

**Competition and Cooperation in Economic and Christian  
Thought: Towards a Better Understanding**

Christopher John White

A thesis submitted for the degree of Doctor of Philosophy  
of The Australian National University

August 2016

© Copyright by Christopher John White 2016

All Rights Reserved

I certify that this thesis is my own original work, except as follows:

- Chapter 3 is a modified version of a paper prepared jointly with my Primary Supervisor, Professor Geoffrey Brennan, and presented at a seminar at Ridley College, Melbourne in November 2013;
- Section A1.2 of Appendix 1 is a modified version of an extended commentary, written jointly with Professor Brennan, on a paper by Dr Ben Cooper published in *Faith & Economics* (No. 65, Spring 2015) and entitled “Game Theory in Christian Perspective,” which commentary paper we understand is to be published in that journal later in 2016.

I have made due acknowledgement in the text and footnotes to all other material used or on which I have relied.

Exclusive of footnotes, figures, tables, bibliography and appendices, the thesis is not more than 100,000 words in length.

Christopher John White

I certify that Chapter 3 and Section A1.2 of this thesis are genuine joint work by me and the candidate, the author of the rest of the thesis, Christopher John White.

H. Geoffrey Brennan

## Acknowledgments

Professor Geoffrey Brennan, my Primary Supervisor, has been very generous with his time with a mature-age candidate, living and working remotely from Canberra, and seeking to explore a topic in a cross-disciplinary area (primarily, economics and Christian theology/ethics) where I had little formal familiarity with one of the disciplines (economics). Indeed, his advice was that if I were a young candidate seeking an academic career, he would advise against a cross-disciplinary study of this type. But because it is a topic which excites my interest, having spent most of my working life as a professional actuary advising in financial areas, and more recently studied and taught Christian theology and ethics, he agreed to supervise me as a candidate.

This process of my engagement with these disciplines, which have generally not communicated well with one another, has continued for over a decade. Geoff showed considerable patience but also enthusiasm for my project, including when I have had very little to say of interest. As well as overseeing my exploration of foundational economic ideas and the history of economic thought, plus my search for a suitable topic and argument, Geoff spent substantial time with me on my visits to Canberra, where he and Margaret showed me very generous hospitality. He also spent time with me on private visits to Melbourne, and co-authored two papers with me (which form part of this dissertation). I am very grateful to him.

My Assistant Supervisors, Professor Paul Oslington and Dr Graeme Garrett, have provided helpful comments on my drafts. Additionally, Paul (who has written widely on the intersection between Christian faith and economics) was very generous in providing me with lists of suggested reading early in my exploration of the subject, and has made other helpful suggestions as the work has progressed. My thanks to them also.

I am also grateful to various commentators at discussions of papers that form part of this dissertation:

- Chapter 3, which is a modified version of a paper jointly co-authored with Geoff Brennan and presented at a seminar held at Ridley College, Melbourne in November 2013;

- Section 7.2 of Chapter 7, a modified version of which was presented at a meeting of the History of Economic Thought Society of Australia held at the Royal Society of Victoria in July 2016.

I thank The Australian National University for tuition fee remission, and particularly to those officers of the university who agreed with my requests for suspension (due to my other commitments) and extension of my candidature.

I thank Dr Chris Mulherin for editorial assistance, which was limited to formatting the dissertation.

Finally, my friends and family have offered encouragement and help, despite many of them doubtless wondering why I was undertaking such a task at this stage of my life, and why it was taking so long. On the former, it has given me an area of interest, which I hope will help reward me intellectually for years to come, and on the latter I can only plead to being a slow learner. My son Nicholas has commented at various stages on my argument and drafts, and has helped me reflect, in the light of his own experience of a PhD, on the journey that this task has proved to be, as well as providing helpful technical support in the form of external electronic backup. My wife Roslyn has been extremely patient with such a prolonged project, at a stage of our lives when many of our peers have had greater freedom, and have been pursuing more relaxing activities than those for which we have had time. I have very much appreciated her support and encouragement over the duration of the project, and much else besides over our half century together, and look forward to spending more time with her, as well as enjoying the benefits of a broader intellectual life.

## Abstract

Economists and Christian theologians/ethicists (hereafter “Christians”) have not typically communicated well, partly due to different orientations of their disciplines: economists generally regard their discipline as *positive* (explaining why things are as they are), whereas Christians see their discipline as *normative* (describing how things should be). I discuss one example of this distinction: the focus of economists on agents’ actions (assuming motives are given), contrasted with the focus of Christians on motives (though for whom actions are by no means a matter of indifference). Economists and Christians also use certain terms in different senses, having the effect of compounding these communication difficulties.

Primarily, this thesis examines one such communication difficulty – the understandings of competition and cooperation (and related terms such as rivalry and altruism respectively). My argument is that economists generally use the terms in a *structural* sense: in particular that competition in its “perfect” form is the economic structure by which efficient exchange is best facilitated, and that cooperation results from that structural state. However, Christians generally use the terms in a *psychological* sense: competition is viewed primarily as rivalry, and cooperation as a deliberate act of the will to love one’s neighbour as oneself, or to go beyond self-love to altruistic self-sacrificial love of the other. I also examine how the terms are used in a number of other disciplines, particularly evolutionary biology, as a means of nuancing the understanding of this distinction.

I explore the concept of cooperation in economics by examining how it is treated in Adam Smith’s *Wealth of Nations*. In the case of the Christian concept of cooperation, I argue for the inclusion of acts which are mutually beneficial to both donor and recipient, as well as acts of self-sacrificial altruism (which latter is often argued to be the Christian ethical norm).

I discuss rivalness (the property of many goods that makes them available to only one person), competition and rivalry in both economic and Christian contexts. In the economic case, the discussion illustrates the structural understanding, and the important point that economic thought looks for structures that enable positive-sum rather than just zero-sum economic engagements. However an examination of these

concepts in the biblical record, and in writers from the Reformation to the present, indicates an overwhelmingly psychological understanding in the Christian case.

Finally, I examine two twentieth century thinkers who wrote at length on competition. Economist Frank Knight specified the conditions for the structural form of (perfect) competition, but then *inter alia* critiqued those conditions, giving them an apparently psychological aspect: however I argue Knight is really critiquing the competitive economic model itself rather than competition as such. Christian William Temple seldom gets past seeing competition in its psychological form of (largely destructive) rivalry.

I thus conclude that the overwhelming views of competition and cooperation in economic thought are structural, contrasted with those in Christian thought which are psychological, and that a better appreciation by members of each disciplinary community of understandings by members of the other community would help improve inter-disciplinary communication.

## Table of Contents

<b>Schedule of Figures and Tables .....</b>	<b>11</b>
<b>1. INTRODUCTION .....</b>	<b>12</b>
<b>2. COMPETITION AND COOPERATION: DEFINITIONS, DISTINCTIONS AND WIDER PERSPECTIVES .....</b>	<b>18</b>
2.1 INTRODUCTION .....	18
2.2 COMPETITION AND COOPERATION: DEFINITIONS AND DISTINCTIONS .....	22
2.3 COOPERATION AND ALTRUISM .....	24
2.4 STRONG RECIPROCITY .....	26
2.5 SYMBIOSIS .....	30
2.6 COOPERATION IN EVOLUTIONARY THEORY .....	31
2.7 GAME THEORY APPLICATIONS .....	37
2.7.1 Introduction .....	37
2.7.2 Nowak's Five Rules for the Evolution of Cooperation .....	38
2.7.3 Christian Reflections on Game Theory .....	42
<b>3. ACTION AND MOTIVE IN ECONOMIC AND CHRISTIAN ETHICS .....</b>	<b>48</b>
3.1 INTRODUCTION .....	48
3.2 CONSEQUENTIALISM VS DEONTOLOGY.....	51
3.3 CHRISTIAN PERSPECTIVES ON ACTIONS AND MOTIVES .....	54
3.4 THE INVISIBLE HAND TRADITION IN ECONOMICS AND A CHRISTIAN RESPONSE.....	67
3.5 CONCLUSION .....	77
<b>4. COOPERATION: ECONOMIC/STRUCTURAL VS CHRISTIAN/PSYCHOLOGICAL .....</b>	<b>79</b>
4.1 INTRODUCTION .....	79
A. <u>ECONOMIC/STRUCTURAL UNDERSTANDING</u> .....	79
4.2 THE IMPORTANCE OF THE STRUCTURAL COOPERATION IN ECONOMICS .....	79
4.3 GAME THEORY SPECIFICATION OF STRUCTURAL COOPERATION .....	80
4.4 ADAM SMITH ON THE DIVISION OF LABOUR.....	83
4.4.1 Introduction .....	83
4.4.2 Trading through markets creates an enormous network of interdependence.....	84
4.4.3 Specialisation permits very substantial increases in productivity.....	86
4.4.4 The extent of specialisation possible is a function of market size .....	88

4.4.5 The network of specialisation depends critically on the possibility of exchange .....	90
4.4.6 The primary role of government in exchange is to eliminate force and fraud.....	91
4.4.7 Individual exchanges: psychological cooperativeness vs self-interest.....	92
4.4.8 Did Smith add anything new to the existing concept of the division of labour? .....	93
4.4.9 Objections and nuances.....	96
<b>B <u>CHRISTIAN/PSYCHOLOGICAL UNDERSTANDING</u> .....</b>	<b>99</b>
4.5 COOPERATION AND ALTRUISM: CHRISTIANITY, EVOLUTIONARY BIOLOGY AND ECONOMICS .....	99
<b>5. RIVALNESS, COMPETITION AND RIVALRY: ECONOMIC PERSPECTIVES.....</b>	<b>109</b>
5.1 RIVALNESS: THE INEVITABILITY OF COMPETITION? .....	109
5.2 STRUCTURAL COMPETITION .....	111
5.2.1 Competitive Economic Structures .....	111
5.2.2 Competition in Political Processes.....	116
5.2.3 Competition in Legal Processes .....	120
5.3 RIVALRY .....	122
5.4 STRUCTURED RIVALRY .....	125
5.4.1 Investment Management Examples .....	125
5.4.2 Sporting Examples .....	129
5.5 OVERVIEW AND CONCLUSION.....	132
<b>6. RIVALNESS, COMPETITION AND RIVALRY: CHRISTIAN PERSPECTIVES.....</b>	<b>135</b>
6.1 INTRODUCTION .....	135
6.2 BIBLICAL MATERIAL.....	136
6.2.1 Rivalness .....	136
6.2.2 Competition as Rivalry.....	141
6.3 CHRISTIAN WRITERS ON COMPETITION AND RIVALRY .....	148
6.3.1 Martin Luther.....	149
6.3.2 John Calvin .....	152
6.3.3 John Wesley.....	155
6.3.4 Eighteenth and Nineteenth Century Theology and Political Economy in Britain.....	159

6.3.5 Nineteenth Century Christian Socialism in Britain .....	170
6.3.6 Specimen Twentieth Century Anglican Views up to the 1950s.....	172
6.3.7 Catholic Social Thought.....	173
6.3.8 Contemporary Christian Attitudes.....	177
6.4 OVERVIEW AND CONCLUSION .....	183
<b>7. COMMENTATORS ON COMPETITION: KNIGHT AND TEMPLE .....</b>	<b>186</b>
7.1 INTRODUCTION .....	186
7.2 FRANK H. KNIGHT.....	186
7.2.1 <i>Risk, Uncertainty and Profit</i> .....	187
7.2.2 <i>The Ethics of Competition</i> .....	197
7.3 WILLIAM TEMPLE .....	204
<b>8. CONCLUSION .....</b>	<b>220</b>
<b>APPENDIX 1: GAME THEORY METHODOLOGY .....</b>	<b>228</b>
A1.1 Prisoner’s Dilemma – Methodological Outline.....	228
A1.2 Game Theory and Christian Applications .....	231
A1.2.1 Introduction.....	231
A1.2.2 Interdependence of What? .....	231
A1.2.3 Payoff Maximisation and Ethics .....	235
A1.2.4 Preferences vs Payoffs.....	241
A1.2.5 Normative and Theological Considerations .....	244
A1.2.6 The Bottom Line .....	246
<b>APPENDIX 2: NOWAK’S FIVE RULES FOR THE EVOLUTION OF COOPERATION .....</b>	<b>247</b>
<b>APPENDIX 3: HISTORY OF ECONOMIC THOUGHT ON COMPETITION .....</b>	<b>253</b>
A3.1 Prior to the Eighteenth Century .....	253
A3.1.1 Thirteenth Century Scholasticism .....	253
A3.1.2 Mercantilism.....	255
A3.1.3 Becher.....	255
A3.1.4 Summary.....	255
A3.2 The Eighteenth Century Prior to Smith .....	256
A3.2.1 Boisguilbert.....	256
A3.2.2 Cantillon.....	257
A3.2.3 The Third Quarter of the Eighteenth Century .....	258
A3.2.4 Turgot .....	259

A3.2.5 Eighteenth Century Italian Economists .....	260
A3.2.6 Stuart .....	261
A3.2.7 Summary.....	263
A3.3 Adam Smith .....	263
A3.3.1 Summary.....	268
A3.4 The Classical Period after Smith .....	269
A3.4.1 Malthus.....	269
A3.4.2 Ricardo.....	270
A3.4.3 Cournot.....	274
A3.4.4 Mill .....	278
A3.4.5 Marx.....	282
A3.4.6 Summary.....	285
A3.5 The Neoclassical Period .....	286
A3.5.1 Jevons .....	287
A3.5.2 Menger .....	288
A3.5.3 Walras.....	289
A3.5.4 Edgeworth .....	291
A3.5.5 Marshall.....	293
A3.5.6 Clark.....	298
A3.5.7 Knight.....	300
A3.5.8 Summary.....	301
A3.6 Imperfect/Monopolistic Competition and Responses .....	302
A3.6.1 Chamberlin .....	302
A3.6.2 Robinson .....	305
A3.6.3 Austrian Responses .....	307
A3.6.4 Summary.....	307
<b>BIBLIOGRAPHY .....</b>	<b>309</b>

## Schedule of Figures and Tables

Figure 1	Modified PD representing status benefits from anonymity or publicity ..	47
Figure 2	Action/Motive Distinction Between Economics and Christianity .....	51
Figure 3	Specimen Differences of Deontology/Consequentialism and Action/Motive .....	54
Figure 4	Examples of Stassen & Gushee Ethical Triads in Jesus' Ethical Teaching ..	65
Figure 5	Standard Prisoner's Dilemma example .....	81
Table 1	Example of comparisons of measures of self-interest and rivalry .....	123

## 1. INTRODUCTION

Communication between economists and (Christian) theologians/ethicists (referred to throughout for conciseness as “Christians”) has often been difficult; much of the problem is to do with the fundamentally different orientations of the two disciplines.

Economists typically like to identify their discipline as a *positive* enterprise (a “science”) – explaining why things are the way they are and/or predicting the way things will respond to particular kinds of changes. Arguably, this self-description downplays the important normative element in economics, which is standardly consequentialist and “welfarist.” By “welfarist” I mean that it focuses on agents’ preference satisfaction – so the internal mental states (the “preferences”) of agents are treated as carrying presumptive normative authority, at least for those agents. Similarly, the explanations in positive economics run in terms of changes in external circumstances, with individual preferences (beliefs and desires, or stemming from them) treated as given and fixed.<sup>1</sup>

At least in areas where economics and theology are likely to intersect, Christianity is largely *normative* – describing how they should be. And in this respect, Christian normativity is centrally occupied with changes in the internal psychological make-up of human agents, i.e. with people’s desires and beliefs and self-understandings. This normatively transformative aspect of Christianity fundamentally distinguishes it from economics, where the socially normative focus is more on structures that are likely to produce preferable outcomes, independent of any direct psychological transformation of the human agents involved.

The succeeding chapters of the thesis deal with specific cases of another aspect of the communication difficulty between economics and Christianity – namely, that it is compounded by a number of *polysemous homonym* problems. By that I mean words employed in each discipline, with the same spelling and shared origins, can have or be used with different meanings.<sup>2</sup> In some respects, economics and Christianity can be

---

<sup>1</sup> The extent to which, if at all, economics should respond to the insights of psychology and/or neuroscience is a contested issue, and beyond my scope in this thesis. See, for example, Gul and Pesendorfer (2005).

<sup>2</sup> Even within economics, the issue of different uses of the same term has a long history: Richard Whately’s *Elements of Logic* (1826) included an appendix by his close colleague Nassau W. Senior entitled “Ambiguous Terms Used in Political Economy.”

said to be “divided by a common language.” The particular terms considered in detail in this dissertation where this difficulty is apparent, are *competition* and *cooperation* (and related concepts such as, respectively, rivalry and rivalness on the one hand, and altruism on the other).

My primary thesis is that competition and cooperation are typically understood differently in the two disciplines:

- in economics, the terms are primarily understood as *structural*: competition (the opposite of which is monopoly rather than cooperation) in its “perfect” form is the economic activity by which efficient exchange is best facilitated, and cooperation results from that structural state of perfect competition;
- In Christianity, the terms are primarily understood as *psychological*: competition is primarily understood as rivalry, and generally viewed as inconsistent with the Christian injunction to love one’s neighbour as oneself, while cooperation (the opposite of competition) is viewed as a psychologically deliberate act of the will to love one’s neighbour as oneself, or even to go beyond mutual-love to altruistic self-sacrificial love of the other (in the *agapē* sense of “love”).

Competition (and rivalry) and cooperation (and altruism) are terms widely used in society generally, and in a number of other disciplines (including philosophy, and particularly evolutionary biology). In Chapter 2, I explore how the terms are defined and used in a number of these “wider” contexts – mostly in evolutionary biology. I choose this area because the use of such terms in evolutionary biology is presumably devoid of any psychological element. This fact frames both the legitimacy of the use of terms like cooperation and competition in disciplines (such as economics) where psychological effects are absent, and indicates the points at which in any human (social scientific) setting there may be scope for ambiguity. It also illustrates how some of the issues of miscommunication with which I am concerned can arise in the conversation between evolutionary biology (and by extension, economics) on the one hand, and Christianity on the other.

Specifically, the discussion in Chapter 2 deals with the following:

- The circumstances in which competition is understood as requiring intentionality, and hence is generally limited to humans, as opposed to circumstances in which competition is understood as not requiring intentionality (including where the response is innate), and hence applying across the whole spectrum of life forms.
- The gradation of competitive responses, and the contexts in which degrees of rivalry are appropriate upshots of competition.
- The distinctions (or absence thereof) drawn between cooperation and altruism, including some of the resulting confusions of terminology and usage, and conflicting understandings.
- The concepts of strong reciprocity and symbiosis, and how each has related to the use of the primary terms.
- The developing understanding of and debates about the importance of cooperation, in addition to competition, in evolutionary biological populations.
- Some preliminary thoughts on the application of game theory, which is generally blind to issues of intentionality, in the understanding of competition and cooperation in Christian ethics.

Chapter 3 deals with one important manifestation in the two disciplines of the positive: normative distinction, which significantly underpins the differing understandings of competition, cooperation, and related concepts:

- the focus of economics on the *actions* of agents, on the basis that motives are to be taken as given; contrasted with
- the focus of Christianity on the *motives* of agents (while by no means being indifferent to their actions), and the fundamental importance of love in Christian ethics, on the basis that normative transformation must start with motives.<sup>3</sup>

---

<sup>3</sup> Chapter 3 is a modified version of a paper prepared jointly with my Primary Supervisor, Professor Geoffrey Brennan, and presented at a seminar held at Ridley College, Melbourne in November 2013.

The specifically structural understanding of cooperation in economics, and the specifically psychological understanding of cooperation in Christianity, are explored in more detail in Chapter 4. The seminal contribution of Adam Smith in *The Wealth of Nations* to the structural understanding of cooperation is the focus of the economic discussion in Part A: specifically, the fundamental importance of the division of labour, specialisation and exchange in facilitating “cooperation”, the enormous network of “cooperation” thereby created (extending far beyond what would be possible through psychologically-based interpersonal cooperativeness), the significance of market size, and the role of government.

In Part B of Chapter 4 the Christian discussion is about how far the psychologically-based, theological understanding of “cooperation” extends: is it as far as total self-sacrificial altruism, or is it restricted to the “normal” meaning of cooperation as providing mutual benefit to donor as well as recipient? Does so-called total altruism (“agapism” in Christian thought) involve some intangible reward to the donor anyway? I argue that there are strands of Christian thought which validate both, as distinct (and ethically orthodox) Christian concepts, as opposed to the frequent conflation of the terms in evolutionary biology, where “cooperation” and “altruism” are often used interchangeably.

Chapter 5 looks specifically at the economic perspectives on rivalness,<sup>4</sup> competition and rivalry. The structural understanding of competition is further elucidated in the context of the competitive market, and illustrated in the related social areas of political and legal frameworks. A lengthy appendix (Appendix 3) traces the history of economic thought on competition (and related concepts), showing how the modern structural understanding emerged. Rivalry is explored in its structural economic understanding, showing *inter alia* how rivalry is definitionally distinct from self-interest. Rivalness as a structural concept is also examined and distinguished from rivalry as a psychological matter. While these structures may often appear to be zero-sum (in arenas of irreducible conflict), it is an important insight of economics that they can admit significant positive-sum elements. Because rivalrous sporting interactions

---

<sup>4</sup> Rivalness is the property of many goods which makes them available to only one person, to the exclusion of others. Rivalness stands in contrast to rivalry, which is a property of minds.

are usually conducted in more tightly defined contexts, they are used to provide useful normative insights for the structural understanding of economic interactions.

The corresponding Christian discussion in Chapter 6 of rivalness, competition and rivalry demonstrates the very different focus of Christian thought. The biblical material is examined in relation to rivalness, and competition as rivalry, exploring the extent of a psychological orientation, particularly in the New Testament. A lengthy review of a selection of Christian writers since the Reformation on competition and rivalry also explores the extent of the psychological understanding. These writers include:

- Fathers of the Reformation Martin Luther and John Calvin,
- Founder of Methodism John Wesley,
- The early nineteenth century Anglican writers on Christian Political Economy,
- The founders of the mid-nineteenth century British Christian Socialism movement,
- Two specimen Anglican writers from the first half of the twentieth century,
- Roman Catholic social thought from *Rerum Novarum* (1891) to the present, and
- More recent Christian commentators (in the last 25 years).

Finally, Chapter 7 examines two twentieth century writers, one from each of economics and Christianity, who have written extensively on competition. The economist, Frank Knight, is credited with finally codifying the conditions for perfect competition and writing on the ethics of competition in the early 1920s. The Christian, later Bishop of London, William Temple, as a young man wrote (with others) in 1917 a Christian critique of competition. I describe each writer's contribution against the background of my overarching claim that economics has a structural understanding of competition, contrasted with Christianity's psychological understanding. Interestingly, Knight – the economist – shows less appreciation of the distinction than one might expect, illustrating perhaps that “common usage” meanings of terms like “competition” can leak over into economists' understandings. This is true, even where, as in Knight's case, his contributions on competition are widely regarded as seminal.

Temple, who was highly influential later in his career, seldom gets past railing at competition as rivalry.

My conclusion in Chapter 8 seeks to test the thesis I began with in the light of the discussion in the body of the dissertation. A tentative further objective is to comment on ways in which, in the light of this project, economists and Christians might better communicate with one another, or in the case of economists who are also Christians, perhaps help them better understand (if not reconcile) some of the differences in their dual intellectual frameworks.

Because this is a cross-disciplinary study, of necessity I have had to cover quite briefly a number of issues within the constituent disciplines (primarily economics and Christian theological ethics, and to a lesser extent evolutionary biology). Some of these issues are important or contentious within those disciplines, and no doubt my treatment is often inadequate, viewed from the debate within those disciplines. However I hope my objective of facilitating better communication between economics and Christianity compensates for these shortcomings.

## 2. COMPETITION AND COOPERATION: DEFINITIONS, DISTINCTIONS AND WIDER PERSPECTIVES

### 2.1 INTRODUCTION

The major objective of this dissertation is to compare and contrast the concepts and usages of competition and cooperation (and related concepts, primarily rivalry and altruism, respectively) in economics and Christian theology/ethics (hereafter “Christianity”). As well as outlining what I see as the major distinction between the two disciplines in this regard, in this chapter I also discuss the definitions and significance of these concepts more generally, including where the understandings in other disciplines such as philosophy, sociology and (particularly) evolutionary biology<sup>5</sup> interrelate with those in economics and Christianity.

Competition is a matter of considerable significance in economic reasoning. For example, High says in the introduction to his edited collection of major contributions to the historical development of economic thought on competition, that competition “is one of a dozen or so concepts that have formed the core of economics since its beginnings as a science.” (High, 2001: xiii) Economists generally approve of competition, viewing it as a primary facilitator of efficient exchange, and thereby maximising the cooperative benefits of specialisation; they use the term in a quite different way to society generally and other disciplines in particular, where competition is normally regarded as the opposite of cooperation. Economists tend to regard those two notions as aligned, and contrast competition, not with cooperation, but rather with monopoly, viewing monopoly’s anti-competitive restrictions of choice as limiting cooperative benefits.

Many in other groups in society disapprove of competition, or are ambivalent about it, at least in its more rivalrous forms. While often undervaluing the economic freedoms and benefits resulting from competition, people generally and certain intellectual and professional communities specifically<sup>6</sup> frequently feel an unease about the potential

---

<sup>5</sup> Evolutionary biology is particularly relevant because of significant overlaps with economics, philosophically in their utilitarian underpinnings, and methodologically in their use of game theory techniques.

<sup>6</sup> Such as the so-called “helping professions,” and a number of the social sciences other than economics.

for competition to result in unethically rivalrous,<sup>7</sup> anti-cooperative and otherwise anti-social behaviour, certainly when its disruptive effects are not appropriately managed (as appears to them to be often the case). Christians are frequently in this latter category, additionally expressing an unease with the thought of competing (potentially rivalrously) with one's neighbour, alongside any injunction to love them as oneself.<sup>8</sup>

Cooperation, on the other hand, is widely seen as a desirable social characteristic, particularly by Christians, who regard it as evidence of Christ's command to love one's neighbour as oneself; they often go further to enjoin (apparently) unrewarded self-sacrifice, often termed "altruism." However, "altruism" is also used interchangeably with "cooperation" in some other intellectual communities (notably evolutionary biology) – I return to these definitional distinctions in Section 4.5, particularly as this usage contrasts with that in Christianity.

Treating cooperation as meaning both parties benefit from the interchange by their own lights (or are symbiotic, perhaps objectively), economists also typically regard cooperation as a desirable outcome of well-structured social institutions.<sup>9</sup>

Hence, a factor in the lack of effective communication between economists and Christians has been the considerable diversity in the understandings of "competition" and "cooperation," to some extent within but particularly between the two disciplines. A central definitional question is at stake here: viz. the extent to which competition and cooperation require intentionality – and hence the related question of whether they are to be thought of primarily psychologically (that is, as human attributes), or in more structural or institutional senses. The intentionality issue is usually of secondary or minimal importance in economic thought, with its primary focus on outcomes and actions, but it is critical for Christian thought, given its major focus on human ethical responsibility. This distinction between economics, with its focus on actions, and Christianity, with its focus on motives, is the subject of Chapter 3.

The psychological understanding of competition can vary from benign (such as in a competitive tennis match between friends), to extreme antagonistic rivalry (such as

---

<sup>7</sup> Rivalry and related concepts are unpacked in some detail in Chapters 5 and 6; for the present it is used in its dictionary meaning of "strife or effort to obtain an object which another is pursuing." (Whitehall, 1952: 1470)

<sup>8</sup> See the discussion in Sections 3.3 and 4.5 on the significance for Christian ethics of Christ's second great commandment to love one's neighbour as oneself.

<sup>9</sup> I discuss this orthodox (neoclassical) economic understanding of cooperation in Part A of Chapter 4.

the murderous competition between rival drug lords). The institutional or structural understanding of competition can be illustrated by competition in markets where many buyers and sellers of uniform commodity products deal directly with one another, and are “price takers” whose transactions do not influence the market price. Or, more analytically, competition might alternatively be illustrated psychologically by the characteristic of rivalry, or institutionally/structurally by the characteristic of “rivalness” (an innate property of many goods and services, which typically limits their availability to more than one person or group).

Cooperation can be illustrated in its psychological understanding by a schoolboy sharing his lunch with another pupil and gaining a friend as a result, and structurally in the commodity markets referred to in the previous paragraph, which provide an environment in which producers and buyers can cooperatively satisfy economic needs. These examples can be described analytically in terms of a psychological characteristic of cooperativeness in the former example, or as an economic structure characterised by interdependence resulting in mutual advantage, but with no necessary psychological element in the latter example.

As a broad generalisation, economists tend to think of competition and cooperation in institutional or structural terms, with no particular focus on intentionality, or what I have termed the psychological dimension of the concepts. On the other hand Christians (and also many non-economic social scientists, as well as people more generally) tend in the main to focus on this psychological dimension, largely ignoring the institutional or structural aspects.

This psychological/structural distinction will be a recurring feature of the discussion undertaken in this thesis of similarities and differences in the understandings of economists and Christians of competition and cooperation. To ensure the sense in which the particular term is used, in what follows I generally qualify the relevant term, to indicate the sense in which I am using the term: thus, for example, I use “structural competition” in relation to the economic concept of a perfectly competitive market, “psychological cooperation” in relation to human cooperative intentionality, and so on.

The question arises as how the psychological understandings of competition and cooperation relate to the theological understandings of the terms, given I am generally

attributing psychological understandings to Christians. Defining psychological as relating to the “nature, functions and phenomena of the human soul or mind,” as opposed to the physical (Onions, 1973: 1700), I see the psychological roots of competition primarily based in the motives, and manifested in such traits as ambition, fear, greed and desire, driving the will to succeed in a contest. Turning to cooperation, examples of the relevant traits are love of and empathy for the other, as well as ambition and desire for both oneself and the other to succeed. These human traits, stemming from the motives, are also of interest to the student of theological anthropology, but with a religious focus rather than the more “scientific” orientation of the psychologist. Thus there is substantial overlap of interest between the disciplines, and I argue that generally Christians view competition and cooperation through a religiously-oriented psychological lens.

While both economic and Christian modes of thought have their own processes and approaches, neither stands totally aloof from other disciplines and intellectual streams. The two primary concepts of my concern here – competition and cooperation – are in a number of important ways related to and influenced by understandings in those other disciplines, particularly in relation to the related concepts of rivalry/rivalness and altruism respectively. In the remainder of this chapter I interact where relevant with these other disciplines and concepts, though it is fair to say that much of the “wider fields” discussion of these concepts is more relevant to the understanding of cooperation and related terms (particularly altruism). The interaction as regards competition and the related concepts of rivalness and rivalry is in the contexts of the discussions in Chapters 5 to 7.

The specific discussions in subsequent chapters of both competition and cooperation and related concepts in economics and Christianity are as follows:

- Chapter 4: Cooperation in its structural understanding in economics, and in its psychological understanding in Christianity;
- Chapter 5: Rivalness, competition and rivalry in economics;
- Chapter 6: Rivalness, competition and rivalry in Christianity;
- Chapter 7: The respective understandings of competition of economist Frank Knight and Christian William Temple.

Prisoner's Dilemma (PD) modelling is a technique within Game Theory, widely used in a number of disciplines including economics, philosophy and evolutionary biology, in the study of interactive processes involving multiple participants, in both competitive and cooperative situations. It arises in a number of contexts in this study, including in later sections of this chapter, and so I introduce it at this point – see Section A1.1 of Appendix 1.

Sections A1.2 of Appendix 1 also includes a modified version of an extended commentary, written jointly with my Primary Supervisor, Professor Geoffrey Brennan, on a paper published in *Faith & Economics*, by Dr Ben Cooper, entitled “Game Theory in Christian Perspective.” (Cooper, 2015). As stated in the commentary, the objective is to adumbrate and clarify Cooper's account of game theory and its relevance to Christian thought (as compared and contrasted with the more frequent application of the theory, *inter alia*, in economics and evolutionary biology).

## **2.2 COMPETITION AND COOPERATION: DEFINITIONS AND DISTINCTIONS**

A dictionary definition of competition is “the action of endeavouring to gain what another endeavours to gain at the same time,” it is “the striving of two or more for the same object; rivalry.” In another use, it is “a contest for the acquisition of something; a match to determine relative excellence; a trial of ability in order to decide the superiority or comparative fitness of a number of candidates.” (Onions, 1973: 382)

Two key words used in this cluster of definitions are “striving”, which indicates vigorous, goal-directed activity, and “rivalry”, which indicates energetic engagement with another striver for the same goal. Both indicate a robust, action-focused enterprise, suggesting engagement of the will. For this reason some social science commentators argue competition is essentially a human activity, and that the non-human life form “... neither competes nor cooperates. It simply exists, immersed in its environment with which it interacts.” (Rapoport, 1974: 24f) On this view, the intentionality of which humans are capable is critical to an act qualifying as competition or cooperation, as opposed to the innate responses of non-human animals, plants and other organisms, and thus competition and cooperation are used in their psychological senses. Christians generally think of competition in this manner.

Sociobiologists, on the other hand, generally see animal behaviour as providing important keys to understanding human behaviour. In this tradition, rooted in evolutionary theory, humans are viewed as part of an evolved continuum of life forms, and hence non-human animals, plants and other organisms, as well as humans, can be regarded as competing and cooperating, without distinction as regards the structural or psychological understandings of either characteristic. E. O. Wilson defines competition as “the active demand by two or more organisms for a common resource,” and illustrates from the animal and plant worlds:

An animal that aggressively challenges another over a piece of food is obviously competing ... Competition also includes the using up of resources to the detriment of other organisms, whether or not any aggressive behavioural interaction occurs. A plant, to take an extreme case, may absorb phosphates through its root system at the expense of its neighbours, or cut off its neighbours from sunlight by shading them with its leaves. (Wilson, 1975: 85)

In addition to Wilson’s plant example of competition without aggressive challenge, an animal example is the early bird which gets the worm; the early bird represents effective competition with the later bird which might have got that worm, but now cannot.

The main point of this line of biological thinking is that psychological intentionality is not a *necessary* feature of competitive behaviour, right across the spectrum of life forms.

Wilson also distinguishes two forms of competition (and illustrates with human examples):

- “scramble”, which refers to unregulated, exploitative action by the dominant, without specific response to others in the vicinity (such as when the stronger in a group of small boys grab most of the coins spilt on the ground as they all scramble for them); and
- “contest,” where there is a specific conflict subject to rules or social order, whether explicit or not, between participants (such as if the boys stand and fight, on the basis that the winner takes all the coins). (Wilson, 1975: 85)

As regards competitive attitude, there is no necessarily intentional competitiveness exhibited by the dominant party in the “scramble” case (“dominance” or “superiority” would perhaps be better descriptions), whereas in the “contest” case there may well

be intentional competitiveness, perhaps tending to rivalry, but even here, a psychological understanding does not seem essential.

