's action in our world) cannot possibly be grasped through either classical or statistical laws. Thus, economic behaviour can never be reduced to a number of variables with predictive power. Instead, our understanding of reality requires a discernment on the part of the enquirer; it demands a shift from the epistemological to the cognitional – a turn to the subject.

The Turn to the Subject

Lonergan's Turning Point in Metaphysics

The above methodological considerations are ultimately epistemological: Lonergan's contribution could be limited to a better methodology that allows for specifically theological sensitivities to be embedded in social scientific research. But this is only half the story; what Lonergan offers is a more profound departure from the current methodology of experimental

496 See below for a description of common sense in Lonergan's *Insight* and also Lonergan, *Insight*, 218-20.

497 McShane, *Randomness, Statistics and Emergence*, 255.

economics, and ultimately of the social sciences: he calls for methodology to encompass not only epistemological concerns but also cognitional ones. This explains his particular sensitivities for normativity and methodology explored in the second chapter: truth is as much a function of how individuals apprehend reality as it is about methods rendering a true picture of the ontological: there are no methods without individuals applying them; they do not exist in a vacuum. McShane echoes Lonergan's stance:

Our position is a realist one which grants to the verified explanation an objective status...Understanding, when correct, is not just subjective...Here then we have a type of correspondence theory of truth. But it is not the correspondence of the structure of propositions to the to the structure of facts: the correspondence is of structure knowing to the known.⁴⁹⁸

For McShane, "it is only a myth which would grant that [a reflection on reality and facts of science] somehow goes outside the processes of knowing, that the real order can be reached other than through human knowing, that in some way knowledge can be compared with reality."⁴⁹⁹ Rather, we need to assume the isomorphism of the structure of the real with the structure of knowing.

Lonergan's turn to the subject explains why he thinks that the (current) scientific apparatus has its limits. The contribution of Lonergan is a case for considering how we think about scientific method from a theological perspective, and how we allow experience and common sense to play a role in scientific endeavours. Intimately woven into this move is a desire to shift the debate about how to ground belief in God's existence: away from questions of objective observation and causal proofs, and toward the question of how we understand what we experience. As Lonergan argues:

With the separation of philosophy and science, there was developed a scientific notion of causality, a notion that relates effects only to causes within the observable, created universe. Accordingly, if God's existence is to be proved, there has to be formulated a complementary, philosophic notion of causality. Within the Scholastic tradition this commonly is done by a metaphysical formulation. My own formulation is, however, gnoseological: it speaks of the complete intelligibility of the real. It does so because,

498 McShane, *Randomness, Statistics and Emergence*, 252.

499 McShane, *Randomness, Statistics and Emergence*, 253.

for me, a metaphysics is not first but derived from cognitional theory and epistemology. In other words, my position is transcendental, in the sense that I would say that our knowledge of objects is construed by the subject's activities.⁵⁰⁰

Recalling what was explored in the second chapter: knowing being is what is intended in our desire to know. "Such intending is somewhere between knowing and total ignorance. It is the conscious dynamic element in the process of man's coming to know."⁵⁰¹ And "as being is intended by asking questions, so it is to be known by answering them correctly [so that] being may be redefined as what is to be known by intelligent grasp"; "being is completely intelligible [and] it is by the exercise of our intelligence that we come to know."⁵⁰² Lonergan concludes that the real is then being:

We know by experiencing and inquiring, by understanding and reflecting, by weighing the evidence and judging. The world mediated by language also is a real world. When, then, I say that the real is being, I am saying that we have to recapitulate in ourselves the old Greek breakthrough from mythos to logos; that we have to do so consistently, completely, rigorously; that unless we do so, we shall be forever caught in the coils of a Kantianism, and idealism, an existentialism, or a positivism; that if we are caught, then we cannot find any valid proof for the existence of God.⁵⁰³

It is unlikely that many social scientists (or even theologians) could fully comprehend or accept Lonergan's methodological shift because it breaks away from the metaphysics that continues to underpin the social sciences; it appears there is no place for a transcendentalist critical realism in the social sciences, especially in experimental economics. Yet, it is such a shift that is most needed, and this beyond epistemological recalibrations. We will explore below how this shift requires social scientists to exhibit discernment in their research.

Scientific Discernment

Lonergan argues that (social) scientists ought to show a trained (understand, inherently ethical) ability to make sense of data, whereby their intelligence is a pure, detached,

500 Bernard J. F. Lonergan, "The General Character of the Natural Theology of *Insight*," in *Collected Works of Bernard Lonergan: Philosophical and Theological Papers 1965-1980*, ed. Robert C. Croken and Robert M. Doran (Toronto: University of Toronto Press, 2004), 5-6.

501 Lonergan, "The General Character of the Natural Theology of *Insight*," 6-7.

502 Lonergan, "The General Character of the Natural Theology of *Insight*," 7-8.

503 Lonergan, "The General Character of the Natural Theology of *Insight*," 9.

disinterested desire simply to know.⁵⁰⁴ This is because “the basic practical problem of statistical inquiry is the selection of representative samples, and indeed that its solution must depend not merely on a full theoretical development of statistical method but also on the general knowledge of individual and on their insights into whatever specific issues they happen to be investigating.”⁵⁰⁵

In other words, the social scientist must avoid a number of pitfalls; he or she needs to have a trained sense of what to look for. This effectively requires several qualities of the researcher, and therefore of the research conducted. Social scientists ought to resist the urge to publish if they have nothing substantive to add to the field. They ought to accept a certain fuzziness in their results. Research would inevitably take more resources and time to be ethically meaningful. While they cannot afford to be dogmatic about anthropological constructs, such as a utilitarian understanding of rationality, they must nevertheless frame the emergence of behavioural patterns with some degree of simplified representation. Again, apprehending being means more careful research and a constant questioning of hermeneutics at play. Lonergan is paradoxically calling for a far more rigorous methodology in the (social) sciences than what current self-perceived positivist empirical research programmes offer: not so much through greater reliance on mathematical models, but through discernment that helps researchers interpret and dialectically strengthen methodology.

Lonergan also argues that the moral theologian engaging with a functional specialism such as economics is confronted with not one ethical dimension but two: “On the one hand, there are the moral issues that arise in the object studied in the human science. On the other hand, there are the moral issues that arise in the subjects that do the studying of the object of the human science.”⁵⁰⁶ He goes on to describe in clear theological language the intricate relationship between the human sciences and ideologies (a relationship which we have witnessed in some of the examples described in the last chapter):

Just as sin and the justification of sin by ideology are to be found on the side of the object, so too they may infect the scientific subject. In particular, ideology is

504 See Lonergan, *Insight*, 97.

505 Lonergan, *Insight*, 82.

506 Lonergan, "Moral Theology and the Human Sciences," 307.

contagious. The sinner gains little from his justifying ideology, if the human scientist points out to all and sundry that the justification is merely ideology. Again, the warfare of conflicting ideologies is stultifying. It makes it difficult, if not impossible, for the scientist to have recourse to the philosopher or the theologian for a clarification of underlying issues. It makes it persuasive and even mandatory for scientists to eschew all theological and all philosophical issues and to pursue their proper tasks with complete autonomy and even contemptuous independence.⁵⁰⁷

Lonergan himself did not provide a detailed method in ethics, but the ethical dimension of his work is difficult to miss: not only does his statistical account look for the emergence of the good, but (social) scientists themselves are called to follow their detached, disinterested, and unrestricted desire to know – in order to guarantee the highest form of ethics of research.

Patrick H. Byrne offers a more systematic account of Lonergan's ethical framework in *The Ethics of Discernment*, highlighting a number of valuable considerations for scientists.⁵⁰⁸ For Byrne, using his own words to describe Lonergan's thought, authenticity in ethical decisions responds "to the call to be continually and intelligently creative in ordinary situations." That ethical responsibility "requires ongoing intelligent creativity of human subjects;" and "refusal of the call to be intelligently creative is a failure of ethical responsibility."⁵⁰⁹

For Byrne, every situation and, by extension, every research question requires its own process of discernment, which only ends when no additional questions pertinent to the situation need to be answered:

The absence of further pertinent questions is the central criterion when it comes to matters of value reflection.... When ethical reflection is liberated to follow its normal course, it will proceed until there are no further pertinent questions that would lead to further insights to modify and correct a flawed idea about a course of action into one that would be genuinely, unconditionally worthwhile or obligatory.⁵¹⁰

The unrestricted desire to know is central to responsible ethical decision-making. Researchers – and all of us as individuals – need to act "in complete fidelity to the standards of our own

507 Lonergan, "Moral Theology and the Human Sciences," 307.

508 Patrick H. Byrne, *The Ethics of Discernment: Lonergan's Foundation for Ethics* (Toronto: University of Toronto Press, 2016).

509 Byrne, *The Ethics of Discernment*, 104.

510 Byrne, *The Ethics of Discernment*, 106.

ethical inquiring” before we can choose what is truly valuable.⁵¹¹ Not all research will turn out to be good research after due discernment. Some scientists and individuals are not likely to reach this state of fully knowing by themselves as discernment is typically a communal process within the scientific community; some researchers will pursue what they discern to be unethical projects. But Lonergan’s ethical thought ultimately trusts the individual actor or scientist’s desire to know and guide them towards what is good and rational.⁵¹²

Byrne argues that there are two reasons why individuals and scientists may be able ultimately to make true value judgments and decisions, despite the obstacles. Firstly, the pure, unrestricted desire to know and value everything that is good. Secondly, the basic fulfilment of this desire, which is enabled by being in love in an unrestricted fashion. The continual discernment process described above ultimately generates a feeling that is not easily characterised by language (again, we note the limits of language in describing the ontological), an experience that Lonergan interprets in terms of his Christian religious tradition as “being in love with God”, even if he recognised that this experience could be universal across all traditions. In fact, Lonergan “endorsed the authenticity of the many ways of interpreting [this experience] within different religious traditions.”⁵¹³ Such an experience requires conversion: intellectual, religious, moral, and psychic.⁵¹⁴

511 Byrne, *The Ethics of Discernment*, 112.

512 “Securing behavioural compliance by means of threats of force (whether physical, financial, or psychological) can never produce ethical behaviour. Ethical behaviours are actions done on the bases of decisions grounded in virtually unconditional judgments of value. Enforcing behaviour may be the correct or the only way to limit the damage that unethical people can inflict, but one can never force ethical behaviour of another (or oneself).” Byrne, *The Ethics of Discernment*, 112-3. For an in-depth study of Lonergan’s metaphysics, and in particular nature-grace and how it shapes Lonergan’s cognitional theory, see J. Michael Stebbins, *The Divine Initiative: Grace, World-Order, and Human Freedom in the Early Writings of Bernard Lonergan* (Toronto: University of Toronto Press, 1995).

513 Byrne, *The Ethics of Discernment*, 219. See Lonergan, *Method in Theology*, 105-6.

514 Expanding on Lonergan’s list of conversions, Byrne defines psychic conversion as “another movement towards wholeness in which the resources of our neurophysiology are patterned in ways that promote ethical reflection under the guidance of the unrestricted notion of value and unrestricted being-in-love.” *The Ethics of Discernment*, 219. See also Robert M. Doran, *Theology and the Dialectics of History* (Toronto: University of Toronto Press, 1990).

Common Sense

Whilst much of this thesis focuses on scientific methodology, a further key element of Lonergan's thought is the importance of common sense in the exercise of discernment: "the occurrence of insight is not restricted to the minds of mathematicians, when doing mathematics, and to the mind of physicists, when engaged in that department of science. On the contrary, one meets intelligence in all walks of life."⁵¹⁵

For Lonergan, common sense is "a specialization of intelligence in the particular and the concrete...[and] is common without being general...[It] may seem to argue from analogy, but its analogies defy logical formulation."⁵¹⁶ And whilst "the scientific generalization aims to offer a premise from which correct deductions can be drawn..., the generalizations issued by common sense are not meant to be premises for deductions."⁵¹⁷ Not unlike proverbs and rules of grammar, the validity of these generalizations is not affected by exceptions. In the same way that classical and statistical investigations are complementary, common sense and scientific endeavours focus on different but interdependent areas of knowledge: science seeks to master the universal and common sense the particular.

Lonergan invests substantial time in developing his idea of common sense in *Insight* but the main relevance for this thesis is the realisation that apprehending economic behaviour need not be limited to scientific methods only. Rather, insights from common sense may explain some particular trust behaviours, especially when it comes to assessing the particulars of a situation that cannot be captured through modelling, statistics, or mathematical functions. Common sense insights ought to be taken more seriously by the scientific community. In other words, whilst Lonergan does not reject the need for scientific methods, he does not limit enquiry and therefore knowing being to those. As will be argued in the next chapter, this calls for a richer inter-disciplinary approach to empirical economics.

515 Lonergan, *Insight*, 196.

516 Lonergan, *Insight*, 198-9.

517 Lonergan, *Insight*, 199.

World Process and the Possibility of the Good

Individuals, and therefore social scientists, are called to discernment as they attend to their daily pursuits. The outcome of research is unpredictable but this does not mean it is not teleological; for Lonergan, it is about reaching for the possibility of the good through a learning process, which will include progress and setbacks. Lonergan calls this a world process. There is, in other words, a clear horizon for scientific pursuit – one that is particularly salient for the social sciences; research is not pursued for its own sake but because it supports a deeper purpose: discovering and pursuing the good.