Turning now to cooperation specifically, the dictionary definition of the verb “cooperate” – “to work together, to act in conjunction (with another person or thing, to an end, or in a work)” (Onions, 1973: 421) includes cooperation for the sake of the activity itself (“in a work”), as well as consequential cooperation (“to an end”).

Notably, this definition neither limits cooperation to, nor precludes, the intentional, and so is inclusive as regards both the structural and the psychological understandings.

Clearly, the development of language has permitted and facilitated widespread human cooperation. It is frequently argued (e.g. de Waal, 2011) that cooperation in humans has its roots in empathy (commonly described as the widespread capacity to “put oneself in the other’s shoes” and hence is a psychological response). Empathy in turn has its roots in the ability to recognise emotions, a characteristic which is probably innate (Baird, 2010), but probably can also be taught (O’Malley, 1999).

As a general conclusion, therefore, definitionally both competition and cooperation may be understood in a psychologically intentional sense, but this is not a necessary element of either term. Thus, the context and specifics of the particular usage have to be explored.

### **2.3 COOPERATION AND ALTRUISM**

I now turn to the overlap of, and distinction between, cooperation and its cousin, altruism. The two terms are frequently used interchangeably (particularly in evolutionary biology, also occasionally in economics). However, in some cases altruism is applied to a subset of cooperation involving (human) psychologically intentional selflessness. Significantly, in Christian theology the concept of altruism is widely used in a more specific sense, as a description of the fundamental New Testament term *agapē*, meaning other-focused love and self-sacrifice (discussed in further detail in Section 3.3).

The term “altruism” was first used in the 1850s, and there has been considerable discussion of its meaning and application. Dixon (2008: 4f) discusses three clusters of meaning:

- psychological: selfless or other-regarding, instinctual, stemming from emotions or motives (the original sense used by the French originator of positivism, Auguste Comte, whose 1851 phrase *vivre pour autrui* (“live for others”) gives the origin of the English word);
- behavioural: actions that benefit another and not the agent (the sense used by Herbert Spencer in the 1870s);<sup>10</sup>
- ethical/ideological: a principle based on the belief that “morally good” generally means for the good of others (the sense is used in positivist writings from the 1850s).

Thus, there is a significant strand of selflessness as a common element in the understanding of altruism in these clusters, which tends to distinguish it from cooperation (which has the sense of shared enterprise and mutual advantage). The understanding of altruism within this overall definitional framework is primarily psychological, involving human self-sacrificial intentionality.

However, there also is a widespread conflation of the two terms more recently, particularly in disciplines which use mathematical (including PD) modelling, such as economics and (particularly) evolutionary biology. In the cases of these disciplines, there is no necessary element of psychological intentionality, and there is generally the assumption of some benefit, albeit non-material, to the donor.

Comte’s use of the term was germane to his argument for a “scientific ethics” and a “Religion of Humanity”, independent of Christian and established metaphysical influences. (Dixon, 2008: 367) Comte and Spencer contrasted egoism (self-realisation) and altruism (self-sacrifice) as the issue in idealistic ethics, the ethical progression being from the former to the latter,<sup>11</sup> though Spencer did argue for the need for balance between self-ism and other-ism. (Dixon, 2008: 259f, 345, 362-364)<sup>12</sup>

---

<sup>10</sup> This understanding of “benefit” excludes any psychological, non-material benefit which the altruistic donor derives from the action that provides material benefit to the recipient. I return to this issue in Part B of Chapter 4.

<sup>11</sup> Nietzsche argued ethical progress was the reverse – from altruism to egoism. (Nietzsche, 2007/1984/1887)

<sup>12</sup> In this latter, qualified respect, Spencer’s view of altruism is consistent with what I have termed “cooperation” here, the Christian egalitarian position of loving one’s neighbour as oneself (Mt 22: 36-40), rather than the caricature of total self-sacrifice often presented by critics of Christian ethics.

## 2.4 STRONG RECIPROCITY

Cooperation has been something of a puzzle from an evolutionary perspective. As well as kin-cooperation, humans (and sometimes members of other evolutionary populations) will in certain circumstances cooperate with genetically unrelated strangers, even those they will never meet again, and even where reputational gains are negligible. The psychological perception of “fairness” can significantly impact cooperation, and there is evidence that individuals who believe they are being treated unfairly will punish others at apparent cost to themselves. (Fehr & Gächter, 2002)

Building on the work of Gintis (2000), in an attempt to secure a more comprehensive explanation of a force which enhances cooperation, Fehr, Fischbacher and Gächter (2002) provide evidence for what they term *strong reciprocity*:

A person is a strong reciprocator if she is willing (i) to sacrifice resources to be kind to those who are being kind (= strong positive reciprocity) and (ii) to sacrifice resources to punish those who are being unkind (= strong negative reciprocity). The essential feature of strong reciprocity is a willingness to sacrifice resources for rewarding fair and punishing unfair behavior *even if this is costly and provides neither present nor future material rewards for the reciprocator*. (Fehr, Fischbacher & Gächter, 2002: 2, emphasis original)

The assessment of kindness/unkindness and willingness to act sacrificially on the basis of that assessment indicates that strong reciprocity has underlying psychological motivations.

Using sequential PD methodology<sup>13</sup> that is played exactly once, the authors distinguish:

- the *strong reciprocator* (who is kind, or who punishes according to how the other actor behaves, regardless of expected material rewards or costs), from
- the *altruist* (who is unconditionally kind, regardless of the behaviour of the other actor),<sup>14</sup> and

---

<sup>13</sup> In which the second player observes the first player’s response before responding.

<sup>14</sup> Note that this use of “altruist” as unconditionally kind differs from some evolutionary biologists, who generally use altruism and cooperation interchangeably. Also, if the punishment imposed by the strong reciprocator were to be motivated by a reformist rather than punitive attitude, intended for the long-term good of the unkind person, it could be argued that strong reciprocity is quite close to altruism.

- the *reciprocal altruist* (whose behaviour depends on the previous behaviour of the other actor, involving short-run costs, but only because she expects long-term benefits). (Fehr, Fischbacher & Gächter, 2002: 3)

There is an apparent correlation between strong reciprocity and some understandings of Christian ethics (i.e. rewarding good behaviour and punishing bad, regardless of expected material benefit or cost, either in the shorter or longer term, to the Christian). An example of biblical support for this Christian ethical viewpoint would be

- Jesus' healing of the blind and dumb in Mt 9:27-34 (rewarding their faith), taken together with
- Jesus' denunciation of the scribes and Pharisees in Mt 23:1-36 (punishing their hypocrisy),

in spite of the threat of the Jewish leadership's developing plot to kill Jesus as a result of his actions in both situations.

These examples are evidently psychologically motivated on Jesus' part. Indeed, it seems that strong reciprocation as a category generally applies to humans and is psychologically motivated. However the requirement that expected material rewards or costs not motivate the response of the strong reciprocator, might include cases where there is no awareness at all of such actual or potential rewards or costs, which in turn might include non-human examples, and hence eliminate the need for psychological description in a small proportion of cases.

The substantive evidence Fehr, Fischbacher and Gächter provide for strong reciprocation falls under various headings, outlined below:

- Enforcement of "Nonbinding" Agreements: In addition to constructed experimental results, Fehr *et al* cite the simple example of the exchange between a taxi driver and his passenger in a big city (a bilateral one-shot encounter, in that the probability of repeated interaction is extremely low). First, the taxi driver has to decide whether to provide the service.<sup>15</sup> The driver having done so, it would often be easy for the passenger to escape without paying, unless the passenger expects the driver to incur the costs of chasing

---

<sup>15</sup> Ignoring the issue of regulatory requirements to provide a public service, in the absence of unsatisfactory passenger characteristics such as drunkenness.

him.<sup>16</sup> For the driver, the costs of chasing the passenger are very often higher than the returns, and hence a selfish driver might well not bother, unless the unpaid fare was large. If all drivers were selfish, passengers could often escape without paying. Thus, in an important sense, the contract is incomplete, but most passengers reciprocate by paying the fare. Fehr *et al* argue there are two reasons for this:

- Many passengers show strong positive reciprocity with the driver and pay the fare, even though they could escape without paying, and
- Many taxi drivers would be very upset if a passenger tried to escape without paying, and would therefore be prepared to incur the cost of catching and punishing the cheating passenger, i.e. they show strong negative reciprocity.

Both of these responses demonstrate a psychological basis to strong reciprocity.

If potential cheating passengers anticipate this likely response of the driver, they realise they are better off not cheating. Thus positive and negative reciprocity both contribute to the enforcement of the sequential exchange for the benefit of both parties. (Fehr, Fischbacher & Gächter, 2002: 5f)

- Punishment in Bilateral Bargaining Situations: The example cited in this case relates to the fact that people frequently break off negotiations with opponents they perceive are trying to squeeze them: it is an ultimatum bargaining game, where the proposer has only one opportunity to propose how to divide an amount of money between himself and the responder. If the responder rejects the proposal, neither get anything, whereas in the case of acceptance, the proposal is implemented. Tests in a wide range of cultural settings and relative amounts of money show that proposals below 20% of the available sum to the responder are rejected with very high frequency, indicating that low proposals are not treated by the responder in a self-interested maximising manner, but are regarded as “unfair,” and result in strong negative reciprocity. (Fehr, Fischbacher & Gächter, 2002: 11)

---

<sup>16</sup> Including reporting to police, summoning other drivers by radio to track the offender down, etc.

- Multilateral Cooperation and Punishment Opportunities: The authors report on various tests of the situation where the bilateral case (above) is extended to multiple interactions. Such tests suggest that “in the presence of punishment opportunities the strong reciprocators can force the selfish types to cooperate while in the absence of such opportunities the selfish types induce the strong reciprocators to defect ...”. (Fehr, Fischbacher & Gächter, 2002: 16) These suggestions by the authors support the contention that self-interest is the primary motivator in cases of strong reciprocation: the selfish types are motivated to avoid punishment by cooperating, and the strong reciprocators are motivated to reinforce cooperation out of a sense of fairness or outrage in the face of potentially selfish behaviour. I return to this issue in the assessment of strong reciprocity at the end of this Section.
- Strong Reciprocity as a Norm Reinforcement Device: In an ultimatum bargaining game called “third party punishment game,” A has 100 units to share between himself and B, who has nothing. C has 50 units and observes the exchange, assigning punishment to A according his perception of A’s generosity or otherwise. For each punishment unit C spends, A incurs 3 units of disadvantage. Because punishment is costly to C, if C is self-interested, he will not punish. Fehr *et al* report results where A is never punished if he transfers 50 or more units to B; for less than 50 the penalty exacted by C increases. If A transferred no units the average penalty cost C spends is 9 units, and hence A suffers 27 units of disadvantage, leaving him with a net 73 units (i.e. more than if he had transferred 50 units to B and incurred no penalty). If there is more than one punisher, there could well be considerable incentive for A to share with B more nearly equally. Again, there is evidence of a psychological response by the third parties with power to punish what they see as unfair behaviour, but at some cost to themselves. However the threat of such punishment may not be sufficient to change the behaviour of a self-interested non-sharer. The methodology can be extended to examine how norms can be reinforced by punishment of free riders by third parties, but as the authors point out, in many, large number situations the impact free riders have on other particular individuals is imperceptible. (Fehr, Fischbacher & Gächter, 2002: 16f)

Strong reciprocity is in a number of respects a more appealing concept, with its encouragement of good behaviour and punishment of bad, and potential for modifying otherwise bad behaviour, than simple cooperation or altruism. Both the latter can be blind to negative aspects of the motivation or behaviour of the others in the interaction; they tend to encourage improvements in otherwise bad behaviour purely by example, and not by using the perceived interests of those others.

Strong reciprocity relocates the focus from the “actor” to the “potential punisher.” In one sense, the potential punisher is behaving altruistically, by threatening to inflict a material loss without achieving any material gain for himself. Consistent with my argument in the previous section, his potential gain is non-material, and the focus of the exchange is his psychology, which might be related to a sense of fairness, or outrage, or a desire to punish for its own sake (but presumably avoid reciprocal punishment). The potential punisher’s action is based in an attitude of justice and norms of behaviour.

Turning now to the actor, it is not clear whether he chooses to cooperate (or rather, chooses the cooperative action) from an attitude of cooperativeness, or from self-interest (specifically, the desire to avoid punishment). The actor is the responder in the interchange.

It is not at all clear that the title “strong reciprocity” is appropriate, since reciprocity as such is a minor aspect of the interaction.

## **2.5 SYMBIOSIS**

As well as evidence of cooperation within species, there is also the question of whether the widely observed mutualistic symbiosis<sup>17</sup> between species constitutes “cooperation” in the sense defined – again with an evolutionary explanation. The answer must be positive in the structural sense of cooperation, since such symbiosis is defined in terms of mutual advantage, such advantage being in measurable objective terms: specifically, terms that increase the survival likelihoods of both species.

---

<sup>17</sup> Mutualism, where both parties benefit, is only one form of symbiosis – others are *commensalism*, where one party benefits but the other does not, but is not harmed; *parasitism*, where one party benefits at the expense of the other; there are also the categories of *endo-* and *ecto-symbiosis*, where one party lives inside or on the surface of the other party respectively.

An example of a mutualistic symbiotic relationship is that between the clownfish and the sea anemone. The clownfish feeds on small creatures that would otherwise damage the sea anemone, which in turn obtains nutrients from the faeces of the clownfish. Further, due to an extra thick mucous layer on its skin, the clownfish is immune to the stings of the sea anemone's nematocysts, which protect it from predators that are not so immune. Thus there are both service-service and service-resource elements to the symbiosis in this case; the precise ways in which this relationship has evolved are not fully understood, given the limitations on the behaviour of each species due to the dependent relationship. (Fautin, 1991)

Any disinclination to use "cooperation" as the descriptive term in these "between species" cases, or the "within species" cases discussed above, stems from an anthropomorphically originating sense that psychological intentionality is a necessary feature of cooperation, though it is not strictly a requirement of its definition. While psychological intentionality is a feature in many of the more sophisticated forms of cooperation and related structures discussed above, most examples of symbiosis drawn from biological settings operate without any psychological intentionality.

## 2.6 COOPERATION IN EVOLUTIONARY THEORY

There is ample evidence that cooperation (or altruism, as it is sometimes termed in evolutionary literature)<sup>18</sup> often exists in conjunction with, as well as alternative to, competition, in a wide variety of communal settings. Indeed, right from the outset of evolutionary theory, Charles Darwin himself recognised that often there were those who would sacrifice their individual potential genetic inheritance, in cooperation with the group and for its evolutionary health. Darwin went so far as to say that *this was part of natural selection* (in that it supported the genetic inheritance of the kin grouping rather than merely the individual):

He who was ready to sacrifice his life, as many a savage has been, rather than betray his comrades, would often leave no offspring to inherit his noble nature. ... There can be no doubt that the tribe including many members who ... were always ready to give aid to each other, and to sacrifice themselves for the

---

<sup>18</sup> Sober and Wilson confirm that the two terms are used with the same general meaning by evolutionary biologists and philosophers, the distinction being the particular professional group or sub group. Cooperation is the term of choice prevalent among evolutionary game theorists, because of their individualistic perspective and tendency to see the activity they are describing as motivated by self-interest, whereas the same behaviour is typically described as altruism by theorists who emphasise group or multi-level selection. (Sober & Wilson, 1998: 84)

common good, would be victorious over other tribes. And this would be natural selection. (Darwin, 1871, i: 163)

Nowak goes so far as to say that such cooperation is necessary for evolutionary populations to survive, and in that sense is the third fundamental component of evolutionary theory, along with mutation and selection. (Nowak & Highfield, 2011)

While cooperation in human populations is often intentional, the fact that cooperation is also observed in a range of populations of non-human life forms means that intentionality in a psychological sense is not a necessary characteristic. Also, because not all cooperation in human populations is necessarily based in intentionality, but can sometimes be characterised using such terms as “spontaneous” or “innate” or structural, evolutionary biologists do not generally distinguish the different types of cooperation. To the extent that “cooperation” and related terms might be regarded as involving the projection of human categories onto life forms more generally, they should be understood metaphorically. Even experts can confuse and be confused by importing human categories without acknowledging the metaphorical. A notable example is one of the most famous recent explanations of the causes of cooperation – Richard Dawkins’s “selfish gene” theory. Decades after this anthropomorphic expression entered public consciousness, Dawkins accepts that a better title would have been the “immortal gene.” (Dawkins, 2006/1989/1976)

Dawkins’s theory is that, because the individual organism is made up of a unique and non-recurring combination of genes, the gene is the primary driver of evolutionary kin selection, and hence is the main source of cooperation (within a primarily competitive evolutionary structure) – that between and among genetically related organisms. This occurs through the reproduction of the host organism, in which it is only the gene that exactly replicates itself, while the offspring of the host organism is different from each parent and (usually) each sibling. This process enables the gene to maximise its inclusive fitness, measured by the number of copies of the gene passed on to the next generation. The process generally results in enhanced survival probabilities of all the genes within the organism, and hence of the organism itself as the genes’ vehicle of transmission. However this mutual enhancement of genetic survival prospects does not always happen, in particular when the inclusive fitness of one gene conflicts with

that of another, in which case the host organism's functionality may be undermined.<sup>19</sup> (Dawkins, 2006) There is, of course, no suggestion that the processes involved here are in any sense psychological in nature.

Dawkins's focus on the gene as the unit of selection has been criticised on a number of grounds.<sup>20</sup> One of the main alternative theories postulates that when species form group social structures and exhibit more frequent interaction within the groups than between them, and when selection in such a population for a cooperative trait such as altruism depends on the differences between the groups than within them, it is termed group selection. Group selection has a long history, but has been recently revived by Edward O. Wilson, who was once a keen proponent of kin selection, but no longer. Wilson, a prestigious biologist for his work over decades on ants, argues that it is super-cooperativeness due to the group selection of eu[truly]social species, particularly ants and humans, which enables them to dominate their environment. Eusociality, Wilson argues, "created superorganisms, the next level of biological complexity above that of organisms." The characteristics of eusociality are: living in multi-generational communities, practising division of labour, and behaving, at least some of the time, "altruistically" (I believe Wilson is using the term interchangeably with "cooperatively," which is the term I prefer here because it avoids any implication of necessary intentionality). While identifying similarities between the eusocial characteristics of ants and humans, such as nests or homes which they defend from attack, Wilson carefully distinguishes the relevant human features from those of the robotic ants: for example, large body and brain, grasping hands tipped with soft, spatulate [and flexible] fingers, and opposable thumbs. (E. O. Wilson, 2012) He is quoted as concluding:

- If our behaviour was driven entirely by group selection, then we'd be robotic co-operators, like ants. But if individual-level selection was the only thing that mattered, then we'd be entirely selfish. What makes us human is that our history has been shaped by both forces. We're stuck in between. (Lehrer, 2012: 41) and
- our hypersocial spirit is both a great blessing and a terrible curse ... it is shockingly easy to elicit a sense of solidarity among a group of strangers ... yet

---

<sup>19</sup> An example of where one gene's survival prospects conflict with those of another is cancer. On certain (not totally improbable) assumptions as to how the cancer's level of activity interacts with the host's survival prospects, this interaction might be modelled as a PD.

<sup>20</sup> For example by Stephen Jay Gould, whose view, summarised by Sterelny, is that "Gene differences do not cause evolutionary changes in populations, they register those changes." (Sterelny, 2007: 83)

we are equally prepared to do battle with those who fall outside the fraternal frame. (Angier, 2012)

In these two insightful descriptions of the evolutionary forces shaping human beings both as individuals and in communities, psychological and structural forces are both seen to be at play. One might perhaps be tempted to conclude that forces which operate at the individual level tend to be somewhat more associated with the psychological, and those which operate at the group level with the structural. But having said that, the structural forces bearing on individual responses, and the psychological forces associated with group dynamics, cannot be ignored. This complexity suggests some caution in interpreting the results of modelling across life forms when we come to the case of human individuals and groups, which in turn also suggests caution in drawing conclusions regarding their relevance to our understanding of competition and cooperation in economic activities.

At this point it is worth recounting some of the evolutionary biological history which lies behind the recent controversy about the understanding of altruism,<sup>21</sup> well summarised in a 2012 article in the science section of *The New Yorker* magazine. (Lehrer, 2012: 36-42) The story starts with a paper by William Hamilton in 1964 (Hamilton, 1964: 1-52),<sup>22</sup> in which he states the now famous “Hamilton’s Rule”, based on the simple formula  $rB > C$ : “[g]enes for altruism could evolve if the benefit ( $B$ ) of and action exceeded the cost ( $C$ ) to the individual once relatedness ( $r$ ) was taken into account”. (Lehrer, 2012: 37) “ $r$ ” measures the probability of related individuals having the same genes, i.e. allowing for their genetic proximity to the sacrificing individual: 1/2 for siblings, 1/4 for half-siblings, 1/8 for first cousins, etc. The formula seems to solve the biological problem, but raises the definitional problem that “altruism” isn’t really altruistic (in the sense of completely disinterested self-sacrifice), since it is just another way for the sacrificing individual to transmit their genetic material. However, as I have already indicated and argue later in the human case (in the context of strong reciprocity, in Section 2.4, and in my discussion of Christian “agapism” in Section 4.5, respectively), altruism generally involves a non-material, psychological benefit to the altruist. The two terms “altruism” and “cooperation” are frequently used

---

<sup>21</sup> Using the term “altruism” as interchangeable with “cooperation,” the normal practice in evolutionary biology, though see the distinction made in footnote 18.

<sup>22</sup> In fact there is a longer history (see, for example, Dugatkin, 2007: 1375-1380), however Hamilton’s paper provides a satisfactory starting point for discussion of the present controversy.

interchangeably in the evolutionary-biological literature; I think that use here of “cooperation” rather than “altruism” would overcome this definitional confusion.

Hamilton’s approach, termed “inclusive fitness theory,” was not readily adopted by biologists initially, but was championed by E. O. Wilson. (Lehrer, 2012: 37f)

Substantially as a result of Wilson’s active support, by the late 1970s Hamilton’s theory had become evolutionary biological orthodoxy, providing an overarching theory to the study of the genetic behaviour of diverse species, and making Hamilton’s scientific reputation.<sup>23</sup>

After his 1964 paper, Hamilton went on to explain the extreme altruism (eusociality) in certain insect societies as due to a genetic quirk called *haplodiploidy*, in which sisters share 75% of their genes instead of the normal 50%,<sup>24</sup> and hence are prepared to serve the queen (who is a “sister-producing machine”) out of apparent selflessness, but actually for purely genetic reasons. Eusociality is a relatively rare but incredibly socially successful phenomenon – only 2% of insect species are eusocial, but they account for c. 80% of all insect biomass. (Lehrer, 2012: 38)

As Hamilton’s legacy continued to grow, and very many evolutionary biological research careers were built on the development of his paradigm, Wilson, Hamilton’s original promoter, started to have doubts. The link between eusociality and haplodiploidy was weaker than the theory suggested. For example, many of the most eusocial insect species (such as termites and ambrosia beetles) were shown not to be haplodiploid, and many haplodiploid insect species showed no evidence of eusociality. By the late 1990s, the emergent consensus was that the link was not statistically significant, and inclusive fitness theorists quietly stopped talking about haplodiploidy, even though it should have been their best piece of evidence if the theoretical link was true. (Lehrer, 2012: 39)

At about this point, mathematician Nowak, and his colleague Corina Tarnita started taking an interest in the mathematical basis of inclusive fitness theory. They concluded that Hamilton’s Rule was not very useful in practice, in that it needs to be applied at the individual level, where the assessment of the benefits (*B*) and costs (*C*) is quite

---

<sup>23</sup> On Hamilton’s death in 2000, Richard Dawkins referred to him in an obituary as “the most distinguished Darwinian since Darwin.”

<sup>24</sup> Because females emerge from a fertilised egg, while males from an unfertilised.

difficult and often unreliable. Their conclusion was that inclusive fitness was only appropriate in very specific and very rare biological circumstances.<sup>25</sup>

Nowak (and Tarnita) sought out Wilson, and after discussion they each realised that the strength of arguments for inclusive fitness in the other discipline, countering the weakness of the theory they understood in their own discipline, was overblown – inclusive fitness was weak both biologically and mathematically.

Wilson came eventually to think that eusociality in insects is so rare because there is a long list of pre-conditions which must be met before it can be established. In the case of ant colonies, this relatedness – all those kin working together – is a *consequence* of eusociality, not the cause. The mathematicians then developed a consistent model of the consequences of eusociality, to test this theory. They ran computer simulations of the characteristics of eusocial queens compared with solitary ones, with astounding results. The eusocial queen's birth rate *increased eightfold*, and her death rate *reduced tenfold*, over those of her solitary counterpart. Such an outcome would explain both the overwhelming success observed once eusociality emerges, but also the formidable barriers to its emergence – unusual mutations and very specific ecological conditions. (Lehrer, 2012: 40)

A jointly authored paper by the three scientists (Nowak, Tarnita & Wilson, 2010) unleashed a storm of protest in the evolutionary biological academic community, which continues.<sup>26</sup> Much of the difference revolves around the equation of Hamilton's Rule  $rB > C$ ; for the mathematicians, it needs to work at a detailed mathematical level (which, as already noted, they claim is extremely difficult), whereas for the biologists the equation is a short summary of the big idea of inclusive fitness. (Lehrer, 2012: 41)

Wilson's work has moved to the revival of a previously discredited idea – group selection, the idea that a group whose members include those willing to work and if needs be sacrifice themselves for the common good, would succeed over most other groups. Because the benefits of selfishness are much more tangible than those of

---

<sup>25</sup> This is an example of a wider problem with cost/benefit analysis, the closely related and widely used technique in business and public policy, based on utilitarianism – frequently costs or benefits which cannot be reduced to quantitative (generally money) terms are ignored.

<sup>26</sup> Particularly by 137 evolutionary biologists in an article in *Nature* (Abbot et al, 2011), but also by Richard Dawkins (Dawkins, 2012).

kindness and generosity, most biologists reject the idea, but Wilson thinks that group selection may be an adaptive trait.

In a comment article in *Nature*, Okasha argues that much of the controversy could be resolved by refining, comparing and contrasting the terminology and methodologies used, and the questions being examined. (Okasha, 2010) David Sloan Wilson, one of the modern proponents of the rehabilitation and development of group selection (as multi-level selection), makes a similar point. He argues that both Dawkins and E. O. Wilson have been fighting old, superseded battles, and that both kin selection and group (and/or multi-level) selection theories are complementary ways of analysing evolutionary problems, particularly in relation to the existence of altruism and competition. (D. S. Wilson, 2012) However the disagreement within evolutionary biology continues, and well beyond these two old warriors. (Okasha, 2015)

Despite (and also as a result of) these controversies, it is clear that evolutionary biology's differing understandings and methodologies have considerably nuanced the understanding of both competition and cooperation, and the ways and circumstances in which they interact. Also, because of the use of similar mathematical methods (particularly PD modelling), some of the insights translate into economic settings. Beyond the standard concepts of evolutionary selection and fitness, species need to cooperate as well as compete if they are to be sustainable: in the human case, also because it is good for the "flourishing" of both individual and society (not a concept that has much purchase in evolutionary or economic models). The Christian vision of how "flourishing" is to be understood presents a much broader, but less tangible, scope than either evolutionary biology or economics bothers to try to encompass. Nevertheless, the fact that, by use of PD models, the otherwise competitive structure of evolutionary theory has been shown to support naturally observed cooperative mechanisms does help explain why evolutionary theory has become increasingly popular in recent decades.

## **2.7 GAME THEORY APPLICATIONS**

### **2.7.1 Introduction**

In this Section I discuss the application of Game Theory (especially PD modelling) to the understanding of the emergence and sustainability of cooperation in otherwise

evolutionarily competitive populations, and whether and if so, to what extent, it has relevance to a Christian understanding of the concept of cooperation. A basic but important qualification to bear in mind is that, strictly, evolutionary theory applies to populations rather than individuals; however, it can throw light on individuals insofar as they are members of populations and reproduce within them.

Darwin brilliantly saw how the evolutionary patterns of mutation and selection could apply across the full evolutionary spectrum, and (as already noted) he had an inkling of the importance cooperation would play as part of the evolutionary processes, but was unable to explicate its evolutionary functions as thoroughly as he did for the other two factors. It is here that these mathematical approaches may help add precision to our understanding.

### **2.7.2 Nowak's Five Rules for the Evolution of Cooperation**

Nowak terms “evolutionary dilemmas” the problem of how cooperation adds to evolutionary success, when it is contrasted with the basic expectations from the operation of the other fundamental factors of evolutionary theory (mutation and selection). He develops evolutionary applications of game theory, starting with a standard one period PD model and developing it further to explain the increasingly more complex/less genetically related examples of evolutionary cooperation within a competitive evolutionary environment.

Nowak's mathematical work illuminates the importance of cooperation in evolutionary processes, in particular in providing a theoretical basis for how more complex forms of cooperation can emerge and then be sustained within evolutionarily competitive populations. My interest in Nowak's work on the evolution of cooperation was stimulated initially by Coakley's 2012 Gifford Lectures, in which she outlines the results of Nowak's work and reflects on its implications for a theological engagement with the scientific/mathematical conclusions – and for a possible renewal of natural theology.<sup>27</sup> My much more modest objective, without fully understanding Nowak's mathematics,

---

<sup>27</sup> Coakley states her purpose in the lectures to be taking “courage to regain a sense of how [the largely marginalized and even discredited] ‘natural theology’ could re-invent itself, without any naïve acceptance of secular evolutionary theory's regnant metaphysics, but yet by the closest attention to how it too is re-inventing itself, theoretically and hermeneutically...”. (Coakley, 2012, Lecture 1)

is to speculate in a preliminary way on what this work may mean for the understanding of human cooperation, including specifically a Christian understanding. Appendix 2 sets out a very brief summary of the mathematics that lie behind Nowak's five rules for the development of cooperation. Nowak assesses his five rules according to three criteria for the emergence and sustainability of a cooperative group within an evolutionary environment: *evolutionarily stable strategy* (ESS), *risk-dominant* (RD), and *advantageous* (AD) (described in more detail in Appendix 2).

It is important to note that the understanding of cooperation implicit in this work is behavioural, based on the observation of mutuality of objective benefit, but without making any claim about the "intentions" of the objects of analysis (such as genes or phenotypes). In the case of human cooperation, the evolutionary understanding is in terms of cooperative dispositional types.

Nowak's first rule is in respect of *kin selection*, where he derives the condition for co-operators to dominate defectors:  $b/c > 1/r$ , i.e.  $rb > c$ , or Hamilton's Law, which satisfies all three criteria ESS, RD and AD.

It is true that in evolutionary biology, most cooperation takes place between blood relations; however, in economics the extent of kin cooperation depends significantly on the social conditions in the particular community, economic interactions between relatives being vastly greater in rural tribal communities than in developed western urban communities, for example. Also, for Christians, in the Sermon on the Mount Jesus enjoins the redeemed to demonstrate love (*agapē*), and the self-denying service that implies, even to enemies – and beyond just kin and friends (the focus of most others). (Mt 5: 43-48)

Moving beyond relations between the genetically related, Nowak examines *direct reciprocity*, where there are repeated interactions between unrelated individuals. He examines three of the many possible strategies: "tit-for-tat" (which starts with cooperation, then does whatever the other player does in response), "generous tit-for-tat" (which starts with cooperation, and sometimes cooperates even though the other defects) and "win-stay, lose-shift" (where the co-operator repeats his previous move when doing well, or changes if doing poorly). Nowak concludes that, while "tit-for-tat" better encourages cooperation when most are defectors, "win-stay, lose-shift" better maintains cooperation once it is established.

Nowak's analysis establishes that the necessary condition for the evolution of cooperation is  $b/c > 1/w$ , where  $w$  is the probability of another encounter between these two players. This condition is ESS, and the conditions for RD and AD increase to  $b/c > (2-w)/w$  and  $b/c > (3-2w)/w$  respectively.

In the case of *indirect reciprocity*, in which cooperation increases a donor's reputation while defection reduces it, Nowak shows that in the simple model of an ungraded "good/bad" reputation, the results are the same as for direct reciprocity (but based on  $q$ , the probability of knowing the other's reputation). The necessary condition for the evolution of cooperation is  $b/c > 1/q$  which is ESS, and for RD and AD it is  $b/c > (2-q)/q$  and  $b/c > (3-2q)/q$  respectively.

In their economic applications, these strategies provide useful theoretical guides to the development and maintenance of cooperation in the many commercial situations where repeated interactions and acquisition of reputation are likely.

Where the assumption of a well-mixed population (where all the players interact equally with one another) does not hold, Nowak develops a graphical model of what he terms *network reciprocity*, where specified, different levels of interaction occur between designated individuals, both co-operators and defectors. Co-operators can prevail by forming network clusters, where they help each other. Nowak derives a surprisingly simple condition for the evolution of cooperation:  $b/c > k$ , where  $k$  is the average number of neighbours per individual. The condition is ESS, RD and AD.

Finally, Nowak turns to the rather controversial, but difficult to model, *group selection* concept, in which co-operators use groups to help them resist the predations of defectors. He assumes co-operators help others in their own group but defectors do not help; offspring are added to the same group, and once the group reaches a certain size it can split, and another group becomes extinct to maintain total population size. After some ingenious mathematics, Nowak derives the condition  $b/c > 1 + (n/m)$  for co-operators to dominate defectors, where  $n$  is the maximum size of a group, and  $m$  is the number of groups. Co-operators in this case are ESS, RD and AD. An interesting outcome is that pure co-operator groups grow faster than pure defector groups, but within mixed groups, defectors reproduce faster than co-operators. Also, if we set  $r = m/(m+n)$ , this result ( $1/r$ ) is in the same form as that for kin selection, indicating an interesting connection between group and kin selection.

Both these latter two methodologies – network reciprocity and group selection – seem likely to have applications in the study of bi- and multi-lateral trade treaties, other economic cooperation agreements, and anti-competitive economic activities such as cartels, where networks and groups of cooperation operate within sub-populations of a wider competitive economic population.

Nowak's work shows mathematically how "cooperative dispositions" can evolve, and the conditions under which those dispositions can be sustained, in various circumstances in otherwise competitive populations. One might conclude that there would be an increasing likelihood of intentional cooperation associated with the increasing complexity and decreasing applicability to non-human populations as one moves through these five cases. However, as already indicated, Nowak's mathematical modelling does not assume the cooperation resulting is due to psychological intentionality when applied in human cases.

Whereas in other social sciences, and also in Christian thought, "competition" and "cooperation" are generally seen as natural antimonies – that is, an agent could be seen as either "cooperative" with others, or alternatively taking a "competitive" attitude towards them – in economics, competition and cooperation are mutually supportive structurally. In other words, a competitive economic structure leads to greater cooperation or mutual benefit overall than would a non-competitive structure. In neo-classical economic thought, this benefit is the product of the incentive structure.

The "indirect evolutionary approach" aims to explain why people are disposed to be trustworthy (or cooperative, self-sacrificial, etc.), by seeking to integrate the traditional economic focus on rationality with the traditional sociological focus on emotion and commitment to norms. The approach proceeds by treating preferences on which rational choices depend as internal to an evolutionary process, in which choices are not motivated by objective evolutionary success. However, objective evolutionary success depends on the choices made, which in turn depend on subjective preferences; success creates a positively reinforcing feedback loop, leading to possible adaptation of rationality itself. (Güth & Kliemt, 1998) Two distinctive features of the indirect evolutionary approach are as follows:

- The “psychological” aspect is explained by the structure of the interaction assumed in the methodology, connecting rational choices, objective evolutionary success, and subjective preferences.
- “Success” is understood in terms of individuals’ well-being, not survival; for example, trustworthy types “do better” and perhaps induce imitation, but is not the same as greater reproductive success.

### 2.7.3 Christian Reflections on Game Theory

As indicated in Section 2.1, Section A1.2 of Appendix 1 includes a modified version of an extended commentary, written jointly with my Primary Supervisor, Professor Geoffrey Brennan, on a paper published in *Faith & Economics*, by Dr Ben Cooper, entitled “Game Theory in Christian Perspective.” (Cooper, 2015) In this Sub-section I highlight and/or expand on several of the points made in that commentary relevant to the Christian application of game theory.

As discussed in Section A1.1 of Appendix 1, in the case of a standard n-player PD, the maximum individual payoff for any particular player arises if the other players all cooperate and he defects (or free-rides), when he gains maximum individual competitive advantage. Even when one or more of the other players defect, he is still better off individually by defecting. The same logic applies to all the players, so the highly likely outcome is that all players defect. However, defection is sub-optimal for the players as a group; if they had all cooperated, the total payoff would be greater than that resulting from their all defecting.

What are the circumstances in which cooperation, the optimal *collective* action of the players, rather than each player concluding that their *individual* optimal action is defecting, is likely? Subject to agreement of a fair distribution of the payoff from that outcome, each player would conclude that his individual share of the payoff would be optimal if all the players cooperated, and that the same conclusion would be true for each other player. Hence, the problem becomes one of how best to achieve 100% cooperation, ensuring no player yields to the temptation to defect.

This is a quite different type of decision for the player hoping for 100% cooperation, from that of the player normally assumed in the standard n-player PD. The former (that is, “cooperating”) player has the difficult task of assessing the likelihood that

each other player will cooperate, or can be persuaded to do so, and having so decided, to stick to it, before making his own decision whether to cooperate or defect. On the other hand, the latter (“standard”) player knows that if he defects, he will be better off individually than he would otherwise be, whichever choices the other players make, albeit they will be worse off collectively than if they had all decided to cooperate.

This level of cooperation, necessary to achieve the collectively optimum level of payoff, relies on shared values and trust among all the players of such a high degree that it is rarely found. In Christian (and other religious and value-based) organisations, where such values and trust might be expected to be found amongst members, it is sometimes the case that the full benefits of 100% cooperation are achieved, though in my experience it is unusual amongst members as a whole of such organisations.

Some Christian commentators reject game theory as appropriate to Christian theology and ethics. For example, in answer to the question “How should Christians play the PD?” Cooper writes:

The answer people expect is, I think, that Christians should cooperate in the prisoner’s dilemma, playing fair, even if this is irrational. However I also think this is not the correct answer. The correct answer is, “Christians should never find themselves playing the prisoner’s dilemma!” (Cooper, 2015: 16)

And in the context of seeking an explanation for altruism and neighbour love (primary Christian ethical qualities), Jackson writes:

I reject eudaimonism and evolutionary game theory: they both conflate doing good with doing well... (Jackson, 2013: 308)

There are two points to make here:

- Christians cannot always avoid choices in certain social situations that can be represented appropriately by a PD – in Section A1.2 of Appendix 1, Brennan and I discuss the example of carbon emissions, which impact all members of society, Christians included, and which – as we show – involve choices which can be represented by a PD. As we discuss, the various ways in which a Christian might respond in the light of the PD outcomes are useful guides to Christian ethical choices.
- While it might be preferable for doing good (epitomised by cooperation) to be analysed separately from doing well (epitomised by altruism), their conflation by game theory is not a reason to reject the methodology. Contra Jackson’s

opinion, in Section 4.5 I argue that the Christian ethical rationale is not limited to altruism, and have set out the case for the Christian ethical rationale including *both* cooperation (epitomised in doing good by loving one's neighbour as oneself) as well as altruism (epitomised in doing well by loving one's neighbour in a deeply self-sacrificial way).

The PD (and other forms of game theory) can be instructive to Christians in a number of types of social interactions which involve them directly as participants, and/or impact on them or others. In some of these, cooperation is not virtuous, but PD models can be used to analyse the interactions, and help Christians understand why the interaction might or might not "succeed" as regards the objectives of the direct participants, and how that outcome might impact others affected by it. Two examples discussed in Appendix 1 are as follows:

- Producer cartels, where prices (and/or conditions) are usually inflated above those which would apply in a competitive market, but where any individual participant has the incentive to defect from the cartel, reduce prices (and/or relax conditions), and hence increase business and hopefully profits.
- A potential drug deal between a drug lord and a group of suppliers, where both have the incentive to defect from the terms of the deal and provide fake goods (counterfeit money and adulterated drugs respectively), in the hope of securing unadulterated drugs for worthless money in the case of the drug lord, and genuine cash for adulterated drugs in the case of the suppliers.

In each case the arrangement has the propensity to fail because of the incentives for the participants to defect, leading to worse outcomes for each of them than either they hoped for by defecting while the other participants cooperated, or would have resulted had they all cooperated and the arrangement proceeded.

As pointed out in Appendix 1, the PD is a useful analytical tool in such cases for Christians (and other people and groups of good will, not excluding economists and utilitarians!) because it demonstrates the following:

- The likely failure of these types of arrangements (producer cartels and drug deals), presumably to the disappointment of the direct participants, but which

is a moral good because of the negative impact their success would impose on certain non-participants:

- In the case of the cartel, the inflated prices (and/or worse conditions) imposed on customers of the participants, and
- In the case of the drug deal, the negative social and economic costs imposed on (in particular) the drug addicts and their families.

Hence these are examples where a PD is useful to Christians (as well as to others of goodwill) because the parties directly involved are not the only parties who matter normatively.

However, as pointed out in Appendix 1, Christians differ from utilitarians and, typically, economists as regards their understanding of ethical desirability. In particular, economists are much inclined to take individual's revealed preferences at face value, such that when the result produced by a PD is sub-optimal as regards those preferences, economists are likely to accept that as bad news *for the participants*.<sup>28</sup>

Also as pointed out in Appendix 1, Christians on the other hand, are not committed to preference satisfaction (and/or payoff maximisation) as definitive of ethical desirability, but are committed to a more substantive view of what constitutes human flourishing, which includes certain attitudes, beliefs and intentions. That said, the fact that Christian ethics considers more than preference satisfaction (and/or payoff maximisation) does not mean that preferences (and payoffs) are not significant normatively. As we said, while Jesus reminds Satan that man does not live by bread *alone* (Mt 4:4), his miracles of the loaves and fishes (Mt 14: 13-21, 15: 32-39) indicate he thinks provision of bread to the hungry is normatively significant.

These examples where the PD represents a good social outcome, approved by others as well as Christians, emphasises the fact that though Christians might have a distinctive ethical stance, on any particular issue where they agree with others they should support them in that common cause. In particular they should resist the

---

<sup>28</sup> This is an attitude separate from that already mentioned underlying the economist's overall ethical – usually utilitarian – assessment of the outcome of a PD, including the extent of preferences of non-participants as well as of those directly involved. The conclusion in that earlier case, where the PD concerned activity likely to be highly damaging to the interests certain non-participants, was that bad news for the participants in the PD constituted good news for society overall because of the level of harm to non-participants thereby avoided.

partisan spirit to which Christians (in common with many other groups with a distinctive ethical stance) frequently fall prey, to distance themselves because they do not agree with those others more broadly.

The issue of individuals motivated by a desire for “social status” is discussed in Appendix 1, and there is a further point in this regard on the application of the PD in a Christian context which I wish to make. I begin with Jesus’ injunction in the Sermon on the Mount regarding almsgiving:

Beware of practicing your piety before others in order to be seen by them; for then you have no reward from your Father in heaven. So whenever you give alms, do not sound a trumpet before you, as the hypocrites do in the synagogues and in the streets, so that they may be praised by others. Truly I tell you, they have received their reward. But when you give alms, do not let your left hand know what your right hand is doing, so that your alms may be done in secret; and your Father who sees in secret will reward you. (Mt 6: 1-4)

Suppose two Christians (A and B) agree to support a worthy cause, but to do it anonymously in the light of Jesus’ injunction. However, each is tempted to gain social status at the expense of the other by secretly allowing his donation to become public, while hoping that the other will adhere to the terms of the agreement of anonymity. If the cost to each of the donation can be represented by 5 and the “value” of the social status gained at the expense of the other due to one donation unilaterally becoming public by 4, the residual cost of that donation after publicity becomes 1, and the PD can be represented as in Figure 1. Depending on how strong their respective desires are to gain social status at the expense of the other, rather than obey Jesus’ injunction and adhere to the terms of their original agreement, a possible (perhaps probable) outcome is that both will defect and gain no advantage over the other in social status. Note that in this case of both defecting from the original agreement, the anticipated gain in social status of 4 is negated and hence the cost of the donation remains 5 in each case.

**Figure 1 Modified PD representing status benefits from anonymity or publicity**

		DONOR B	
		Remain anonymous	Allow publicity
DONOR A	Remain anonymous	[ 5 ; 5 ]	[ 5 ; 1 ]
	Allow publicity	[ 1 ; 5 ]	[ 5 ; 5 ]

This example differs from the standard PD, where the net advantage in the “defect/defect” case would be lower than in the “cooperate/cooperate” case; there the “dilemma” is of the following form:

“Can I defect and gain an advantage if the other cooperates, while risking that he defects too and we both end up worse off than if we had both cooperated?”

In the present case, the “dilemma” is somewhat different:

“Can I defect and gain a social status advantage over the other which largely offsets the cost to me of my donation, while risking that he defects too and we both end up in the same relative position as before, with neither of us having any social status advantage over the other to offset against the cost to us of our donations?”

Compared with the standard PD, the “defect/defect” outcome in this application does not involve any reduction in advantage to each donor. While this analysis brings into account the “value” associated with changes in status, it ignores other non-material benefits and costs such as those which might well be associated with damage to the relationship between A and B due to defection from the agreement of anonymity.

### 3. ACTION AND MOTIVE IN ECONOMIC AND CHRISTIAN ETHICS

#### 3.1 INTRODUCTION

The distinction drawn here involves a difference in the respective normative positions adopted in economics and in the Christian tradition. After discussing this difference in some detail, I comment on the respective economic and Christian positions on the significance of the “invisible hand” tradition – the idea that pursuit of self-interest<sup>29</sup> produces outcomes which are socially beneficial overall – before touching briefly on differences between the two disciplines on the social role of markets. With this focus on a key normative distinction between economics and Christianity, and a broader discussion of markets and their rationale as background, I return in Chapters 4 and following to develop my specific thesis in relation to competition and cooperation, and related concepts.

As a religious faith, Christianity takes a normative position, the understanding of which is the subject of Christian theology and ethics. There is, of course, frequently considerable contention among Christian theologians and ethicists (collectively referred to here as “Christians”) about the *content* of that normative position, but the basic issue under consideration, the fundamental normativity of the faith, is uncontentious.

However, the issue is contentious for economics, because many economists deny that the discipline is committed to a normative position. On that view, economics is a science – an essentially descriptive/explanatory enterprise, which in principle involve no value judgments at all, as represented in a famous statement by Lionel Robbins: “ethical value judgments have no place in scientific analysis.” (Robbins, 1945/1935)<sup>30</sup> Perhaps ethical requirements can be added to the system of explanation to provide “policy advice” or a normatively-based defence of certain social institutions. But any such ethical component is seen as superfluous to economics as a scientific discipline:

---

<sup>29</sup> Self-interest in this context is not necessarily “selfish,” but represent the wider expression of the individual’s interests, including concerns for others and the wider array of social concerns which the individual may have.

<sup>30</sup> The statement has been widely quoted and discussed, e.g. by Paul Samuelson, who asserts the correctness of Robbins’ view. (Samuelson, 1983/1947: 219f). For a contemporary review of the debate on Robbins’s view see Scarantino, 2009: 449-473.

on this view it is an add-on without any credentials within the economics discipline as such.

Even if this view of economics were accepted, there is an identifiable focus of explanation which attaches most naturally to certain kinds of ethical evaluation (and not to others). Specifically, economics concerns itself with human behaviour (in its Austrian tradition, human action) – or more accurately, with changes in that behaviour/action. And this means that normative/ethical systems that focus on action connect with economics in a manner that other normative/ethical systems do not.

In any event, as a purely empirical matter, economists as a profession – whatever their protestations as to the “scientific” credentials of their findings – have never been reluctant to offer advice on what public policies ought to be followed, or on what institutional arrangements are “best.” And even if that advice is understood hypothetically – for example, “if you want to achieve X, do Y” – there is still the presumption that X is what sensible policy makers will or ought to want to do and/or what sensible voters will or ought to vote for.

Clearly, any ethical system involves a specification of the scope of ethical evaluation – i.e. defining what it is that matters from an ethical point of view. Within economics, the answer given to that question has been human behaviour/action – and the social outcomes to which that behaviour/action gives rise. Within the Christian tradition by contrast, there has been much more attention to the issue of agent motive: inclination or disposition or attitude or intention or will. And it is this action/motive distinction which is the object of focus here.

The thought that the distinction between the economist and the Christian tracks the distinction between outcome-focus and motive-focus might not be so obvious if one focuses simply on the writings of Christians on public policy questions. Often such writings proceed by treating the Christian position as if it had direct implications for substantive policy. Thus, declarations by Christians on issues such as abortion, or euthanasia, or sweatshops in developing countries, or the environment, do not obviously focus on the motives of the relevant agents: those declarations usually deal primarily with agents’ actions, or the legal and public policy issues to which those actions give rise. The difference between economists and Christians in terms of my “basic distinction” I see as one of emphasis. It is true that the great majority of

economists are inclined to think that action is all that counts, but I do not think that Christians are committed to a focus on motive to the same extent. Just where the weight between motive and action in the Christian tradition properly lies is doubtless a matter of some argument. Nevertheless, I think that there is a demonstrable difference between economists and Christians on this matter, and that this difference is something that needs to be borne in mind in communication across this “disciplinary divide.”

Further, the Christian tradition has no monopoly on a concern with agent motivation. The Kantian tradition for example deprecates any action that is not driven by a sense of duty towards the requirements of the moral law – no act can have moral worth that is not driven by the intention to fulfil the moral law’s requirements. Similarly, virtue ethics (of the kind advanced by Plato and Aristotle, *inter alia*<sup>31</sup>) identifies the character of the actor rather than the action performed as the central ethical concern. In this case, motive and mode of deliberation and the nature of the agent’s inclinations all figure – over and above the actions undertaken. But it does seem that a central element in specifically Christian ethics is that motives matter – that it is not enough to be obedient to the letter of the law, as the scribes and Pharisees were. The law must be inscribed on the heart – that it is possible to sin by “thought” as well as by “word” and “deed”.<sup>32</sup> Having bad thoughts (lust for another’s wife, or anger towards one’s brother) is, in the words of Jesus, a type of sin. (Mt 5:21-30)

The Pauline triad of faith, hope and love (1 Cor 13:13) all invoke an indispensable attitudinal dimension. Paul makes it clear that love, the superior of these qualities of Christian ethical character, does not reduce to actions – “If I give all I possess to the poor and surrender my body to the flames, but have not love, I gain nothing.” (1 Cor 13:3)<sup>33</sup>

The conceptual landscape relevant to the discussion that follows thus has three elements: actions, motives, and the relation between them. And my aim is to contrast

---

<sup>31</sup> Contemporarily including Alasdair MacIntyre (1985/1981).

<sup>32</sup> Word as well as deed can be thought of as a kind of action. The decision to articulate a thought, perhaps unlike the thought itself, is a matter over which the agent can be thought to exercise greater control.

<sup>33</sup> For discussion of the textual difficulties of this verse, see Fee, 1987: 629.

economics and Christian theology in relation to those elements. Accordingly, the argument can be usefully presented in terms of the following matrix (Figure 2).

**Figure 2 Action/Motive Distinction Between Economics and Christianity**

	<b>Action</b>	<b>Motive</b>	<b>Connection</b>
<b>Christian</b>	derivative	predominant	conceptually complex
<b>Economics</b>	predominant	derivative	conceptually direct

Simply put, economics and the Christian tradition differ in what they focus on in terms of normative evaluation – and hence what requires to be explained and analysed. Economics focuses on action: motive has a derivative role, relevant only insofar as it influences action. But the connection between motive and action is conceptually direct: for the great majority of economists, agents are uniformly taken to be basically rational in the Humean sense.<sup>34</sup> The Christian tradition focuses on motive; action has a second-order role as a signal of motive, but the relation between motive and action is conceptually complex and arguably a matter of contestation between various sources (the features of which are explored in Section 3.3).

### **3.2 CONSEQUENTIALISM VS DEONTOLOGY**

It will serve to clarify the conceptual framework set out in the previous section to differentiate our distinction from the consequentialism/deontology distinction with which it is sometimes confused. There are a number of ways in which deontology and consequentialism can be distinguished, but as I see it there are three important dimensions in terms of which differences and also complexities emerge:

1. One dimension relates to the position taken towards the scope of ethical evaluation specifically, whether the actor is called on to act so as to maximise/optimize the achievement of the specified value, or to act so as to instantiate or exemplify that value. Suppose for example the normative system specifies truth-telling as the normatively relevant consideration. The

---

<sup>34</sup> Behavioural economists, while exploring the implications of evidence counter to this neoclassical assumption of rationality, are still primarily interested in how agents' psychological dispositions influence their actions.

consequentialist then thinks that each should act to secure the maximal amount of truth-telling overall. In particular, if by my telling a lie, I can bring about greater truth-telling overall, I should tell the lie.<sup>35</sup> The deontologist thinks that I should not – that my obligation is to uphold the relevant value of truth-telling by exemplifying that value in my own conduct. This difference is often described by reference to a tension between doing what is “right” (deontology) and doing what is “good” (consequentialism). It can be captured by a more precise definition of the ethical value – either the truth-telling specifically of the individual agent, or truth-telling in general.

2. Secondly, there are complexities in choosing between the “right” and the “good” in many situations, independently of whether actions or motives are predominant in our ethical framework. In many such situations, we may reasonably argue that adopting a deontological position to the exclusion of a consequentialist one (or *vice versa*) results in untenable outcomes at extremes, despite that in our “redeemed” moments we may even perceive both positions as identical.<sup>36</sup> Thus, an economist may be *predominantly* a consequentialist, but agree that there are some circumstances in which a deontological position or element needs to be factored in. Conversely, a Christian may be *predominantly* a deontologist, but accept that on occasion there may be a need to have some regard for consequences. For example, an overlap between “right” and “good” can emerge when the predominant consequentialist argues “what but the ends can justify the means?” – surely, only some ends justify some means, and not that any ends justify any means. The predominant deontologist might reject this proposition, asking “shall we do evil that good may come?” but all save the most extreme deontologists would be prepared to argue that “let right be done though the heavens fall” is more immoral. Only a

---

<sup>35</sup> The possibility is not totally fanciful. Suppose I do not believe in eternal damnation, but know that if I promote the view that lying leads to eternal damnation, that will increase truth-telling. Or suppose that I happen upon evidence that lying is much more common than people generally believe it to be. I realize that, were this evidence to become common knowledge, standards will fall and people will be less inhibited about lying (for esteem-related reasons – see Brennan & Pettit, 2004). I am asked in a public forum how common lying is. If I lie and say “rare”, that may well have the effect of reducing lying overall. In each case, a consequentialist will tell the lie, whereas a deontologist will not.

<sup>36</sup> “In moments of grace we may be given the perception that our duty and our fulfilment are one and the same, and we may speak of that unity in hope and faith; but we cannot ask that we should never be challenged to further thought and conscientious struggle by an awareness of the divergence of inclination and duty.” (O’Donovan, 1994/1986: 139).

few of those who are predominant deontologists would argue that a lie is never justified (such as to save an innocent life), or that the violence in pushing someone out of the path of the proverbial runaway truck is in the same category as the same level of violence with the objective of injury. The point is that the means and ends must be “fitting,”<sup>37</sup> whether stemming from action or motive or a mixture of both, and hence this complexity in the application of consequentialist and deontological methodologies has a distinguishable character from action and motive.<sup>38</sup>

3. A third (and independent) feature of the difference relates to the metric of evaluation. Deontologists tend to talk in terms of “permissibility/impermissibility” – so in relation to truth-telling, there is a simple on/off relation between action and rightness.<sup>39</sup> Consequentialists tend to talk in terms of degrees: when I tell a lie to increase truth-telling by others, there is a calculation required as to whether aggregate truth-telling goes up (recognising that my lying serves to reduce truth-telling in aggregate). However, in that consequentialist calculation there is no necessary presumption that each instance of lying is equally bad. Specific instances of lying can be evaluated, for example, by assessing how great is the difference between what is said and what is true. Often, of course, lying is itself a means to a further end – or even if valued intrinsically, is not the only intrinsically valued object under consideration. So it may be that a “white lie” is measured not so much by reference to how far from the truth it sits, but rather by what the assessed effect of the lie is on the well-being of the person lied to. As already pointed out, this “metric” aspect operates independently of the ethical scope. So a deontologist might work with a three-valued metric, whereas a consequentialist might measure the “ethical performance” by means of a continuous value-metric (which is individual and not meaningfully comparable with the corresponding metrics of others).

---

<sup>37</sup> This “mixed” ethical approach, combining the good, the right and the fitting (or the teleological, the deontological and the ethological) is that recommended by Max Stackhouse in resolving complex ethical situations - see his introductory essay in Stackhouse *et al*, 1995: 31.

<sup>38</sup> For a more extensive discussion see Whyte, 1967.

<sup>39</sup> The categories produce a three-valued metric, since not-performing X may be impermissible (i.e. performing X may be obligatory) – so X may be impermissible, permissible or obligatory.

The important point for my purpose, however, is that however precisely the characteristics of the deontology/consequentialism distinction are drawn, that distinction is not the same as the distinction between motive and action. In the matrix shown in Figure 3, all the illustrative entries are possible: one might be an action deontologist or a motive deontologist; and though consequentialist theories are usually applied to actions, there is nothing to preclude the possibility that the consequentialist end to be maximized is a particular motive or attitude.<sup>40</sup>

**Figure 3 Specimen Differences of Deontology/Consequentialism and Action/Motive**

	<b>Deontology</b>	<b>Consequentialism</b>
<b>Action</b>	Pharisees in relation to the “law”	Standard utilitarianism
<b>Motive</b>	Kantian internalisation of moral law	Maximisation of “love”

Figure 2 sets out relatively uncontroversial and familiar examples of each category. In some ways, each of the entries is somewhat question-begging. For example, some elements of the law mandate attitudes (e.g. the covetousness of the tenth commandment of the Hebrew bible); and it is arguable whether “love” is to be understood in terms of motive alone independent of action. Nevertheless, the cases seem sufficient to establish that the action/motive distinction and the deontology/consequentialism distinction are different distinctions. It is therefore appropriate to set the latter distinction aside for my present purpose.

### 3.3 CHRISTIAN PERSPECTIVES ON ACTIONS AND MOTIVES

For the Christian, the defining commandment is arguably that set out in Jesus’ answer to the testing question of a Pharisee lawyer: “Teacher, which commandment in the law is the greatest?” to which Jesus replies:

‘You shall love the Lord your God with all your heart, and with all your soul, and with all your mind.’ This is the greatest and first commandment. And a second is like it: ‘You shall love your neighbour as yourself.’ On these two commandments hang all the law and the prophets. (Mt 22:36-40)

<sup>40</sup> See, for example, Adams (1976).

Mark also records this interchange, and, significantly, adds “and with all your strength” to the list in the first commandment,<sup>41</sup> possibly suggesting that the commandment extends beyond motive (“heart”, “soul”, and “mind”) to action (“strength”).

This emphasis in, and the all-encompassing scope of, Jesus’ first, pre-eminent commandment reflect the fundamental connection of his teaching to Jewish theology. He is quoting the *Shema Yisrael*, the first and great commandment of the Ten Commandments (Dt 6:4), the most important part of the Jewish prayer service, and recited twice daily by observant Jews. The source of the second and equal commandment of Jesus is found in the law: “You shall not take vengeance or bear a grudge against any of your people, but you shall love your neighbour as yourself” (Lev 19:18), probably the earliest statement of what has become known as the Golden Rule. However, Jesus radically extends its application beyond the household of Israel to all people, notably in his definition of “neighbour” in the parable of the Good Samaritan.<sup>42</sup>

The primary requirement of “love” in these overall statements of the moral law of both the Hebrew Bible and the New Testament drives us from the field of moral action to the moral subject, from this or that act which the subject might perform, from the question of whether it is a good or a bad act and the extent to which it does or does not result from love, to the subject him or herself, whether he or she is a good or a bad person, and to what extent he or she is motivated by love. As well as exploring what love means in this context, I also look at the New Testament concept of what actions stem from love, what motivates love, particularly at the meaning of the related New Testament concept of “heart”, and how those actions and motivations interact.

Not all commentators agree that “love” is the defining characteristic of Christian ethics. Hays, in a very influential book (Hays, 1996), sets out three tests for what he calls the focal images of New Testament ethics, which ask of the candidate:

- The extent to which it finds a textual basis in all of the canonical witnesses;

---

<sup>41</sup> Mk 12:28-31. Lk (10:25-28), which shows Jesus using the first commandment in the prelude to the parable of the Good Samaritan, also includes “and with all your strength”.

<sup>42</sup> See previous footnote. The Samaritans were roundly disliked, even hated, by the Jews, and the two groups normally had nothing to do with each other. (See Jn 4:9)

- If it stands in serious tension with the ethical teachings or major emphases of any of the New Testament witnesses;
- If it highlights central and substantial ethical concerns of the texts in which it appears. (Hays, 1996: 195)

By a thorough application of these tests to the New Testament canon, Hays derives three focal images of New Testament ethics – community, cross and new creation. (Hays, 1996: 196-200) He deals with the objection that he has erroneously omitted love by arguing:

- that love is not a focal image in (at least) Mark, Acts, Hebrews and Revelation,
- that rather than a focal image, love is more properly an interpretation of an image, and is embodied concretely in the cross, and
- that the term has become so debased in popular discourse that it has become a cover for what is an assertion of ethical relativism – the “loving” thing to do is to accept everyone and avoid the difficult demands of the gospel. (Hays, 1996: 200-203)

Hays’s approach is based on the ideal of a unity of focal images throughout the whole of the New Testament canon, rather than accepting some diversity in the emphases of the various texts according to their differing authors, circumstances and settings (which extent of diversity in turn gives the various texts an enhanced authenticity).

In emphasising the particular words of Jesus from which I have derived love as a focal image, I am of course concentrating on his primary ministry to Jewish people.<sup>43</sup> Hence, my focus is on Jesus’ ministry, primarily to Jews and before the Easter event, and so it is not surprising that the cross does not figure in the way that it does in the letters to the early churches, which increasingly included Gentiles.<sup>44</sup>

The three focal images Hays chooses are excellent foci in the light of the issues and interests of the early church. However, I disagree with him when he says that “[t]he content of the word ‘love’ is given fully and exclusively in the death of Jesus on the cross; apart from this specific narrative image, the term has no meaning” (Hays, 1996:

---

<sup>43</sup> And hence with the strong connections to the ethical basis of the Hebrew Bible.

<sup>44</sup> Though as pointed out below, in the context of Burridge’s analysis, love is also an important theme in the Pauline letters to the early church

202), and hence love should not be added to the list. Granted, when John records Jesus telling his followers to “love one another as I have loved you” (Jn 15:12), there would clearly have been the ultimate ethical challenge of Jesus’ supreme sacrifice in the minds of John’s readers/listeners. However, the death on the cross of the incarnate Christ, the sinless son of God atoning for their sins and those of the whole world, clearly represented infinitely more by way of love for others than any of his followers could ever imagine emulating. Hence, love as an ethical focus for the post-Easter believer has a meaning related to but subsidiary to Jesus’ love for all of humanity in his death on the cross.

Several commentators agree that love is the primary focus of Christian ethics.<sup>45</sup> Richard Burridge, as well as adopting love as the epitome of Jesus’ two great commandments and hence as the basis of Christian ethics (Burridge, 2007: 50-55), deals specifically with Hays’s objections. He critiques at some length Hays’s complete neglect of the central role played by love in the Pauline letters, particularly its very practical ethical consequences in them. (Burridge, 2007: 108-110) In addition to love’s primary place in Jesus’ two great commandments, he analyses in detail the relationship between love, law and freedom. Summarising an extended and at times complex discussion, Burridge concludes that God’s love, what he has done in Christ, is the “fulfilment of the law” (Gal 5:14, Rom 13:10); it frees the Christian from the law to live a life exemplified in the life and teaching of Jesus in the power of the Holy Spirit. (Burridge, 2007, 110-115)

In addition to Jesus’ focus on love, the gospels include many instances of where Jesus rails at the casuistry of the scribes and Pharisees, at their narrowly legalistic application of the law, rather than its spirit. In his primary ethical teaching in the Sermon on the Mount, Jesus both affirms the rules of the Hebrew Bible (“the law [and] the prophets” Mt 5:17-20), and, as just noted, goes beyond [“fulfils”] them, to the motivations, which to many exegetes he appears to equate with the action itself. Thus lusting after a woman is equivalent to committing adultery with her in the heart (Mt 5:27, 28). Christian theology, primarily based in the atoning death of Jesus Christ on the cross, holds that God gives redemption by grace to those who believe and accept

---

<sup>45</sup> For example: Schrage, 1988: 212f & 216f; Furnish, 1972: 95; and Campbell, 2005: 117, cited by Burridge 2007: 108.

his forgiveness for their sins, and even though in their actions they continue to fall short, they can continue to be forgiven after genuine repentance, provided their motivation “in the heart” is true.

Two biblical characters who are recorded as greatly used by God in the course of salvation history but who are nevertheless fallible, demonstrate the truth of this statement of God’s grace towards sinners who genuinely seek forgiveness and maintain a pure heart:

- **David**, whom Samuel pronounces as Saul’s successor as King of Israel because he is “a man after God’s own heart” (1 Sam 13:14). This is despite David’s subsequent adultery with Bathsheba and deliberate murder of her husband Uriah (2 Sam 11). But when confronted over his sin by Nathan the prophet and punished by the death of his and Bathsheba’s child, David admits his sin and seeks God’s forgiveness (2 Sam 12:3-20, and Ps 51). David continues to be God’s anointed king of both Israel and Judah in the Hebrew Bible (e.g. Ezek 37:24f), from whose line the Messiah will come (e.g. Is 9:7), and is confirmed as “a man after God’s own heart” in the New Testament by Paul at Pisidian Antioch (Acts 13:22).
- **Peter** is called by Jesus as one of the first disciples (Mt 4:18-20), the first disciple to whom God reveals that Jesus is the Messiah (Mt 16:13-17), one of the three disciples with Jesus on the mount of transfiguration (Mt 17:1-13), and declared by Jesus to be the foundation of the church (Mt 16:18-19). Nevertheless he denies Jesus three times after his arrest (Mt 26:69-75), but repents (v 75) and is forgiven. Peter is commissioned by the resurrected Christ to shepherd his flock (Jn 21:15-19), and goes on to be one of the key apostles of the early church. He declares the gospel in Jerusalem to Jews (Acts 2:14-42, Acts 3:11-26, Acts 4:5-22, Acts 5:17-32), and beyond to Gentiles as well (Acts 9:32-10:48), for whom he is instrumental in their acceptance as Christians (Acts 11:1-18).

For my question, then, the significance of action and motive in Christian ethics, Jesus’ pre-eminent commandments (recorded in his reply to the Pharisee in Mt 22:36-40), and his development of that statement in his other fundamental ethical teaching, particularly the Sermon on the Mount, requires considerable unpacking.

First, what the New Testament gospel and (particularly) letter writers meant by the word translated as “love” is a matter on which Biblical scholars have expended considerable energy. Its importance, particularly in Paul’s writings, including the seminal verse in 1 Corinthians 13:13: “And now faith, hope, and love abide; these three, and the greatest of these is love”, is reason enough.

There are four words in Greek so translated – *storgē* (affection, especially within families) and *eros* (including love between the sexes, including erotic love), neither of which are really used in the New Testament, *philia* (friendship, “brotherly love”), and *agapē* (charity, or self-giving love). Despite being the most widely used word in contemporary Greek literature for “love”, *philia* and its cognates are used very sparingly in the New Testament (mostly in John’s gospel). *Agapē* is used rarely in classical Greek, but is the preferred word for love of the New Testament writers (over 100 times), arguably primarily to avoid the associations and/or limitations of the commonly used Greek words of the first century. It is also used widely in the Septuagint (the Greek translation of the Hebrew Bible widely in use at the time of Christ), probably for similar reasons.

Grenz summarizes well the arguments for the New Testament and early church writers’ use of *agapē*:

This previously obscure word of uncertain etymology, lacking both the power or magic of *eros* and the warmth of *philia*, was just what the early Christians needed to articulate their understanding of love.