We noted how Lonergan rejects determinism because he inherently believes in freedom of choice. Equally, he reckons that behavioural patterns exist and form norms over time and space, from which some unpredictable and unusual deviations are to be expected. However, these patterns ultimately converge through what he calls the world process:

World process is open. It is a succession of probable realizations of possibilities. Hence it does not run along the iron rails laid down by determinists, nor on the other hand is it a nonintelligible morass of merely chance events.... World process is increasingly systematic. For it is the successive realization of a conditioned series of schemes of recurrence, and the further the series is realized, the greater the systemization to which events are subjected.... The increasingly systematic character of world process can be assured.⁵¹⁸

Again, he remains staunchly opposed to a determinist *Weltbild*, because “the determinist would desire full information exact to the nth decimal place,” whereas “the advocate of emergent probability is quite satisfied with any initial situation in which the most elementary schemes can emerge and probably will emerge in sufficient numbers to sustain the subsequent structure.”⁵¹⁹ As explored above, we can infer from Lonergan that studying human behaviour requires discernment between events that can be apprehended through the classical(-deterministic) method and events that cannot be determined because of their

518 Lonergan, *Insight*, 149.

519 Lonergan, *Insight*, 149.

non-systematicity. The reason for this is the element of unpredictability: individuals who are driven by their desire to know; who possess (contingent) free will but have not yet reached full rationality-qua-the-good nor enacted it. Only when individuals discern and enact rationality can the good emerge.

To avoid the determinist trap that imagines world process as an unstoppable linear path of progression, Lonergan acknowledges that world process “admits breakdowns. For no scheme has more than a probability of survival, so that there is for every scheme some probability of a breakdown; and since earlier schemes condition later schemes, a breakdown of the former entails the breakdown of the latter.”⁵²⁰

Lonergan’s world – if not deterministic – is still profoundly programmatic; it converges to a determined horizon.⁵²¹ Individuals and society learn what is rational and good over time, but sometimes still err and backtrack. Yet, the more they learn, and the more mistakes they make, the more chances there are that world process advances towards the rational and good – even though some will irrationally or sinfully seek to prevent this. In other words, world process becomes more likely even if not necessarily more certain because it is an intelligible movement that individuals and society can rationally support. It is not inevitable but it is programmatic because it has a direction: it is the actualisation of the good immanent to being becoming fully known.⁵²²

Values

Constitutive of a world process that actualises the good are values. For Lonergan, these are not only intricately linked to the cognitive process but inherent to it: “It is in the rational, moral self-consciousness that the good as value comes to light, for the value is the good as the possible object of rational choice,” with the emergence of the good a result of following these values. “The good of order with its concrete contents is a possible object of rational

520 Lonergan, *Insight*, 150.

521 Lonergan, *Insight*, 150.

522 For an in-depth study of the origins of Lonergan’s notion of the dialectic of history, see Michael Shute, *The Origins of Lonergan's Notion of the Dialectic of History* (Baltimore: University Press of America, 1993).

choice and so a value.”⁵²³ As noted in the second and third chapter, it is also this dynamic process of rational self-consciousness, guided by and actualising values, that determines a body of ethical principles.

Lonergan’s thinking on values and, in particular, their constitutive role in history and world process has been the focus of Robert Doran’s *Theology and the Dialectics of History* and *Theological Foundations 2 - Theology and Culture*.⁵²⁴ Doran makes explicit the relationship between grace and the transformation of society, which requires values to be constitutive at all echelons of society:

The person...as a self-transcendent originator of values in self and world does not exist, and is in fact an impossibility, without the gift of God’s grace. Religious values, then, are the condition of the possibility of personal integrity. But the pursuit of the values that constitute cultural integrity is possible only if there are persons of moral and intellectual integrity to carry it on, and so personal values condition the possibility of cultural values. Genuine cultural values are those that will promote the integral dialectic of community in the social infrastructure, the delicate tension of political organization, economic relations, and technological developments with the intersubjective base of the social community. Cultural values, through which the meanings by which our lives are informed are discovered, expressed, valued, criticized, corrected, developed, and improved, are thus the condition of the possibility of a good social order.⁵²⁵

Trust can be understood as a key part of this social order. Trust is a disposition developed through reasoning and habit, a disposition which can, in turn, give rise to a broader societal value that enables the emergence of the good.

Conclusion

Lonergan’s thought is highly relevant to a theological critique of experimental economics but not because it explicitly addresses issues pertaining to the discipline. Rather, as we saw

523 Lonergan, *Insight*, 624.

524 Robert M. Doran, *Theological Foundations 2 - Theology and Culture*, 2 vols., vol. 2 (Milwaukee: Marquette University Press, 1995). See also Robert M. Doran, *Theological Foundations 1 - Intentionality and Psyche*, 2 vols., vol. 1 (Milwaukee: Marquette University Press, 1995).

525 Doran, *Theology and the Dialectics of History*, 99-100.

earlier, the salience of his contribution lies insofar as it can further expand Tony Lawson's critique into the necessity of the theological whilst remaining rooted in a critical realist perspective. This is what can in turn enable a fruitful dialogue between theology and experimental economics. Lawson's contribution is limited to a secular critique of economics leaving the question of what is good open whilst Lonergan allows for and (ultimately) defines how to answer that question. Lonergan's proposition is that being is inherently good and that truthful and objective knowledge can emerge if the appropriate methodology is used.

As observed in the second chapter, that is a substantial departure from the philosophy of science underlying experimental economics. Any theological approach to empirical economics which seeks to redress the methodology of the discipline will need to embrace three substantial points. Firstly, social scientists need to use discernment in their methods and not, in Bhaskar's terminology, flatten the ontological to the epistemological. Secondly, they must use a methodology that accounts for empirical residues, acknowledging that not all findings can be explained systematically. This is not because classical or even statistical methods are intrinsically insufficient (although they certainly are in the absence of proper discernment on the part of the scientist, i.e., in the absence of a dialectical approach); it is in order to leave space to discern divine action (if at all intelligible). Thirdly, the methodology must acknowledge the real possibility of the emerging good (as well as its absence). It is in these three requirements that Lonergan's thought departs from Lawson and paves the way for a differentiated methodology from secular critical realism.

Current empirical economic methods cannot properly account for God's participation in all things. Lonergan's affirmation is that the empirical residue will only become fully intelligible once we fully come to know being (that is, once we fully participate in the life of God). This is why we also need to better (theologically) discern what we are looking for; this is why we need to establish what such residual tendencies could be; this is why we need to be able to distinguish them. There is also an imperative of construing true categories, e.g. what exactly we mean by trust, before it can even be observed.

More controversially, the desire to know being and the focus on the ontological, also call for a reliance on experiential objectivity, as proposed by Lonergan. The rationale is that the

ontological is inevitably richer than what any empirical method can possibly observe. Not allowing for some conceptual thinking to go beyond the observable risks limiting reality to what is empirically constructed. As argued throughout this thesis, the assumptions made by mainstream economics about human behaviour are inherently reductivist. Therefore, it would be appropriate to be able to make assumptions about human behaviour, based on common sense and on a sense of values and ethics. These assumptions can go beyond what is observable, provided that they are, in time, supported by empirical evidence through a more patient, data-rich statistical and inter-disciplinary mode of enquiry.

This penultimate chapter explored Lonergan's understanding of statistical methods as a complement to the classical-deterministic tendency of experimental economics. Having previously explored the limitations of the experimental literature, it became clear why his suggestions are highly relevant to a theological engagement with empirical economics. This chapter then laid down the methodological axioms on which to pursue an alternative enquiry of trust through empirical economics, beyond the secular premises of Bhaskar's and Lawsons' critical realism. The next chapter will, in turn, explore a number of methodological recommendations concerning the process of observing trust from a theological perspective, taking into account the theoretical considerations of this chapter as well as insights from the existing experimental literature.

Chapter 7 - Methodological Recommendations for Future Research

Introduction

The previous chapter explored Lonergan's dialectic method and how it provides the necessary underpinning for a differentiated approach when engaging with empirical economics. Lonergan's approach accounts for freedom of choice and the actualisation of ethical value, both central to any theological enquiry. Once the classical-deterministic framework is abandoned, the gathering of sufficient real-life and historical data allows ethical values to emerge (despite the ever-present possibility of irrationality). Finally, and in a departure from Bhaskar's and Lawson's critical realism, we came to recognise the particular importance, from a theological perspective, of what Lonergan calls the empirical residue. This final chapter will, in turn, explore more specific recommendations. By employing the analysis conducted through this thesis, it will lay out one possible way to observe trust empirically from a theological perspective.

Initial Methodological Considerations

The Limitations of Experimental Economics

The past three chapters explored at length questions of methodology together with reviewing existing experimental research on trust, and called for a better design of empirical studies, one which precludes a causal deterministic model. Namely, it called for an approach to empirical studies which understands human beings to be free moral agents, whose knowing and acting can be adversely affected by irrationality or sin. Because we take a critical realist perspective, the epistemology of empirical economics cannot dictate anthropological constructs. This means that most of the research conducted in the field of experimental economics must be questioned, critiqued, and ultimately reframed with models and additional methods that assume a more realistic understanding of human beings; the flaws

of existing models and research, as well as how this influences and frames the results, must be pointed out.

As observed in the fourth chapter, any empirical research about human behaviour has to be open to tendencies which may or may not be actualised and, as Lonergan would argue, open to the possibility that we may fall short in our behaviour even when we know how we should best behave. Any such research should also allow for changes over time. The irrationality of certain behaviours does not mean that the individual himself is always irrational, but that at a particular time and place, that individual, even if he or she knows what would be a better response, nevertheless acts irrationally. That same individual may also learn to act more in line with his or her beliefs and begin to behave differently over time.

There is particular need to be more considerate of what individual human beings could do in a specific situation, because choices are often not binary or fully quantifiable (as constructed in experimental economics). There ought to be a reflection on what individuals could do, but choose not to do, so there is a differentiation between their intrinsic norms and their actual behaviour. That is because human beings can act irrationally and only a separation between thinking and acting can help them make sense of their behaviour. Irrationality, as implicitly argued by Lonergan, only makes sense if it departs from a particular norm. That norm is not as simplistic as utility maximisation, as portrayed in mainstream economics, because there would never be any reason for a mismatch between thinking and acting: why would anyone not act to maximise their utility if this is what they desire? Experimental economics has shown that individuals depart from expected behaviours but it struggles to explain why. Lonergan places irrationality in the failure to act on our intelligence: we might be simply inconsistent or it is just not always possible or simple to act on our belief system.

Empirical methods, such as qualitative interviews used in psychology, can also increase our grasp of the complexity of human behaviour, because they allow for a richer understanding of the ontological by extending it to the possible rather than just the actual. Understanding the tendencies of human beings that are not actualised (Lawson's powers) is how critical realism can enable a richer understanding than the defective and reductivist *homo economicus* of mainstream economics.

These tendencies are best observed through a number of methodological tools explored in the fourth chapter: (a) abstraction, where more data ought to be gathered from real life situations than what we originally look for, so that we will be able to study the possible coincidence of other events not considered at first, (b) semi-regularities, which help us to observe emerging patterns that are not inherently determinist, and (c) differentials, where social scientists evaluate data from similar situations but different individuals in order to understand how these deviate from a possible norm. All of these can help scientists apprehend normativity by providing a more in-depth understanding of behaviours like trust. All three demand more data from real life situations and a more in-depth analysis than is can be gathered through the current practices of experimental economics.

Once a hypothesis is developed, it is necessary to perform retrodiction by testing it against (past) rich real life data. A successful hypothesis should then provide an explanation of past events, rather than being able to predict future behaviours, since we are able to learn and change our behaviours in future situations. The hypothesis would otherwise be inherently determinist.

Equally important is the further relaxation of the *ceteris paribus* clause, whereby observations have to be in isolation of any external influence. Not having to solely rely on observing specific causal relationships to produce meaningful research means that more data (Lonergan's statistical residues) will be available to formulate statistical laws and behavioural tendencies.⁵²⁶

In turn, it is necessary to consider what fits a deductive form of enquiry and what is more suited for inductive enquiry. As highlighted in the previous chapter, the body of experimental economic literature assumes a deductive framework, yet it has struggled to produce meaningful results due to the limits of its methodology. It is therefore necessary to consider what fits in the deductive framework by first conducting statistical analysis, and such enquiry necessitates more data over time. One-shot games with anonymous players cannot possibly

526 See Lonergan, *Insight*, 94.

depict how subjective cognitions affect decisions and how these processes change over time. Observations also need to encompass other situations – especially real-life ones.

It follows that a differentiated approach to empirical economics needs to rely on several precepts. First, the desire to focus on real life situations that account for freedom of choice rather than using laboratory experiments with a deterministic causal approach. Second, the use of more historical data whilst engaging with the qualitative approach of other disciplines such as history, anthropology, sociology, and psychology. (Evidently, the theologian will also need to ask questions about the metaphysical and anthropological assumptions of these disciplines.) Third, a focus on the coincidence of events in substantial amounts of data, looking for semi-regularities and their possible development over time and space, taking a differential and orthogonal approach; the underlying assumption being that we all have certain tendencies even if we do not always choose to act on them. Fourth, admitting that we delve in open systems and are capable of learning, which in turn requires a historical approach that considers time and space, and allows for the possible emergence of the good. Fifth, moving away from atomism and admitting the influence of environment and individuals upon each other. And finally, the importance of empirical scientists becoming aware of their own anthropological and methodological assumptions; and the importance of revising them when it is the ethical and right thing to do. In other words, intelligent designs call for both self-awareness about the limitations of the methods used and for diligent efforts to shun the positivist fallacy.

The Role of the Theologian

The challenge for the theologian to engage with empirical research on trust is not small; this thesis will have shown that it is a complex task fraught with pitfalls. Firstly, the imperative of using a theologically-grounded category of trust means engaging in theological and biblical exegesis, instead of thoughtlessly borrowing categories from other social sciences. This thesis offered one possible understanding or facet of trust, derived from Luke-Acts. Additional theological research would be necessary to explore this particular category as well as other

possible constructs in more depth. Any research will need to constantly refine the theological category (or categories) of trust and review the appropriate method to observe it.

Secondly, any methodology brings with it certain horizons that the theologian needs to understand, critique, and correct. This thesis will have shown that theologians simply borrowing research from other social sciences to inform their views can be naïve. The role of the theologian in empirical research ought to include critiquing and improving models used in experiments by drawing on Scriptures and on the Christian tradition to engage in a dialectical process. The starting point is inherently transcendental but ultimately requires both a critical and a realist mindset: critical because the starting point, including Scriptures and tradition, is always a matter of interpretation rooted in the cognitional, and realist because it ultimately needs to be grounded in ontological possibilities and not solely in idealism.

Thirdly, the decisions we make either through enquiry or through day-to-day choices are more or less rational and therefore are more or less conducive of the good; they always possess an ethical dimension. But how this can be fully integrated into methodology is in itself challenging because what is good and rational, until it has been fully discovered, remains a moving target – a target grounded in great part, on (theological) assumptions. Furthermore, any methodology which seeks to apprehend the moral dimension of human behaviour, and which allows for freedom of choice, is faced with substantial methodological challenges. Not only is it challenging to move away from controlled and closed systems to open ones, but we must also abandon the effort to construct laws that predict human behaviour. Rather, all we are left to infer are powers, tendencies, and Lonergan's empirical residue, all of which are real but not actual or empirical; the semi-regularities that would help delineate those cannot be expressed through mathematical functions as such semi-regularities would simply appear to behave like random variables.

Fourthly, the theologian ought to allow for the possibility of grace. As observed in the second chapter, the respective operations of nature and grace at the cognitive level cannot (easily) be distinguished empirically. This does not however mean that grace is absent and that cognitions and behaviours are not effected by it. It also does not mean that the research has

to fall back on methodological naturalism. Rather, it would require the researcher to be able to fully discern grace, which may or may not be discerned through empirical methods. Grace may be a working hypothesis in differentiated behaviour between church and secular communities.⁵²⁷

An Experimental Starting Point: Religiosity and Trust

A noteworthy experiment – which, in part, sparked the idea of this thesis – is that of Jonathan H.W. Tan and Claudia Vogel, who explored the relationship between religion and trust using the trust game.⁵²⁸ For the authors, religion is a potential determinant of trust and trustworthiness through the doctrines it teaches and through the psychological biases it generates towards people within the same community. In a similar vein to other experiments, trust was understood to be “a costly investment in a person or entity, with the expectation of return, [that] exposes oneself to the risk of being made worse off.”⁵²⁹

Participants were first asked to answer a questionnaire about their religiosity alongside other distracting questions (in order to make participants blind to the purpose of experiment). Information about the participants’ religiosity was communicated to their counterparts in some of the rounds and not in others, to allow for comparison. Tan and Vogel offer five results from the experiment. Firstly, trust increases with the religiosity of the responder. Secondly, the more religious the first player, the more their trust will increase with the religiosity of the second player. Thirdly, no systematic intragroup acts of favouritism or inter-group discrimination were observed, meaning that the reason why people trusted each other was less about commonality than the fact that their religiosity per se was a determinant of trust and trustworthiness. Fourthly, a responder’s trustworthiness increased with religiosity. Fifthly, the more religious the second player, the more likely he is to reciprocate increasing trust put in him. The authors conclude:

527 Robin Gill explored such questions in *Churchgoing and Christian Ethics* (Cambridge: Cambridge University Press, 2004).

528 Tan and Vogel, "Religion and Trust."

529 Tan and Vogel, "Religion and Trust," 833.

Religiosity is effectively used as a category to guide decision-making – but not by everyone. The degree to which a Proposer relies on information on a Responder’s religiosity depends on the Proposer’s own religiosity. The Proposer behavior we observed can be justified by the fact that such a stereotype accords with social reality, in that Responders of higher religiosity are indeed more trustworthy, positively reciprocating the trust invested in them.⁵³⁰

These results are meaningful but beg for a much richer analysis; in line with the argument followed in the past chapters, a differentiated approach is necessary and will be suggested below. We note in particular how religious individuals may show virtuous behaviour by trusting others more, but the experiment does not explain why: perhaps because of their trust in God’s benevolence but maybe also because they follow moral imperatives (without necessarily understanding them). Furthermore, trust and trustworthiness associated with religiosity is arguably perceived as a good by both those trusting and those trusted, but the moral dimension itself is not explored. Finally, we also note that higher trustworthiness is observed in conjunction with higher religiosity. Thus, the above study cannot (dis)prove the theological construct of trust proposed at the beginning of this thesis, namely:

(Lukan) trust, as a theological category, is a virtue necessary to achieve the economic common good, enabling an individual to choose to act in a way that leaves him or her vulnerable to the action of someone else by instead primarily relying on God for his or her welfare.

The experiment remains particularly lacunary because it fails to explain the cognitional process that leads people to choose how much they trust. There are several reasons for this. Firstly, the way religiosity is construed is problematic. Secondly, there is insufficient granularity at the cognitional level to make any claim as to why (religious) individuals trust. Thirdly, the conclusions, although not deterministic, fail to depict a different picture to the Pavlovian man. Looking for determinants diminishes the sense that individuals are able to make free and intelligent decisions; how the experiment was built to isolate such variables, as with any trust game, reflects this shortcoming. Finally, although not to be expected from a secular study (even if conducted by a Christian economist and partially advised by a theological faculty), it begs the question of the moral “so what?”; Tan and Vogel somewhat

530 Tan and Vogel, "Religion and Trust," 844.

shyly claim that “religion can thus serve a practical role in society, via the dissemination of moral values, which are transmitted even to those who are not officially members of the religion (via social learning).”⁵³¹

The rest of this chapter will suggest remediations to this nevertheless relevant and meaningful study: firstly, refining the understanding of both trust and religiosity; secondly, refining the focus to attend to the cognitional process behind trust and individual decision-making over time; thirdly, using the insights of other social sciences to corroborate the claims of such a study; fourthly, retrodicting hypotheses through real and historical situations.

Methodological Remediations

Step One: Redefining Trust

Tan and Vogel construed religiosity through three dimensions (belief, experience, and ritual):

The belief dimension captures the closeness to which an individual’s set of beliefs ascribes to the ideological constructs of the religion, namely its theology. It consists of statements (of faith) on the (i) existence of a divine being and its nature; (ii) content and goals of the will of the divine being, and the role of nature and humans in this will; (iii) actions required to fulfil this divine will. The ritual dimension measures one’s involvement in a variety of religious practices and the relationship between different practices (different individuals weight activities differently and so practice each with different frequencies). The experience dimension measures the extent to which individuals perceive themselves to have had encounters of a religious context (e.g. sense of salvation, sin, and closeness to and fear for [sic] the Divine).⁵³²

The first element of religiosity, belief, encompasses the cognitional but remains broad; it would be more helpful to determine more specifically the person’s beliefs about God’s providence and benevolence. The ritual element covers practice but it would be more appropriate to focus on someone’s generosity, in particular how much they give to charity

531 Tan and Vogel, "Religion and Trust," 844.

532 Tan and Vogel, "Religion and Trust," 834.

and the extent to which it weakens their financial stability; simply attending services on Sundays would not be a meaningful proxy because the correlation is not straightforward to explain. Finally, the experiential dimension may be helpful in highlighting an individual's faith but at the risk of diminishing expectations of how conversion should affect behaviour. In short, more precision is necessary at the cognitive level and more focus on specific practices associated with such cognitions.

Additionally, trust cannot be considered within a deterministic framework because there is not only no scope for free will but also no scope for events that can affect future choices: learning from past experience, recurring doubt about the value of trusting, immediate and unforeseeable circumstances;⁵³³ all elements that will mean variations in trusting behaviour that cannot be predicted but rather necessitate an inductive approach refined over time. Trust can be learned – and unlearned – through previous experiences. But circumstances cannot fully erase more profound tendencies, ones that result from the desire to know and the cognitional fruit that it bears, even if they can undermine them.

This, in turn, calls for a closer understanding of the decision-making processes and the particular sets of cognitions that inform the act to trust. Trust emerges over time, and this demands that methodology focus on individuals and communities over a longer period of time, including qualitative interviews to understand cognitions and their changes over time. This stands in contrast to experiments that aggregate one-off individual behaviours without historical context and that are ultimately based on the premise that all individuals go through the same cognitive rational decision-making process. Additionally, the role of emotions, together with what Lonergan refers to as individual, group and general bias, needs to be understood, including how these relate to cognitions. There is therefore a need to explore different concurrent but not necessarily related events, to explore their co-incidence and possible correlation. An inductive method focusing on non-related series of events will inevitably necessitate more qualitative data.

533 See in particular Brian Skyrms, "Trust, Risk, and the Social Contract," *Synthese* 160, no. 1 (2006), <https://doi.org/10.1007/s11229-006-9075-3>. Skyrms presents the case for learning to cooperate through an analytical framework of rational choice, evolutionary game theory and dynamic model of social network formation. For him, an innate predisposition to trust is unnecessary when social network dynamics are taken into account.

Step Two: Exploring Cognitions and their Moral Dimension

Any empirical method intended to observe (Lukan) trust needs to fulfil four criteria, which are likely to be true for any research on categories of individual economic behaviour:

Firstly, it must embrace the belief that people are driven by a desire to know, and therefore are capable of learning. Current models assume that individuals are static, as if they possess an inherent trusting mechanism that could never change. This is a strong assumption that is highly problematic: people do learn to trust, based on past experiences, but also from mistakes; they can learn to distrust if previous experiences have been repeatedly negative or traumatic. Current models, including those from experimental psychology, do not account for an individual's ability to change cognitions over time. Therefore, any modelling needs to account for changes in trusting behaviour and needs to seek to understand what triggered those changes. To achieve this, any enquiry must follow the same individuals over time, ideally over a series of similar situations, to record what might have possibly triggered those changes.

Secondly, it must recognize freedom of will (no matter how contingent) and the possibility of grace, while taking into account the gap between the cognitional and the behavioural. Individuals do not always act on what they believe to be a rational conclusion; again, the emotions can sway decisions towards the irrational, influencing or short-circuiting any cognitional analysis. Free will is, in reality, always contingent on unpredictable forces, whether because of unconscious biases or because of chemicals in the brain. But in spite of contingency, individuals can, in most cases, make free choices, and a determinist model of a linear-logical type is inappropriate.

Thirdly, it must have a guiding outcome that allows for the moral dimension without setting that moral vision in stone (that would make it crudely absolutist). Such a guiding vision would be rooted in Christian assumptions, but open to revision in light of the data collected. This is a particularly crucial and tricky element of the theological contribution, because it must

balance an openness to the Christian worldview and an openness to the experimental data without falling into naturalism or determinism.

Fourthly, it must allow for qualitative input, even if the data itself becomes quantified for aggregate analysis. A purely statistical analysis without individual and situational context would not have more meaning than a logical-deterministic model. Specific indicators, taken out of context, would be correlated over time, but these would risk being spurious if they are not contextualised; they would produce weak explanatory models overall. One of the biggest shortcomings of current experimental approaches is that they do not take into account the perspectives of the individuals observed. The standard argument is that the approach needs to be objective, and that individual perspectives would be subjective and most likely biased about interior motives. Whilst this is true, at least to some extent, social scientists are equally likely to be biased in how they themselves interpret the data, infer rationales for behaviours, and model experiments.

As Lonergan rightly suggests, any scientific enquiry must be an ethical exercise requiring detachment, and such detachment may be more possible if social scientists allow for their views to be challenged by the subjects of their experiments. In particular, it is necessary to have the perspective of the individual throughout the cognitional and decision-making processes, if we wish to understand the rationale behind every decision, and to establish the authenticity of that decision. Following Lonergan's transcendental method, any approach would need to gather qualitative information about (a) what information the experimental subject took into account, i.e. "attentiveness," (b) what sense they gave it, i.e. "intelligence," (c) whether the reflection is sufficiently grounded in facts, i.e. "reasonableness," and (d) whether the action taken is in line with their reflection, i.e. "responsibility."⁵³⁴

Any empirical enquiry should first follow specific individuals over time before seeking to aggregate data, and this means studying the process from observation to decision. For every single decision to trust, the question should be asked whether the individual pays sufficient attention to the data ("experience") that will support a rational and good decision, or whether

534 See Lonergan, *Method in Theology*, 11-12.

he or she already misses out on crucial information and can only, as a result, be limited in his or her intelligence and reasonableness. Then, in a second step, the same applies when making sense of the data (“understanding”): is the individual making full sense of the data; is he or she making a full interpretation of it? The third question is then whether the conclusion reached from the first and second steps makes sense in general; could it be reasonably applied in similar circumstances (“judgment”)? Finally, once the individual has reached a conclusion, he can then act more or less responsibly – acting on what he or she believes to be the right decision. In all this, the ability to reach full authenticity builds on (or is limited by) each previous step.

This process is illustrated in Figure 1. If quantitative observations refer to a single time period, a distribution can be drawn and the mode, mean, or median can be highlighted (e.g., the mode would represent the most frequent decision point). Such scaling requires substantial subjective appraisal because authenticity cannot be objectively measured quantitatively. It would be similar to a university grading system where the appraisal demands discretion on the part of the examiner; this would in fact also apply to the natural sciences where how a student comes to the answer (e.g., the calculations and or methodology used), matters as much as the final answer itself. Since such examination methods are used to measure a student’s progress in the natural and social sciences, it is difficult to argue that these methods of assessment are unscientific. Again, such assessments are made on the basis of qualitative inputs that include the individual’s perspective and the fuller context.

If the observations refer to several time periods (Fig 2), they are plotted over time and changes in direction are noted, whether towards more or less authenticity, and hypotheses are made as to possible reasons why changes happened in one of the four steps to decision-making. Again, any graph requires a qualitative explanation, with quantitative data only making sense if it is linked to qualitative context so that the grading can be traced back. As with university grading, at least two pairs of eyes should agree on the marking, with the possibility of a third-party reviewing congruence between assessments.