In part the reason for the choice of *agapē* lay in the meaning of the term itself. In classical Greek, the verb form *agapaō* can carry the idea of “to prefer,” “to set one good or aim above another,” “to esteem one person more highly than another.” As a result it could denote God’s preference for a particular person and hence the one whom God blesses with particular gifts and possessions. Consequently to the ancient Greek mind *agapē* spoke of a love that moved beyond emotion – beyond an experience which, in the words of Barclay, “comes to us unsought, and, in a way, inevitably.” Instead, *agapē* is “a principle by which we deliberately live.” This kind of love has to do with the mind and the will. (Grenz, 1997: 280f)

So this love of God and neighbour which is at the core of the Christian life is a self-giving love based in the heart, soul and mind rather than in the emotions. It is the enabler of actions, and, without minimising the importance of actions, transcends them. But, how do Jesus and the synoptic gospel writers understand “heart”, the wellspring of this radical love? One might conclude that, in modern language, it is the

motivation for the action which they are emphasising. Some theologians have specifically adopted this position, e.g. Helmut Thielicke: "The specifically 'Christian' element in ethics is rather to be sought explicitly and exclusively in the motivation of the action." (Thielicke, 1966, 1:20, cited in Grenz, 1997: 229)

Jesus' criticism of the religious leaders of his day was that in spite of their outward conformity to the law, their motives were wrong. They were focused on their own interests, specifically their pride and power, rather than worship of God and care for their people, from which Jesus was able to see they were motivated by selfishness. His divine insight exemplifies the obvious dilemma of motive as a human ethical basis: only the extremely insightful (such as Jesus, and ultimately only God himself) can distinguish good actions done for wrong reasons (or vice versa). Scripture is replete with examples: throughout the Bible, believers are urged to pray, give to the poor, and fast, but Jesus points out that those who do such for selfish reasons will go unrewarded by God. (Mt 6:1-18) And there is a second leg to this dilemma: when a motive (good or bad) never has the opportunity to find fulfilment, this too is opaque to ordinary human eyes. At its most fundamental, the dilemma illustrates the absence of a one-to-one correspondence between a given action and the motive of its agent.<sup>46</sup>

This reason, the difficulty of deducing others' motives from merely observing their actions, lies behind the extensive warnings in the New Testament against judging others (e.g. Mt 7:1f, Lk 6:37, Rom 14:1-15, Jas 4:12). Meier concludes: "Since individuals cannot reliably judge others' motives, we have no recourse in human affairs but to 'know a tree by its fruit' (Mt 7:15-20, 12:33, Lk 6:43-45) even while recognizing the limitations of not being able to see another's heart." (Meier: 1996) In this respect, Christians are of course in the same boat as anyone else, but cannot leave the matter there, recognising the importance of motive (or the "heart", to use the Biblical writers' majority term), because of God's priority on the innermost wellspring of action.

Even more hazardous is attempting to deduce God's motives based upon his actions; as second Isaiah says:

---

<sup>46</sup> See extended discussion by Meier, 1996.

For my thoughts are not your thoughts, nor are your ways my ways, says the Lord. For as the heavens are higher than the earth, so are my ways higher than your ways and my thoughts than your thoughts. (Is 55: 8-9)

A New Testament example has Luke recording Jesus as saying to the Pharisees when they scoffed at His teaching that humans cannot serve God and wealth: “You are those who justify yourselves in the sight of others; but God knows your hearts; for what is prized by human beings is an abomination in the sight of God.” (Lk 16:15)

In some cases scripture shows the omniscient God responding to people in respect of their motives (e.g. 1 Kings 8:39), in other cases in respect of their actions (e.g. Rom 2:2-16), and sometimes with a balance of both (e.g. Rev 2:23). That our intentions are not always achieved, and frequently that our actions have unintended consequences (both good and bad), make any analysis enormously complex. In any case, how God will judge our motives and actions is doubtless beyond human scrutiny. And God seems to work out his purposes independently of human actions<sup>47</sup> (raising interesting questions about human free will – an important issue, but beyond my present scope).

Human motives which may never result in action are still subject to divine scrutiny and factored into God’s judgment: Jesus equates anger with murder (Mt 5:21,22) and lust with adultery (Mt 5:28).<sup>48</sup> James (4:17) says it is sinful to know the right thing to do, but fail to do it; hence many Christians pray in the liturgy of confession for forgiveness of sins of omission as well as sins of commission. And in the Hebrew Bible, the last of the Ten Commandments prohibits covetousness, independently of any resultant action (unlike the preceding four commandments, which deal specifically with anti-social actions). (Ex 20:17)

Thus, a thought can constitute an act, and is capable of being sinful. However, it seems to me that it is the deliberate or permissive act of thinking which has the potential for sinfulness, rather than a thought which occurs more or less spontaneously due to some circumstance or stimulus.

---

<sup>47</sup> The classic biblical example is in the Genesis record of the life of Joseph (Gen 37-50). In Gen 45:5, after revealing his identity to his brothers, Joseph tells them that “God sent me before you to preserve life”, and when he is eventually reconciled with his brothers after Jacob’s death, he tells them “Even though you intended to do harm to me, God intended it for good, in order to preserve a numerous people...” (Gen 50:20).

<sup>48</sup> See more extensive discussion below.

The widespread consequentialist view understanding motivation through the resulting impact of an action is in a substantial minority in scripture, as opposed to the majority deontological perspective of the intrinsic value of that action. Assuming a particular outcome is frequently seen in scripture as presumptuous of the future, which cannot be predicted with any certainty; rather one is enjoined to trust God (e.g. Mt 6:25-34). Some writers find motivation an inadequate description of what the New Testament states is the ethical core of who human beings are. For example, Grenz says that

...even the quest for right motives does not tap the central heartbeat of the New Testament conception of the ethical life. Motivation is itself related to something deeper. According to the New Testament writers the ultimate wellspring of action is our “heart”... (Grenz, 1997: 229)

He goes on to link “heart” with the virtue of integrity, which in turn he argues leads to uprightness of character, and then, importantly for the Christian, authenticity, courage of conviction, and finally a communitarian virtue ethic. (Grenz, 1997: 229-239)

Or we might turn the definition the other way around, and define virtue in terms of the heart:

A “virtue” is a habit of the heart, a stable disposition, a settled state of character, a durable, educated characteristic of someone to exercise her will to be good. The definition would be circular if “good” meant just the same thing as “virtuous.” But it’s more complicated than that. Alasdair MacIntyre’s famous definition is “A virtue is an acquired human quality the possession of which tends to enable us to achieve those goods which are internal to practices and the lack of which effectively prevents us from achieving such goods.” (McCloskey, 2006: 64 quoting MacIntyre, 1981: 178)

Independent of following Grenz or not in this subsequent train of thought, I turn now to the primary word used in the New Testament covering the wellspring of motivations (the “heart”). When Jesus attacks the scribes and Pharisees for their legalist prioritising of tradition in Mark 7, including the Jewish food laws, he then teaches the disciples that it is what comes from the human heart which is critical:

Do you not see that whatever goes into a person from the outside cannot defile, since it enters, not the heart but the stomach,... It is what comes out of a person that defiles. For it is from within, from the human heart, that evil intentions (*dialogismos* = calculation, reasoning, thought, plotting) come: fornication, theft, murder, adultery, avarice, wickedness, deceit, licentiousness, envy, slander, pride, folly. (Mk 7:18b-23)

The word “heart” (*kardia*) in the New Testament has multiple meanings, the most important of which, according to Behm, are:

- (a) the seat of feelings, desires, and passions (e.g. joy, pain, love, desire, and lust),
  - (b) the seat of thought and understanding,
  - (c) the seat of the will, and
  - (d) the religious centre to which God turns, which is the root of religious life, and which determines moral conduct.
- (Behm, “*kardia*,” in Kittel & Friedrich, 1985: 416)

Behm in this article attributes meaning (b) – the seat of thought and understanding – to the use of *kardia* in this Markan passage.

This judgment is confirmed by *kardia*’s inclusion in the widely recognised Bauer’s Greek-English lexicon under the expanded classification as follows:

- the seat of physical, spiritual and mental life
  - as centre and source of the whole inner life, with its thinking, feeling, and volition
    - of the faculty, of the thoughts themselves, of understanding, as the organ of natural and spiritual enlightenment. (Bauer, 1979: 403f)

O’Donovan questions this interpretation of “heart” in this Markan passage. He asks:

Could Jesus have meant that every act of foolishness was preceded by a foolish thought? that every act of slander was preceded by a slanderous thought? and that every act of pride was preceded by a proud thought? Did he perhaps mean that none of these acts would be a matter of serious moral concern if they were spontaneous and undeliberated? (O’Donovan, 1994/1986: 205)

His answer is that “the seat of thought and understanding” is an inadequate interpretation in this context,<sup>49</sup> and that “[t]hese evils arise from the “personal agency” of the one whose acts express them.” He explains:

They “defile a man,” unlike the food he eats, because they really belong to him. He the moral agent is himself the evil thinker, the fornicator, the thief; he is not merely one who happens to perform fornication, theft or slander, as it were incidentally. The individual is the subject of his own corrupt acts, he is the consummate moral reality which his acts declare. When we are told that God looks upon the heart of a man, this means, not only that God sees certain acts which, by their private character, are hidden from the scrutiny of human observers, but also that he sees and comprehends the subject himself in his totality as a moral being. (O’Donovan, 1994/1986: 205)

Thus, for O’Donovan, Jesus’ meaning of “heart” in this passage goes beyond the “seat of thoughts and understanding,” to the very core of who we are, in our “totality as a

---

<sup>49</sup> Though not in other contexts – see below.

moral being.” This conception gets to the very core of what Mark’s recording of Jesus’ use of “heart” means in this passage. Thoughts and understanding, and, I think, motivations, are a consequence unseen (except by God), rather than who people are in our totality as moral beings.

But O’Donovan does not see the substitution of divine ethical evaluation of the subject him or herself for ethical evaluation of his or her acts; they are correlates, not alternatives. The understanding of this correlation is, in O’Donovan’s words, “the most difficult question that faces an ‘ethics of character’.” (O’Donovan, 1994/1986: 205f)

At the risk of over-simplifying his extended discussion (O’Donovan, 1994/1986: 206-225), O’Donovan expands on the relationship between character and action, subject to two stipulations – that our acts do not define our character, and yet we shall be known by our acts (“fruits”). Contra the first stipulation, modern ethics is substantially act-ethics, and dispositions of character are reduced to repetitiveness of actions; however there are dispositions of character not easily reduced to actions – e.g. “maturity”, or “even-temperedness”, or “lack of initiative.” In relation to the second stipulation, actions have epistemological priority over character; however character is only helpful in understanding a person’s actions retrospectively, since character is not fixed, and legitimately varies between people (consistent with the different gifts and callings). Character is a category useful for moral evaluation, rather than moral deliberation, as a category which must remain open until the end of life, and perhaps even until the end of time.

I now come to the second key passage in the examination of the Christian understanding of the respective significance of motive and action – Jesus’ primary ethical teaching in the Sermon on the Mount. Again, it is motive (or the outcome of what is in the heart) that is the source, and the ethical equivalent, of the resulting action. This has always seemed very hard teaching.

Christian ethicists have agonised about how seriously to take Jesus’ apparent equating of lust with adultery, or anger with murder, and preachers frequently avoid (or fudge over) this core of Jesus’ ethical teaching on the grounds of pastoral difficulty. Stassen and Gushee deal with this challenge by framing Jesus’ teaching in the Sermon on the Mount as a series of fourteen ethical triads (Stassen & Gushee, 2003: 125-145), illustrated in the cases of adultery/lust and murder/anger as follows (Figure 3, p 142):

**Figure 4 Examples of Stassen & Gushee Ethical Triads in Jesus' Ethical Teaching**

	<b>Adultery/Lust</b>	<b>Murder/Anger</b>
	(Mt 5:27-30)	(Mt 5:21-26)
<b>Traditional Righteousness</b>	You shall not commit adultery	You shall not kill
<b>Vicious Cycle</b>	Looking with lust is adultery in the heart	Being angry, or saying, you fool!
<b>Transforming Initiative</b>	Remove the cause of temptation	Go, be reconciled

Their very appealing argument is that the key emphasis in each triad is on the “transforming initiative,” whereas the stumbling-block for many interpreters has stemmed from seeing the “vicious cycle” as the core of the teaching. This argument is appealing, in that it removes this core of Jesus’ teaching from the realm of the apparently impossibly idealistic.<sup>50</sup> But from the perspective of my discussion here, the driver of the transforming initiative is an act of the will, deriving from a renewal of the attitude of the heart, and then evidenced by the resulting actions. Only if the heart is renewed and transformed can the will enable and empower the action of the transforming initiative.

I have focused in this discussion of the ethical basis of the gospel on the primary relevant statements of Jesus in the gospels. Before leaving this discussion, I touch on a couple of examples from the New Testament letter writers, who reflect the positions on action and motivation with varying degrees of emphasis.

---

<sup>50</sup> In an influential commentary, Bruner terms the three elements of the triad “Old Commandment,” “New Command” and “Little Steps of Obedience,” which implies he sees the “New Command” (Stassen & Gushee’s “Vicious Cycle”) as the core of Jesus’ teaching. However Bruner acknowledges the insight from Stassen, implying minimal difference between them in practice, though Bruner would differ in principle from Stassen and Gushee, who see the “Transforming Initiative” as the core of Jesus’ teaching: The “Little Steps” are often unjustly neglected in the wake of the astonishing power and novelty of Jesus’ New Command. But they help by giving creative, practical suggestions on how concretely to try to live Jesus’ road-clearing new way. (Bruner, 2004/1987: 207)

Paul, dealing with the problem of the inconsistency of his desire to serve God contrasted with the sinful actions resulting from his human fallenness, which is the external evidence of an inner conflict, sees his redemption through Christ:

So I find it to be a law that when I want to do what is good, evil lies close at hand. For I delight in the law of God in my innermost self, but I see in my members another law at war with the law of my mind, making me captive to the law that dwells in my members. Wretched man that I am! Who will rescue me from the body of this death? Thanks be to God, through Jesus Christ our Lord! (Rom 7:21-25a)

Thus, for Paul, motives matter supremely, because it is only by belief in God's grace and forgiveness through Christ that we can be saved, just as it is impossible for us to please God by our actions. The inner conflict between the "law in the mind" and the "law in the members/body" seems to be Paul's description of the ongoing battle for inner transformation of the heart, as his renewed mind fights to control his wayward actions.

James, dealing with the problem of believers who thought they had no need to concern themselves with good actions, sees good actions as evidence of the transformation within of the innermost motives, expressed as "faith":

... faith by itself, if it has no works, is dead. But someone will say, 'You have faith and I have works.' Show me your faith apart from your works, and I by my works will show you my faith. (Jas 2:17-18)

To summarise, I have focused most attention on Jesus' reinforcement of the two great commandments, and their implications for Christian ethics, particularly our question of the relationship between motive and action. I have also looked briefly at the implications of Jesus' key ethical teaching in the Sermon on the Mount, and even more briefly at selected excerpts from Paul's and James's letters as samples of the variety of New Testament thought on the question (aside from that of the gospel writers – especially focusing on the words they record Jesus using).

The primary conclusion is that consistently throughout the New Testament, what I have termed motive and its wellspring are the primary theological concern, while actions are seen as a consequence of the inner transformation.<sup>51</sup> A variety of terms are used in the New Testament to address the concepts involved, and I have explored the

---

<sup>51</sup> The initial action may precede as a result of reluctant obedience, but hopefully that inner transformation takes over (or at least begins) and the subsequent obedience becomes less reluctant; hence the process may be more a progressive cycle of transformation and action.

two most important of them – love (*agapē*) and heart (*kardia*) in some detail. There is considerable diversity of opinion on their appropriateness as the key expressions of this wellspring of motives, but none challenges the primary conclusion that motives as such remain central.

### 3.4 THE INVISIBLE HAND TRADITION IN ECONOMICS AND A CHRISTIAN RESPONSE

With the foregoing discussion of the differing understandings of action and motive in economic and Christian thought as background, it is useful to illustrate this major difference between the two traditions by reference to “invisible hand” mechanisms.<sup>52</sup>

There is a long-standing tradition in economics, particularly stimulated by the work of Adam Smith, of interest in institutional arrangements where the so-called “invisible hand” mechanism produces desirable results. The central idea of this metaphor<sup>53</sup> is that good social outcomes can emerge from certain well-designed institutions, without the goodness of those outcomes depending on the behaviour of the participating agents. The special “virtue” of such institutions where the invisible hand metaphor is a dominant description (“invisible hand institutions”), is that they make minimal demands for their good operation (and in the limit, no demands at all) on the virtue of participants. Since virtue is scarce among humanity, social arrangements that secure good outcomes without relying on human virtue are *prima facie* desirable.<sup>54</sup> Invisible hand institutions “economise on virtue” (Brennan & Hamlin, 2000, Chapter 4) or “economise on love” (Robertson, 1956).

In all his writings Smith only uses the invisible hand metaphor three times; two of those are of direct interest to economists, and are somewhat peripheral to his main argument in each of the cases where he uses it. In *The Theory of Moral Sentiments* he seems to be making a rather exaggerated argument of the “trickle down” variety; he says of the rich:

They consume little more than the poor, and in spite of their natural selfishness and rapacity ... they divide with the poor the produce of all their improvements. They are led by an invisible hand to make nearly the same

---

<sup>52</sup> There is some overlap in the discussion in this Section with that in Section 4.4.

<sup>53</sup> There is considerable debate on the precise nature of the expression (see, for example, Samuels, 2011: 60-77); however metaphor seems the most reasonable general description, without denying some of the more significant but limited alternatives.

<sup>54</sup> And while desirable from a Christian perspective also, such actions would be better if they arose from good motives.

distribution of the necessaries of life, which would have been made, had the earth been divided into equal portions among all its inhabitants, and thus without intending it, advance the interest of the society ... (Smith, 2002/1759, Part IV: 215)

A more modest statement of his argument (minus the hyperbole) is that spending by the rich gives employment to the poor, thereby making the distribution of income, particularly on the “necessaries of life,” less unequal, and therefore more amenable to free markets.

In *The Wealth of Nations* he argues that the concern of a businessman for his own security and gain leads him to favour domestic rather than foreign investment, to the probable, but on his part, unintentional, benefit of the whole of society:

By preferring the support of domestic to that of foreign industry, he intends only his own security; and by directing that industry in such a manner as its produce may be of the greatest value, he intends only his own gain, and he is in this, as in many other cases, led by an invisible hand to promote an end which was no part of his intention. Nor is it always worse for the society that he was no part of it. By pursuing his own interest he frequently promotes that of the society more effectually than when he really intends to promote it. (Smith, 1999/1776, Book IV: 32)

While the first of these direct examples of the invisible hand in Smith is, on the face of it, somewhat questionable, and the second somewhat limited in application,<sup>55</sup> economists have generally attributed to Smith the origination of what has become a wide applicability of the “invisible hand” in economic institutions. Their standard example of an invisible hand institution is the freely operating market, often citing Smith’s memorable statement:

In civilized society, he [man] stands at all times in need of the cooperation and assistance of great multitudes, while his whole life is scarce sufficient to retain the friendship of a few persons... Man has almost constant occasion for the help of his brethren, and it is in vain for him to expect it from their benevolence only. He will be more likely to prevail if he can interest their self-love in his favour and shew them that it is for their own advantage to do for him what he requires of them... It is in this manner that we obtain from one another the far greater part of those good offices which we stand in need of. It is not from the benevolence of the butcher, the brewer or the baker that we expect our dinner, but from their regard to their own interest. We address ourselves not to their humanity but to their self-love and never talk of our own necessities but of their advantages. (Smith, 1999/1776, Book I: 118f)

---

<sup>55</sup> Though in *The Wealth of Nations* example, he acknowledges the applicability of the invisible hand in “many other [unspecified] cases.”

Smith had spent the first three chapters of his *magnum opus* explaining just how extensive are the gains from specialisation (the “division of labour”), and hence the huge potential gains from human cooperation on a large scale. (Smith, 1999/1776, Book I, Chapters I-III) But he sees that the mobilisation of those gains depend on the possibility of exchange, so each individual can satisfy needs and wants by exchange rather than through the limiting and significantly less efficient process of self-sufficiency. People will be led to specialise more extensively if it is in their interests to do so. That is what exchange allows: it encourages each participant in the trading relationship to act in the interests of others even when he has no concern for those others’ interests other than instrumentally as a by-product in the pursuit of his own.

Asked what is the fundamental concept in economics, one might offer a variety of suggestions: scarcity, competition, the allocation of resources, optimisation, self-interest. These are all good answers in their own ways, but there is another possible answer that is in many ways better still. This is Smith’s answer – the basic concept is “human cooperation” and the huge material advantages that such cooperation delivers. But the cooperation Smith envisages is not effected psychologically, in that a cooperative spirit *may* be present, but the cooperation does not depend on it. Rather, it depends on a system of mutually agreeable exchanges, in which it may be presumed self-interest is predominant. The cooperation in question can thus be described as “invisible,” though “not necessarily intentional” is probably more descriptive.

Smith does not presume that all individual market exchanges need to be dominated by self-interest. For example, if the baker feels benevolence for those of his customers who are penurious, and if as a result he decides to supply bread to the hungry where no payment is forthcoming, this would not make it impossible for the market system to operate. Smith’s claim seems to have two aspects: first, the analytic claim that the market does not require benevolence for its operation; and second, the empirical claim that, as a matter of fact, most market participants seem not to be driven primarily by benevolence. Some versions of invisible hand reasoning might actually require self-interest,<sup>56</sup> but Smith’s does not seem to. The market, on Smith’s view, does not *require* greed: the market is substantially “motive independent.”

---

<sup>56</sup> Arguably Mandeville’s in *The Fable of the Bees* (Mandeville, 1732), or Hayek’s defence of market prices as indicators of marginal value (Hayek, 1945).

Thus for Smith, it is the well-structured market which makes the benefits of cooperation through specialisation available, and not self-interest as such. Indeed, he gives several examples of the disadvantages of self-interest in the absence of a well-structured market, including from his own field of academia. He cites certain universities in which the professors' remuneration largely depends on fees paid by the students, in which cases the professors have an incentive to attend diligently to the quality of their teaching. By contrast, in universities where professors' remuneration comes directly from central university funds or foundations, there is no such incentive to provide quality instruction, and teaching standards are poor. The self-interested academic who is "naturally active" has an incentive to "employ that activity in any way from which he can derive some advantage, rather than in the performance of his duty, from which he can derive none."<sup>57</sup> Even where teaching standards are supposed to be monitored by other academics who also have, or ought to have, teaching duties, Smith says that, because of self-interest, "they are likely to make a common cause, to be all very indulgent to one another..."<sup>58</sup>

A second point to note is that there is no suggestion in *The Wealth of Nations* – or in the idea of an invisible hand mechanism more generally – that it produces or increases greed (or material motives more broadly).<sup>59</sup> Further, while it is generally argued by neoclassical economists that the invisible hand formulation takes human motivations as given, analysis by behavioural economists of *The Theory of Moral Sentiments* concludes Smith saw motivations as variable, though their analysis does not suggest this variability is due to exchange activity as such.<sup>60</sup> And insofar as Smith has anything

---

<sup>57</sup> Smith is clearly ignoring any non-material aspect of "advantage" which might result from a sense of satisfaction to the academic in having taught well or performed his duty.

<sup>58</sup> (Smith, 1999/1776, Book V: 349f) Smith is also making a rather personal point here – his own Glasgow University is an example of his first, market-based institution, while Oxford University (where he studied, at Balliol College, from 1740-1746) is an example of his second, centrally funded institution. Of the latter university, where he was doubtless critical of the teaching standards, he goes as far as to say: "In the university of Oxford, the greater part of the public professors have, for these many years, given up altogether even the pretence of teaching." (Smith, 1999/1776, Book V: 350)

<sup>59</sup> The concept of the invisible hand was, of course, formulated long before the (relatively) recent application of the insights of psychology in Behavioural Economics, which field is interested in this assumption.

<sup>60</sup> Ashraf, Camerer & Loewenstein, 2005: 131-145. They conclude (142) as follows:

Adam Smith's actors in *The Theory of Moral Sentiments* are driven by an internal struggle between their impulsive, fickle and indispensable passions, and the impartial spectator. They weigh out-of-pocket costs more than opportunity costs, have self-control problems and are overconfident. They display erratic patterns of sympathy, but are consistently concerned about fairness and justice. They are motivated more by ego than by any kind of direct pleasure from consumption and, though they don't anticipate it, ultimately derive little pleasure from either.

to say in *The Wealth of Nations* about the effect of markets on motivations, his remarks focus on the possible narrowing effects of specialisation rather than the effects of exchange activity as such (corrupting or otherwise).<sup>61</sup> Indeed, Smith thinks that life in commercial society makes people more attentive to the needs and wants of others, more punctual and more trustworthy (the “douce commerce” argument). These effects too arise from self-interest: it pays participants in market exchanges to develop these habits and dispositions.<sup>62</sup>

It is clear that for Smith the rise of commercial society and the consequent diffusion of a “general plenty ... through all the different ranks of society” (Smith, 1999/1776, Book I: 115) is a good thing. Yet the institution of the market itself is not a matter of deliberate design by humankind. (Smith, 1999/1776, Book I, Chapters I-III)

As regards attempts at management of the market, Smith counsels minimal interference. The only duties of government are protection of society from external invasion, protection of every member of society from injustice or oppression by others, and the creation and maintenance of necessary public goods which would be unprofitable for individuals or small groups of them to provide. To go beyond these necessary functions is to risk overreaching:

The sovereign is completely discharged from a duty, in the attempting to perform which he must always be exposed to innumerable delusions, and for the proper performance of which no human wisdom or knowledge could ever be sufficient; the duty of superintending the industry of private people, and of directing it towards the employments most suitable to the interest of the society. (Smith, 1999/1776, Book IV: 274)

In Smith’s understanding, the invisible hand of the market not only operates unseen, and without any necessary or overt intention of societal benefit on the part of the participants, but it also originates similarly. Markets may be “constructed” to meet a

---

In short, Adam Smith’s world is not inhabited by dispassionate rational purely self-interested agents, but rather by multidimensional and realistic human beings.

<sup>61</sup> Smith also notes that commercial society tends to “extinguish the martial spirit” and makes it difficult for a people to defend themselves. (Smith, 1999/1776, Book V: 373) But whereas Smith considers this a loss, one might argue that a society lacking the inclination to heroism might also lack the inclination towards military adventurism – peaceability is not obviously a moral inadequacy, even if it is partly a matter of timidity.

<sup>62</sup> In the *Lectures on Jurisprudence* (1762) (para 327) Smith remarks that the Dutch are more “faithfull to their word” than the English, and the English more so than the Scots – and that this is because commercial society is better developed in Holland than in England than in Scotland. One might concede Smith’s empirical claim but suspect that he got the direction of causation wrong, i.e. that greater innate trustworthiness is the cause of more developed commercial society rather than vice-versa.

perceived social need, but primarily and most usually they emerge spontaneously in response to the obvious and ubiquitous individual (and hence social) benefits of specialisation and exchange. Smith clearly sees this emergence as “providential” and refers to it as the action of a “benign deity” – though it is not by any means clear how he intended this reference to be taken, literally or figuratively.<sup>63</sup>

Smith’s personal theological views are not transparent, nor are they relevant to the present argument.<sup>64</sup> The influence on the emerging understanding of the invisible hand metaphor of Smith’s personal views and the broader intellectual and social climate of the period, while of some interest, are not fundamental to the argument. What is fundamental is an aspect of the invisible hand notion that is widespread amongst mainstream economists – namely, that invisible hand institutions operate primarily via effects on action, with basic motives and attitudes unaffected.<sup>65</sup>

Accordingly, economists’ interest in invisible hand mechanisms adopts a normative framework of evaluation in which motives and attitudes do not play the decisive role, since if the primary normative framework focuses on the virtue of agents, then the impact of any “invisible hand” structure will necessarily be second-order.

It is worth at this point referring more broadly, albeit briefly, to Christian theological thinking relevant to the consideration of the economic doctrine of the invisible hand. Stemming from the fundamental Christian principle of the omnipotent, omniscient, all-loving divine nature,<sup>66</sup> God is understood to undergird the good but fallen creation in the working out of his divine plan of the renewal of creation, including in the case of humanity, (at least) in relation to the redeemed elect.<sup>67</sup> Whoever ultimately forms part

---

<sup>63</sup> For a debate on precisely this question, see Hill (2001), Alvey (2004) and Hill (2004).

<sup>64</sup> The question of whether Smith believed there was some element of divine providence in the invisible hand, in the context of the long-standing theological debate on the question of divine providence, raises an interesting subject for comparison of economic and Christian thought. There is quite some literature on the subject of Smith’s theological position (see, for example, Oslington (2012) and Long (2011)). However as the theological position taken by Smith (or indeed mainstream subsequent economists qua economic thinkers) is now defined to be outside the economic intellectual discipline, it does not directly bear on the motive/action question from a strictly *economic* perspective.

<sup>65</sup> However this is not an uncontroversial issue amongst intellectuals more broadly, particularly in relation to areas of public life formerly regarded as providing common goods, and where markets have previously not operated – for example see Sandel (2012), especially Chapter 3 “How Markets Crowd Out Morals”.

<sup>66</sup> Supported by many biblical texts and generally agreed theological discussion – see, for example, Erickson (1983), Chapters 16-18.

<sup>67</sup> An example biblical text is Rom 8:28: “We know that in everything God works for good with those who love him, who are called according to his purpose.”

of the redeemed elect,<sup>68</sup> it seems reasonably clear from scripture and two millennia of theological debate that God's ultimate plan is for their good.<sup>69</sup>

What is more theologically problematic, however, is the place in God's plan of economic institutions such as markets. Does the divine undergirding of creation extend to markets as potential vehicles for human flourishing generally, including the relief of poverty and suffering? Or are markets an integral and fallen part of a fallen world, which must inevitably function in the face of greed? Or, thirdly, are markets, as some argue in relation to guns, ethically neutral, and tools to be used for the difficult task of discriminating between good and evil, according to human motivation and resulting action? Christian writers have adopted all three positions with equal vigour; Atherton summarises the arguments well and quotes from selected leading proponents of each.<sup>70</sup> In his conclusion (written over 20 years ago), Atherton expressed ambivalence about the traditional liberal response of the church, and argued that more direct engagement with both the conservative and radical responses was called for. He has more recently developed these ideas, indicating ways in which Christians and the church generally can engage more directly and positively with a political and economic world which has become more amenable to the conservative position, while seeking to retain important elements from the radical position. (Atherton, 2008)

Suffice it to say that, while there remain significant elements of a deep Christian scepticism about the morality of markets, particularly how market participants have behaved recently, and how they have been regulated (e.g. during and in the wake of the 2008 Global Financial Crisis), there seems to be a greater recognition by Christian

---

<sup>68</sup> Throughout Christian history there has been considerable theological debate about the extent and qualification of the elect, ranging for example from extreme Calvinist doctrine of "double predestination" (i.e. that God predetermines ahead of time and at an individual level who will be redeemed and who will be damned), to the other extreme of universalism (i.e. that all will be saved in the end; there have been many versions of this doctrine throughout Christian history).

<sup>69</sup> For a representative contemporary array of theological thought on issues of divine providence, see Murphy & Ziegler (2009), especially essays by Sondregger, "The Doctrine of Providence" (pp 144-157); and Webster, "On the Theology of Providence" (pp 158-175).

<sup>70</sup> Atherton (1992) summarizes the arguments of key Christian writers propounding each view: The Conservative Response. Affirming the Market Economy: The Tradition of Christian Political Economy – substantially based on the writings of Brian Griffiths (pp 85-116); The Radical Response. Rejecting the Market Economy: The Tradition of Christian Socialism – based on a number of writers, particularly Ulrich Duchrow, R. H. Tawney and F. D. Maurice (pp 117-155); The Liberal Response. Subordinating the Market: The Mainstream Liberal Tradition – based on a number of writers, particularly J. Philip Wogaman and R. H. Preston (pp 156-192).

thinkers than was the case 30 or more years ago, that there is no alternative to a constructive engagement with a globalised market economy.

There is likely to be some anxiety, especially but not only amongst thinkers who are also Christians, that a social system that is tolerant of self-interest (and in the extreme, greed) will serve to produce more of it. Such thinkers might well argue that it would be preferable if only the virtuous thrive (in the broad sense of the term, and certainly not just financially),<sup>71</sup> since that will provide a general incentive to virtue. Or perhaps, if the virtuous are more likely to survive (and/or reproduce?), some analogue of evolutionary processes may ensure that virtue abounds in society.<sup>72</sup> And if a particular social structure has the effect of detaching virtue from thriving (or from surviving), then so much the worse for that social structure.

If this is so, then the difference between the economic and Christian views of market structures can largely be explained, not in terms of any disagreement about the way in which markets operate, but rather in terms of disagreements as to the content of the rival bases of evaluation. This rivalry is not so much a matter of “consequentialism” versus “deontology,” but rather of a consequentialism in which different “consequences” count differently. The Christian focuses primarily on the effects of different social institutional arrangements on the virtue of the agents – on their motives and attitudes.<sup>73</sup> The economist, particularly if an invisible hand enthusiast, is inclined to think that markets, independently of agents’ motives and attitudes, matter predominantly instrumentally in terms of producing a more tolerable life, primarily in the efficiency of the provision of material goods, for larger numbers of people.

From a Christian perspective, market mechanisms which provide material benefits independent of any considerations of their impact on the virtue of participants, are desirable as far as they go. But much more desirable are arrangements in which the virtue of participants is or can be enhanced by the market interaction, under the

---

<sup>71</sup> A matter of some contention in contemporary Christian discourse is the so-called “prosperity gospel”, the notion that God intends Christians to thrive financially, but which has been the source of considerable financial abuse by preachers espousing the notion, usually of poor people hoping for divine intervention in their financial plight. For discussion see Bowler (2013), and Lausanne Theology Working Group (2010).

<sup>72</sup> There is emerging evidence from evolutionary biology that cooperative structures can be sustained under certain conditions of natural selection, with significant ethical implications for societies in which competitive markets dominate. See Nowak & Highfield (2011) and the discussion in Sub-section 2.7.2.