Aggregation of data from more than one individual would be possible but have limited use, the reason being that quantitative representation of qualitative data loses some sense as

soon as it is detached from its source: the decision-making process is something personal, and even if parallels can be drawn between individuals, the anonymised aggregation used in experimental studies disembodies decisions, and choices deemed irrational become difficult to understand. The rationale given is that individuals act more freely under anonymity, which is likely but nevertheless demands a much stronger assumption, namely that all human beings make decisions in the same way. However, aggregation of data could make sense if external inputs were the same for all individuals: for instance, if all had received the same instruction on how to make better decisions.

In summary, whilst it is possible to rate the decision-making process to highlight improvements, the process is mainly qualitative. However, a statistical plot could depict relative deviations from means, medians and modes, highlighting intra-personal irrationality and ultimately freedom of will. Individuals will not always make decisions with precisely the same level of authenticity even if the same variables are at play (contrary to the deductive models of experimental economics). What is depicted by a dialectical analysis are behavioural tendencies. Finally, if it is specifically Lukan trust, as construed in the first chapter, that is to be empirically observed, then what Lonergan understands as conversion would necessarily be an additional consideration at the level of the subject.

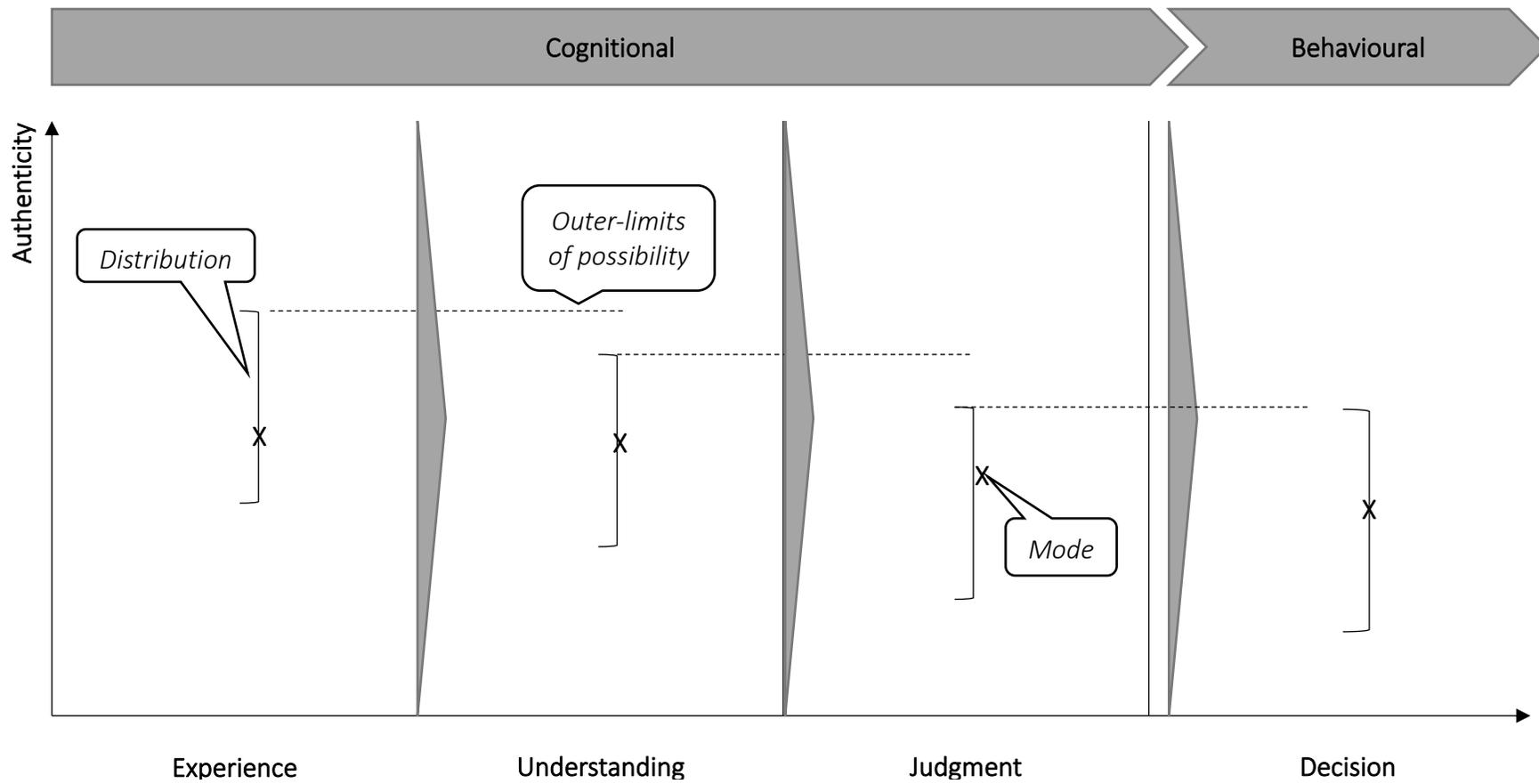


Figure 1 - Single time-period statistical distributions

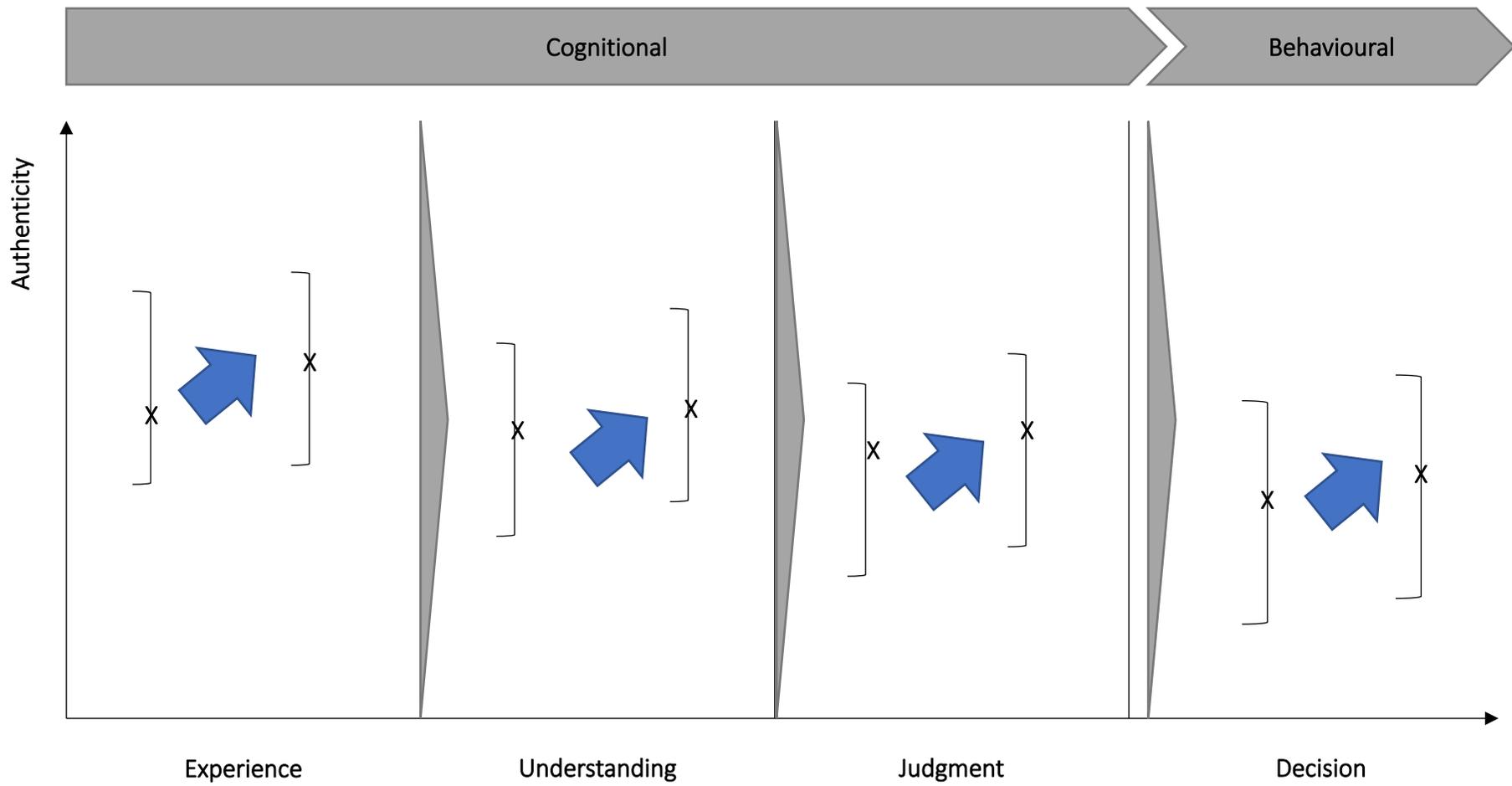


Figure 2 - Two-time period statistical distribution

Step Three: Dialectical Engagement with the Social Sciences

In addition to researching the theological category of trust, it is equally necessary to engage with other social sciences than economics, in particular psychology, but also anthropology and sociology, to learn from their particular insights. Again, as highlighted throughout this thesis, the social sciences are not neutral in their assumptions, whether in the categories they use or in their methodologies. It follows that theologians need to be aware and critical, but also able to engage constructively with the social sciences and their methodologies. The premise of this thesis is that theology both can and ought to engage with the empirical sciences because by being in dialogue with them, it can highlight the ethical dimension of research and research horizons.

In addition, as Lonergan argues in *Method in Theology*, theologians should engage with the empirical sciences because such engagement can support their own efforts to understand, rearticulate and communicate Church doctrines. The approach is not entirely new, as socio-historical exegetes have been questioning previous interpretations of Church thinking for many decades. Lonergan welcomed this development but also questioned its fundamentals, reaching for a method that would not oppose scientific enquiry to Christian theology. It is in this spirit that the present thesis suggests its differentiated methodology.

Step Four: Retrodiction

Once the category of trust has been theologially redefined, and cognitional processes have been observed in more detail and dialectically refined through engagement with other social sciences, our understanding of trust can then in turn be tested against a number of historical or present situations. Following Lawson's recommendation, this can be used for two purposes. Firstly, working orthogonally, i.e. comparing situations that differ only slightly (ideally in only one variable) in order to identify co-incidental and causal relationships. Secondly, working through retrodiction, i.e. testing the causal laws identified through an

orthogonal approach.⁵³⁵ The following type of communities of (Lukan) trust would offer such material, firstly to draw comparisons between communities within each category, and, secondly, between each category:

i. Monasteries and other Christian communities – current (sociological study)

Monasteries and other Christian communities would offer a prime opportunity to test whether individuals' trust in God's benevolence and providence changes their propensity to offer charity to others. Differences between communities and individuals will likely occur and the reasons for these will require more in-depth interviews with members of those communities.

ii. Monasteries and other Christian communities – past (historical study)

Historical analysis of past Christian monasteries and communities should provide additional insights into the economic behaviour of individuals and communities, in particular as monasteries often possess large historical records of their economic activity as well as life journals. Additionally, political and economic context should give particular insight as to the (a)temporality of theological beliefs, i.e. how these have been shaped (or not) by their context.

iii. Christian congregations

An additional set of control groups are Christian congregations: these adhere to the same beliefs as monasteries or Christian communities but may not show similar levels of commitment or practice, and the requirement to trust and be trustworthy may not be as high as in a monastery or other Christian community. The differential between the two types of

⁵³⁵ Pro memoria, Lawson gives the following example of retrodiction: "If we attribute weather pattern x to a particular combination of (already understood) causal mechanism y, it is necessary to determine (retrodict) the conditions for y and then check empirically whether these conditions are actually obtained." Lawson, *Economics and Reality*, 221.

groups should be studied in detail through qualitative interviews in order to identify potential facilitators of trust.

iv. Non-Christian religious communities – current (socio-anthropological study)

Differing beliefs about God are likely to inform the economic behaviour of non-Christian religious communities when compared to Christian ones; at least they may be grounded in a distinct theology. Nevertheless, similarities with Christian communities may exist and will call for more in-depth understanding of the cognitional process in the decision to trust.

v. Communities identifying as non-religious (e.g. squat, commune)

Communities identifying as non-religious are likely to show some similar behaviours to religious ones, yet their (non-)theological fundamentals will be different. In particular, the benevolent and provident figure of the Christian God may or may not be replaced with a system of economic rights: the weaker members may still receive food and shelter and therefore trust the commune's system.

The above four sources of data will allow for retrodiction as proposed by Lawson but will equally require substantial analysis of the cognitive process through interviews in order to distinguish what informs every step of the decision to trust. An additional data point will be the difference in economic behaviour towards members and non-members of the community; this will provide for control situations to test whether trusting behaviour is dependent on particular characteristics of the counterpart or if it is a more internalised value and practice.

Conclusion

This final chapter first reviewed the methodological implications of conducting an empirical study of (Lukan) trust from a theological perspective, before offering a methodological roadmap. The starting point for this roadmap was an existing experimental study on the link between religiosity and trust, highlighting both its insights and its limitations. The chapter then offered practical remediation in four steps. Firstly, redefining the category of trust, echoing findings on how trust is (mis)construed in experimental economics and does not correspond to a theological category.

Secondly, conducting more in-depth research at the cognitional level, i.e. how individuals come to trust. The rationale is that experimental economics focuses its research on quasi-Pavlovian determinants of trust and fails to account for four important realities of decision-making: firstly, freedom of will; secondly, people's ability to learn and change their behaviours; thirdly, the possibility of irrational behaviour (i.e. that it does not necessarily follow that individuals act on what they know is right); fourthly, the existence of an objective good through the actualisation of values. It became clear that given the complexity of the ethical decision-making process, particular attention would need to be paid to objective values as well as subjective cognitions that support individuals in being attentive, intelligent, reasonable and responsible.