<sup>73</sup> Though the Christian focus is not exclusive – see Section 3.1.

influence of the Holy Spirit. Where the subject becomes problematic, however, is in determining exactly how market mechanisms might be adjusted or managed such that the virtue of participants can be enhanced, while still enabling the provision of material benefits. Frequently such suggested adjustments or management approaches are designed to limit what are seen as the ethical negativities of competition; however of relevance here is Frank Knight's comment that critics of competition "generally underestimate egregiously the danger of doing vastly worse." (Knight, 2004/1935/1923: 49f)

There is a more nuanced economic response than "irrelevant!" to the issue of what effects markets have on agents' motives and attitudes. Smith thought that commercial society generated greater trustworthiness, greater attentiveness to the interests of others (albeit largely for self-interested reasons), and a more peaceable disposition (albeit mainly grounded in timidity).<sup>74</sup> He also thought that the division of labour was likely to lead to a more limited preoccupation, to a dullness among the large bulk of the working poor<sup>75</sup> – a misgiving which Marx emphasised in his own interpretation of Smith's account. On balance, Smith, as a recognised member of the "douce commerce" school, thought the effects of commercial society on the motives and attitudes of its participants are benign – though the argument is not un-nuanced. There are also the potentially negative effects, both ethical and material, of deviation from symmetry between the participants' power in the exchange interaction. But importantly, any such effects were in Smith's view to be balanced by the substantial material benefits accruing from commercial society. For Smith, those material benefits had to be accorded significant weight in any proper assessment.

So far in my discussion the focus has been on the market system as the primary case of an "invisible hand" mechanism, but it is not the only example. For example economists

---

<sup>74</sup> For an extended discussion of this issue see McCloskey (2006) on the "bourgeois virtues".

<sup>75</sup> To quote Smith:

The man whose whole life is spent in performing a few simple operations, of which the effects are perhaps always the same, has no occasion to exert his understanding or to exercise his invention in finding out expedients for removing difficulties which never occur. He naturally loses, therefore, the habit of such exertion, and generally becomes as stupid and ignorant as it is possible for a human being to become. ... But in every improved and civilised society this is the state into which the labouring poor, that is, the great body of people, must necessarily fall, unless the government takes some pains to prevent it. (Smith, 1999/1776, Book V: 368f)

Consequently, Smith's recommendations for government action in the provision of education follow from this anxiety.

have over the last fifty years created a significant sub-field in political theory called “public choice” theory, in which democratic institutions are investigated for their “invisible hand” properties. The basic idea here is that, despite their protestations of their priority for service of the common good, and accepting that they have a genuine concern for such public service, political operatives in the end are motivated by self-interest. In this context, a central feature of democracy is the provision of constraints on political office-holders that encourage them to act broadly in the interests of the citizenry. Thus one central element in the argument of the apologist for democracy is that elections encourage outcomes that are not too distant from the citizens’ collective interests, even when the political representatives’ inclinations might be otherwise.<sup>76</sup> Or as Hamilton put it, democracy serves to bend the politician’s interests to the service of duty – which he regarded as “the best security for the fidelity of mankind.” (Hamilton, *Federalist*, No. 72, 1788) Undoubtedly this social safeguard does not offer an ethically flattering view of politicians; neither does the invisible hand perspective offer an ethically flattering view of market agents. But in the light of the doctrine of human fallenness, a Christian might well argue that this is no bad thing, in that it leads to a lively sense of human moral inadequacy and the need of redemption. Further it would arguably be an over-optimistic feature of social organisation if agents could plausibly maintain that their thriving (whether economically or politically) reflected their relative virtue!

Of course, no such thought has been central to economists. The first and foremost thought is that relations among persons (political and economic) should be structured to secure the best material outcomes for them: the invisible hand perspective is in that sense resolutely “action-oriented”.

The concept of a common good transcending the sum of individual goods does not seem to fit here. Of course the arguably greater likelihood of oppression or exploitation (at least of minorities) when the task of determining the common good is left in the hands of parliament or a “benign” dictator might well lead to the conclusion that the economic understanding is that most consistent with a bitterly realistic view

---

<sup>76</sup> Of course, citizens’ perceptions of their interests may differ from a more rational (often longer term) view of reality – and thus electoral structures are not particularly encouraging of “visionary leadership.” However, the argument is in the spirit of Churchill’s famous observation that democracy is the worst of system of government except for the others! (And this from a politician whose taste for “visionary leadership” was considerable!)

of human nature. But the sometime idealism of Christians who, dreaming of the eschatological rule of Christ in the renewed creation, and indulging nostalgia for a long-departed Christendom, can be seduced by an overly optimistic view of the potential for democracy and human leadership. What the strand of economic thought discussed here can show Christians is a more realistic view of human institutions, institutions that can sometimes galvanise them into positive social action, perhaps even suggestive of the Kingdom.

### **3.5 CONCLUSION**

The central presupposition of this chapter is that some progress in the communication between Christianity and economics – whether thought of as academic disciplines or simply as “approaches” to the questions that concern them – can be achieved if each has a good sense of “where the other is coming from.” And the central claim of the chapter is that one significant difference between the Christianity and economics is the normative framework that each employs.

I do not want to make excessive claims in this regard: the differences are matters of relative weight rather than categorical exclusion. But it does seem clear that economics is considerably more focused on actions and that Christianity is more focused on motives and attitudes (without being indifferent to actions) – and that this difference helps to explain why economists and Christian theologians or ethicists often talk past one another when they consider what looks like the same subject matter. So in particular, when economists talk of broad institutional arrangements like the market or democratic politics – or more detailed arrangements such as monopoly or the separation of powers or federal structures or fixed terms for political representatives – they will look to the ways in which those arrangements impact on the actions that agents take and the resultant outcomes that are produced under the arrangement. The Christian tradition tends to be more interested in questions of how such institutional arrangements influence the motives and attitudes of those involved,<sup>77</sup> with the actions consequential upon those motives and attitudes being of secondary concern.

---

<sup>77</sup> Or perhaps what those institutional arrangements themselves express in terms of values.

But being alert to the distinction can do work as well within both economics and Christianity as separate disciplines. Whether the issue is one of normative social theory or biblical interpretation, the distinction between action effects and motive/attitude effects is worth bearing in mind. That distinction rests of course on the claim that such a distinction can plausibly be made. For economists, it is a routine distinction (as the “invisible hand” analysis exemplifies). Other disciplines, including Christian theology/ethics, are perhaps more prone to “attribution errors” – to assuming an overly close association between action and motive, at least in some contexts. Economists do not, of course, deny that motives/attitudes influence behaviour, but much of their explanatory energy is focused on ways in which changes in behaviour can be wrought without requiring any change in underlying motives or attitudes. Perhaps in each discipline there is an excessive tendency to focus on one of action or motive to the exclusion of the other.

At the normative level, perhaps the aim should be an appropriate synthesis of action and motive/attitude elements into an overarching framework in which all are appropriately weighed. Perhaps agreement on the parameters of such a framework is a necessary condition for establishing a justification for any serious conversation between economists and Christian theologians/ethicists (and more generally between social scientists and Christians). All serious conversation presupposes that there are things that each can learn from the other. But serious conversation also presupposes enough common understanding that participants are not consigned to endless talking at cross-purposes.

## **4. COOPERATION: ECONOMIC/STRUCTURAL VS CHRISTIAN/PSYCHOLOGICAL**

### **4.1 INTRODUCTION**

This chapter examines in some detail the distinction between economic and Christian thought in the understanding of cooperation, which distinction has been a significant factor in the communication difficulties between the two disciplines. The structural understanding, fundamental in economics, is explored through the foundational writings of Adam Smith, while the psychological understanding, fundamental in Christian thought, is examined through a discussion of Christian understandings in interaction with the insights of evolutionary biology.<sup>78</sup>

#### **A. ECONOMIC/STRUCTURAL UNDERSTANDING**

### **4.2 THE IMPORTANCE OF THE STRUCTURAL COOPERATION IN ECONOMICS**

A fundamental concept in economics, arguably *the* fundamental concept of the discipline, is cooperation. The alternative candidates – scarcity, resource allocation, optimisation, self-interest, and importantly, competition – are satisfactory as far as they go. However it is the enormous cooperative benefits of a well-structured economy that is the overriding (and often overlooked) primary rationale of the discipline.

Those alternative candidates, particularly competition as commonly understood, resonate to varying extents with a widespread popular opinion of the economic process as a rivalrous scramble for survival of the fittest in a world defined by Social Darwinism.<sup>79</sup> What this popular opinion overlooks is the fact that the economic process is better understood as a process of cooperative exchange than driven by aggressive rivalry. This is not to deny that rivalry, aggressive or otherwise, happens, but rather to assert that cooperative exchange is by far the more accurate description of the majority situation.

To understand the rationale of this understanding of cooperative exchange, it is helpful to revisit the early chapters of what is widely accepted by economists as the

---

<sup>78</sup> The discussion in Chapter 6 on Christian attitudes to rivalness, competition and rivalry also deals at various points with the alternative Christian attitudes to cooperation.

<sup>79</sup> For the history of this idea, see Claeys, 2010.

foundational document of their discipline – *The Wealth of Nations* – and see how Smith explains the origins of the essential cooperation fundamental to the economic system. Importantly, and as Smith makes clear, this cooperation is essentially a *structural* relationship between the different agents who participate in the economic system, and the net benefits they derive from it. The success of this relationship does not depend on any attitude of psychologically intentional cooperativeness. Indeed as Smith makes clear, if the economic process were exclusively dependent on such psychologically intentional cooperativeness, it would actually be much less successful than is the case, because of the limitations on the numbers of others with whom one can effectively have a genuinely psychologically intentional relationship of cooperation:

In civilized society he [humankind] stands at all times in need of the co-operation and assistance of great multitudes, while his whole life is scarce sufficient to gain the friendship of a few persons. (Smith, 1999/1776, Book I: 118)

First, however, it is appropriate to define what economists mean by structural cooperation. I start by looking at a model of structural cooperation between two individuals, before turning to the wider question of structural cooperation in society more generally, the primary economic rationale for the “invisible hand” metaphor discussed in Section 3.4.

### **4.3 GAME THEORY SPECIFICATION OF STRUCTURAL COOPERATION**

As I argue in Section 4.5, cooperation in general (whether structural or psychological) is best defined as the situation where there is mutual benefit (specifically, where the net material benefit accruing to both parties to the exchange is positive), specifically excluding altruism or self-sacrifice (where there is no reciprocity, merely unilateral action).

But what is meant by *structural* cooperation? Within at least certain organisational structures, it means that the levels of material well-being of different individuals are positively, rather than negatively, related. As already mentioned, this positive relatedness does not necessarily depend on any attitude of cooperativeness between the individuals. Symbiosis between non-human species (such as the example of the sea anemone and the clownfish cited in Section 2.5) is a case of structural cooperation where there is clearly no attitudinal cooperativeness.

In PD terms (see Section A1.1 of Appendix 1), but in its “anti” (or “Prisoner’s Delight”) mode, structural cooperation between two individuals A and B can be illustrated as follows:

**Figure 5 Standard Prisoner’s Dilemma example**

		INDIVIDUAL B	
		Choice X	Choice Y
INDIVIDUAL A	Choice X	[ 1 ; 1 ]	[ 5 ; 2 ]
	Choice Y	[ 2 ; 5 ]	[ 7 ; 7 ]

The first number  $c$  in the pair  $[ c ; d ]$  is the material payoff to Individual A (i.e. Suppose A chooses X; then if B chooses X, A’s payoff is 1, whereas if B chooses Y, A’s payoff is 5. Alternatively, suppose A chooses Y; then if B chooses X, A’s payoff is 2, whereas if B chooses Y, A’s payoff is 7). The second number  $d$  is correspondingly (and identically) the payoff to Individual B (since if B:X and A:X,  $d = 1$ , or A:Y,  $d = 5$ ; if B:Y and A:X,  $d = 2$ , or A:Y  $d = 7$ ).

As in the case of the standard PD, there is a *dominant strategy* for each individual:

- whether B chooses X or Y, A always receives a higher “payoff” by choosing Y (since  $2 > 1$  and  $7 > 5$ );
- using exactly the same reasoning, regardless of how A chooses, B always receives a higher payoff by choosing Y;
- so by choosing Y, each increases the material payoff to the other.

The payoffs in this example are both identical for each individual, and positive; neither condition is necessary for the methodology to work.<sup>80</sup>

<sup>80</sup> In this particular example, the dominant strategy (i.e. choosing Y) produces identical outcomes for both individuals, but this is not necessarily the case. For example:

		INDIVIDUAL B	
		Choice X	Choice Y
INDIVIDUAL A	Choice X	[ 1 ; 1 ]	[ 5 ; 2 ]
	Choice Y	[ 3 ; 4 ]	[ 7 ; 6 ]

Choice Y is still dominant for both A and B, leading to different outcomes (7 for A and 6 for B), and different intermediate inequalities ( $3 > 1$  and  $7 > 5$  for A;  $2 > 1$  and  $6 > 4$  for B). An example where the dominant strategies would produce different outcomes is the division of labour, where specialisation by

If there exists a structure such as those illustrated in this simple example, it may be said that there is structural cooperation. A and/or B may have a psychologically intentional disposition of cooperativeness toward the other, in the sense of wishing the other to flourish *ceteris paribus*, but there is no requirement in the structure illustrated by the example that this be so. There is no necessity for either or both of A and B to have such a motivation in order for both to enjoy the maximum material payoff; all that is necessary is that each acts to maximise their own payoff. A's benefit from B's choice of action, and correspondingly B's benefit from A's choice of action, could arise entirely as a coincidental by-product of A's desire to optimise their own benefit, and correspondingly in B's case. So one can conclude that within this type of structure, there is a positive relationship between the two individuals' payoffs resulting from the exercise of the choices under the structure of interdependence: that positive relationship is the defining, constitutive feature of structural cooperation. The fact that each individual participating in this type of structure is advancing the material interests of the other, purely by pursuing their own material interests and not necessarily due to the result of any psychological intentionality towards the other's interests, is the basis of the characterisation that each is led by an "invisible hand" to advance the material advantages of the other.

By contrast, in the standard PD case (again, see Section A1.1 of Appendix 1) the possibility of mutual gain is not realised by the single-minded pursuit of self-interest. In the PD, each participant in attempting to maximize his own payoff, imposes a payoff reduction on the other (and because of the symmetry of all the payoff structures, incurs a payoff reduction himself).

---

definition produces different outcomes (in that the different specialisations are just that – different).

The outcomes produced by the dominant strategies are not necessarily enhanced positive benefits: they may produce lower liabilities. For example, if all the potential benefits resulting from the different choice combinations in the first example are reduced by a liability of 8, the matrix becomes as follows:

		INDIVIDUAL B	
		Choice X	Choice Y
INDIVIDUAL A	Choice X	[-7 ; -7 ]	[-3 ; -6 ]
	Choice Y	[-6 ; -3 ]	[-1 ; -1 ]

Once again, Choice Y is dominant, producing an outcome of -1 for both A and B.

## 4.4 ADAM SMITH ON THE DIVISION OF LABOUR

### 4.4.1 Introduction

I come now to Smith's perceptive account of the world he observes. His analysis involves two elements:

- the mutual benefit that comes from exchange as such, and
- the division of labour (specialisation) which widespread exchange makes possible.

Interestingly, Smith discusses these elements in inverse order – reflecting perhaps his view of the magnitude of the mutual benefits at stake in each case.

The division of labour arises spontaneously, Smith says, because of a fundamental aspect of human nature:

This division of labour, from which so many advantages are derived, is not originally the effect of any human wisdom, which foresees and intends that general opulence to which it gives occasion. It is the necessary, though very slow and gradual consequence of a certain propensity in human nature which has in view no such extensive utility; the propensity to truck, barter, and exchange one thing for another. (Smith, 1999/1776, Book I: 117)

This “propensity to truck, barter and exchange” creates the desire to produce goods or services excess to personal needs or wants, or more generally for the purpose of meeting the needs and wants of others, the producers' objective being the satisfaction of their own otherwise unmet needs and wants. The division of labour then occurs naturally in response to the pressure to produce those goods or services intended for trading as efficiently as possible. And it is then that competition with alternative traders arises through markets.

Schumpeter, no uncritical devotee of Smith, archly concedes:

[N]obody, either before or after A. Smith, ever thought of putting such a burden upon the division of labor. With A. Smith it is practically the only factor in economic progress. (Schumpeter, 1986/1954: 187)

Smith only arrives at his emphasis on the importance of exchange as the basis of structural cooperation from his analysis of the significance of the division of labour for vastly improving productivity. (Smith, 1999/1776, Book I, Chs. I-III: 109-126) He famously uses simple everyday examples to make many of his very insightful points:

- the effect of the division of labour in the manufacture of pins (Smith, 1999/1776, Book I: 109f);
- the comparative efficiencies of different types of workers in manufacturing nails (Smith, 1999/1776, Book I: 113);
- the many activities directly and indirectly involved in the production of a workman's woollen coat (Smith, 1999/1776, Book I: 116f).

Smith shows convincingly the following important points:

- Trading through markets creates an enormous network of interdependence;
- Specialisation permits very substantial increases in productivity;
- The possible extent of specialisation is a function of market size;
- The network of specialisation depends critically on the possibility of exchange;
- The primary role of government as regards exchange is to impose natural justice constraints intended to eliminate force and fraud;
- Individual exchanges are not necessarily mediated by psychological cooperativeness, but predominantly by self-interest.

I consider each of these points in more detail, before asking what if anything Smith added which was new to the existing concept of the division of labour, and what objections might be made to his account.

#### **4.4.2 Trading through markets creates an enormous network of interdependence**

Smith uses the illustration of the workman's woollen coat to indicate the enormous range and diversity of the functions which bear on the production of an everyday item. Such is this diversity that many of those who provide the relevant goods and services would not even be conscious of their contribution to the coat, much less the existence or identities of most of the other providers involved. As an indication of this diversity, Smith mentions, in addition to all those concerned directly with the production and processing of the fleece,<sup>81</sup> the merchants who acquired the materials and the carriers who transported the materials to and from these different workers, those who helped

---

<sup>81</sup> Smith mentions the shepherd, wool sorter, carder, dyer, scribbler, spinner, weaver, fuller and dresser.

bring the substances used by the dyer from around the world,<sup>82</sup> and the varieties of labour necessary to make the workmen's tools, and also the more complex machines involved in some of the processes.<sup>83</sup> Consider the simplest of tools, namely the shears with which the shepherd clips the wool: those shears represent the outcome of interactions between the miner, the smelting furnace builder, the charcoal burner, and so on and on.

Smith notes that the scope of the network of interdependence concerning the coat is replicated in relation to other necessities of the workman's life, such as his other items of clothing, his household furniture, his kitchen utensils, his food and drink. Smith concludes that:

[I]f we examine, I say, all these things, and consider what a variety of labour is employed about each of them, we shall be sensible that, without the assistance and co-operation of many thousands, the very meanest person in a civilized country could not be provided, even according to what we very falsely imagine the easy and simple manner in which he is commonly accommodated. Compared, indeed, with the more extravagant luxury of the great, his accommodation must no doubt appear extremely simple and easy; and yet it may be true, perhaps, that the accommodation of a European prince does not always so much exceed that of an industrious and frugal peasant as the accommodation of the latter exceeds that of many an African king, the absolute master of the lives and liberties of ten thousand naked savages.  
(Smith, 1999/1776, Book I: 117)

Smith's thesis is that the division of labour within the context of a free market economy is a great force for improving the material lot of the whole society, including those with the least ("the very meanest person in a civilized country"), compared with a society subject to a command economy.

Though there may have been some coordination of some of this plethora of activities (e.g. those within a woollen mill), obviously there has been no *overall* coordination of *all* these activities (and the many others which he could have mentioned) outside of market relations from which each buyer and each seller in the chain of relations expects to benefit. The providers of the goods and services needed are engaged out of self-interest in the great complex of unconscious, cooperative relations which enables all the elements necessary for the production of the coat (and the workman's other necessities of life) to come together. Even the simplest of commercial societies

---

<sup>82</sup> He mentions ship-builders, sailors, sail-makers and rope-makers.

<sup>83</sup> Such as the sailor's ship, the fuller's mill, and the weaver's loom.

involves a vast set of interdependencies in which each worker is connected to each consumer via a host of connections, concerning most of which each almost certainly remains in total ignorance. At the same time as playing their roles in the production of the workman's coat and his other needs, many of these same component goods and services are simultaneously forming part of the unconscious, cooperative relations involved in creating many other products unrelated to those of interest to the particular workman, in an equally uncoordinated way.

#### **4.4.3 Specialisation permits very substantial increases in productivity**

In his famous example of pin manufacture, Smith gives production figures which, while arresting, are apparently based on observation: he writes that an untrained workman working alone "could scarce ... make one pin in a day, and certainly could not make twenty," but ten similar men each performing two or three of the 18 distinct functions involved "could, when they exerted themselves, make among them ... upwards of forty-eight thousand pins in a day," or an average of 4,800 per worker.<sup>84</sup> The increase in productivity Smith claims is therefore a factor of 240 times, and perhaps as much as 4,800 times. (Smith, 1999/1776, Book I: 110)

He gives three primary reasons for the great increase in output resulting from the division of labour (Smith, 1999/1776, Book I: 112):

- (a) the increase in the dexterity of all workers in their specific functions;
- (b) the time saved in the worker moving from one task to another;
- (c) the increase in the invention of machines which further increase worker output.

As regards (a), Smith is keen to establish that originally untrained workers who concentrate on a particular specialised function can gain a degree of dexterity which cannot be matched for overall efficiency by apparently more experienced tradesmen

---

<sup>84</sup> While it is highly likely Smith got his inspiration for the example of the pin factory from Volume V of Diderot's *Encyclopédie* of 1755 (in which an article entitled *Épingle* on the division of labour in pin manufacture refers to 18 separate operations – the same number Smith mentions), he specifically refers in the *Wealth of Nations* to observing a pin factory in which ten men carried out the requisite functions. It therefore appears Smith did his own field research rather than relying totally on other sources as some have suggested. (e.g. Warsh, 2006: 40) See also <https://andrewlainton.wordpress.com/2013/01/27/modelling-the-pin-factory-the-origin-of-the-division-of-labour-theory-part-2-2/> accessed 4 July 2015.

who do not specialise. His examples cite numbers of nails made in a day by different categories of worker, based on reports he has elicited or on his own observation (Smith, 1999/1776, Book I: 112f):

- a smith, who has never made nails, will at best make 200 or 300 of poor quality;
- a smith, experienced in making nails, but not solely doing so, will make 800 to 1,000;
- boys under age 20 who have never done anything except make nails will each make 2,300 or more.

Taken together, these examples indicate the enormous efficiency benefits of increasing levels of specialisation. Smith adds that when the specialisation is taken to the most basic function (such as in his pin factory example),

[t]he rapidity with which some of the operations of those manufactures are performed, exceeds what the human hand could, by those who have never seen them, be supposed capable of acquiring. (Smith, 1999/1776, Book I: 113)

Turning to (b), Smith sees there to be considerable inefficiency (more than might be imagined) in a worker moving from one task to another in a less specialised, multi-task environment, especially if those tasks are conducted in different locations. Even where the different tasks are conducted at the same location, he thinks the inefficiency is still considerable:

When he first begins the new work, he is seldom very keen and hearty; his mind, as they say, does not go to it, and for some time he rather trifles than applies to good purpose. The habit of sauntering and of indolent careless application, which is naturally, or rather necessarily acquired by every country workman who is obliged to change his work and his tools every half hour, and to apply his hand in twenty different ways almost every day of his life, renders him almost always slothful and lazy, and incapable of any vigorous application even on the most pressing occasions. (Smith, 1999/1776, Book I: 113f)

Smith does not say whether these conclusions are based on observation, others' reports of observations, or are just his surmise. It is not immediately clear why a role with some variety of tasks would be less engaging to a worker than a repetitive, mind-numbing, single-function task such as Smith discusses in his pin factory example. Whether or not this argument represents his drawing rather a long bow, his conclusion

that there is some inefficiency in the “put down and pick up” aspect of multi-task roles nevertheless rings true.

As regards (c) (mechanisation), Smith argued that the “invention of machines” had been facilitated by the division of labour, which had brought about a focus on a particular task, both by the worker involved, and also by manufacturers of machines. As well, the more abstract scientific developments of the period leading up to Smith’s time, such as Boyle’s law connecting pressure and volume in a gas (1662), the development of calculus by Newton and Leibniz (1675), Newton’s laws of motion (1687), and the discovery of oxygen by Priestley and Lavoisier (1778), significantly facilitated mechanical developments and emerging industrial processes. For Smith, scientific enquiry and technological development are just other examples of the division of labour – including the development of different areas of specialisation (i.e. the emergence of different “disciplines”).

#### **4.4.4 The extent of specialisation possible is a function of market size**

While the figures he cites for efficiency improvement in pin manufacturing are astounding, Smith describes the example as “very trifling” and goes on to elaborate on the division of labour and the factors which limit it from emerging more fully. The division of labour is – he claims – more developed in more industrialised economies, because manufacturing is more conducive to specialisation than is agriculture. This is due to the seasonal nature of many of the functions in the agriculture, which lead to multiple functions necessarily being carried out by fewer people than would be the case if each activity had its own full-time exponent. Even though there are differences between countries in the quality of agricultural technology (such as cultivation techniques) and natural advantage (soil type and climate), these differences are swamped in terms of efficiency of productivity by this limitation on the division of labour. On the other hand, greater degrees of division of labour are possible in manufacturing provided traditional economic structures are changed: if “what is the work of one man in a rude state of society [becomes] generally that of several in an improved one.” Consequently variation between countries in quality and price of products due to the division of labour is greater in manufacturing than in agriculture. (Smith, 1999/1776, Book I: 111f)

As well as limitations on the potential extent of division of labour in agriculture, Smith also points out it is more limited in areas of lesser population concentration, because of the more limited scope for any individual making a living from a specific specialisation. The facility of transporting product from one worker to another or transferring services from one provider to another impacts the extent to which these limitations on the extent of the division of labour in the case of more dispersed workers/providers can be overcome. (Smith, 1999/1776, Book I: 121f)

In his chapter entitled “The Wages of Labour” Smith points out that increases in wages which lead to improved living standards are directly related to net increases in the working class population.<sup>85</sup> He argues that increasing demand for labour encourages “marriage and multiplication of labourers,” and if reward is insufficient to meet that demand “the deficiency of hands would soon raise it.” Conversely if the reward level produces more labour than is needed “their excessive multiplication would soon lower it to this necessary rate.” (Smith, 1999/1776, Book I: 182f)

The only cavil with Smith’s assessment is his use of the word “soon” to describe the response of working population numbers to changes in demand. Even in an era of child labour, there would still be a lag of at least a decade between a change in demand and a response via a change in the working population due to changed marriage and reproduction rates.

In this Smith anticipates the later and highly influential work of Malthus, who also made a direct link between wage levels and population growth. Malthus emphasises the downside of this connection, and argues that unless there were strong checks on population growth, there would be mass starvation:

The power of population being ... so much superior, the increase of the human species can only be kept down to the means of subsistence by the constant operation of the strong law of necessity, acting as a check upon the greater power. (Malthus, 1970/1830: 21)<sup>86</sup>

What Smith understands, which Malthus apparently does not, is that population growth also increases the size of the market, and in turn the scope for greater division

---

<sup>85</sup> While the poor often had large families, many of the offspring did not survive childhood.

<sup>86</sup> Without much apparent empirical evidence, Malthus argued that “Population, when unchecked, increases in a geometrical ratio. Subsistence increases only in an arithmetical ratio.” (Malthus, 1798) I discuss Malthus’s influence in the context of the emergence of Christian Political Economy in Sub-section 6.3.4.

of labour, specialisation, and consequently greater returns. (see Smith, 1999/1776, Book I: 190)

#### **4.4.5 The network of specialisation depends critically on the possibility of exchange**

It is only through the availability of exchange that the network of specialisation can emerge and develop. An orchardist wants to exchange some of his fruit for bread or meat, just as a baker wants to exchange bread for fruit and meat, a butcher for fruit and bread, and so on.

In its more primitive forms, barter provides the means of a producer with an excess of his product beyond his own needs and wants acquiring other commodities from other producers in the same situation. The cumbersome nature of barter leads to the development of markets and in particular a common means of exchange – money. This type of market provided the exchange basis for manufacture and production of goods intended solely for sale rather than exchange of the excess over the producers' own needs and wants,

In situations where the scope of the division of labour and specialisation is limited (such as in areas which are remote or have limited populations), limitations on the extent of exchange possible require people to constrain needs and wants and/or learn a wider range of skills (and tend to become “jacks of all trades”). The incentive to overcome these limitations is strong, and is the basis of the emergence of inter-community and international trade.

When Smith turns from the relatively specialised and limited business of pin manufacture to the enormously complex and interrelated economy of a whole country, including international trade, and then focuses down again on his example of the workman's coat, he elucidates just how reliant each element of society is on the many others, and how the functioning of that society is totally dependent on exchange and a vastly more intricate and extensive division of labour. (Smith, 1999/1776, Book I: 110-117) One might modify the thrust of the scriptural quotation somewhat and say that “man does not live by pins alone.”

Gains from exchange as such considered in economics texts frequently begin with consideration of utility maximisation between two parties each trading a single good,

using the equi-marginal principle, and then making the examples progressively more complex by increasing the number of parties and the range of goods.

An interesting real-life case study of this kind is that recounted by Radford in a World War II prisoner of war camp. (Radford, 1945) The quantity of goods available for trading by each POW was constant, primarily being what was supplied by the Red Cross in standard food parcels, including various food items and, importantly, cigarettes (which became the camp currency). Radford describes how the camp quickly adopted a trading system, and such matters as how the price of goods in cigarettes varied in different supply/demand circumstances, what happened when there were shortages, and what happened to attempts at price-fixing. However, there is a zero-sum character to this example in that the total quantity in the camp of any particular good was fixed, there being little or no opportunity to expand the total quantity of a commodity or the size of the market (additional prisoners in the camp only increased the total supply of parcels proportionately).

The scope for gains due to exchange in Smith's account greatly exceeds that just described, because the division of labour greatly increases the reward due to improved efficiency, and assuming the size of the market is sufficient to sustain the increased production. Thus, by contrast, Smith's account might be described as having a positive-sum character.

#### **4.4.6 The primary role of government in exchange is to eliminate force and fraud**

Smith argues for individuals participating in markets being left free to determine the allocation of resources and provision of goods and services (including, by implication, the extent of division of labour), without government competition. Government's role is to ensure those individuals and markets can operate without interference, either external or internal, including providing an adequate legal framework to ensure this. He makes the important point, confirmed by experience, that government's record at "picking winners" is such as to mean that the temptation for governments to provide goods and services should be resisted. The only areas where government has a role are public services which no profit-seeking individual or group would be likely to provide:

Every man, as long as he does not violate the laws of justice, is left perfectly free to pursue his own interest his own way, and to bring both his industry and capital into competition with those of any other man, or order of men. The

sovereign is completely discharged from a duty, in the attempting to perform which he must always be exposed to innumerable delusions, and for the proper performance of which no human wisdom or knowledge could ever be sufficient; the duty of superintending the industry of private people, and of directing it towards the employments most suitable to the interest of the society. According to the system of natural liberty, the sovereign has only three duties to attend to; three duties of great importance, indeed, but plain and intelligible to common understandings: first, the duty of protecting the society from the violence and invasion of other independent societies; secondly, the duty of protecting, as far as possible, every member of the society from the injustice or oppression of every other member of it, or the duty of establishing an exact administration of justice; and, thirdly, the duty of erecting and maintaining certain public works and certain public institutions, which it can never be for the interest of any individual, or small number of individuals, to erect and maintain; because the profit could never repay the expense to any individual or small number of individuals, though it may frequently do much more than repay it to a great society. (Smith, 1999/1776, Book IV: 273f)

An interesting question in terms of government providing public services is the fact that an overall public service can be subject to division of labour, some elements of which may be able to be provided by private individuals or groups subject to competitive market conditions. It might well be argued that, consistent with Smith's approach, these elements should be separated out and provided by market operators (probably decided by tender). Alternatively, the expected profit from these elements could be argued to be an offset to the cost of the unprofitable elements of the overall public service, and that the whole public service concerned should therefore be provided in total by government.<sup>87</sup>

#### **4.4.7 Individual exchanges: psychological cooperativeness vs self-interest.**

Smith is clear that the advantages of the division of labour and the exchanges on which it depends do not, indeed cannot, rely on psychological cooperativeness. The example of the workman's coat shows just how extensive is the range of people an individual implicitly relies on to gain the benefit of that relatively common, apparently simple item. He says:

In civilized society he [the individual] stands at all times in need of the co-operation and assistance of great multitudes, while his whole life is scarce sufficient to gain the friendship of a few persons. (Smith, 1999/1776, Book I: 118)

---

<sup>87</sup> One sees both approaches used in contemporary practice.

Smith's point is that the division of labour, and the exchange on which it relies, would be much more restricted if those one dealt with were restricted to those with whom one has a relationship of psychological cooperativeness. Hence relying on the other's self-interest in pursuing one's own self-interest is a much more immediately effective way of achieving what in the contemporary business language is termed a "win-win" situation than trying to persuade the large numbers of others necessarily involved to support one's position of self-interest out of magnanimity alone.<sup>88</sup> Smith continues, finishing with what is probably his most quoted text:

[M]an has almost constant occasion for the help of his brethren, and it is in vain for him to expect it from their benevolence only. He will be more likely to prevail if he can interest their self-love in his favour, and show them that it is for their own advantage to do for him what he requires of them. ... Give me that which I want, and you shall have this which you want, is the meaning of every such offer; and it is in this manner that we obtain from one another the far greater part of those good offices which we stand in need of. It is not from the benevolence of the butcher, the brewer, or the baker that we expect our dinner, but from their regard to their own interest. (Smith, 1999/1776, Book I: 118f)

It is interesting when one contemplates, in the context of every economic transaction engaged in every day, the vast numbers of people with whom one interacts indirectly, as well as the relatively few with whom one interacts directly, and the fewer still of them with whom we could conceivably have a relationship that we might call psychologically cooperative. Is there any practical way of engaging with such vast numbers, most of whom one cannot know, other than by using self-interest as the best guide to each person's assessment of what is good for them in the multiplicity of transactions involved (subject to qualifications of fairness, etc. in the terms of those exchanges)?