Thirdly, engaging with qualitative social sciences such as history, sociology, anthropology, and psychology whilst maintaining a critical disposition towards them. Unlike experimental economics, these social sciences are able to contextualise individual behaviour; the thick data they convey can help further understand trust.

Fourthly, following Lawson, a theological construct of trust could be tested against real life and historical data through (1) orthogonality, in order to identify causal mechanisms of the semi-regular type and (2) retrodiction, in order to verify the hypotheses identified in previous steps. Similarities within and between various communities (monastic, congregational, Christian, non-Christian, past and present) should offer sufficient data for such an exercise.

Such an approach remains far from the self-perceived scientific methodology of experimental economics; it neither shares the mathematical basis of the natural sciences, which mainstream economists look to for their inspiration, nor perceives itself to be positivist. In short, theology both rejects determinism and admits the good as a reality. Whilst determinism is rejected by the likes of Bhaskar and Lawson, the existence of an objective and atemporal good is not shared by other critical realists. At times, the theologian might find himself or herself rather alone in this quest, even if there may be sympathisers in the midst of social scientific practitioners.⁵³⁶

It is also not surprising that theologians have at times been shy when engaging methodologically and in-depth with empirical sciences: not only is their toolkit usually insufficient to engage with something on the lines of Lonergan's dialectic method but they have tended to make a similar mistake as social scientists: their ethical frameworks, often idealist and deductive, have tended to flatten what it means to be human to a series of a moral absolutes. This is arguably what Lonergan himself protested against when he criticised the deductivist methodology in ethics among his predecessors and peers.

Asking any theological method to engage with empirical economic phenomena, therefore, is a challenge. I hope that this chapter, based on the theoretical critique of previous chapters, will have demonstrated that such an approach is not completely out of reach for theologians. But it will require substantial determination on their part to pursue this task any further, again, not only because of the scepticism of social scientists, but mainly because of the scepticism of their peers. The challenge is arduous, but the alternatives are worse: either to naïvely adopt the conclusions of the secular social sciences, or to limit oneself to lofty theological statements that are detached from reality, and ultimately, from human experience. Either case is no less than a denial of the Incarnation: as a necessary point of faith, a reality, and a metaphysical event.

536 For an example of (practical) theology rooted in critical realist philosophy that allows for the reality of divine action (and human freedom and divine grace), see Andrew Root, *Christopraxis: A Practical Theology of the Cross* (Minneapolis, MN: Fortress Press, 2014).

Conclusion

The Barman's Trust (continued)

The theologian and the economist met for breakfast the following morning, and they began to discuss what they believed could explain the barman's trust. The economist took the lead. He recognised that mainstream theory had not historically taken account of trust but that the contribution of experimental economics was useful in recognising the existence of something akin to trust. He argued that trust was more than anything a product of the trustor's assessment of the trustee's trustworthiness and, in particular, the extent to which the trustee could encapsulate the trustor's interests. When that was not the case, trusting was irrational. To some extent, trustors often had to take a shot in the dark, because they did not have full information about the trustee, and that is a function of how willing they are to take risks. This explains, the economist continued, why in cases where there is existing social history, individuals tended to trust more and be more trustworthy: the levels of trustworthiness have been made more explicit.

In the case of the barman, then, the decision to trust them was somewhat irrational, or at least it was not entirely obvious why he trusted them. Perhaps the barman focused on some of their attributes, such as the fact that they were academics and therefore more likely to be reputable and therefore trustworthy. Perhaps (somewhat unfairly), the barman trusted them because they were, like him, white men. It may also have been the social norm in this town that barmen were expected to trust their clients; with the place being such a small town, most people knew each other and there was some form of socially-generalised trust because there were more incentives to be trusting of each other than to cheat. The costs of cheating would generally be higher than those of compliance because of social scorn and its long-term consequences. The barman might have therefore applied the same expectations to the two visitors without being fully conscious that he was treating with out-of-towners; his actions would have been learnt and socially expected.

The theologian pointed out that the body of experimental literature does not really find many predictors of trust; it only provides certain observations. Of course, the size of the potential gain or loss and the perceived trustworthiness matter, but two observations above all emerge: firstly, that trust fosters trustworthiness and, secondly, that trust is often linked with a sense of altruism or kindness. In particular, it is only when individuals were not sufficiently trusted that they tended to show untrustworthiness: they had expected to be trusted and they tended to punish those who had not trusted them enough. Individual characteristics, including socio-economic variables, were not good predictors of behaviour: studies over time failed to reproduce similar results or found alternative explanations when tested for other variables. Closeness between the individuals increased trusting behaviour, but it was not unheard of that a substantial minority still decided to cheat on their next of kin, especially when they could remain anonymous. It seemed, therefore, that the act of trusting was not as much a product of the other's trustworthiness, but of the trustor's propensity to trust, which again was more likely to be co-incidental with certain specific character dispositions. Environmental variables, such as mistreatment over generations, could lead to generalised distrust, but this was unlikely to be the case for the barman.

The economist then admitted that recent work from experimental psychology was helpful in that certain personality traits could help determine likely behaviours: maybe, the barman was simply someone who was amenable and generally disposed to trust strangers; his life experience was such that he did not experience traumas that made him less likely to distrust others. Perhaps it was the function of his propensity to take risks; he would behave similarly when faced with a lottery. It could also be that the emotion(s) he associated with trusting enabled him to act the way he did. In other words, he simply enjoyed trusting when it meant he was not taking too big a risk.

The theologian responded that, yes, emotions coincide with the act of trusting, but these cannot necessarily be predicted prior to the actual situation; it is not possible to fully predict the emotion that an individual will experience in a situation where he or she will have to choose whether to trust. The only indicators (not predictors), are personality traits, but these are not inherently deterministic. Individuals are not willing to take as much risk in a lottery setting as with a human counterpart, and this is so even if the odds of losing are the same and

communicated as such. In the case of the barman, it is likely that the man had a kind nature and was willing to take a risk without unredeemable consequences, but this does not mean that he was a gambler as such – in fact, it was rather unlikely. It is also likely that the barman indeed enjoyed the emotion attached to the act of trusting.

The economist then replied that more studies isolating certain variables are necessary, in particular when it comes to emotions; and that this is a promising field of research. Maybe the act of trusting was not completely different from a cognitional-emotional response pattern that could be studied in more detail. Whilst the theologian admitted that more research would be useful, the barman's action was unlikely to be anything like a learnt Pavlovian response: surely, he had some control over his cognitions and emotions since the situation did not require some kind of fight-or-flight visceral reaction. Surely, the theologian argued, the barman did consider the options and looked at the evidence, weighing different possibilities, even if quickly, before making his decision. In addition, there was a gap between coming to a conclusion as to the best decision and acting on it, and because the decision was not made under duress, the choice was most likely to have been fully conscious even if the barman had a trusting predisposition.

The theologian then began to argue that the problem with existing experimental research on trust is that, firstly, it does not account for any freedom of will because it is inherently deterministic, and, secondly, that it does not allow for the rational to be equated with the good. More research on the same premises would just be more of the same, and the real issue is the assumptions inherent to the experimental models. In particular, the idea that rationality is a calculation is problematic: rationality is more likely to be result of the repeated cognitional activity over time, which is necessary for individuals to apprehend reality. In other words, individuals learn over time what makes sense when navigating reality, and through that learn to recognise that, ultimately, what is rational is also what is good. Through experience, reflection, and their own mistakes, they learn to recognise truth and actualise true values.

The economist interjected, "But you can't assume that what is good is what is rational; we can't make value judgments!" The theologian sighed and acknowledged that such an

assumption is a step of faith, which is something the economist could not quite embrace, at least until – the theologian hoped – further research would eventually prove his point. Yet, the theologian was keen to use a different anthropological model: the homo economicus was not only terribly reductive, but also led to erroneous conclusions. The (experimental) models used by economists (and psychologists) enormously affected the outcome, and the only way to mitigate these shortcomings was an inter-disciplinary approach where competing explanations could help shed light on the object of study.

The theologian felt that such a task would be isolating within his own field, with too few theologians either believing in an empirical approach to Christian ethics or possessing the appropriate tools to engage in such dialectic; he was more likely to be understood in his approach by psychologists, sociologists and anthropologists, but they would still be suspicious of his religious credentials. Still, all of them study trust, and whilst they may have different descriptions, they are talking about similar phenomena. Rather than single-mindedly sticking to their own disciplines and methods, academics should develop ways to engage with each other, united by a desire to understand the same thing, rather than divided by their respective languages.

Yet, unable to find much of a conclusion from empirical studies, the economist and theologian agreed to split the bill – the economist recognised the limitations of his discipline but was not quite yet ready to embrace a different methodology, and the theologian acknowledged that his had produced little evidence to support a different explanation. Both realised they needed to go back to their desks and study the phenomenon of trust in more depth.

When they finally got to the bar, they asked the barman why he had trusted them. His answer, alas, did not shed as much light as they'd hoped: "To be honest, I'm not sure. This is what we tend to do around here. And you seemed like nice guys but we obviously don't do it all the time." Both the economist and the theologian understood that the barman himself could not fully know why he had trusted them and it would be difficult to know whether this is something he did out of principle or habit; the influencing factors and cognitive processes could not be observed easily, and both knew too little about the local social context to infer the extent of social conditioning.

Trust as an Economic Virtue

On the way back, the theologian could not help but think to himself that trust ought to be understood as a virtue. Something that is habitual but not entirely predictable. Surely, individuals learn to trust or distrust over time, based on their experiences, embedded in context. Surely, like any other virtue or habit, trust can help us supersede our biases and move toward the good.

The problem with current approaches, the theologian thought, is that they focus on a very specific situation at a single point in time, but acts of trust tend to be something more than purely situational: they are profoundly personal. A fairer study of trust would follow individuals over time rather than seek to aggregate isolated one-shot behaviours.

The theologian, believing that trust could be understood as a virtue, was convinced that the moral dimension of trust is not only a matter of compliance with social norms, but an individual decision to do what is right and good. The theologian also remained very sceptical of the utilitarian explanation of why individuals do good: how could it be explained that some individuals, without certainty of a reward for good behaviour, still choose to make sacrifices when they gained nothing from those. The decision is more likely to be based on ethical beliefs and a form of faith rather than a pure calculation because of uncertainty. That is why the mathematical modelling of human behaviour is inherently problematic: individuals do not behave like formulae, not least because they are not entirely predictable. A world where people were entirely predictable, without any hope of change, would not only be bleak, but it would mean holding a very low view of what it meant to be human; he was not such a theologian and believed in free will and in the inherent goodness of human nature.

Nevertheless, any approach to observing trust empirically would need a scientific method; the theologian believed that a dialectic approach would be more helpful in discovering why people trust than the approach of experimental economics. For him, individuals make decisions and act on them in four steps. First, they gather data – they are attentive. Second, they interpret it – they are intelligent. Third, they check that their interpretation is grounded in reality – they are reasonable. Fourth, they decide to act on their conclusion – they are

responsible. At all levels of decision-making, individuals draw both on a habit that has been formed over time and on an assessment of a particular situation, and the better their attentiveness, intelligence, reasonableness and sense of responsibility, the more likely they are to be rational and to allow the good to emerge over time.

Any mode of enquiry should therefore allow for the exploration of the process of individual decision-making at these four stages, and in particular should explore why individual behaviour deviates from what one would expect to be the attentive, intelligent, reasonable and responsible norm. In particular, the specific reasons for deviation from the expected behaviour should be explored qualitatively; the process behind every decision should be discussed with the individuals concerned, and changes over time recorded. Such an enquiry should cover a range of individuals, using an orthogonal approach in situ (i.e., similar situations should be used when comparisons are drawn). Further, any generalisations about behaviour should be subject to the possibility of semi-variability, which can only be observed through a statistical approach. In other words, generalisations should only be drawn when most individuals show a tendency captured over time and with a minimum threshold in terms of statistical confidence. For instance, if a particular individual tends to trust over time, with some possible deviation from the norm, but with a clear pattern, then a generalisation can be drawn about that individual. If similar generalisations can be drawn across a number of individuals and groups, then a more formal and comprehensive theory of trust can be constructed.

The theologian further thought, knowing that this may not well be received by the economist, that some outcomes of decision-making are objectively better and are therefore more rational. Such a mode of enquiry would inevitably need to make some value-judgments that run against the usual premises of economics. In addition, the theologian believed that, for instance, the default assumption of experimental economics is that more money is always assumed to be better than less, and that this in itself is already a value judgment. He imagined how the economist would simply reply “but that’s a fact”, leaving the theologian with no other choice than to sigh. What the theologian certainly did not mean is that values would be unilaterally imposed as good, but rather these would emerge over time and after due discernment. He wondered, in fact, how many other theologians would support him in such

an approach, especially if they were deeply attached to a deontological ethical framework. Again, he feared that he would be somewhat lonely in his endeavour and might not gain much support from friends or foes.

The theologian did believe that his peers would want to offer a different anthropological model, but they might not be able to understand the need for a differentiated methodology. He would need to argue that such an approach very much needed to avoid making the same assumptions as an economist would make. The role of theology would still be to discuss values and morals – not as disembodied “oughts” and “shoulds” but as attributes that are actualised and that emerge over time through intelligence and grace.

The Challenges Ahead

This thesis has raised a number of substantive issues that could only be covered in part: the method of moral theology, the philosophy of (experimental) economics, the role of the theologian in interdisciplinary dialogue, and even the role of theology in contemporary society. Focusing on trust showed how the above were all related and illustrated the need to use a comprehensive and systematic philosophical framework. The thought of Bernard Lonergan enabled an in-depth critique of (experimental) economics and of deductive theology; it also allowed us to lay the basis for further theological and empirical research.

Whilst it was trust and economics that were the focus of the exercise, the critical approach advanced in this thesis could apply to other categories of human behaviour and to the methodology of other social sciences. It was shown how failing to critique the categories and the methodologies of social sciences can be inherently problematic for the theologian in his appraisal of human behaviour. At the same time, it became clear how engaging with the empirical was both key to engaging with the wider (scientific) world, and essential to the work of theology itself. In that respect, I most certainly side with Lonergan in that the purely deductive methods of the past have had their day. Nevertheless, this thesis is apologetic; it sides with Radical Orthodoxy in rejecting secular ideologies as alternative theologies, even if it demands that theology be profoundly challenged by those secular viewpoints. The

approach put forward here means to challenge theologians by inviting them to apprehend reality with an open mind, leaving behind the deductivist theological method that has been used by the discipline in the past. It makes this argument for the sake of the survival of both the Church and of theology, especially in the Western world.

Whilst this thesis started by highlighting differences in the theological and economic categories of trust, there is nevertheless an implicit expectation of a dialectic between the empirical and Biblical exegesis: any interpretation that does not start with some observations of human behaviour to guide the process, even if these are anecdotal, is likely to be problematic. This is not to discard a mode of interpretation that allows for the metaphorical or allegorical – in fact much interpretation would make no sense without adopting such a mode, but rather to encourage a hermeneutic that rejects literalist readings of Scripture (as if Scripture contained only facts and as if the individuals in Scripture truly behaved as described). Again, the role of the theologian is to interpret both Scripture and the Christian tradition through a critical lens; engaging with the empirical and other social sciences can only help in this task. But again, such an exercise, whilst necessary, cannot be conducted naïvely by importing the problematic assumptions of other disciplines.

There is no doubt that the approach developed in this thesis may not be welcomed by some theologians, or that it will be deemed too obscure or difficult to apply by others. Nevertheless, this approach is necessary if theologians, and the Church by extension, are to engage with the research that influences the lives of others. This approach is highly relevant to engagement with policy-makers: it should be easy to see after reading this thesis that if the models used by policy-makers are based on a flawed anthropology (and a flawed methodology), there will be real repercussions on the lives of many. In particular, if we understand individuals to be inherently bad (and by extension untrustworthy, only responsive to material incentives), the policies we create will be cynical and distrusting, stunting the growth and development of the populations that they serve. This could easily be the case with the provision of unemployment benefits, for example: people who are deemed untrustworthy are likely to have their benefits cut to encourage them to find work. Such an approach can have terrifying effects on the most vulnerable.

Similarly, if policies such as the redistribution of wealth are based on political ideology, they are likely to ignore how individuals make economic decisions, and to overlook their inherent, God-given, freedom of choice. On both accounts, a differentiated anthropology needs to be grounded in sufficient empirical data in order to convince both economists and policy-makers. The role of the theologian then becomes political by necessity, if he or she is to contribute to the actualisation of the good through intelligent decisions.

Conversely, if theologians reject empirical evidence, they may equally risk adopting (political) ideologies that are detached from reality. Imagine for instance that the Early Christian Community were reduced to a political ideal. A theologian might declare that the redistribution of wealth in Acts is Biblical, and might demand it accordingly; this would disregard the profoundly human quality of freedom of choice. Lonergan in his economic writing made it clear that he rejected such an approach – economic decision-making could not be made by a politburo to serve the masses; this applies to Communist central planning, to present-day church life, and to contemporary elitist politics where the fate of disenfranchised individuals is too often decided by a privileged elite who are detached from the embodied suffering of those they should serve.

A logical consequence of this thesis is that the Church's involvement in the political discourse, even if at arm's length, is inevitable. But before it can effectively do so, it will firstly need to learn to engage intelligently with the social sciences that serve as the basis for political decisions. Secondly, it will need to learn to question how social scientific conclusions are reached, before applying critiques and solutions of its own.

The future of the Church as a voice for the good, will continue be at stake unless it can attentively, intelligently, reasonably and responsibly participate in public dialogue. It will indeed be more likely to be taken seriously if it can draw on stronger empirical evidence for its claims rather than relying on the propagation of lofty statements, too easily dismissed by the wider population on account that they are not grounded in reality. Then, perhaps, the Church can again start to resemble Luke's (idealised) *ekklesia*: its teachings, when truly embodied, would mean that no one need lack anything anymore.

Bibliography

- Acedo, C., and A. Gomila. "Trust and Cooperation: A New Experimental Approach." *Annals of the New York Academy of Sciences* 1299 (Sep 2013): 77-83.
<https://doi.org/10.1111/nyas.12142>.
- Anderl, Christine, R. Steil, T. Hahn, P. Hitzeroth, A. Reif, and S. Windmann. "Reduced Reciprocal Giving in Social Anxiety - Evidence from the Trust Game." *Journal of Behavior Therapy and Experimental Psychiatry* 59 (Oct 24 2017): 12-18.
<https://doi.org/10.1016/j.jbtep.2017.10.005>.
- Ashraf, Nava, Iris Bohnet, and Nikita Piankov. "Decomposing Trust and Trustworthiness." *Experimental Economics* 9, no. 3 (2006): 193-208. <https://doi.org/10.1007/s10683-006-9122-4>.
- Baier, Annette. "Trust and Antitrust." *Ethics* 96, no. 2 (Jan. 1986 1986): 230-160.
- Barclay, John M. G. *Paul and the Gift*. Grand Rapids, MI: William B. Eerdmans Publishing Company, 2015.
- Barden, Garrett. "Aristotle's Notion of Epieikeia." In *Creativity and Method: Essays in Honor of Bernard Lonergan, S.J.*, edited by Matthew L. Lamb, 353-66, 1981.
- Bardsley, Nick. *Experimental Economics : Rethinking the Rules*. Princeton, N.J. ; Oxford: Princeton University Press, 2010.
- Barr, James. *The Semantics of Biblical Language*. Oxford: Oxford University Press, 1961.
- Exegetisches Wörterbuch zum Neuen Testament*. Stuttgart: Verlag W.Kohlhammer, 1983.
- Barton, Stephen C. "Money Matters: Economic Relations and the Transformation of Value in Early Christianity." In *Engaging Economics: New Testament Scenarios and Early Christian Reception*, edited by Bruce W. Longenecker & Kelly D. Liebengood, 37-59. Grand Rapids, MI: William B. Eerdmans, 2009.
- Bateson, Patrick. "The Biological Evolution of Cooperation and Trust." In *Trust: Making and Breaking Cooperative Relations*, edited by Diego Gambetta, 14-30. Oxford: Basil Blackwood Ltd, 1988.
- Baumgartner, Nicolas J. Lukan Trust and Its Applicability to the Church of England's Drive against Payday Lenders. 2014. MA Thesis. Department Theology and Religion, Durham University.
- , "What Economists Can Learn from Religion About Trust," *Future of Economic Progress. World Economic Forum*, 21/12/2019, 2018,
<https://www.weforum.org/agenda/2018/04/trust-and-economics-what-the-early-church-can-teach-us-about-a-fairer-society/>.

- Ben-Ner, Avner, and Freyr Halldorsson. "Trusting and Trustworthiness: What Are They, How to Measure Them, and What Affects Them." *Journal of Economic Psychology* 31, no. 1 (2010): 64-79. <https://doi.org/10.1016/j.joep.2009.10.001>.
- Ben-Ner, Avner, Louis Putterman, and Ting Ren. "Lavish Returns on Cheap Talk: Two-Way Communication in Trust Games." *The Journal of Socio-Economics* 40, no. 1 (2011): 1-13. <https://doi.org/10.1016/j.socec.2010.09.009>.
- Berg, Joyce, John Dickhaut, and Kevin McCabe. "Trust, Reciprocity, and Social History." *Games and Economic Behavior* 10, no. 1 (1995): 122-42. <https://doi.org/10.1006/game.1995.1027>.
- Bhaskar, Roy. "Dialectical Critical Realism and Ethics." In *Critical Realism: Essential Readings*, edited by Margaret Archer, Roy Bhaskar, Andrew Collier, Tony Lawson and Alan Norrie, 641-87. London and New York: Routledge, 1998.
- . "General Introduction." In *Critical Realism: Essential Readings*, edited by Margaret Archer, Roy Bhaskar, Andrew Collier, Tony Lawson and Alan Norrie, ix-xxiv. London and New York: Routledge, 1998.
- . *Scientific Realism and Human Emancipation*. Brooklyn, NY: Verso, 1986.
- Bonein, Aurélie, and Daniel Serra. "Gender Pairing Bias in Trustworthiness." *The Journal of Socio-Economics* 38, no. 5 (2009): 779-89. <https://doi.org/10.1016/j.socec.2009.03.003>.
- Brühlhart, Marius, and Jean-Claude Usunier. "Does the Trust Game Measure Trust?." *Economics Letters* 115, no. 1 (2012): 20-23. <https://doi.org/10.1016/j.econlet.2011.11.039>.
- Buchan, Nancy R., Rachel T. A. Croson, and Sara Solnick. "Trust and Gender: An Examination of Behavior and Beliefs in the Investment Game." *Journal of Economic Behavior & Organization* 68, no. 3-4 (2008): 466-76. <https://doi.org/10.1016/j.jebo.2007.10.006>.
- Theological Dictionary of the New Testament*. Grand Rapids, MI: William B. Eerdmans, 1968.
- Byrne, Patrick H. *The Ethics of Discernment: Lonergan's Foundation for Ethics*. Toronto: University of Toronto Press, 2016.
- Camerer, Colin. "Individual Decision Making." In *The Handbook of Experimental Economics*, edited by John H. Kagel and Alvin E. Roth, 587-616. Princeton, NJ: Princeton University Press, 1995.
- Cartwright, Nancy, and Jeremy Hardie. *Evidence-Based Theory: A Practical Guide to Doing It Better*. New York: Oxford University Press, 2012.
- Charness, Gary, Ramón Cobo-Reyes, and Natalia Jiménez. "An Investment Game with Third-Party Intervention." *Journal of Economic Behavior & Organization* 68, no. 1 (2008): 18-28. <https://doi.org/10.1016/j.jebo.2008.02.006>.

- Charness, Gary, Ninghua Du, and Chun-Lei Yang. "Trust and Trustworthiness Reputations in an Investment Game." *Games and Economic Behavior* 72, no. 2 (2011): 361-75. <https://doi.org/10.1016/j.geb.2010.09.002>.
- Chaudhuri, Ananish , and Lata Gangadharan. "An Experimental Analysis of Trust and Trustworthiness." *Southern Economic Journal* 73, no. 4 (April 2007 2007): 959-85. <http://www.jstor.org.ezphost.dur.ac.uk/stable/20111937>.
- Chaudhuri, Ananish, Yaxiong Li, and Tirnud Paichayontvijit. "What's in a Frame? Goal Framing, Trust and Reciprocity." *Journal of Economic Psychology* 57 (2016): 117-35. <https://doi.org/10.1016/j.ioep.2016.09.005>.
- Coleman, James S. *Foundations of Social Theory*. Cambridge, MA: Belknap Press, 1990.
- Collier, Andrew. "Realism and Formalism in Ethics." In *Critical Realism: Essential Readings*, edited by Margaret Archer, Roy Bhaskar, Andrew Collier, Tony Lawson and Alan Norrie, 695-701. London and New York: Routledge, 1998.
- Cox, James C. "How to Identify Trust and Reciprocity." *Games and Economic Behavior* 46, no. 2 (2004): 260-81. [https://doi.org/10.1016/s0899-8256\(03\)00119-2](https://doi.org/10.1016/s0899-8256(03)00119-2).
- Cubitt, Robin. "Experiments and the Domain of Economic Theory." *Journal of Economic Methodology* 12, no. 2 (2005): 197-210. <https://doi.org/10.1080/13501780500086040>.
- Dal Bó, Pedro, and Guillaume R. Fréchette. "The Evolution of Cooperation in Infinitely Repeated Games: Experimental Evidence." *American Economic Review* 101, no. 1 (2011): 411-29. <https://doi.org/10.1257/aer.101.1.411>.
- Dawkins, Richard. *The Selfish Gene*. 3rd ed. Oxford: Oxford University Press, 2006.
- de Waal, Frans B. M. "The Chimpanzee's Service Economy: Evidence for Cognition-Based Reciprocal Exchange." In *Trust & Reciprocity: Interdisciplinary Lessons from Experimental Research*, edited by Elinor Ostrom and James Walker. New York: Russel Sage Foundation, 2003.
- Deaton, A., and N. Cartwright. "Understanding and Misunderstanding Randomized Controlled Trials." *Social Science & Medecine* 210 (Aug 2018): 2-21. <https://doi.org/10.1016/j.socscimed.2017.12.005>.
- Di Cagno, Daniela, and Emanuela Sciuabba. "Trust, Trustworthiness and Social Networks: Playing a Trust Game When Networks Are Formed in the Lab." *Journal of Economic Behavior & Organization* 75, no. 2 (2010): 156-67. <https://doi.org/10.1016/j.jebo.2010.04.003>.
- Doran, Robert M. *Theological Foundations 1 - Intentionality and Psyche*. 2 vols. Vol. 1, Milwaukee: Marquette University Press, 1995.