#### **4.4.8 Did Smith add anything new to the existing concept of the division of labour?**

The concept of the division of labour, including the two very influential ideas emphasised by Smith – increasing returns resulting from labour specialisation, and the

---

<sup>88</sup> The challenge for Christians, in the light of Christ's injunction to love one's neighbour as oneself, plus Christ's expansion of the definition of "neighbour" in the parable of the Good Samaritan, is whether recruiting the support of the other in the pursuit of one's own self-interest by appealing to the other's self-interest, constitutes "loving" him or her. The question is discussed in Section 4.5, in an attempt to engage an aspect of economic and Christian thought in a constructive dialogue.

limitation of the division of labour by the size of the market – had existed since antiquity (Sun, 2012: 11-16):

- Xenophon (c.431-354 BCE) makes the former point in the context of the high standards of diverse and specialised cooking in King Cyrus’s kitchen, and the latter point by contrasting economic activities in small towns with those in large cities.
- Plato (c.428-348 BCE) argued that cities develop because of the advantages of the division of labour, and continue until the disadvantages of increasing size overtake the benefits of increasing returns from further division of labour, such that the city “won’t be a huge settlement ... and it won’t be a small one either” (*The Republic*).
- Aristotle (384-322 BCE) focuses on the emergence of barter and then money as means of facilitating the division of labour.

The Greek philosophers, particularly Plato, developed the concept of the division of labour to such an extent that Foley goes so far as to suggest

that Smith could have gotten his original inspiration for the division of labor principle, not from the sources usually quoted in this connection – the *Encyclopédie*, Harris, Locke, Mun, or Mandeville – but from the ancient Greeks. (Foley, 1976: 221f)

Sun details other treatments bearing on the division of labour before the seventeenth and eighteenth centuries – in early Chinese literature on specialisation and the market, in the treatment of the division of labour in the medieval Islamic Scholastics, and in the discussion of private property and commerce in the medieval Latin Scholastics. (Sun, 2012: 17-38)

And of particular relevance in the context of my project is the discussion by St Paul in 1 Corinthians 12 of different spiritual gifts, and his use of the parts of the body as a metaphor for the use of those gifts in the life of the church:

For just as the body is one and has many members, and all the members of the body, though many, are one body, so it is with Christ. (1 Cor 12:12)

This model is clearly one of specialisation according to individual God-given talents and skills, with use by the various individual members of the church of all their different

gifts, blending together and complementing one another in a united, diversely skilled community:

... God arranged the members in the body, each one of them, as he chose. If all were a single member, where would the body be? As it is, there are many members, but one body. The eye cannot say to the hand, "I have no need of you," nor again the head to the feet, "I have no need of you." (1 Cor 12:18-21)

Against the background of this very long intellectual history, the question arises: Did Smith contribute anything unique to the understanding of the division of labour, or did he import the idea in toto (whether from antiquity or from his more recent predecessors)? No doubt the intellectual heritage on the subject informed Smith's understanding to a significant degree, but he also brought an important and quite different new idea into contention.

The great majority of writers historically on the division of labour see the differences between individuals as regards talents, skills and interests as primarily innate. Thus in Plato's *Republic*, Socrates states that "we aren't born alike, but each of us differs somewhat in nature from the others, one being suited to one task, another to another." (Book II: 370b; quoted by Sun, 2012: 14) And clearly St Paul's image of the different parts of the body representing different skills and talents sees them as existing from birth.

But the new thought which Smith advances is that specialisation is not so much the *result* of differing talents, skills and interests as had been widely accepted, but that when specialisation is carried to a sufficiently comprehensive extent, it is the *cause* of them:

The difference of natural talents in different men is, in reality, much less than we are aware of; and the very different genius which appears to distinguish men of different professions, when grown up to maturity, is not upon many occasions so much the cause as the effect of the division of labour. The difference between the most dissimilar characters, between a philosopher and a common street porter, for example, seems to arise not so much from nature as from habit, custom, and education. (Smith, 1999/1776, Book I: 120)

The saying that "genius is 1% inspiration and 99% perspiration" resonates here. It is not that Smith is denying that innate talents exist at all, just that their importance has been greatly exaggerated. Families and successive generations in which a particular talent is exhibited have led to the widespread impression that the talent is largely the result of nature rather than nurture. But such families frequently encourage and

educate their children in the development of that particular talent, so the relative importance of innate talent versus education, training and practice is not immediately obvious.

Clearly some talents and skills have physical requirements, athletic prowess in particular aspects of many sports being clear examples (e.g. the effective height prerequisites of the basketball centre or “five,” or the AFL ruckman). And while intuitively it is hard to avoid the conclusion that Mozart had a unique innate musical talent, it is also true that (under the disciplined tutelage of his father, *inter alia*) this innate talent was developed by much hard work to the extraordinary degree exhibited in his spectacular musical output. At Mozart’s unique level of achievement, it is difficult to be dogmatic about the balance between the innate and the learned, but the evidence, even at high levels of achievement, is that innate talent is less important than is popularly believed.<sup>89</sup>

Thus Smith’s conclusion, i.e. that inter-personal differences in talents and skills overwhelmingly *result from* the choice of profession and the level of application to it, has considerable validity. This is opposed to the view from antiquity (such as from Plato), amongst Smith’s predecessors, contemporaries, and subsequent economists (such as Ricardo), and persisting still (e.g. Blaug, 1996: 36), that the reverse is the case: that interpersonal differences in talents and skills *result in* the choice of profession and the level of application to it.

#### **4.4.9 Objections and nuances**

The discussion in Sub-sections 4.4.1 to 4.4.8 elaborates on structural cooperation as neoclassical economic orthodoxy, founded in Adam Smith’s argument in *Wealth of Nations* of the primary role of the division of labour and hence of the necessity and positive role of markets. The question arises, however, how that view has been nuanced and challenged.

---

<sup>89</sup> Gladwell (2008) recounts a German study of violin students, who began practising from about age five, but whose practice times diverged from about age eight. By age 20, elite performers averaged more than 10,000 hours of practice, while the less able performers averaged about 4,000 hours, and the researchers showed that the positive relationship between practice and achievement was statistically significant. Gladwell’s argument is that if innate talent dominates hard work, surely some naturally gifted performers would float to the top of the elite category with fewer practice hours than their peers. The possibility that violin-playing talent and propensity to practise hard are causally related does not negate his point.

First, a concern expressed by Smith himself, is a consequence of the division of labour. In spite of his society's objectification of workers as part of the developing industrial economic process, at the human level Smith is sensitive to the mind-numbing effect of high degrees of specialisation:

The man whose whole life is spent in performing a few simple operations ... has no occasion to exert his understanding or to exercise his invention in finding out expedients for removing difficulties which never occur. He naturally loses, therefore, the habit of such exertion, and generally becomes as stupid and ignorant as it is possible for a human creature to become. (Smith, 1999/1776, Book V: 368)

Smith is concerned such a person becomes severely limited, both mentally and physically; he loses both his mental capacity to make the ordinary judgments of domestic life and of the interests of his country (including its defence), and his physical capacity for other employments beyond that required for his repetitive task. These disadvantages do not arise in so-called "barbarous societies" where the varied occupations and varieties of tasks confronting hunters, shepherds and even husbandmen are such as to keep them reasonably alert, both mentally and physically, and able to judge the performance of their leaders in the relatively simple business of their society. In a more civilised society, however, the overall complexity is much greater, but the capacity of the great majority to engage with the wider economic and social issues is severely limited, that being left to the privileged few who have the inclination and the means. Smith makes a strong case for mass public education to address what he sees as a significant downside of greater division of labour. (Smith, 1999/1776, Book V: 368-372)

More broadly, the neoclassical economic view supporting the benefits of markets in general is challenged frequently on ethical grounds. A "conversation" sponsored by the John Templeton Foundation sets out brief responses by thirteen scholars and other relevant individuals on the question "Does the free market corrode moral character?" (Templeton Foundation, 2008)

The opinions expressed vary widely, in several cases deeply influenced by personal experience. For example, former world chess champion and critic of the current Russian regime, Gary Kasparov, agrees the free market can lead to the corruption of moral character, since it facilitates the basic human urge to want more, but that the

alternative economic structures of Russian historical and contemporary experience are worse:

But attempting to restrain these basic human needs and desires leads to greater evils. All the needed evidence can be found over the last century in Russia, from the czars to the Soviets to Putin's oligarchic regime today. (Templeton Foundation, 2008: 7)

Several of the commentators (among them, the famous French philosopher, Bernard-Henri Lévy) argue that, while totally free markets do tend to permit the corruption of morality, the best (or more accurately, least bad) realistically available economic structure is a free market, subject to some limits to minimise corruption and interference.<sup>90</sup> John Gray goes further, arguing that some measure of moral corrosion is essential for the necessary mix of markets and regulation, appropriate to the particular context, to function acceptably:

No economic system can enhance every aspect of moral character. All rely to some extent on motives that are morally questionable. Greed and envy may be vices, but they are also economic stimulants. An economic system is good to the extent that it harnesses human imperfections in the service of human welfare. The choice is not between abstract models, such as the free market and central planning. In the real world of history, neither has ever existed in the form imagined by its advocates. No, the true choice is between different mixes of markets and regulation, none of which will ever be entirely morally benign in its effects. A sensible mix cannot be achieved by applying an ideal model of how the economy should work. Different mixes will be best in different historical contexts. But one thing is clear: a modern market economy cannot do without a measure of moral corrosion. (Templeton Foundation, 2008: 5)

The danger is that, as sociologist Daniel Bell famously commented, markets can end up cannibalising their own moral infrastructure. That is, markets can create desires and incentives which weaken the self-discipline and moral obligations they need to function well. (Templeton Foundation, 2008: 16) This argument goes back as far as Marx, who argued capitalist society tends to subvert its own moral foundations, for example by encouraging the parties to a bargaining situation to misrepresent, as part of the negotiation process, the prices or other terms on which they are prepared to deal, thereby undermining the fundamental market virtue of honesty.

---

<sup>90</sup> By implication they would conclude that the widely varying Russian restraints Kasparov refers to have been excessive or completely inappropriate.

John C. Bogle (founder of Vanguard Investments) argues the rise of “managerial capitalism,” which has led to domination of stock markets by fund managers rather than ultimate investors, has resulted in agency conflicts which all too often have been resolved in the interests of those agents, and led to serious distortions in the financial system. Writing at the time of the Global Financial Crisis in 2008, he sees a corrosion of moral character:

Now that the financial crisis is upon us, however, the burden is largely falling not on the irresponsible few who created it but on the many who, against the counsel of traditional thrift and prudence, were lured into it – namely, the investors in overrated mortgage-backed bonds and borrowers whose homes are being foreclosed at record levels. “Fettered” capitalism has indeed corroded our moral character, both by privatizing the rewards of the market and (in the form of federal bailouts) socializing its risks. Both are betrayals of the free market and its genuine virtues. Our society has a huge stake in demanding higher moral values in a less fettered market system. (Templeton Foundation, 2008: 25)

In summary, like all models, the standard economic market model has its limitations as a representation of the so-called real world. As Gray says, the interaction of economic, social and political structures in any particular context has a major impact on the mix of markets and regulation which will function most effectively, the objective being an economic system which “harnesses human imperfections in the service of human welfare.” (Templeton Foundation, 2008: 5)

## **B CHRISTIAN/PSYCHOLOGICAL UNDERSTANDING**

### **4.5 COOPERATION AND ALTRUISM: CHRISTIANITY, EVOLUTIONARY BIOLOGY AND ECONOMICS**

In her 2012 Gifford lectures, theologian Sarah Coakley argues that “the last decades of the twentieth century saw a notable failure of nerve in universal accounts of religious rationality, and a simultaneous obsession with the ‘selfishness’ of evolutionary phenomena.” (Coakley, 2012, Lecture 1) Her intuition is that there is an upheaval happening in evolutionary theory, largely driven by the use of mathematical methods, which is set to transform the understanding of evolutionary processes:

At the centre of these challenges is a newly-precise mathematical understanding of what biologists call ‘cooperation’; here they trace the countervailing and productive significance of ‘sacrificial’ behaviours in the span of evolution, sacrificial behaviours that are no mere background of detritus to the agonistic competitiveness of evolution that is centrally at work in selection,

but just as necessary to the very workings and continuation of evolutionary life. Without them, evolutionary populations go into decline. (Coakley, 2012, Lecture 1)

Having worked with Martin Nowak and his team of mathematical evolutionary biologists at Harvard, Coakley expressed concern at the interchangeable use of the two terms “cooperation” and “altruism” in PD modelling by Nowak’s team and in the evolutionary biological literature generally. She points to this conflated usage, whether discussing mathematical evolutionary accounts of cooperation in slime-moulds (say), or based on the same methodology as applied to human sacrificial acts of compassion. While Nowak’s response is that the same sets of mathematical computations can be used across the evolutionary spectrum, Coakley’s rejoinder is that the specifically human trait of intentionality in cooperative acts surely distinguishes those acts from whatever is going on in slime-moulds, and does justify the use of separate terminology. (Coakley, 2012, Lecture 2) She does, of course, have in mind a Christian understanding of “altruism” which transcends the understanding of mutually advantageous “cooperation” based in self-interest.

Of particular interest for my present purposes, Coakley and Nowak (and his team) agreed definitions to distinguish the meanings as follows:

- Cooperation: a form of working together in an evolutionary population in which one individual pays a cost (in terms of fitness, whether genetic or cultural) and another gains a benefit;
- Altruism: a form of (costly) cooperation in which an individual is motivated by good will or love for another, and is thus a subset of cooperation, reserved for conditions of additional affective intentionality. (Coakley, 2012, Lecture 2)<sup>91</sup>

What is the effect of the “additional affective intentionality” in this proposed definition of altruism, this “higher level” of cooperation? From the context of its subsequent usage in Coakley’s discussion of Nowak’s game theory modelling, it is clear that her intention is to categorise the type of cooperation identified in that modelling as non-altruistic, separate from a higher level of altruistic cooperation, particularly that based in *agapē* and enjoined in Christian ethics. (Coakley, 2012, Lecture 3)

---

<sup>91</sup> Albeit Coakley does not think this agreement will change the present, largely interchangeable, usage in the evolutionary biological literature.

The Coakley/Nowak definitions include within *cooperation* (as defined) two classes of activity, both of which involve a cost to the cooperating individual and accrue a benefit to another individual, the outcome of which activity has:

- (a) tangible value to the cooperating individual (for example, due to future expectation based on repeated experience or observation of the other's behaviour, or due to benefit to one or more kin of the individual), or
- (b) intangible or nil apparent value to the cooperating individual, whose motivation for self-sacrifice is purely good will or love.

It is (b) which Coakley defines as "altruism," involving what she terms an *excess of cooperation*. (Coakley, 2012, Lecture 3) On this approach, the distinction between the two subsets of the definition from an economic point of view depends primarily on the tangibility, and secondarily on the magnitude of the value, of the benefit to the cooperating individual resulting from the costly activity.

Coakley acknowledges that her definition of cooperation is "a little fuzzy at its edges conceptually (what is the 'cost' and what is the 'benefit,' and when does it happen?)." (Coakley, 2012, Lecture 2) It is much more likely that these definitional, assessment and valuation issues can be resolved in the "normal" cooperative case (a), leaving unanswered the important question of what constitutes value (if any) of the costly, sacrificial activity to the altruist in case (b). Is a psychological or other intangible benefit to that altruist, who incurs a cost benefitting another and who is acting out of love or good will, nevertheless of some value to her, and if so, how would that value be assessed (relative to the value of more tangible benefits)? The distinction seems at least as much to do with the "extent of tangibility" of the benefit to the altruist, as with any assessment of its magnitude.

Separate from this question of whether there is tangible value to the altruist, Jackson poses some particular difficulties for the Coakley/Nowak definitions. He points out that their definition of type (a) cooperation, where "one individual pays a cost (in terms of fitness, whether genetic or cultural) and another gains a benefit" is

straight-forward but problematic, since it appears to rule in parasitism and agapism as forms of cooperation, even as it rules out mutualism and commensalism. In mutualism, both parties benefit from an interaction; in commensalism, one party benefits while the other is unaffected; but surely it is odd to decline to call these instances of "cooperation." Moreover, it seems

downright contradictory to call (coercive) predation and willing self-sacrifice instances of “cooperation.” (Jackson, 2013: 308).

Jackson believes a better definition of “cooperation” is limited to the case where there is mutual benefit, leaving “altruism” to cover the case of self-sacrifice without the possibility of any compensation.

The Coakley/Nowak definition refers to cost, and by implication, benefit, “in terms of fitness, whether genetic or cultural,” which, transposed into the social (and particularly, economic) equivalent of their evolutionary biological usage, includes benefits which are both material and non-material (including psychological). Jackson does not qualify his use of the term “benefit” either, so it is reasonable to assume he agrees with the inclusion of non-material as well as material benefits and costs within the scope of the definition of cooperation (in my view, appropriately).

Jackson defines cooperation as where the sum of the cost paid by one individual and benefit accruing to the other is greater for both of them than could be achieved by either independently. This alternative definition excludes parasitism and agapism, since both involve uncompensated costs, the former due to coercion and the latter to self-sacrifice. Jackson has a good point here, and offers an appropriate sharpening of the Coakley/Nowak attempt at distinguishing and defining cooperation and altruism.

As already noted, when he turns to altruism, Jackson initially appears to exclude the possibility of *any* compensation to the altruist for his/her self-sacrificial gift:

... “altruism” involves x’s willingly paying a cost (without the possibility of compensation) for y’s benefit. (Jackson, 2013: 309)

However it becomes clear subsequently that he modifies his position on the definition of altruism, when he makes what I believe is an important distinction between the motivation for altruism and the beneficial consequences which may result to the altruist:

But one must distinguish, in any event, between the beneficial *consequences* of altruism and its primary moral *motivation*. Otherwise one will inevitably be tempted by a eudaimonistic ethic, inspired by the Greeks, in which I “love” others primarily because this secures my own flourishing. (Jackson, 2013: 310, emphasis original)

Here we have the distinguishing characteristic of *altruistic* behaviour, which confronts what Jackson terms “the burgeoning literature seeking to document the myriad ways in which altruistic behavior redounds to the agent’s benefit.” (Jackson, 2013: 310) The

distinguishing feature is self-sacrificial behaviour by the altruist, motivated by love of the other, without any expectation of beneficial consequences. While actions aimed at self-interested flourishing may well have their place – they may, for example, involve cooperation – they are not altruistic actions.

This distinction based on the motivation of altruistic action takes the concept outside the purview of mainstream economics and evolutionary biology, and places it squarely within the scope of Christian theology and ethics. Following the argument in Chapter 3, if the source of altruism is its formative motivation, rather than its source being a matter of indifference and with the focus being on the resulting action, clearly the concept of altruism is relevant to a Christian but not to an economic world view.

Jackson defines the Christian version of altruism (“agapism”) as exhibiting the following interpersonal features (which do not seem to me to limit his discussion of altruism generally):

- unconditional willing of good for the other,
- equal regard for the well-being of the other, and
- passionate service open to self-sacrifice for the sake of the other.

(Jackson, 2013: 309)

Practising Christian charity can, as Jackson says, “awaken one to a fuller or higher sense of what makes for genuine happiness and well-being,” but Christlike altruistic, self-sacrificial love can (and perhaps often does) lead to sorrow and loss in this life. “For Christians, at any rate, the Passion of Christ only ‘makes sense’ if agape is its own reward, a participation in God’s own holiness.” (Jackson, 2013: 311) This concept of the benefit to the altruist being “participation in God’s own holiness” and the Christian hope of eternal life spent in God’s presence, the heavenly reward for the redeemed, is far greater, more other-worldly, and totally remote from any utilitarian concept of “benefit.” The idea that this heavenly reward might be the subject of some utilitarian cost-benefit analysis seems totally inappropriate, but is worth testing biblically to see what sort of theological case could conceivably be made out for some kind of assessment process.

Sketching a biblical theological argument very briefly to address this question, I start with Christ’s fundamental ethical injunction to love God, and love your neighbour as

yourself (Mt 22:36-40). This means that the case (b) altruistic action benefitting another does also have theological value to the altruist as it is motivated by love of the other. This is so because “love is of God” and “if we love one another, God lives in us, and his love is perfected in us.” (1 Jn 4:7,12)

Further, the altruistic action can be understood theologically as of eternal significance, specifically in the light of Jesus’ teaching on its value at the final judgment. The action forms part of the eternal reward of the righteous, in their having met the physical needs of the disadvantaged, which is counted as done to Christ, and hence is evidence of sacrificial love for both God and neighbour. (Mt 25:31-46)

On this view, the magnitude of the benefit to the altruist will almost certainly far outweigh the cost, but the problem is its intangibility, being a benefit based in a faith understanding of the mystery of the resurrected life. Compared to the case (a) benefit to the co-operator, this case (b) benefit to the altruist poses a much more difficult assessment problem.

The issue is that the benefit concerned is contingent on faith, “the substance of things hoped for, the evidence of things not seen.” (Heb 11:1) Very few Christians have faith completely free of doubt, but in the extreme case of the doubt-free believer, the answers to these questions, firstly the benefit’s effective tangibility, and then its enormous magnitude, mean the altruistic act has a real temporal value to the altruist, arguably a “theologically tangible” value, far exceeding its cost.<sup>92</sup> On the other hand, to the believer whose faith admits of doubts (and who is much more often the norm), the enormously valuable benefit remains intangible, and temporal value assessment much more difficult and probably impossible.

If the distinguishing feature of altruism is the self-sacrificial motivation of the altruist, motivation by the expectation of any benefit resulting from the act, which might accrue thereby, negates its altruistic status. Any attempt to deflect this limitation by introducing an external assessor of the act and the resulting benefit, in the end fails: integral to the subsequent application of game theory and any other utilitarian methodologies is the accrual to the agent him- or herself of the benefits resulting from the act (net of costs), and the impact that accrual has on the actions of the agent. I

---

<sup>92</sup> And clearly negating any residual argument for altruism’s (purported) character of unrewarded self-sacrifice.

therefore believe that these methodologies can be applied to situations of cooperation, but their application to situations of altruism is arguably impossible.

On the question of the use of game theory to examine situations involving altruism, Jackson engages the ancient debate regarding Christian ethical origins between eudaimonism<sup>93</sup> and agapism.<sup>94</sup> He argues that “[b]oth game theory and eudaimonism start out with natural self-interest and the instinct for self-preservation and seek to analyse robust other-regarding virtues on that basis. Yet both fail...” He rejects evolutionary game theory as an appropriate tool for examining the issue, because, he contends, game theory cannot adequately deal with uncompensated self-sacrificial behaviour aimed at benefitting another. (Jackson, 2013: 307f)

Game theory is directly relevant to situations of cooperative behaviour, albeit there may be assessment difficulties in cases involving non-material, psychological benefits. It may also be relevant in situations of altruistic behaviour, where it emerges after the event that there are benefits to the altruist as a result of her self-sacrificial behaviour which were not part of her motivation for the altruistic act. But in situations involving either co-operators and/or altruists, game theory can also indirectly provide relevant analysis to illuminate choices.

For example, as is clear from the discussion in Sub-section 2.7.3, an altruist seeking to get all of those involved in a choice which can be structured as an n-player PD could use that analysis to encourage cooperation, to the benefit of the whole group. The altruist, motivated to encourage the best overall result for the group, could use the PD to show that, while each player would be individually better off defecting, and hence the likely outcome is that all defect, the result of cooperation would be that the group as a whole is better off.<sup>95</sup> Similar indirect uses of game theory, for example the carbon emissions and cartel examples discussed in Section A1.2 of Appendix 1 and Sub-section 2.7.3, illustrate this point.

---

<sup>93</sup> Which holds “that all human actions aim at personal thriving or ‘happiness.’”

<sup>94</sup> Which holds that Judeo-Christian ethics “begins with theology rather than anthropology, with the real holiness of God rather than the ideal happiness of humanity.”

<sup>95</sup> Note that the altruist might use this approach with a group of which she was not a member, and hence where there is no suggestion she could have benefited from the outcome of cooperation by the members of the group. But even where she was a member of the group, it is quite possible she was not motivated by the prospect of personal benefit, and could even demonstrate this by suggesting a basis of distribution of the collective benefit which did not advantage her over what would have been the case had all the participants defected.

Thus, I agree with Jackson that game theory is not applicable directly as a tool for analysing altruistic behaviour, but it has its uses for altruists. More generally, understanding how utilitarians (and economists) think, and engaging with them across this disciplinary divide, is a useful skill for Christians.

The fundamental implication here for communication between Christian and economic *ethical* thought is whether Jackson's agapist accurately represents the Christian social ethical norm. As discussed below, I believe Jackson's agapism constitutes a Christian ethical ideal, but cooperation, which benefits both parties, is also biblically-endorsed and therefore an acceptable component of a Christian social ethic.

Most of the focus observed in theological dictionaries and the like is on whether or not altruism in its "purest" (or most extreme) sense – Jackson's agapism (i.e. complete self-disregard in the interests of the other) – is even possible. A number of authors question whether enhancing reputation or even a theologically suspect desire to "earn" heavenly reward are not likely motives, even for the most saintly. As I argue above, agreeing with Jackson, such a motive would render the action cooperation rather than altruism. (e.g. Nelson, 1995)

My argument is that *both* altruism and cooperation have scriptural mandates as ethical Christian behaviour. Importantly, Jesus answers the scribe that the second commandment is "love your neighbour *as yourself*," like the first and greatest commandment "love the Lord your God with all your heart, and with all your soul, and with all your mind." (Mt 22:37-39, emphasis added) In other words, self-love is assumed, and loving others to a similar degree is second only to loving God.<sup>96</sup> Loving the other as oneself constitutes cooperation – albeit a demanding form of cooperation, treating the other consistently with oneself. In addition, Paul advises the Philippians "let each of you look not *only* to his own interests, but also to the interests of others" (Phil 2:4, RSV, ESV, emphasis added).<sup>97</sup> Hence, total self-sacrifice is not the sole Christian requirement or ethical objective. It is true that Jesus' life especially, but

---

<sup>96</sup> The basis of Christian ethics in love (agapē) is discussed in some detail in Section 3.3.

<sup>97</sup> This reading of the text of Phil 2:4 is not uncontested. The problem is the word "only" in the first clause is not in the best reading of the Greek text, whereas the word "also" in the second clause is in the text, leading to a literal English form of the text "not ... but also." Commentators and NT translators either include "only" in the first clause or omit "also" in the second clause. I prefer the former reading, from the overall context and following Marshall, 1991: 45-47 and Hansen, 2009: 116f. Following the latter reading are Barth, 1962: 59 and Fee, 1999: 89, both of whom emphasise the necessity of community consensus, effectively supporting cooperation anyway.

also his teaching as presented in the gospels, does point in the direction of a very rigorous ethic of care for the other, in some cases with little or any apparent regard for self-interest.<sup>98</sup> However, it also points to self-care, in that Jesus frequently withdrew from the needs of the crowds to be alone and pray (e.g. Lk 5:15f).

There are significant strands of Christian thought supporting the ethical priority of altruism, some of which treat cooperation as either second best or not really counting as redeemed Christian behaviour at all.<sup>99</sup> However, I do not think altruism can be argued to be a single tenet of Christian social ethics to the exclusion of cooperation. The differences may perhaps be seen theologically in terms of relative merit at the divine judgment at the end of time.

This understanding of Christian social ethics of cooperative “care of self as well as care of the other,” in addition to altruistic ethics,<sup>100</sup> compares with a strand of economics which regards apparent altruism as “impure,” resulting in “warm-glow giving,” where as well as being motivated to help the recipient, the donor enjoys utility in the form of enhanced self-esteem. (e.g. Andreoni, 1989, 1990) However in this and some other social science literature, “altruism” is treated as a motivating force (which may or may not exist alongside “ulterior motives”), and “cooperation” is the outcome or action (e.g. Andreoni, Harbaugh & Vesterlund, 2010). The distinction between motivating force and outcome or action is helpful in clarifying the differences of treatment in the different disciplines.

As already noted, the two terms are often used interchangeably in evolutionary biology, particularly in work using PD modelling, and here it is only the outcome or action which is relevant, and in my view “cooperation” is the relevant term. It is important to note that cooperation as a class of actions does not necessarily require

---

<sup>98</sup> Such as in the parable of the good Samaritan, where any tangible self-interest of the Samaritan – beyond the non-material, or psychological – is hard to detect, beyond the assumption of the Samaritan leaving the injured stranger in the care of the innkeeper because of his desire to continue going about his business. (Lk 10:25-37)

<sup>99</sup> Citing texts such as the rich ruler (Lk 18:18-25) who asks Jesus what he must do to inherit eternal life, and who in response to Jesus’ question said he had kept all the commandments since his youth, to which Jesus replies: “There is still one thing lacking. Sell all you own and distribute the money to the poor, and you will have treasure in heaven; then come, follow me.” (Lk 18:22) This teaching does emphasise temporal care for the poor; however, it might arguably be also seen as “eternal care” for self.

<sup>100</sup> Including altruistic acts which sometimes result in benefits, whether or not material rewards.

an attitude of cooperativeness, particularly when the cooperation is structural (such as in economically perfectly competitive markets).

In conclusion, cooperation and altruism are defined and distinguished in different ways, both within and between different disciplines. Acknowledging that there are difficulties in being completely precise, in my view the preferable way of distinguishing the two terms is as follows:

- by defining cooperation as applying in situations where there is mutual net benefit to both parties, where “benefit” includes non-material or psychological elements, and independent of whether there is an attitude of competitiveness;
- by limiting altruism to situations where the altruist is motivated in self-sacrificial love (*agapē*) for the other, and not by any potential or possible benefit, whether material, non-material or psychological.

## 5. RIVALNESS, COMPETITION AND RIVALRY: ECONOMIC PERSPECTIVES

### 5.1 RIVALNESS: THE INEVITABILITY OF COMPETITION?

Competition is an inevitable consequence of the nature of the properties of many goods, and the property of those goods which results in competition is termed *rivalness*. The basic idea, nothing to do with the psychology of participants in economic interactions, is that rival goods are those which are only available to one of you or me, or where use by one person excludes use by another. Rival goods are said to be the subject of *natural competition*, in the sense that exclusive use of them by one individual is an inherent feature of their nature.<sup>101</sup>

*Rival* goods are made up of *private* goods (such as a university scholarship or a kidney transplant) which can be owned, and consumed or otherwise used by only one individual. *Common* goods (such as a seat in a public garden or a particular book in a free library) which can be consumed or otherwise used by only one individual, but are not owned by only one individual.

*Non-rival* goods are those where my using or consuming the good does not limit its availability to you. If non-rival goods are restricted to those who pay for use (such as a subscription concert performance to a large audience, where my listening to the concert does not limit your ability to do so also, or the commercial provision of a cable television signal, where my watching the TV program does not limit your capacity to watch it), they are termed *club* goods. If non-rival goods are available without charge (such as national defence or free-to-air television transmission) they are termed *public* goods.

Most intellectual property is non-rival; many types actually become more valuable (*anti-rival*) as more people consume them (such as the increasing use globally of the English language). However few goods are completely non-rival, because they often become rivalrous at some level (for example internet use eventually becomes rivalrous as more users eventually decrease speeds for others). Hence many goods are

---

<sup>101</sup> It might be argued that desire for a good is a necessary feature of its rivalness, since there is no *evidence* of the good's rivalness until someone has desired it; however I would argue that the good's rivalness is an inherent feature of it whether or not someone desires it.

somewhere between the two extremes of rival and non-rival; rivalness can therefore be regarded as a continuous dimension rather than binary category.

Public goods, which are available to all without (direct) charge, often need to be provided communally, because there is little incentive for individuals or corporations to provide them. If there is no method of controlling their use, common goods suffer from the risk of over-use and over-consumption (the so-called *Tragedy of the Commons*), and in the extreme, the destruction of the good. Increasingly this risk of over-use and over-consumption is being managed by governments and other public authorities by charges or regulation to limit usage, thereby negating to some degree their status as public goods.

The rivalness of most ordinary goods (say, apples and oranges) – the fact that for any one piece of fruit, either I get it or you get it – means it is the object of natural competition, and also means it is “distributionally relevant.” In other words, when one asks the distributional question in relation to the fruit “Who gets what?” the presumption is that the “what” in the question is subject to rivalness, in a way which does not apply in the case of non-rival goods, where the question either doesn’t arise or is very much peripheral.<sup>102</sup>

The primary point is that rivalness is a property of goods, whereas *rivalry* (discussed in Section 5.3 below) is a property of minds. This rivalness property of most goods exists whether your and/or my motivational attitude in relation to the piece of fruit is competitive, cooperative or altruistic. So long as there is only one apple and we both want the apple, it is an object of competition between us, regardless of our motivational attitude in respect of it. It remains rival-in-consumption whether we want to have it for ourselves, or want the other (or someone else) to have it. Rivalness and the necessity it creates for choices to be made are termed *scarcity* by economists.<sup>103</sup> Scarcity is not the opposite of abundance, since choices have to be made however expansive the option set that an individual might face: the oligarch can invest a particular \$1 billion in another oilfield or in developing a coalmine, but not both.

---

<sup>102</sup> Where you sit in the concert hall might affect how well you can see or hear, but the main point is that the concert is given for the benefit of all the concert-goers (and hence is primarily a non-rival good).

<sup>103</sup> Scarcity is a somewhat unfortunate term, the economist’s meaning of which has led to considerable confusion, in contrast with its dictionary meaning of “insufficiency of supply”. (Onions, 1973, Vol. 2: 1898) A better term might be *selectivity*.

Neither does scarcity disappear in situations of poverty: the homeless person still has to choose, if only how he spends his time – on Monday evening, he can beg outside the railway station or queue at the soup kitchen, but not both. The oligarch's alternative investments compete, just as the homeless person's alternative uses of his time compete, and both pairs of alternatives are subject to (economic) scarcity.

Some goods are naturally "lumpy," in that they exist in forms which are indivisible and hence available to only one person to the exclusion of others; so a kidney for transplant is only available to one potential recipient, and a potential spouse is only able to be married to one suitor (under current law). Some goods which are rival (such as apples and oranges) can be divided and shared, though they then cease to be the same good (a whole piece of fruit). Lumpy goods cannot be divided, and so lumpiness exacerbates the distributional limitations of rivalness as a property of certain goods.

The main point for my overall thesis is that rivalness is an inherent or structural property of certain goods, which has nothing to do with rivalry, and implies nothing about the psychological dispositions of the parties involved as the potential possessors of any particular rival good. Psychological competition or rivalry may be involved, but this is separate from the quality of rivalness of the good concerned.

## **5.2 STRUCTURAL COMPETITION**

As well as the rival nature of many goods, the fundamentally evolutionary origins of humanity means competition is a naturally occurring phenomenon in many areas of human social interaction, key among them economic, political and legal interactions. In this Section I discuss the structural nature of competition in these three interconnected areas.

### **5.2.1 Competitive Economic Structures**

Consequent upon the rivalness of many goods, competition is present in many economic exchange relationships. This in turn raises the interesting question of the extent to which competition in economic relationships is also a matter of choice. I suggest that the degree of such choice is indicated by the extent of competitive attitude exhibited by one or more of the agents involved, but that competition itself is almost always present regardless of whether any agent chooses to take a competitive position.