- . *Theological Foundations 2 - Theology and Culture*. 2 vols. Vol. 2, Milwaukee: Marquette University Press, 1995.
- . *Theology and the Dialectics of History*. Toronto: University of Toronto Press, 1990.
- Downward, Paul, John Finch, and John Ramsay. "Seeking a Role for Empirical Analysis in Critical Realist Explanation." In *Applied Economics and the Critical Realist Critique: A Critical Realist Approach*, edited by Paul Downward, 89-107. London and New York: Routledge, 2003.
- Dunne, Tad. "Consciousness in Christian Community." In *Creativity and Method: Essays in Honor of Bernard Lonergan, S.J.*, edited by Matthew L. Lamb, 291-303. Milwaukee, WI: Marquette University Press, 1981.
- Dunning, David, Detlef Fetchenhauer, and Thomas M. Schlösser. "Trust as a Social and Emotional Act: Noneconomic Considerations in Trust Behavior." *Journal of Economic Psychology* 33, no. 3 (2012): 686-94. <https://doi.org/10.1016/j.joep.2011.09.005>.
- Epstein, Brian. "Why Macroeconomics Does Not Supervene on Microeconomics." *Journal of Economic Methodology* 21, no. 1 (2014): 3-18. <https://doi.org/10.1080/1350178x.2014.886467>.
- Fetchenhauer, Detlef, and David Dunning. "Betrayal Aversion Versus Principled Trustfulness—How to Explain Risk Avoidance and Risky Choices in Trust Games." *Journal of Economic Behavior & Organization* 81, no. 2 (2012): 534-41. <https://doi.org/10.1016/j.jebo.2011.07.017>.
- . "Do People Trust Too Much or Too Little?" *Journal of Economic Psychology* 30, no. 3 (2009): 263-76. <https://doi.org/10.1016/j.joep.2008.04.006>.
- Feyerabend, Paul. "Explanation, Reduction and Empiricism." In *Scientific Explanation, Space, and Time*, edited by H. Feigl and G. Maxwell, 28–97. Minneapolis: University of Minneapolis Press, 1962.
- Friedman, Daniel, A. Cassar, and Reinhard Selten. *Economics Lab: An Intensive Course in Experimental Economics*. London and New York: Routledge, 2004.
- Friedman, Milton. "The Methodology of Positive Economics." In *Essays in Positive Economics*, 3-43. Chicago, IL: Chicago University Press, 1953.
- Friel, Christopher. "Lonergan and Bhaskar: The Intelligibility of Experiment." *The Heythrop Journal* 60, no. 1 (2019): 55-78. <https://doi.org/10.1111/heyj.12162>.
- Fukuyama, Francis. *Trust: The Social Virtues and the Creation of Prosperity*. London: Hamish Hamilton, 1995.
- Fullbrook, Edward. *Ontology and Economics: Tony Lawson and His Critics*. London: Routledge, 2009.

- Gallucci, Marcello, and Marco Perugini. "An Experimental Test of a Game-Theoretical Model of Reciprocity." *Journal of Behavioral Decision Making* 13, no. 4 (2000): 367-89. [https://doi.org/10.1002/1099-0771\(200010/12\)13:4<367::aid-bdm357>3.0.co;2-9](https://doi.org/10.1002/1099-0771(200010/12)13:4<367::aid-bdm357>3.0.co;2-9).
- Gambetta, Diego. "Mafia: The Price of Distrust." In *Trust: Making and Braking Cooperative Relations*, edited by Diego Gambetta, 158-75. Oxford: Basil Blackwell Ltd, 1988.
- Garbarino, Ellen, and Robert Slonim. "The Robustness of Trust and Reciprocity across a Heterogeneous U.S. Population." *Journal of Economic Behavior & Organization* 69, no. 3 (2009): 226-40. <https://doi.org/10.1016/j.jebo.2007.06.010>.
- Gibbons, Michael. "Insight and Emergence: An Introduction to Lonergan's Circulation Analysis." In *Creativity and Method: Essays in Honor of Bernard Lonergan, S.J.*, edited by Matthew L. Lamb, 529-41. Milwaukee, WI: Marquette University Presse, 1981.
- Gill, Robin. *Churchgoing and Christian Ethics*. Cambridge: Cambridge University Press, 2004.
- Guala, Francesco. "Economics in the Lab: Completeness Vs. Testability." *Journal of Economic Methodology* 12, no. 2 (2005): 185-96. <https://doi.org/10.1080/13501780500086024>.
- Hänchen, Ernst. *The Acts of the Apostles*. Oxford: Basil Blackwell, 1971.
- Hands, D. Wade. "Transforming Methodology: Critical Realism and Recent Economic Methodology." In *Transforming Economics: Perspectives on the Critical Realist Project*, edited by Paul Lewis, 286-301. London and New York: Routledge, 2004.
- Hardin, Russel. "Gaming Trust." In *Trust & Reciprocity: Interdisciplinary Lessons from Experimental Research*, edited by Elinor Ostrom and James Walker, 80-102. New York: Russel Sage Foundation, 2003.
- . *Trust & Trustworthiness*. The Russel Sage Foundation Series on Trust. Edited by Russel Hardin and Margaret Levi Karen S. Cook. Vol. IV, New York: Russel Sage Foundation, 2002.
- Hart, Keith. "Kinship, Contract and Trust: The Economic Organization of Migrants in an African City Slum." In *Trust: Making and Breaking Cooperative Relations*, edited by Diego Gambetta, 176-93. Oxford: Basil Blackwell Ltd, 1988.
- Hausman, Daniel M. *The Inexact and Separate Science of Economics*. Cambridge: Cambridge University Press, 1992.
- . "'Testing' Game Theory." *Journal of Economic Methodology* 12, no. 2 (2005): 211-23. <https://doi.org/10.1080/13501780500086065>.
- Heaps, Jonathan Robert. "A Supernatural Nowhere: How Radical Orthodoxy and Lonergan Studies Have Failed to Get Along (and Why They Should)." *Radical Orthodoxy: Theology, Philosophy, Politics* 3, no. 1 (2015): 52-67.

- Hertwig, R., and A. Ortmann. "Experimental Practices in Economics: A Methodological Challenge for Psychologists?" *Behavioural and Brain Sciences* 24, no. 3 (Jun 2001): 383-403. <https://doi.org/10.1037/e683322011-032>.
- Hesse, Mary. "Lonergan and the Method in the Natural Sciences." In *Looking at Lonergan's Method*, edited by Patrick Corcoran, 59-72. Dublin: Talbot Press, 1975.
- Hollis, Martin. *Trust within Reason*. Cambridge: Cambridge University Press, 1998.
- Holm, Håkan, and Paul Nystedt. "Trust in Surveys and Games – a Methodological Contribution on the Influence of Money and Location." *Journal of Economic Psychology* 29, no. 4 (2008): 522-42. <https://doi.org/10.1016/j.joep.2007.07.010>.
- Holton, Richard. "Deciding to Trust, Coming to Believe." *Australasian Journal of Philosophy* 72, no. 1 (1994): 63-76. <https://doi.org/10.1080/00048409412345881>.
- Hoover, Kevin. "Does Macroeconomics Need Microfoundations?" In *The Methodology of Empirical Macroeconomics*, 57-87. Cambridge: Cambridge University Press, 2001.
- . "Is Macroeconomics for Real?" In *The Economic World View: Studies in the Ontology of Economics*, edited by Uskali Mäki. Cambridge: Cambridge University Press, 2001.
- . "Microfoundational Programs." In *Microfoundations Reconsidered: The Relationship of Micro and Macroeconomics in Historical Perspective*, edited by Pedro Garcia Duarte and Gilberto Tadeu Lima, 19-61. Cheltenham: Edward Elgar, 2012.
- . "Microfoundations and the Ontology of Economics." In *The Oxford Handbook of Philosophy of Economics*, edited by Harold Kincaid and Don Ross, 386-409. New York: Oxford University Press, 2009.
- Houser, Daniel, Daniel Schunk, and Joachim Winter. "Distinguishing Trust from Risk: An Anatomy of the Investment Game." *Journal of Economic Behavior & Organization* 74, no. 1-2 (2010): 72-81. <https://doi.org/10.1016/j.jebo.2010.01.002>.
- The Anchor Bible Dictionary*. 6 vols. New York: Doubleday, 1992.
- Huang, Li, and J. Keith Murnighan. "What's in a Name? Subliminally Activating Trusting Behavior." *Organizational Behavior and Human Decision Processes* 111, no. 1 (2010): 62-70. <https://doi.org/10.1016/j.obhdp.2009.10.002>.
- Janssen, Marco A. "Evolution of Cooperation in a One-Shot Prisoner's Dilemma Based on Recognition of Trustworthy and Untrustworthy Agents." *Journal of Economic Behavior & Organization* 65, no. 3-4 (2008): 458-71. <https://doi.org/10.1016/j.jebo.2006.02.004>.
- Johansson-Stenman, Olof, Minhaj Mahmud, and Peter Martinsson. "Trust, Trust Games and Stated Trust: Evidence from Rural Bangladesh." *Journal of Economic Behavior & Organization* 95 (2013): 286-98. <https://doi.org/10.1016/j.jebo.2011.06.022>.

- Johnson, Dominic. *God Is Watching You: How the Fear of God Makes Us Human*. Oxford: Oxford University Press, 2016.
- Johnson, Luke Timothy. *The Literary Function of Possessions in Luke-Acts*. Society of Biblical Literature Dissertation Series. Edited by Howard C. Kee and Douglas A. Knight. Vol. 39, Missoula, MT: Scholars Press, 1977.
- Johnson, Noel D., and Alexandra A. Mislin. "Trust Games: A Meta-Analysis." *Journal of Economic Psychology* 32, no. 5 (2011): 865-89.
<https://doi.org/10.1016/j.joep.2011.05.007>.
- Jones, Karen. "Trust as an Affective Attitude." *Ethics* 107, no. 1 (1996): 4-25.
- Keefe, Donald J. "A Methodological Critique of Lonergan's Theological Method." *The Thomist: A Speculative Quarterly Review* 50, no. 1 (1986): 28-65.
<https://doi.org/10.1353/tho.1986.0045>.
- Kerr, Fergus. "Beyond Lonergan's Method: A Response to William Mathews." *New Blackfriars* 57, no. 669 (1976): 59-71. <http://www.jstor.org/stable/43246503>.
- . "Objections to Lonergan's Method." *New Blackfriars* 56, no. 662 (1975): 305-16.
<http://www.jstor.org/stable/43246398>.
- Komonchak, Joseph. "Lonergan and the Tasks of Ecclesiology." In *Creativity and Method: Essays in Honor of Bernard Lonergan, S.J.*, edited by Matthew L. Lamb, 265-74. Milwaukee, WI: Marquette University Press, 1981.
- Kucker, Aaron J. "The Spirit and the "Other", Satan and the "Self": Economic Ethics as a Consequence of Identity Transformation in Luke-Acts." In *Engaging Economics: New Testament Scenarios and Early Christian Reception*, edited by Bruce W. Longenecker and Kelly D. Liebengood, 81-103. Grand Rapids, MI: William B. Eerdmans Publishing Company, 2009.
- Kuhn, Thomas. *The Structure of Scientific Revolutions*. Chicago: University of Chicago Press, 1962.
- Kurzban, Robert. "Biological Foundation of Reciprocity." In *Trust & Reciprocity: Interdisciplinary Lessons from Experimental Research*, edited by Elinor Olstrom and James Walker, 105-27. New York: Russel Sage Foundation, 2003.
- Lamb, Matthew L. "Generalized Empirical Method and Praxis." In *Creativity and Method: Essays in Honor of Bernard Lonergan, S.J.*, edited by Matthew L. Lamb, 53-78. Milwaukee, WI: Marquette University Press, 1981.
- Lawson, Tony. "Critical Issues in *Economics as Realist Social Theory*." In *Critical Realism in Economics: Development and Debate*, edited by Steve Fleetwood, 209-58. London and New York: Routledge, 1999.

- . "Economic Science without Experimentation." In *Critical Realism: Essential Readings*, edited by Margaret Archer, Roy Bhaskar, Andrew Collier, Tony Lawson and Alan Norrie, 144-85. London and New York: Routledge, 1998.
- . *Economics and Reality*. London and New York: Routledge, 1997.
- . *Reorienting Economics*. London and New York: Routledge, 2003.
- Lenton, Pamela, and Paul Mosley. "Incentivising Trust." *Journal of Economic Psychology* 32, no. 5 (2011): 890-97. <https://doi.org/10.1016/j.joep.2011.07.005>.
- Lewis, Paul. "Metaphor and Critical Realism." In *Critical Realism in Economics: Development and Debate*, edited by Steve Fleetwood, 83-102. London and New York: Routledge 1999.
- Lonergan, Bernard J. F. *For a New Political Economy*. Edited by Philip McShane. Toronto: University of Toronto Press, 1998.
- . "The General Character of the Natural Theology of *Insight*." In *Collected Works of Bernard Lonergan: Philosophical and Theological Papers 1965-1980*, edited by Robert C. Croken and Robert M. Doran, 3-9. Toronto: University of Toronto Press, 2004.
- . *Grace and Freedom: Operative Grace in the Thought of St. Thomas Aquinas*. Edited by Frederick E. Crowe and Robert M. Doran. Toronto: University of Toronto, 2000.
- . *The Incarnate Word*. Translated by Charles C. Jr Hefling. Edited by Robert M. Doran and Jeremy D. Wilkins. Toronto: University of Toronto Press, 2016.
- . *Insight: A Study of Human Understanding*. Collected Works of Bernard Lonergan. 5th ed. Edited by Frederick E. Crowe and Robert M. Doran. Toronto: University of Toronto Press, 1992.
- . *Macroeconomic Dynamics: An Essay in Circulation Analysis*. Edited by Frederick G. Lawrence, Patrick H. Byrne and Charles C. Hefling. Toronto: University of Toronto Press, 1999.
- . *Method in Theology*. 2nd ed. Darton: Longman and Todd, 1973.
- . "Moral Theology and the Human Sciences." In *Philosophical and Theological Papers, 1965-1980*, edited by Robert C. Croken and Robert M. Doran, 301-12. Toronto: University of Toronto Press, 2004.
- . "The Ongoing Genesis of Methods." *Studies in Religion/Sciences Religieuses* 6, no. 4 (1977): 341-55. <https://doi.org/10.1177/000842987700600402>.
- . *The Ontological and Psychological Constitution of Christ*. Edited by Michael G. Shields. Toronto: University of Toronto Press, 2002.
- . *Verbum: Word and Idea in Aquinas*. Edited by Frederick E. Crowe and Robert M. Doran. Toronto: University of Toronto Press, 1997.