However the total quantity of goods and services to be distributed is not specified by nature, but is influenced by the nature and management of the institutions through which exchange is facilitated. This is the lens through which economists view competition, the central problem being the maximisation of the quantity (and quality) of goods and services exchanged, and the efficiency with which exchange is transacted. A critical economic question is whether that central problem is best addressed through the agency of free markets, or via monopoly/monopsony, or some combination of both, and the extent to which society needs to regulate the exchange process to achieve the optimal outcome.

The conditions for perfect competition<sup>104</sup> are such that very few markets totally qualify, but the conditions only need to be met with sufficient accuracy for perfect competition to apply for all practical purposes. (Stigler, 1965/1957: 256-261) For example, world markets for commodities such as more durable, widely-consumed foodstuffs (e.g. wheat and tea), provided there is no evidence of collusion or undue interference by national marketing authorities and the like, meet most of the conditions for perfect competition.

Competition in these markets is structural and not psychological in nature. For example, individual Australian wheat farmers are basically price takers: if neighbouring farmers are producing the same strain and quality of grain, the major differentiating decisions are whether and if so, how much to plant, and whether to sell at spot or buy futures. There is no rational basis for any psychological attitude of rivalry between them; indeed changes in market conditions affect them both equally. And Australian wheat farmers are not rivalrous towards Russian wheat farmers, but do not typically shed the same quantity of tears as do the Russians if the Russian wheat crop fails.

Competition has the tendency to ensure all market participants treat prices as given. In a monopoly, the competitive processes by which excess profits at the margin are squeezed out are constrained; however, while the monopolist can charge more than marginal cost, he cannot charge whatever he likes if he wishes to maximise profit, since the prices he asks constrain the level of demand. And the oligopolist is constrained by the actions of other sellers in response to his actions. The standard economic view is that cooperation between market participants (buyers and sellers) is

---

<sup>104</sup> Discussed in detail in Chapter 7, in the context of Frank Knight's work on competition.

enhanced by competition: there is more cooperation between buyers and sellers in a perfectly competitive market than in a monopolistic one.

A competitive market provides the purchaser with choice of provider. If the market is perfectly competitive or effectively so, neither buyer nor seller can exercise any real control over the other's choice of trading partner, since to refuse to deal with one merely leads to the trade taking place with another in respect of the identical product.

In the case of imperfect or monopolistic competition, where the seller is endeavouring to differentiate the product or service by one means or another, the buyer's choice of trading partner is more limited. In this case, the extent of the limitation depends on the number and proximity to one another of the alternative products or services, and the buyer's flexibility as regards the acceptability of those alternatives.

As the market becomes more monopolistic, the buyer's options as to choice of product/service and/or choice of seller become more limited, raising questions of the extent to which alternative providers can enter the market. In the extreme case of monopoly, the buyer may well have no choice of any alternative product/service to that offered by the monopolist. The buyer may even have no recourse if the monopolist decides for whatever reason not to deal with her at all. For this reason, *inter alia*, state-sanctioned monopolies are frequently subject to regulatory oversight and/or external appeal processes.

In summary, the virtues of competition are that

- it leads to greater gains from trade, and
- it protects individual consumers from the arbitrary treatment, exploitation and exclusion which can easily arise under a monopolistic structure.

The main point for my overall thesis is that the economic ideal of perfect competition is a *structural* understanding of the market conditions obtaining in which all participants are price takers and there is no significance to be attributed to any psychological attitude of competitiveness or rivalry between either buyers or sellers. Increasingly concentrated markets (where the forms of economic competition move through monopolistic competition, oligopoly and finally monopoly) may be more likely to give rise to such psychological attitudes amongst some market participants, but the objective of economic analysis is the structural description of such markets.

The history of economic thought on the nature of competition gives important insight into the way in which economists approach the question, important for a number of reasons, including helping explain why economists tend to view competition differently from Christian theologians and ethicists, and more generally practitioners of a number of other social disciplines, and people more broadly. Appendix C sets out a detailed review of the history of how economists have understood competition historically, which I summarise in the following brief overview:

- Prior to the eighteenth century, going back as far as the thirteenth century, there are examples of focus on conditions for a “just price” agreed between buyer and seller, and hence strands of a structural understanding; as well as challenges to monopoly arrangements and unrestricted competition (particularly for labour). Despite some structural elements, the understanding of competition was primarily psychological.
- In the eighteenth century prior to Adam Smith, the developing understanding was of a providential role of competition in exchange relationships; competition, while viewed as subject to psychological forces, increasingly was analysed structurally. The structural concept of competition, which was to be developed by economists in both the classical<sup>105</sup> and neoclassical<sup>106</sup> periods, was established before Smith wrote *The Wealth of Nations*.
- In Smith and later classical economists, the understanding of competition was of individually *competitive action*, the price asked or offered being the individual’s primary economic tool. In the neoclassical period, with the emergence of marginalism, competition came to be understood as a *static condition* termed “perfect competition,” affecting all those participating in a market, in which no single individual has the power to impact the demand or supply for the commodity by varying the price offered. The economic benefit of a perfectly competitive market is that it secures the efficient equilibrium of supply and demand, but with the limitation of nil or minimal product differentiation. Under certain conditions, competitive market equilibrium secures maximal preference satisfaction.

---

<sup>105</sup> Broadly, the century up to 1870.

<sup>106</sup> The fifty years from 1870.

- The opposite of competition came to be viewed by neoclassical economists, and their subsequent orthodox successors, as monopoly and/or collusion. Compared with perfect competition, monopolistic prices are normally higher and quantities purchased/consumed lower.<sup>107</sup> Initial mathematical development of monopoly theory by Cournot, an “early neoclassical,” described conditions for a monopolist to maximise profit; he also analysed duopoly and oligopoly. Along with the neoclassical development of utility theory, monopoly theory was further developed by Menger, Edgeworth and Marshall.
- By the 1920s economists were generally using one of these two models of competition – perfect competition or monopoly. The perceived imperfections of both when applied to empirical examples, traditionally dismissed as “frictions,”<sup>108</sup> led to the work of Chamberlin and Robinson in developing the concept of “imperfect” or “monopolistic” competition. Chamberlin argued that markets included both competitive and monopolistic elements: viz. non-price competition in areas such as trademarks, brand loyalty and customer service, as well as price competition; and monopolistic elements such as product differentiation, particularly by use of advertising. Robinson remained more within the mainstream than Chamberlin, by providing a “box of tools” for partial-equilibrium analysis of markets, using the pure monopoly model for all the intermediate categories of imperfect competition.
- Criticisms of the theoretical developments of Chamberlin and Robinson led to the focus turning to market structure and behaviour of the firm within that structure, which can be analysed as a spectrum ranging from perfect competition to perfect monopoly. These developments were in turn criticised by Hayek and Schumpeter; Hayek on the grounds that competition was the means by which producers learnt what consumers wanted, and Schumpeter on

---

<sup>107</sup> However, Marshall, who was something of an apologist for “natural monopolies,” argued that this general conclusion might not hold if a monopolist could run the whole business with lower total expenses and/or with greater efficiency than a number of competing entities. (Marshall, 1920/1890, V.XIV: 16-18)

<sup>108</sup> These imperfections were described by Sraffa as “themselves active forces which produce permanent and even cumulative effects.” (Sraffa, 1926: 542) Robinson attributed Sraffa’s work as the impetus for her work.

the grounds that competition was essential to understanding economic development and innovation.

- Despite these criticisms, the market structure approach has dominated, and perfect competition and monopoly were the primary models with which economists worked in the post-World War II period. As early as 1957, Stigler was able to say “that the concept of perfect competition has defeated its newer rivals [i.e. imperfect and monopolistic competition] in the decisive area: the day-to-day work of the economic theorist... Today the concept of perfect competition is being used more widely by the profession in its theoretical work than at any time in the past.” (Stigler, 1965/1957: 267) Arguably, this conclusion is a reasonable contemporary representation of the situation, though there remain critics (e.g. Blaug, 1996: 594).

### **5.2.2 Competition in Political Processes**

Political and legal processes, together with economic processes, make up critical elements of Western society’s overall social framework. It is relevant to my present project to explore how the various treatments of competition and cooperation in these processes compare with one another, and with those of Christianity, the ethical and religious environment in which they each arose in Western democratic society.

Western democratic political structures are based on a contest of ideas, policies and competence, with the elected government continually having to defend its proposals, policies and legislation from attack by an opposition, whose task is to challenge and offer alternatives, with the objective of enhancing its (the opposition’s) reputation with the electorate as the alternative government. Democratic systems in this sense are fundamentally based in competition.

The competing political parties and representatives seem not to be intended to cooperate with one another in the normal course of things, by design. Rather they are intended to cooperate with voter-citizens, and their propensity to do so successfully is enhanced by the competitive structure in which they are placed. Electoral victory is an intrinsically rival good. And a structure in which contestants vie for electoral victory is taken to enhance the likelihood of achieving outcomes that are more likely than not to satisfy a “public interest” test.

The role publicity and the media play in highlighting the rivalrous, competitive aspect of politics does perhaps obscure those areas where there is an element of cooperation between government and opposition, usually out of the media spotlight, such as in the bipartisan work of some parliamentary committees. And there are cooperative exceptions in times of national crisis (e.g. all-out war, or dealing with terrorist attacks) or on occasions of great social significance (e.g. honouring heroes or recognising significant defining events).

Broadly, there are two major models of government in Western democratic nations:

- the Westminster model (such as in Australia), with a non-political head of state and a prime minister who leads the government in the elected parliament, and
- the presidential model (such as in the USA), with an elected political head of state, and elected parliament.

Under either model (depending on such factors as the social or ethnic groupings within the nation, and the electoral system employed) the parliament may be dominated by two major political parties or coalitions, or consist of a multiplicity of parties which seek to form alliances to govern. Whichever model and application applies in a particular nation, competition in respect of such matters as vision, leadership, policy, and administrative capacity amongst the various participants is a fundamental design feature of the system. My question here is whether this predominant competition (and minority cooperation) is structural or psychological.

A strong case can be made that these features of parliamentary democratic systems are structural. However, the question arises whether the psychologically rivalrous way in which politicians appear to behave towards their political opponents is sufficiently significant to challenge the conclusion that the competition in the system is structural. (After all, each party has the structurally induced instrumental desire to demonstrate that the alternative government performs less well in the electorate's eyes – other things being equal.)

There is also the further question regarding the nature of the cooperation and competition within political parties and groupings – are they also structural, or do psychological elements predominate? While there is a much higher level of cooperation within parties and groupings (particularly as they generally share common

social and philosophical positions), there is usually a contest of ideas and power struggles also, particularly as regards policy, leadership and the exercise of power generally. And despite attempts to present a unified front to the media and electorate, these contests and struggles often become public (particularly where there is an active and unfettered media). These struggles often become personal and psychological,<sup>109</sup> but to a degree they are also a structural feature of the system.

The discussion thus far represents the situation in respect of a single layer of government levying taxes, regulating activity and providing public benefits. But in situations where people are able to choose readily between two or more alternative jurisdictions, there are clearly opportunities for competition between jurisdictions. A particular structural example is federalism, where powers are divided between several (almost always geographic) regional (municipal, state or provincial) governments and (almost always) an overall (city or national) government. The theoretical development of how powers and responsibilities are most efficiently distributed between such jurisdictions is based on Tiebout's seminal work. (Tiebout, 1956: 416-424)

Tiebout argues that the "free rider" problem in a federal structure is solved non-politically by regional jurisdictions offering varying baskets of services and levying commensurate taxes. Subject to his assumptions,<sup>110</sup> Tiebout shows that varying individual evaluations of the baskets of services and capacities to pay the relevant taxes will lead to individuals moving such that the population is sorted into optimum communities. This model leads to those better able to pay choosing regions providing the most valuable baskets of services and those less able to pay choosing regions providing the more basic baskets of services, rather than "contest" (in which the regional governments compete directly for residents/taxpayers).<sup>111</sup>

The relationship between the governing body (the parliament, or the government which controls it) and the governed (i.e. the institutions and other groupings within

---

<sup>109</sup> An example is the conflict between Kevin Rudd and Julia Gillard over the leadership of the ALP between 2010 and 2013, graphically described in the ABC TV series *The Killing Season*, broadcast in June 2015.

<sup>110</sup> Tiebout's assumptions are as follows: perfect mobility, competition for residents in the tax price of public goods, adequate jurisdictional choice and aggregation of preferences, absence of interjurisdictional spillovers, and perfect information.

<sup>111</sup> Of course, there are many practical limitations on the implementation of the model, among them the costs of and other inhibitions to moving, and overall community decisions on mandatory inclusions in the baskets of services provided in all regions.

the society, as well as the individual members of the society, including – importantly – the subset who are electors) have an apparently cooperative relationship, though in fact primarily an exchange relationship. The cooperative aspect might be thought to be the more obvious, given the role of the elected representatives to represent the interests of electors, and the society generally. However it is really an exchange relationship between electors and the government, particularly the elected representatives (and their party groupings), as the electors try to ensure the representatives and government pursue the electors' (and the wider society's) interests rather than their own (such as re-election, and retention of power).

This is a complex subject, particularly when one includes the other roles integral to or surrounding the democratic government structure (e.g. the bureaucracy, lobby groups, and the media); I cannot deal with their cooperative/competitive/exchange here in any detail. For example, the bureaucracy has an apparently cooperative relationship with ministers (particularly) and elected representatives more generally, but there are also elements of exchange (providing what ministers request in return for retaining employment, promotion, etc. – subject to whether the bureaucracy is tenured), and a competitive relationship with other interests or departments in the bureaucracy. Lobby groups cooperate with their clients organisations (industry groups and other sectional interests), have a normal commercial exchange relationship with them, and competitive relationships with other lobby groups and sectional interests. They seek to develop exchange relationships with relevant ministers, representatives and bureaucrats.

Even systems of government, such as dictatorship and absolute monarchy, which rely on apparent cooperation of courtiers, bureaucrats and (sometimes) “parliamentary representatives,” with the wishes of the dictator or monarch, also have a competitive aspect. Those different individuals and groups are usually in competition with one another for influence and/or delegated power. In such systems, the various advisers to the dictator or monarch are in analogous positions to the bureaucrats and lobbyists in a democratic system, albeit the competition between those vying for the dictator's or monarch's attention is usually less overt than in a democratic system.

My general conclusion is that competition between parties or groupings in the major types of political system is fundamentally structural, but that the structure itself often

creates an environment where a psychologically competitive disposition on the part of participants towards their political opponents is inevitable. But, of course, such competition may be “good.” And its absence (as in one-party states) could be described as inherently despotic in structure – even where the present despot happens to be benevolent – merely in the simple descriptive sense that citizens have “no choice.”

Cooperation within parties and groupings is also structural, in that commitment to a particular party or grouping requires “cabinet solidarity” (or the equivalent), even where the individual’s or faction’s view on an issue is at variance with the “party line.” However, there is also a psychological element, usually stemming from a collective commitment to a particular political philosophy or emphasis (e.g. libertarian, liberal or communitarian).

In the case of the less overt competition within parties and groupings, there are both structural and psychological elements, depending on such features as the number of factions etc. involved and their political philosophy or emphasis, and the processes agreed for the allocation of roles such as leader or spokesperson. In extreme cases such “internal competition” can lead to splits, sabotage of policies or leaders, etc. It is difficult to generalise in the absence of more detail in any particular case.

Cooperation between parties and groupings which are otherwise political rivals (which sometimes occurs, e.g. in times of national crisis, or on issues which are of a bipartisan nature) can also have elements which are both structural and psychological. For example, a “government of national unity” in a time of national crisis may be desirable structurally to harness total public commitment, while at the same time appeal to politicians psychologically as presenting a statesmanlike image.

### **5.2.3 Competition in Legal Processes**

Analogously to the democratic political system, the standard tort case under the legal system in most English-speaking societies is competitive (in that it is adversarial), with plaintiff and defendant each represented by advocates who separately represent their clients and present their cases as favourably as possible. The integrity of the system relies on the sole focus of the advocates on their respective clients’ cases, and any cooperation or collusion between the advocates in this system, other than as required

by the rules of the system (such as timely disclosure of evidence, or provision of witness statements), would be regarded as a breach of professional obligation.

The role of the judge in this system is:

- to ensure that the case is conducted in accordance with the law and court procedure (e.g. the laws of evidence),
- to hear the witnesses and other evidence presented by the parties,
- to assess the credibility and arguments of the parties, and then
- to issue a ruling based on his/her interpretation of the law and personal judgment.

In some jurisdictions a jury determines guilt or innocence in serious cases (such as murder), and the judge determines the penalty. The alternative scenarios and evidence presented by the advocates and witnesses are “competing” to convince the judge or judge and jury for the most credible explanation of the relevant events.

On the other hand, under inquisitorial legal systems (such as operate in France), the court is actively involved in investigating the facts of the case, and there is a much greater measure of “compulsory cooperation” between the representatives of the various parties to the action.

In the adversarial legal system, the role of competition between the advocates is both prominent and clearly structural, whereas in the inquisitorial system, competition between advocates plays a more apparently subdued role, being secondary to the more overt “compulsory cooperation.” Nevertheless, there is a necessary rivalry between the cases of the parties, culminating in the counter-balancing of the merits of those cases in the inquisitorial judge’s or court’s decision making process. Arguably there is a structural aspect to competition in the inquisitorial legal system also, but it is much less overt and, arguably, less transparent than in the adversarial system. In either system there the potential for psychologically rivalrous competition to be evident, perhaps more overtly and sometimes seemingly inevitably so in the adversarial system, but it is not a necessary feature of either.

### 5.3 RIVALRY

The distinction discussed so far between economic and Christian attitudes to competition has identified primary foci on structural elements (e.g. outcome) in the case of the former, and psychological elements (e.g. motive) in the case of the latter. Despite his normal *structural* focus, the economist could look nevertheless at motive and ask how one might represent “rivalry” or “psychological competitiveness” and how that representation might be compared with the more typical economic agent’s “utility function” (understood as direct self-interest). His conclusion would reasonably be that the agent is concerned with her own consumption of goods and services: money income, work satisfaction, leisure, cultural stimulus, etc., independent of the consumption of others. It might be argued that her self-interest could be held to include her vicarious satisfaction resulting from the consumption of others emotionally close to her, particularly immediate family, but as regards her more commercial dealings, relations with others are generally assumed to be “non-tuistic” (i.e. unconcerned with the interests of those others).<sup>112</sup>

Clearly this understanding does not involve rivalry, in that her self-interest (expressed as her consumption of goods and services) is not being measured or compared relative to that of anyone else. Rather, rivalry involves the concept that one’s utility/desires/preferences reflect one’s position *relative to that of one or more others*. This means that if everyone else experiences a reduction in consumption while mine remains unchanged, I perceive myself as better off in utility terms when the relationship is one of rivalry, whereas in terms of material self-interest as normally understood, I remain in the same position.

The economist could then describe rivalry, again using the utility concept, but this time as a positive function describing where the economic agent stands in a rank ordering of the same measure of consumption, but in relation to the consumption of one or more others in a comparator group. Alternatively, the utility function could be defined, not as a rank ordering, but in terms of the proportions achieved by each participant of the total consumption of all participants in the comparator group. However defined, this utility function of rivalry describes her consumption achieved *relative to* that of others, versus the utility function of self-interest which describes her absolute level of

---

<sup>112</sup> The term “non-tuism” was coined by Wicksteed (1946/1933).

consumption, *independent of* that of others. As noted, a reduction in the consumption achieved by a rival always increases her relative position on this latter definition of the rivalry utility function (i.e. based on proportions of total consumption), and may also on the former definition (i.e. based on rank ordering of consumption), even though her own absolute level of consumption achieved remains unchanged.

A simple example makes this conclusion clear. Suppose four agents A to D achieve consumption as shown in the table following: relative comparisons are shown using comparator measures of (1) absolute amounts consumed, (2) rank ordering of the respective consumption levels, and (3) percentages of the total amount consumed. Assuming the amounts consumed by B, C and D reduce as shown on two scenarios, the relative comparisons are then recalculated:

**Table 1 Example of comparisons of measures of self-interest and rivalry**

Agent	Base Case			Scenario I			Scenario II		
	(1) Consumption	(2) Rank Order	(3) % of Total	(1) Consumption	(2) Rank Order	(3) % of Total	(1) Consumption	(2) Rank Order	(3) % of Total
A	200	3	20.0	200	3	25.0	200	1	40.0
B	300	2	30.0	250	2	31.25	100	3	20.0
C	400	1	40.0	300	1	37.5	150	2	30.0
D	100	4	10.0	50	4	6.25	50	4	10.0
<b>Total</b>	<b>1,000</b>	<b>10</b>	<b>100.0</b>	<b>800</b>	<b>10</b>	<b>100.0</b>	<b>500</b>	<b>10</b>	<b>100.0</b>

In each scenario, A's consumption is 200, so if her utility is represented by her own self-interest, her utility remains the same, regardless of others' consumption.

In the base case, A's utility measured by the rank order of her consumption is 3<sup>rd</sup> and if measured by her share of the total consumption of 1,000, she rates at 20%. By comparison in the base case, B's, C's and D's utility measured by rank order are 2<sup>nd</sup>, 1<sup>st</sup> and 4<sup>th</sup> respectively, and if measured by share of the total consumption of 1,000 are 30%, 40% and 10% respectively.

The reductions to B's, C's and D's consumption under Scenario I leave A's utility measured by the rank order of her consumption unchanged at 3<sup>rd</sup>, but if measured by her share of the total (reduced) consumption of 800, it rises from 20% to 25%. And the

further reductions to B's and C's consumption under Scenario II increase A's utility measured by the rank order of her consumption to 1<sup>st</sup>, and if measured by her share of the total (further reduced) consumption of 500, further increase her measure to 40%.

A's absolute level consumption has not changed under any of the three scenarios, and hence her measure of self-interest has remained unchanged at 200. However her percentage share of the total consumption has increased under each subsequent scenario (because that total has reduced from 1,000 to 800 and then 500), and under Scenario II her rank order has increased from 3<sup>rd</sup> to 1<sup>st</sup> as B's and C's consumption levels have fallen below hers.

Hence rivalry is *definitionally* distinct from self-interest, a distinction which is critical to the economic way of thinking,<sup>113</sup> which includes the prospect, or at least the possibility, of gains to all parties in an exchange transaction or other economic process.

Rivalry on either definition of the utility function is clearly zero-sum. On the former definition, while the rank ordering of individuals may change as the result of a transaction or other economic event, the total number of ranks remains unchanged by definition (in the above example, 10). And on the latter definition, while the proportions of total consumption may well change, the total of the individual proportions remains 100%. In simple terms, any improvement in one party's ranking or proportion must be at the expense of another's.

Self-interest, on the other hand, is not limited in this way: at least in principle, all participants in an exchange or other economic process can benefit. Because economists are interested in positive-sum interactions, they have generally focused on processes under which positive-sum interactions are not excluded definitionally by virtue of psychological dispositions such as rivalry (defined in this way) which, as already argued, is zero-sum by nature.<sup>114</sup>

---

<sup>113</sup> *The Economic Way of Thinking* is the title of an important book by Paul Heyne *et al* (13th ed, 2013). The fundamental ideas are set out in Heyne, 2008, Chapter 16; the basic assumption is that "all social phenomena emerge from the choices of individuals in response to expected benefits and costs to themselves." (Heyne, 2008: 294)

<sup>114</sup> Of course, this principle of self-interest, namely positive-sum economic interactions, is not always realised in practice, in that not all parties to a transaction or process in fact benefit, or do not necessarily benefit to the extent to which a particular party might regard as "fair." The degree of "fairness" in the distribution of those overall benefits among the parties is a complex question, which may well not admit of any completely satisfactory solution, because of the different psychological

The purpose of much economic reasoning is to describe the conditions under which maximum economic benefits accrue to the parties involved as a whole, subject to the legal, structural and environmental constraints within which the interactions take place. None of this is to deny that economic relationships and interactions might well exhibit rivalry, but this feature of agents' psychology – expressed in such aspects as their attitudes, values and motives – is not one on which mainstream economists have chosen to focus.

There is a significant sense in which analogous comparison of economic processes and transactions with most sporting contests (such as tennis matches) or competitive games (such as chess), which are clearly zero-sum, is quite misleading. But competition with oneself, to improve one's score (or time or rating) is an aspect of some competitors' motivation in sports or games which is at least self-interested, and arguably also "rivalrous" (if one can regard one's prior performances as something against which one can compete as if with a rival).

The primary point I make here is that economists' primary concern is with self-interest because of its structural potential for positive-sum outcomes, rather than with rivalry because of its generally opaque psychological motivations, and its typically zero-sum character.

## **5.4 STRUCTURED RIVALRY**

Despite the rivalrous interaction of agents normally being in a zero-sum context, it is possible to construct a rivalrous structure in pursuit of positive-sum economic outcomes.

### **5.4.1 Investment Management Examples**

Consider the following examples of possible alternative reward and performance structures at a hedge fund, in respect of ten recent MBA graduates who are each allocated \$10 million to establish a portfolio of assets, and are each assumed to be

---

attitudes, values and motives of the parties; such issues are frequently ignored in economic analysis, assumed to be too opaque. Nevertheless, these psychological factors may well influence the extent to, or basis upon, which a particular party is prepared to participate in the transaction or process, and thus have an impact in practice on the extent to which the overall maximum potential benefit of the transaction or process can be achieved.

strictly non-tuistically self-interested (i.e. the fortunes of the other nine do not enter the utility function of any of them):

1. Each graduate is paid 1% of his/her portfolio's value after a year;
2. Each graduate is paid 15% of the increase (if any) in his/her portfolio's value after a year;
3. Each graduate is paid a share of a total sum of \$1 million, equal to the proportion after a year of the value of his/her portfolio to the total value of all ten portfolios;
4. The graduate whose portfolio's value after a year is greatest is hired on a permanent basis on generous terms, and the other nine are paid nil and "let go."

Rewards under alternatives 1 and 2 depend solely on the graduate's own performance, but differ according to the extent of that dependence. For example if we consider an end-of-year value for a particular graduate of \$10,500,000 (5% increase), under alternative 1 our graduate gets a reward of \$105,000 and under alternative 2, \$75,000. If the rate of increase in the end-of-year portfolio value is 10% (i.e. value at end-of-year = \$11,000,000), alternative 1 produces a reward of \$110,000 (or \$5,000 more than at a 5% increase), and alternative 2 produces \$150,000 (or \$75,000 more than at a 5% increase). Would it be reasonable to conclude that alternative 2 rather than alternative 1 makes the graduate more competitive because of the prospect of significantly greater reward for higher performance? *Prima facie*, this does not seem an appropriate conclusion, since the graduate is not competing directly with anyone else. The greater potential reward of alternative 2 may inspire him to greater effort and concentration, but that is attributable to a psychological disposition to personal achievement and self-fulfilment rather than competitiveness with others.

The psychological disposition of a particular graduate might well lead him, on learning during the year of the progress of other graduates' portfolios, to a competitive attitude towards one or more of the others, based on a psychological desire to produce the best result at year-end, to be seen as "winning" the contest, and/or to receive the greatest reward. However, this potentially competitive attitude toward the others can be regarded as secondary to the primary motivation by the particular

graduate to produce the best result possible, and thereby optimise his own result, since the competitive motivation can be regarded as merely a spur to the primary motivation of personal achievement and self-fulfilment.

The reward structure can also have implications for the investment behaviour of a graduate whose personality disposition is such that linking reward too closely to portfolio performance leads to *either* excessive risk-appetite or risk-aversion, either of which the fund manager might wish to discourage. If alternative 2 overly encourages an unduly aggressive or alternatively an unduly defensive investment approach by any particular graduate, either may be counter-productive, but in neither case does it seem to bear on the question of which reward structure might either encourage or discourage greater relative competitiveness.

The better conclusion is that, depending on the psychological disposition of the particular graduate, alternative 2 might either lead to greater or lesser riskiness in investment behaviour according to whether the lure of greater reward or the fear of lesser (or nil!) reward predominates. Choice by the management of the hedge fund of alternative 1 or alternative 2 as the reward basis would seem to depend on both their assessment of the psychologies of the ten graduates and the type of investment behaviours they wish to encourage, rather than any question of which reward structure encourages greater competitiveness.

Alternatives 3 and 4 introduce mutual dependency into the reward structures. In alternative 3, the better others do, the smaller any particular graduate's reward, since the total reward pool is fixed. This introduces an element of rivalry between the graduates, but it is primarily structural, and does not depend on any or all of them having a psychologically rivalrous disposition towards their colleagues. One or more of the graduates *may* have a rivalrous disposition, and the structural rivalry might even tend to increase that psychological tendency, but it is not a *necessary* feature of reward structure 3.

Alternative 4 is an extreme case – it makes the graduates necessarily rivals, given it is a “winner-take-all” situation. Compared with alternative 3 the extent of structural rivalry is much greater, and may well be more likely to increase any psychological tendency to a rivalrous disposition, but even here the rivalry inherent in the reward basis is structural rather than *necessarily* psychological.

From these four alternatives, it is clear that some economic relations involve structural rivalry (a specific feature of the structure of rewards), and others do not. Most standard cases in orthodox economics do not; for example, profit maximisation or being paid the value of marginal production are individually based (the comparison is alternatives 1 and 2).

A consequential question is whether a particular example of structural rivalry is so likely to increase an existing psychologically rivalrous disposition that it should cause concern. Suppose the hedge fund in the above example decides to adopt alternative 4 – should its management and arguably other stakeholders be concerned at a reward structure which pits the graduates against one another in this way? It might be argued that in the wider context of the hedge fund's clients (assume, for example, they include an endowment fund supporting widows and orphans), the graduates' reward structure is one of the inputs to the hedge fund's performance objectives in meeting that very worthy aim. If the management of the hedge fund believes that alternative 4 is the best reward structure for optimising the fund's investment performance for the benefit of those widows and orphans, why should it not be adopted? The management might well argue that if any of the graduates find the arrangement objectionable, they do not have to accept it, which seems reasonable assuming the graduates have freedom to make their choices without undue pressure.

In considering the question of whether the reward structure is likely to produce the greatest fund value at the end of the year, the hedge fund management need to have regard for the social, legal and political context in which they operate the fund. Issues they will need to consider include the following: whether the graduates are to be treated as interns gaining valuable experience or as short-term employees, the legal basis on which the graduates are engaged and the consequent requirements of the relevant employment law, and the public relations consequences of the arrangement being exposed in the press.

The management should also have regard for the ethical issues which their reward policy raises. Quoting and applying my argument in discussing consequentialism and deontology in Section 3.2 to this situation:

[A]n overlap between 'right' and 'good' can emerge when the predominant consequentialist [in this case, the fund management] argue(s) that 'what but the ends [the investment performance, and the needs of the beneficiaries] can

justify the means [the reward policy]?’ – surely only some ends justify some means, and not that any ends justify any means.

Thus a key question the management need to ask is: “Does the good end of anticipated better investment performance (by how much, compared with that anticipated under the other alternatives?) justify a reward policy under which nine of the graduates receive nothing for their year’s work (notably the one who comes second, perhaps only by a small margin)?”

Christians (as well as some non-Christian ethicists) would ask the additional question: “Are the graduates being treated as human beings, ends in their own right, or are they being treated as objects, means in the pursuit of an (albeit worthy) end?” There would seem to be an at least arguable case that they are indeed being objectified in pursuit of another goal, though their ability to refuse the role does raise the defence of freedom of choice, presuming they will not starve or be seriously disadvantaged if they do decline the role.

#### **5.4.2 Sporting Examples**

The comparison here with competitive sport is an interesting one. Most rivalrous sporting competitions are zero-sum – there is only one winner, and hence winning is a rival good. If there is a ladder reflecting relative success, at the end of the season it runs inexorably from the victorious premier down to the unfortunate recipient of the wooden spoon. And in many of these competitions the participating athletes sacrifice all, frequently risking serious injury<sup>115</sup> to gain success. In the wealthiest sports often the financial rewards of the winners are enormous, while the losers often end up with relatively meagre pickings.

The competition in sporting contests is *prima facie* structural, with players fulfilling their competitive roles without any *necessary* psychologically competitive attitude towards the opposing contestants. That said, in some cases teams and (particularly) individual players may behave in psychologically competitive ways towards their opponents, often apparently “constructed” so as to lift their adrenalin and hence their performance.<sup>116</sup> But is such “constructed” competitiveness truly psychological

---

<sup>115</sup> And very occasionally, death – e.g. cricketer Phillip Hughes, killed by a blow to the head from a ball bowled by a fast bowler in November 2014, or Formula 1 racing car driver Ayrton Senna, killed in a crash during the 1994 San Marino Grand Prix.

<sup>116</sup> One thinks of fast bowlers and “sledging” in cricket matches.

competitiveness or rivalry, or really just part of the “theatre” – and hence structural competition – of the sport? It is true that in some cases this type of competitiveness does “spill over” into something more aggressive and more enduringly psychological in nature. It is also true that some opponents in vigorously competitive sporting contests are privately good friends. I suggest that, in the main, competition in sport is, first and foremost, part of the structural nature of the competition.

Teams need high levels of cooperation if they are to be successful, and the scope for very able “loners” can often be quite limited in team sports. While the competition and cooperation involved in these sporting contexts may have psychological elements (and evidence of “psychological narcissism” may be the reason for exclusion of an able loner from a team), the basis of the cooperation needed for a team to be successful is primarily structural. At the same time as this team cooperation there is frequently quite intense competition within the longer list of those vying for team selection, as well as within teams for opportunities to perform in specific situations and roles during the game.

An interesting example of both competition and cooperation is long distance cycling (such as the *Tour de France*), where individual riders compete as members of teams. Within a team, the primary role of some riders during the main part of the race is to cooperate by protecting the leader (e.g. by dropping back to collect sustenance for the leader, protecting the leader from the risk of crashes, pacing the leader on major climbs, or riding in front to allow the leader to slipstream and conserve energy for the final assault). But their role is also to compete with other riders in his own team (as well as with riders from other teams) if it appears the team leader is faltering. Hence, there can be both cooperation and competition within a team, as well as competition with riders from other teams.