- Lorenz, Edward H. "Neither Friends nor Strangers: Informal Networks of Subcontracting in French Industry." In *Trust: Making and Breaking Cooperative Relations*, edited by Diego Gambetta, 194-210. Oxford: Basil Blackwell Ltd, 1988.
- Lowe, William. "Towards a Responsible Contemporary Soteriology." In *Creativity and Method: Essays in Honor of Bernard Lonergan, S.J.*, edited by Matthew L. Lamb, 213-28. Milwaukee: Marquette University Press, 1981.
- The Anchor Bible Dictionary*. 6 vols. New York: Doubleday, 1992.
- MacIntyre, Alasdair. *Whose Justice? Which Rationality?*. Notre Dame, IN: University of Notre Dame Press, 1988.
- Mäki, Uskali. "Models Are Experiments, Experiments Are Models." *Journal of Economic Methodology* 12, no. 2 (2005): 303-15.
<https://doi.org/10.1080/13501780500086255>.
- Marguerat, Daniel. "La Mort D' Ananias Et Saphira (Ac. 5.1-11) Dans La Stratégie Narrative De Luc." *New Testament Studies* 39, no. 2 (1993): 209-26.
<https://doi.org/http://dx.doi.org/10.1017/S0028688500022815>.
- Maslow, Abraham H. *The Psychology of Science: A Reconnaissance*. New York: Harper & Row, 1966.
- Mathews, William. "Lonergan's Awake: A Reply to Fergus Kerr." *New Blackfriars* 57, no. 668 (1976): 11-21. <http://www.jstor.org/stable/43246490>.
- McEvily, Bill, Joseph R. Radzevick, and Roberto A. Weber. "Whom Do You Distrust and How Much Does It Cost? An Experiment on the Measurement of Trust." *Games and Economic Behavior* 74, no. 1 (2012): 285-98.
<https://doi.org/10.1016/j.geb.2011.06.011>.
- McShane, Philip. "Feature of Generalized Empirical Method and the Actual Context of Economics." In *Creativity and Method: Essays in Honor of Bernard Lonergan, S.J.*, edited by Matthew L. Lamb, 543-71. Milwaukee, Wisconsin: Marquette University Presse, 1981.
- — —. *Randomness, Statistics and Emergence*. Dublin: Gill and Macmillan Ltd, 1970.
- Melchin, Kenneth R. *History, Ethics, and Emergent Probability: Ethics, Society, and History in the Work of Bernard Lonergan*. The Lonergan Web Site, 1999.
<https://lonerganresource.com/pdf/books/6/Melchin, Kenneth - History, Ethics, and Emergent Probability.pdf>.
- Lutterworth Dictionary of The Bible*. Cambridge: The Lutterworth Press, 1990.
- Meyer, Ben. "The "inside" of the Jesus Event." In *Creativity and Method: Essays in Honor of Bernard Lonergan, S.J.*, edited by Matthew L. Lamb, 197-210. Milwaukee, WI: Marquette University Press, 1981.

- Meynell, Hugo A. *An Introduction to the Philosophy of Bernard Lonergan*. London: Macmillan, 1976.
- . "Lonergan, Wittgenstein, and Where Language Hooks onto the World." In *Creativity and Method: Essays in Honor of Bernard Lonergan, S.J.*, edited by Matthew L. Lamb, 369-82. Milwaukee, WI: Marquette University Press, 1981.
- Meynell, Hugo A., and Bernard J. F. Lonergan. *The Theology of Bernard Lonergan*. Atlanta, GA: Scholars Press, 1986.
- Midgley, Mary. "Designs on Darwinism." *The Guardian* (London), 6 September 2005. <https://www.theguardian.com/science/2005/sep/06/religion.news>.
- . *Evolution as a Religion*. 2nd ed. London: Routledge, 2002.
- Milbank, John. *Theology and Social Theory*. Blackwell, 1993.
- . *The Word Made Strange: Theology, Language, Culture*. Oxford: Blackwell, 1997.
- Milbank, John, Catherine Pickstock, and Graham Ward. *Radical Orthodoxy: A New Theology*. London: Routledge, 1998.
- Mislin, Alexandra, Lisa V. Williams, and Brooke A. Shaughnessy. "Motivating Trust: Can Mood and Incentives Increase Interpersonal Trust?" *Journal of Behavioral and Experimental Economics* 58 (2015): 11-19. <https://doi.org/10.1016/j.socec.2015.06.001>.
- Moore, Sebastian. "For a Soteriology of the Existential Subject." In *Creativity and Method: Essays in Honor of Bernard Lonergan, S.J.*, edited by Matthew L. Lamb, 229-48. Milwaukee, WI: Marquette University Press, 1981.
- Morgan, Mary S. "Experiments Versus Models: New Phenomena, Inference and Surprise." *Journal of Economic Methodology* 12, no. 2 (2005): 317-29. <https://doi.org/10.1080/13501780500086313>.
- New Bible Dictionary*. 2nd ed. Wheaton, IL: Tyndale House Publishers, 1982.
- Nelson, Alan. "Some Issues Surrounding the Reduction of Macroeconomics to Microeconomics." *Philosophy of Science* 51, no. 4 (1984): 573-94.
- O'Donoghue, Noel Dermot. "Lonergan's Notion of Being in Relation to His 'Method'." In *Looking at Lonergan's Method*, edited by Patrick Corcoran, 42-54. Dublin: Talbot Press, 1975.
- O'Neill, Onora. *Autonomy and Trust in Bioethics*. Cambridge: Cambridge University Press, 2002.
- Ormerod, Neil. "The Grace–Nature Distinction and the Construction of a Systematic Theology." *Theological Studies* 75, no. 3 (2014): 515-36. <https://doi.org/10.1177/0040563914538718>.

- . "It Is Easy to See". *Philosophy and Theology* 11, no. 2 (1999): 257-64.
<https://doi.org/10.5840/philtheol19991121>.
- . "System, History, and a Theology of Ministry." *Theological Studies* 61, no. 3 (2016): 432-46. <https://doi.org/10.1177/004056390006100302>.
- Ormerod, Neil, Paul Oslington, and Robin Koning. "The Development of Catholic Social Teaching on Economics: Bernard Lonergan and Benedict XVI." *Theological Studies* 73, no. 2 (2012): 391-421. <https://doi.org/10.1177/004056391207300206>.
- Pagden, Anthony. "The Destruction of Trust and Its Economic Consequences in the Case of Eighteenth-Century Naples." In *Trust: Making and Breaking Cooperative Relations*, edited by Diego Gambetta, 127-41. Oxford: Basil Blackwell Ltd, 1988.
- Parsons, Stephen D. "Why the 'Transcendental' in Transcendental Realism?". In *Critical Realism in Economics: Development and Debate*, edited by Steve Fleetwood, 151-68. London and New York: Routledge, 1999.
- Peperzak, Adriaan T. *Trust: Who or What Might Support Us?* New York: Fordham University Press, 2013.
- Raymaker, John A. "The Theory-Praxis of Social Ethics: The Complementarity between Hermeneutical and Dialectical Foundations." In *Creativity and Method: Essays in Honor of Bernard Lonergan, S.J.*, edited by Matthew L. Lamb, 339-52. Milwaukee, WI: Marquette University Press, 1981.
- Eerdmans Dictionary of the Bible*. Grand Rapids, MI: Wm. B. Eerdmans Publishing Co., 2000.
- Roger C. Mayer, James H. Davis and F. David Schoorman. "An Integrative Model of Organizational Trust." *Academy of Management Review* 20, no. 3 (1995): 709-34.
- Root, Andrew. *Christopraxis: A Practical Theology of the Cross*. Minneapolis, MN: Fortress Press, 2014.
- Schliesser, Benjamin. *Abraham's Faith in Romans 4: Paul's Concept of Faith in Light of the History of Reception of Genesis 15:6*. Wissenschaftliche Untersuchungen Zum Neuen Testament. 2. Reihe. Vol. 224, Tübingen: Mohr Siebeck, 2007.
- Schlösser, T., O. Mensching, D. Dunning, and D. Fetschenhauer. Is Trust Driven by Efficiency: Effects of Mutual Gain on the Decision to Trust. 2011. University of Cologne, Unpublished manuscript.
- Schram, Arthur. "Artificiality: The Tension between Internal and External Validity in Economic Experiments." *Journal of Economic Methodology* 12, no. 2 (2005): 225-37.
<https://doi.org/10.1080/13501780500086081>.
- The New Palgrave Dictionary of Economics*. 2nd ed. Houndmills / New York: Palgrave Macmillan, 2008.

- Shute, Michael. "Economic Analysis within Redemptive Praxis: An Achievement of Lonergan's Third Decade." *Lonergan Workshop* 14 (1998).
- . *The Origins of Lonergan's Notion of the Dialectic of History*. Baltimore: University Press of America, 1993.
- Simpson, Thomas W. "What Is Trust?". *Pacific Philosophical Quarterly* 93, no. 4 (2012): 550-69. <https://doi.org/10.1111/j.1468-0114.2012.01438.x>.
- Skyrms, Brian. "Trust, Risk, and the Social Contract." *Synthese* 160, no. 1 (2006): 21-25. <https://doi.org/10.1007/s11229-006-9075-3>.
- Smith, James K. A. *Introducing Radical Orthodoxy : Mapping a Post-Secular Theology*. Milton Keynes: Paternoster Press ; Grand Rapids, Mich. : Baker Academic, 2004.
- Smith, Vernon L. "Microeconomic Systems as an Experimental Science." *The American Economic Review* 72, no. 5 (1982): 923-55. <https://www.jstor.org/stable/1812014>.
- St.Amour, Paul. "Lonergan and Gilson on the Problem of Critical Realism." *The Thomist: A Speculative Quarterly Review* 69, no. 4 (2005): 557-92. <https://doi.org/10.1353/tho.2005.0003>.
- . "Lonergan and Piketty on Income Inequality." Marquette University Lonergan Colloquium, Milwaukee, WI, 22 March 2018 2018.
- Stebbins, J. Michael. *The Divine Initiative: Grace, World-Order, and Human Freedom in the Early Writings of Bernard Lonergan*. Toronto: University of Toronto Press, 1995.
- Stock, James H., and Mark W. Watson. "Experiments and Quasi-Experiments." In *Introduction to Econometrics*, 521-67. Harlow: Pearson Education, 2015.
- Sugden, Robert. "Experiment, Theory, World: A Symposium on the Role of Experiments in Economics." *Journal of Economic Methodology* 12, no. 2 (2005): 177-84. <https://doi.org/10.1080/13501780500085943>.
- "The Sveriges Riksbank Prize in Economic Sciences in Memory of Alfred Nobel 2002." news release., 2002, <https://www.nobelprize.org/prizes/economic-sciences/2002/press-release/>.
- "The Sveriges Riksbank Prize in Economic Sciences in Memory of Alfred Nobel 2017." news release., 2017, <https://www.nobelprize.org/prizes/economic-sciences/2017/press-release/>.
- "The Sveriges Riksbank Prize in Economic Sciences in Memory of Alfred Nobel 2019." news release., 2019, <https://www.nobelprize.org/prizes/economic-sciences/2019/press-release/>.
- Tan, Jonathan H. W., and Claudia Vogel. "Religion and Trust: An Experimental Study." *Journal of Economic Psychology* 29, no. 6 (2008): 832-48. <https://doi.org/10.1016/j.joep.2008.03.002>.

- Tekippe, Terry J. "Response to Donald Keefe on Lonergan." *The Thomist: A Speculative Quarterly Review* 52, no. 1 (1988): 88-95. <https://doi.org/10.1353/tho.1988.0034>.
- Thielmann, Isabel, and Benjamin E. Hilbig. "The Traits One Can Trust: Dissecting Reciprocity and Kindness as Determinants of Trustworthy Behavior." *Pers Soc Psychol Bull* 41, no. 11 (Nov 2015): 1523-36. <https://doi.org/10.1177/0146167215600530>.
- . "Trust in Me, Trust in You: A Social Projection Account of the Link between Personality, Cooperativeness, and Trustworthiness Expectations." *Journal of Research in Personality* 50 (2014): 61-65. <https://doi.org/10.1016/j.jrp.2014.03.006>.
- . "Trust: An Integrative Review from a Person–Situation Perspective." *Review of General Psychology* 19, no. 3 (2015): 249-77. <https://doi.org/10.1037/gpr0000046>.
- Vollan, Björn. "The Difference between Kinship and Friendship: (Field-) Experimental Evidence on Trust and Punishment." *The Journal of Socio-Economics* 40, no. 1 (2011): 14-25. <https://doi.org/10.1016/j.socec.2010.10.003>.
- Walters, Bernard, and David Young. "Critical Realism Methodology and Applied Economics." In *Applied Economics and the Critical Realist Critique*, edited by Paul Downward. London and New York: Routledge, 2003.
- Williams, Rowan. *The Edge of Words*. London: Bloomsbury, 2014.
- Wittgenstein, Ludwig. *Tractatus Logico-Philosophus, Tagebücher 1914-1916, Philosophische Untersuchungen*. Frankfurt am Main: Suhrkamp, 2014.
- Yamagishi, Toshio, Satoshi Kanazawa, Rie Mashima, and Shigeru Terai. "Separating Trust from Cooperation in a Dynamic Relationship." *Rationality and Society* 17, no. 3 (2016): 275-308. <https://doi.org/10.1177/1043463105055463>.
- Theological Lexicon of the New Testament*. Peabody, MA: Hendrickson Publishers, 1994.