In the case of a breakaway from the main peloton of a small group of riders (usually one from each of several different teams, and usually not the lead riders of those teams), these otherwise competing riders cooperate (by sharing the lead and allowing slipstreaming, as a way of maintaining their lead over the peloton). However, at some point (usually judged to be sufficiently close to the finishing line), one or more riders of the breakaway group decides to compete individually and the cooperation disintegrates. Meanwhile there is a similar cooperation within the main peloton as the

sharing of the lead increases the chance that breakaway riders will be overtaken. Again, members of teams within the peloton will protect their leaders (e.g. from energy-sapping front-riding, or crashes with other riders) and at some point, endeavour to get their leaders to the front of the race for the final assault on the finish line or intermediate mountain-top.<sup>117</sup> If in this final stage it looks like their leader is flagging, other riders within the team may compete, both with one another as well as with riders from other teams, to improve their individual standings or even compete for line honours.

Thus there is a complex structure of both competition and cooperation, both within and between cycling teams, all of which is primarily structural. Of course, there may be psychologically motivated elements to some of these cases, both of competition and cooperation, but they are not the primary defining quality.

Major professional sport supports a vast industry with its coaches, administrators, commentators, media, and especially the paying fans. The most lucrative sports achieve their vast wealth because they touch something tribal within huge numbers of people – supporting one's team or favourite player provides many fans with a level of engagement and emotional satisfaction unmatched elsewhere in their lives. So, while the game itself may be zero-sum, at the wider level the commercial competition of a major sport provides livelihoods to many times the number of direct competitors, and enormous enjoyment to many times that number again of fans. In this way sport, while generally zero-sum at the level of the sporting contest itself, in its wider context can be the supreme example of a positive-sum economic activity. Thus, as well as a structurally competitive activity at the level of the contest itself, professional sport in this wider context is clearly also a structurally cooperative enterprise, with significant division of labour. It provides employment to a workforce of a multiple of the number of direct players, and significant engagement and enjoyment for a number of fans and followers equal to many times the number directly employed in the enterprise.

---

<sup>117</sup> Whether to win the stage or maintain or improve time advantage for the "general classification" or "king of the mountains" category.

Professional sport is in the entertainment business, but it can also have deeper meaning for a local, regional or national sense of identity.<sup>118</sup>

## 5.5 OVERVIEW AND CONCLUSION

*Rivalness* describes the feature of many goods that only one party can consume them, or use them at any one time; *lumpiness* is a related concept, which describes the indivisibility of many goods. Both are inherent or *structural* properties of goods, and imply nothing about the *psychological* disposition or attitude of any of the parties involved in their consumption or ownership, or in trading or competing for them. Neither characteristic implies any necessary psychological competition or rivalry in respect of the goods concerned; they may be involved, but this is unrelated to these characteristics.

The economic concept of *perfect competition* is a *structural* understanding of idealised market conditions, including (*inter alia*) many buyers and sellers of a uniform product, and all participants being price takers. A *psychologically* competitive or rivalrous attitude on the part of any participant in relation to their involvement a perfectly competitive market makes no rational sense.

Progressively more concentrated market conditions, such as *monopolistic competition* (which describes product differentiation, particularly through advertising, and non-price competition), *oligopoly*, and the extreme of *monopoly*, may be more likely to give rise to psychologically-motivated competitive or rivalrous attitudes, but such are not necessarily part of the relevant market structures or the economic analysis of them.

I have considered very briefly the place of competition in two social institutions related to the market economic processes – the political and legal processes. In both, the role of competition is fundamentally structural; however in certain versions and aspects of each, the environment is created where a psychological disposition to rivalrous competitiveness can be facilitated, and in some cases is even rendered inevitable.

To consider rivalry from an economic viewpoint, I have looked at simple examples where economic outcomes for individuals are designed either to, or to not, depend on

---

<sup>118</sup> One thinks of the significant role played by Nelson Mandela and the 1995 Rugby World Cup win by Springboks in helping unite the disparate parts of the South African nation as part of the transition to black majority rule, memorably recorded in the 2009 movie *Invictus*.

the outcomes for others. In the former case, there is rivalry, whereas in the latter there is not. However, the rivalry in the former case is not necessarily psychological, since it is a product of the design of the economic relationships between the participants. The latter case, where the outcome for each participant is independent of that for the others, is representative of the normal self-interest of interest to economists in its various settings, particularly when there is the possibility of a positive-sum outcome. Many examples where there is rivalry are zero-sum, and are of less economic interest traditionally because of that.

Despite their typically zero-sum aspect, it is quite possible to construct rivalrous structures in pursuit of positive-sum economic outcomes. The constructed rivalrous interactions between the participants do not necessarily involve a psychological attitude of rivalry, albeit certain designs may make it more likely that a participant with a latent psychologically rivalrous disposition will behave in that way. An extreme example is one in which a reward structure for a group of workers can be described as “winner take all,” where the structure may be likely to produce an optimal outcome for the employer and perhaps society more generally, but which raises questions of whether the reward structure is socially and ethically acceptable.

Sporting examples are interesting, because many sporting contests are zero-sum, and the competition and rivalry involved is fundamentally structural. However, while a psychologically competitive attitude is not a necessary feature of many sporting contests, it frequently arises with particular individuals and be more likely in some sports than others (e.g. those which involve physical contact). In team sports, as well as the obviously necessary competitiveness towards the opposing team, high levels of cooperation within the team are also needed. But there is frequently some competitiveness *between* the members of the team or squad – for places in the team, key positions, etc., and in some sports both cooperation and competition within the team can be evident at different stages within the contest. Despite sporting contests generally being zero-sum, sport in its wider context provides a very good example of a wider-sum economic activity.

The overall conclusion is that the economic understandings of the various concepts and structures discussed in this chapter – rivalness and lumpiness of goods, perfect competition and the various more concentrated market forms, political and legal

structures, the specifically economic understanding of rivalry, and various sporting examples – are primarily structural. In varying degrees, psychologically rivalrous and/or competitive attitudes may exist as well in the various structures and interactions, and in some cases be more likely to arise than in others, but without making the primary economic understanding psychological rather than structural.

## 6. RIVALNESS, COMPETITION AND RIVALRY: CHRISTIAN PERSPECTIVES

### 6.1 INTRODUCTION

My purpose in this chapter is to examine rivalness, competition and rivalry from a Christian perspective, particularly how they impact on the structural/psychological distinction between economic and Christian understandings of these concepts which has characterised much of my discussion to date.<sup>119</sup>

However, there are also other emphases in economic and Christian thought which nuance the ways in which each discipline views rivalness, competition and rivalry. Firstly, economic thought has a significant and direct focus on the individual and their actions (as the best means of indirectly optimising the outcome for others as well as the acting individual – characterised by the “invisible hand” metaphor). On the other hand, Christian thought is concerned with others more directly (primarily through the institution of the Christian community, but also in the Christian relationship with the wider society in which adherents are located).

So there is an individualist/ communitarian divide hovering here, which is also evident in the discussions in Chapters 2, 3 and 4. Secondly, particularly for those economists who emphasise the scientific character of their professional enterprise, the *positive* nature of economic thought is critical, whereas for Christians generally, thought about social relations is necessarily *normative*, Christianity being a religion with a significant ethical dimension.<sup>120</sup>

In what follows I look at the relevant biblical material, briefly as regards rivalness and in more detail as regards competition (usually in its rivalrous sense) and cooperation, before turning to specific examples of how Christian thinkers (at and since the Reformation) have treated these issues. The discussion illustrates the argument in Chapter 2 that the frequently expressed view in Christian thought of competition and cooperation as opposites is often based on a psychological view of both concepts.<sup>121</sup> This Christian understanding may be contrasted with the structural understanding in

---

<sup>119</sup> As elsewhere in this dissertation, in this Chapter I use “Christianity” and “Christian” as succinct terms for Christian theology and ethics, and their intellectual exponents, etc.

<sup>120</sup> This distinction is discussed in a little more detail in Section 3.1.

<sup>121</sup> The relationship of psychological elements in competitive and cooperative dispositions, with Christian theological anthropology is discussed briefly in Section 2.1.

economic thought,<sup>122</sup> which rather sees the opposite of competition as monopoly, which is rarely if ever encountered in Christian thought.

## 6.2 BIBLICAL MATERIAL

### 6.2.1 Rivalness

Rivalness (discussed in its original, economic, context in Section 5.1) focuses on a property of many goods: their availability to only one individual.<sup>123</sup> Rivalness is a fact of the nature of such goods which has distributional consequences, and it is here that economics and Christianity may differ. Where economists take an interest in the distributional aspects of rival goods, it is generally *positive* – seeking to observe and describe the ways in which rival goods are dealt with distributionally by those involved. On the other hand, Christian thought on the distributional aspects of goods necessarily available to one person to the exclusion of others concentrates on *normative* issues of fairness and generosity, whether of sharing or giving a rival good with/to the other, even an oppressor.

The Mosaic law specifies rules concerning return of a man's outer garment (which was clearly a rival good, and often served the additional function of the equivalent of a modern-day blanket) in circumstances where the owner was experiencing financial hardship:

If you take your neighbour's cloak in pawn, you shall restore it before the sun goes down; for it may be your neighbour's only clothing to use as a cover; in what else shall that person sleep? (Ex 22:26-27a)

When you make your neighbour a loan ... [i]f the person is poor, you shall not sleep in the garment given you as the pledge. You shall give the pledge back by sunset, so that your neighbour may sleep in the cloak and bless you; and it will be to your credit before the Lord your God. (Dt 24:10a, 12-13)

And Jesus radically says in the gospels, again in relation to this particular rival good, an essential item of an Israelite's clothing, even when it is the subject of a legal dispute:

... and if anyone wants to sue you and take your coat, give him your cloak as well (Mt 5:40)

---

<sup>122</sup> The structural understanding in economic thought is explained in some detail in Part A of Chapter 4 (Sections 4.2 to 4.4)

<sup>123</sup> Some rival goods (such as an apple) can be shared, but then cease to be the original good (a whole apple). Other rival goods cannot be shared (such as a kidney available for transplant); these are described as "lumpy" goods.

A Hebrew Bible example illustrating the point of a biblical normative focus on fairness is King Solomon's use of the threat to divide in two a baby (a "rival good" in the context of the story), to resolve a dispute between two recent mothers. One mother's baby had died, and the dispute was over whose was the living child. Solomon wisely determined which woman was the real mother: rather than see the child die, the real mother was prepared to cede her baby to the other woman. Thus the other woman's lie (that the child was hers) was exposed, since she would have let the child die, because she preferred that neither of them have the child if she could not. (1 Kgs 3:16-28) In the context of my discussion, the child was a "lumpy good" and not "fully divisible" i.e. the child would have ceased to be a child if divided.

Jesus' radical extension of the concept of "neighbour," particularly in the parable of the Good Samaritan (Lk 10:25-37), raises the question of the scope of the Christian injunction to share with others. It might be argued Jesus is teaching that *all* others, however remote (familiarily, culturally, geographically, etc.), should rank equally in the believer's application of fairness and generosity. Alternatively, Jesus might be argued to be expanding the extent of concern beyond the traditional scope (such as family, religious community, tribe, etc.) to include needy outsiders of any background or group, with whom the believer comes into contact. Also, in one of his criticisms of the Pharisees and scribes, Jesus specifically affirms the requirement of the Mosaic law to honour parents, the context meaning "honouring" includes providing for their material needs, rather than avoiding this specific responsibility by designating financial resources as *corban* (meaning vowed for religious purposes, and not available for other purposes). (Mk 7:1-13) But when told that his immediate family members wished to speak to him, Jesus equates his disciples to his "brother and sister and mother." (Mt 12:46-50)

A balanced assessment of the New Testament account of Jesus' teaching on fairness and generosity would seem to include *both* taking responsibility for immediate family and members of the community of faith, *and* caring for needy outsiders with whom the believer comes into contact.<sup>124</sup>

---

<sup>124</sup> For the modern western Christian in a globalised world, details of people, including fellow Christians, in tragic circumstances appear daily in the media. In this context, are those with whom the believer comes into "contact" via the media, whether other Christians or "outsiders," part of a much wider range than would have been the case in first century Palestine? Depending on how one answers this question,

This Christian preoccupation with fairness and generosity, as well as arising out of the fact of the rivalness of most goods (which is not an analytic category), also represents a focus on rivalry (which is an analytic category, and one in which Christianity is particularly interested); rivalry is discussed below in its Christian context in Sub-section 6.2.2.

When one turns to the Christian concept of divine grace, the question arises as to whether it is a rival good. I argue that in orthodox Christian thought it is not, but rather that it is available to any and all who are willing to receive it and genuinely endeavour to comply with the consequent conditions of belief and practice. But it is worth considering a few of the texts which might be taken to point to divine grace, and the faith to believe and endeavour to live a virtuous life, being a rival good:

- Jesus' parable of the great banquet (Mt 22:1-14) shows a king inviting anybody and everybody to a wedding banquet for his son, after the (apparently more select) guests originally invited have rudely refused to attend and have even killed the servants sent by the host to summon them to the feast. But a guest not satisfying the conditions of attendance (wearing a wedding garment) is ejected into terrifying conditions; the parable ends with "For many are called, but few are chosen." (v14) This is the third of three parables Jesus directs to the Jewish leadership, indicating the dire consequences of their rejection of him and his message, and the inclusion in the kingdom of ordinary people who accept it and comply with the conditions. Hagner indicates that "few" in v14 "is here very probably ... to be understood as a Semitism meaning 'fewer than' in the sense of 'not all'." (Hagner, 1995: 632)
- The several passages, mostly in Paul's letters, and discussed in some detail in the next Sub-section, which refer to athletic pursuits (running and boxing in particular) are, as I argue there, primarily about endurance and not about individual supremacy. They represent an injunction for all believers to persist, echoing Jesus' injunction that "the one who endures to the end will be saved." (Mt 24:13)

---

difficult questions are potentially raised for modern Christians as regards the scope of humanitarian concern, and the most effective ways of expressing that concern.

- The references in Revelation (Rev 7:4, 14:1-5) to the 144,000 redeemed, sealed as God's own from every tribe, do not indicate limitation to that number, but rather is a symbolic number representing completeness – not one of the redeemed is missing. (Metzger, 1993: 61 & 77; Morris, 1981: 114 & 175)

Thus there is no sense of God's grace being limited and hence rival; grace is available to all, the only requirement being that believers accept Christ and his message, and endeavour to comply with the conditions of belief and practice. These conditions may be demanding (such as for the rich – e.g. Mt 19:24) or of wide applicability (such as for those who have the opportunity to care for the needy – e.g. Mt 25:31-46), but do not limit the availability of God's grace. The faith to believe and the endeavour to live a virtuous life are also not rival (albeit some of the particular means of living a virtuous life may well be rival). All who persist with the faith will be among the redeemed at the end of time, so the eschatological reward is not rival.

While rivalness is usually an unambiguous property of a particular good, sometimes a decision as to how to proceed determines whether or not the resulting good is rival. For example protection from theft can be delivered individually by alarm systems or collectively by police services; the former outcome is rival but the latter is not. Other examples are protection from malaria by mosquito nets or draining the malarial swamp; and provision of movies by DVDs or cable TV. In such cases I suggest that there is frequently a difference between how Christians and economists view the alternatives, with Christians more often focusing on distribution and economists on efficiency. Probing behind this difference of focus, I think the Christian preference for distribution often includes a desire to fund the provision of the good or service communally, with a progressive cross-subsidy in the funding basis (consistent with a priority for the poor). On the other hand, I think the preference for efficiency usually leads most economists to adopt a starting point of directly attributable costs being borne directly by the individual concerned.

If a good is zero-sum, for example a rank ordering of particular characteristic such as an examination score, or the share of a limited total pool such as the proceeds of a trust fund, the question arises if there is any Christian reflection relevant to actions which would change the rank ordering or pool shares. Any particular rank, and any marginal improvement in a particular share of the limited pool, is rival; by definition

any improvement in my rank or in my share of the limited pool must be at expense of that of one or more others. In both cases, one can conceive of situations where my engaging in action likely to mean I overtake another's rank or increase my share of the pool, might have serious economic or other consequences for them, which I as a Christian should consider as part of my duty to love my neighbour as myself. For example if holding the top rank or maintaining a particular share of the pool is of vital importance to another (my "neighbour" in Christian terms) but is of relative indifference to me, how do I contemplate actions which will displace him/her or reduce his/her share? "Throwing" a contest, or refraining from legitimate actions, in the interests of preserving someone else's economic position, seem to infringe Christian ethical injunctions such as to "run with perseverance the race that is set before you." (Heb 12:1) Perhaps all that can be said is that the various options open to me as a Christian, in relation to my position in the rankings or shares of the pool respectively – such as pursuing improvement in my position, and if successful considering whether to make a gift to the other; refraining from seeking to improve my position; or withdrawing completely – need to be considered in the light of the circumstances and available options in the particular case.

But there is the case of perhaps greater interest to economics: where the rival good is positive-sum, such as where there is the possibility of greater efficiency due to increased division of labour. In such a case, pursuit of greater efficiency may well have potential net benefits (provided all the disadvantages and costs are adequately included in the assessment), perhaps for me, but also certain others who are my Christian "neighbours." However, refraining from pursuing that greater efficiency and overall net benefit with the objective of preserving an "existing other's" current economic position has a further issue. While some "existing others" may be unable to change current activities or decisions to achieve these efficiencies (and would need to be treated equitably in sharing the net benefits of greater efficiencies), there may also be some "existing others" who are merely unwilling to attempt to do so. Such unwillingness might well need to be confronted (sympathetically) as part of an overall Christian duty to love *all* relevant neighbours as oneself.

The distinction between economic and Christian thought in relation to rivalness also reflects the fundamental positive/normative distinction between the two modes of

thought: economics is descriptive of rival goods and the facts of their distribution, whereas the Christian focus is on the ethics of the distribution of rival goods.

It might also be argued that this distinction also resonates with the structural/psychological distinction, in that the economic descriptive approach more readily focuses on the structural nature of the exchange of rival goods, whereas the Christian approach to rival goods is more reflective of the psychologically based act of the will involved in loving one's neighbour.

### **6.2.2 Competition as Rivalry**

As with biblical hermeneutics generally as regards many texts and subjects with contemporary ethical implications, an attempt at a biblical theology of competition as rivalry needs to be sensitive to the textual context, and if and how each particular text can then be authentically interpreted in contemporary context.

Hebrew Bible texts apparently relevant to the questions of human competitiveness frequently deal with psychological rivalry (sometimes deadly conflict) between individuals; prominent examples are:

- Cain and Abel, who compete in respect of God's approval of their respective offerings, which interestingly is non-rival provided the offering is appropriate (Gen 4:4), and
- David and Saul, who compete for public approbation of their respective levels of military prowess (1 Sam 18).

Those texts also deal with rivalry (including armed conflict) at the national or tribal level, between the Israelites and pagan nations, usually over already occupied land.<sup>125</sup> Whether already occupied or not, land is rival in relation to sole occupancy.<sup>126</sup>

However, in the context of the *universalist* New Testament message<sup>127</sup> (specifically the triumph of good over evil in Christ's sacrifice on the cross, and salvation by God's grace

---

<sup>125</sup> Starting during the Exodus, with the defeat of Kings Sihon and Og, and the occupation of their lands (Num 21: 21-35), the many conquests recorded in the books of Joshua and Judges, and continuing until the wars of conquest under King David in 2 Samuel.

<sup>126</sup> Albeit the archaeological and other evidence is that in many cases the lands occupied by the Israelites were shared with other ethnic groups. (Bright, 1981/1960: 133-143)

<sup>127</sup> The New Testament's application to all peoples contrasts with the exclusivist position of the Hebrew Bible: the Israelites were God's chosen people, and hence there was a highly competitive relationship between them and the surrounding pagan communities, as the Israelites sought to expel the current occupants of the land, and occupy it as they were promised.

available for *all* believers – whether Jew or Gentile), the understanding of competition derived from the Hebrew Bible is generally rather less directly relevant hermeneutically for contemporary Christians than what we may hope to derive from the New Testament.

When one turns to the gospels, there is a significant strand of Christian thought on competition which typically starts from Jesus' two great commandments, set out in his answer to the testing question of a Pharisee lawyer:

“Teacher, which commandment in the law is the greatest?” He said to him, “‘You shall love the Lord your God with all your heart, and with all your soul, and with all your mind.’ This is the greatest and first commandment. And a second is like it: ‘You shall love your neighbour as yourself.’ On these two commandments hang all the law and the prophets.” (Mt 22:36-40)

Jesus' affirming the fundamental commandments of the Hebrew Bible, and then extending the definition of “neighbour” beyond the Israelites to all peoples in the parable of the Good Samaritan (Lk 10:29-37) is the rationale for consistent Christian ethics outside the community of faith as well as within it.

As will be clear from later discussion, there is considerable diversity in (particularly contemporary) Christian thought on the subject of competition as rivalry. Some Christian thinkers, in pursuing the above line of thought then ask a question along these lines:

“How can we love our neighbour as ourselves if we are competing with them, pursuing our self-interest beyond equal treatment, at the expense of their self-interest, seeking to attain what they are striving to attain, and perhaps even striving to deprive them of what they have already attained?”<sup>128</sup>

There may well be an assumption of an underlying rivalrous, competitive attitude underlying this question, and hence a view of competition as psychological, rather than based on participation in any economic or other process based on a structural view of competition. However, the competition could be “unconscious” in the sense of my consuming a good which might otherwise be available to my neighbour, and hence not really involving the psychological, though this scenario does raise the suggestion of the competition potentially becoming psychological if it occurs or is pointed out to me that the other has a need or desire for the good. Ignoring the other's need or desire

---

<sup>128</sup> Examples of this type of attitude in the historic Christian thinkers discussed later in this chapter include Luther, Wesley, and more recently Temple (discussed in Chapter 7).

for the good, whether consciously or unconsciously, might be more evidence of lack of love of neighbour than of psychological competition as such. Consistent with the view expressed in Chapter 3 that psychological competition is restricted to human beings, this type of unconscious competition on the part of animals or other lower life-forms is clearly non-psychological.

The suggestion in the *pro-forma* question that competition could include “perhaps even striving to deprive them of what they have already attained” might seem somewhat unlikely, but an example might be competing rivalrously for another’s job in circumstances where it is subject to what is normally seen as a perfunctory review.

It seems that in most situations where competition could be categorised as both rivalrous and psychological, one would usually be placing a higher value on one’s own interests than those of the other, rather than rating them equally as enjoined in Jesus’ commandment.

The Pauline text frequently quoted in developing the line of argument in the *pro forma* question above, is Philippians 2:3:

Do nothing from selfish ambition or conceit, but in humility regard others as better than yourselves.

The Greek word translated as “selfish ambition” (NRSV), *eritheia*, is complex, containing the idea of selfish assertion of one’s self or group, and is variously translated in other versions as “factionalism” (Lightfoot), “competition” (Jerusalem Bible) or “rivalry” (New English Bible, also J. B. Phillips). Thus biblical interpreters who oppose a competitive attitude, on the part of Christians towards others, typically quote that this text and others defining the characteristics of love (e.g. 1 Cor 13:4-7), and enjoining love for others, including enemies (e.g. Jn 13:34-35, Mt 5:43-48).

An alternative way of understanding the injunction of Jesus’ second commandment as regards competition is to view it in terms of the rivalness of most goods, i.e. that use of a good by one person precludes use by anyone else, that most goods are the subject of natural competition (the economic concept is discussed in Section 5.1). Loving one’s neighbour as oneself might then be understood in terms of sharing the rival good with the other (if it can be divided), or giving the rival good wholly to the other (particularly if it cannot).

There is a rich vein of biblical material on this theme, particularly sharing with or giving to the needy. In the Hebrew Bible such generosity is commanded or encouraged (e.g. Deut 15:10, Jer 22:16, Prov 14:31); meanness and ignoring the plight of others is condemned (e.g. Prov 17:5, 21:13, 22:16, 28:27; Ezek 16:49).

In the New Testament, Jesus' teaching in the Sermon on the Mount goes further than just giving to the other, even in conflictual situations with enemies or oppressors:

... I say to you, Do not resist an evildoer. But if anyone strikes you on the right cheek, turn the other also; and if anyone wants to sue you and take your coat, give your cloak as well; and if anyone forces you to go one mile, go the second mile. (Mt 5:38-41)

This text has been the subject of considerable scholarly attention, given its very challenging demands on the believer. While there have been very reasonable attempts to explain Jesus' teaching in terms of an attitude of non-violent resistance towards an oppressor,<sup>129</sup> much Christian discussion of the injunction has been to accept it at its challenging face value. Jesus also focuses in the Sermon on the acquisition of heavenly rather than earthly treasure (Mt 6:19-21), with the implication that material wealth should be used with generous abandon for the benefit of others and the furtherance of the in-breaking kingdom.

Jesus teaches at the end of his earthly ministry that the basis for his separating the sheep from the goats at the judgment of the nations, before his millennial rule, is on the basis of how we have acted in relation to the deprivation of the needy; our actions towards them will be assessed as towards Christ. (Mt 25:31-46)

Interestingly, the Christian implications for relations with the poor of this understanding of the natural rivalness of goods directly links with the Christian understanding of cooperation and altruism, which are explored in more detail in Chapter 4.

Jesus also deals with a psychological understanding of competition as rivalry in the parable of the shrewd manager (Lk 16:1-8) and the related parables of the talents (Mt 25:14-30) and the pounds (Lk 19:12-27):

---

<sup>129</sup> Particularly Wink (1998: 98-111), who argues the additional, challenging actions enjoined by Jesus are aimed at shaming the oppressive representatives of an occupying force.

- In the former parable Jesus deals with a corrupt manager, who, having been found out and sacked from his position, competes very “creatively” with the traditional punishment ethic for the mercy and generosity of his master, with the objective of securing his future security. Jesus apparently<sup>130</sup> commends Christians to learn from those who, while having behaved unethically, are sufficiently streetwise to turn potentially challenging or destructive competitive circumstances to their advantage. Scholars have found the interpretation of the parable problematic.<sup>131</sup> Two contrasting examples are as follows:
  - Cameron sees Jesus’ purpose as contrasting God’s abundance and generosity (exemplified by the rich man’s surprising commendation of the shrewd manager’s dishonest but generous dealings with the debtors) with human self-absorption driven by belief in scarcity (exemplified by the shrewd manager’s unsurprising focus on protecting his own comfortable lifestyle in future). Jesus’ hearers are incensed that there is no justice, only the master’s generous smile of approval; they miss Jesus’ pointing them (and, Cameron suggests, contemporary Christians also) to a life emulating God’s generosity, trusting in His abundant provision. (Cameron, 2015)
  - Nolland’s interpretation of the parable’s significance for contemporary Christians facing challenging situations, competitive and otherwise, is in learning from those who are worldly wise, and appropriating that knowledge in the pursuit of kingdom-focused goals:

The challenge is for us to have the shrewdness to recognize and seize the opportunity that exists in the midst of threat. In the immediate context, the threat and opportunity are those created by the ministry of Jesus. But beyond that the story challenges all Christians to be as successful as the worldly wise in cutting their cloth according to their situation: to act committedly in the light of what we know (in knowing God in

---

<sup>130</sup> Some commentators suggest that verse 9 does not record the words of Jesus because they appear to condone unethical behaviour, but is an editorial addition by Luke or the authors of the special Lucan material. See, for example, the discussion in Marshall, 1978: 619-622.

<sup>131</sup> See an extended discussion in Bailey, 1976: 86-110. Amongst many interpretations are the suggestions that the rich man is complicit in the manager’s “deals,” or that the manager, acting as an “agent,” may have inflated the original debts, intending to enrich himself, but subtracts his “cut” when he is dismissed. Bailey, 1976: 87f.

Christ) of the larger shape of reality, its moral texture, and its orientation to future judgment. (Nolland, 1993: 803)

- Bailey, who brings a deep understanding of Middle-Eastern culture and thinking to his comprehensive discussion of the parable, focuses on both the mercy of the master, and also his commendation of the manager's shrewdness:

The steward is dismissed and admits his guilt by silence. He is not jailed and so discovers his master's mercy. He decides to risk everything on that mercy. Reductions are made in rents with the assumption of the master's approval. Praise flows from the local population to the master and to the steward. An ungracious repudiation by the master of such a "generous act" is out of the question. The steward is praised by the master of the story for his skill at self-preservation. Finally the parable ... provides unforgettable insight into the nature of God, the predicament of man, and the ground of salvation. (Bailey, 1976: 110)

In a real sense Bailey integrates the understandings of both Cameron and Nolland, in that God, as well as showing unmerited grace (in particular, both mercy and generosity) to humanity in general, also sympathises with the human predicament of learning how to survive in a fallen, competitive world which focuses on scarcity, at least until we can learn the redemptive lesson of His abundance and generosity.

- The latter pair of parables relate to the ethics of the servants undertaking the stewardship of investments, via the level of riskiness of the investment strategies adopted, and the competitive reward or punishment outcomes resulting from the investment results achieved.<sup>132</sup> Additionally, the circumstances surrounding the parable of the pounds provide further competitive elements – the master is absent validating his authority, and the servants are competing with external uncertainties (specifically, challenges to the absent master's authority) and internal challenges (tensions between the servants over how to respond to a demanding master's instructions).<sup>133</sup> Again, Jesus' message here seems to be pragmatic about the nature of the world, and provides no mandate for Christian quietest withdrawal from engagement with

---

<sup>132</sup> One wonders how Jesus would have structured the parable if the commended servants who had invested productively (but inevitably with greater risk) had instead produced a worse result than the condemned servant who had buried the money in the ground (perhaps out of fear, but presumably also at low/minimal risk).

<sup>133</sup> For a fuller discussion see Quek, 1997: 192f.

the competitive issues of everyday life – the issue is how one’s motives lead one to respond, for good or ill, to challenging circumstances.

Turning now to the epistles, there are multiple references reinforcing Jesus’ teaching in relation to generosity with rival goods, especially to the needy (e.g. 2 Cor 8:1-15, Jas 2:14-26, 1 Jn 3:17-18).

There are also a number of references in the epistles to the image of competitive athletic races, but the images are more of the athlete’s persistence than his competitiveness. Along with the injunction of the Hebrews author to “run with perseverance the race that is set before us” (12:1), Paul includes similar images of the persistent athlete: “running well” (Gal 5:7), “not running in vain” (Gal 2:2, Phil 2:16), and “an athlete ... is not crowned without competing according to the rules” (2 Tim 2:5). In all these cases both the Hebrews author and Paul are encouraging doing one’s very best, using the image of the athlete to encourage persistence and sustained effort in Christian living. There are similar images elsewhere in Paul: “athletes exercise self-control” (1 Cor 9:25), “I do not run aimlessly” (v 26), and “I have finished the race” (2 Tim 4:7). However there are also competitive images as well: (particularly) “the runners all compete, but only one receives the prize” (1 Cor 9:24), and (at least implicitly) “nor do I box as though beating the air” (v 26), and “I have fought the good fight” (2 Tim 4:7). But even in these cases the winner can be viewed as the one who endures to the end. In the totality of his use of the image of the athlete – runner or boxer – it seems highly unlikely that Paul means to imply that the prize of eternal life is only reserved for a single winner. Rather than the sprint, Quek helpfully suggests the image of the marathon, in which all who complete the gruelling race can be regarded as winners. (Quek, 1997: 194) In a real sense, then the athletic image is of persistence, not competition.

In summary, competition in the New Testament is used primarily in its psychological sense, albeit the treatment is quite diverse:

- If competition is regarded psychologically (widespread in Christian thought), Jesus’ primary ethical teaching in the gospels to love one’s neighbour as oneself can be argued to be counter to the concept of competing with them (unless perhaps that is the way one shows “tough love”);

- There is also a strand in Jesus' parables which takes the psychologically competitive world as given, and enjoins believers to use that environment deliberately in the furtherance of the higher calls of the gospel;
- Paul's letters use the image of the athlete striving to win the prize, but his message is that they use their competitiveness to ensure persistence and commitment;
- If alternatively, competition is seen in the economic sense of rival goods being subject to natural competition, Jesus and the epistle-writers alike teach that Christians should be very generous with material wealth, especially to the poor; this teaching resonates with the Hebrew Bible also.

### **6.3 CHRISTIAN WRITERS ON COMPETITION AND RIVALRY**

As with many social issues, Christian attitudes to competition and rivalry in economic life are significantly coloured by their historical, social and cultural settings, and hence care is needed in the hermeneutical assessment of the extent of their contemporary relevance.

As historical examples from Protestant (including Anglican) thought, I comment on the treatment of competition and rivalry in the writings of three prominent figures spanning the period from the Reformation to the end of the eighteenth century: fathers of the Reformation, Martin Luther and John Calvin; and eighteenth century Anglican revivalist and founder of Methodism, John Wesley.

Then follows a discussion of the role of competition in the interaction between Christian theology and Political Economy in Britain in the first few decades of the nineteenth century, particularly stimulated by Malthus's *Essay* (1798). I also comment briefly on the mid and later nineteenth century phenomenon of Christian Socialism, particularly the cooperative association movement.

As a sample of the understandings of two very influential Anglicans from the first half of the twentieth century, I include (for completeness) a summary of my more detailed discussion in Chapter 7 of the writing on competition during World War I of Christian socialist, William Temple, and a brief discussion of competition in an essay from mid-century by C. S. Lewis.

On the understanding of competition in Roman Catholic social thought, I comment briefly on aspects of the tradition's history over the same period (since the Reformation), and then in relevant modern papal and episcopal contributions, beginning with Leo XIII's great social encyclical *Rerum Novarum* of 1891.

Finally I give a brief survey of the diverse contributions of more recent Christian writers (from various traditions) on competition (and also cooperation). As a counter to this mostly critical opinion, I include an introduction to the thought of three contemporary writers (Novak, Tanner and Atherton) who seek to engage rather more positively with economic thought.

### **6.3.1 Martin Luther**

In spite of the radical theological and ecclesiastical challenges he unleashed, Luther was in many ways a conservative socially, particularly as regards economics and business, looking back to a world which was changing. His social model was based on the agrarian and artisanal medieval community, and he opposed trade beyond that necessary to support the basics of life within that community. He rejected trade from far countries in luxuries, which had the tendency to displace the more mundane, locally available staples. His criticism was of the former, "which minister only to ostentation but which serve no useful purpose" (Luther, 1524), and which he believed were a major cause of poverty in Germany. Luther's general hostility to trade and commercialism "largely reflects his unfamiliarity with the sophisticated world of finance then emerging in the great free cities." (McGrath, 1990: 231)

We might question whether this potential displacement of local staples with foreign luxuries can properly be described as involving competition, or whether it is merely the result of choice. If competition necessarily involves the striving of alternative suppliers to sell their similar products or services, then what Luther describes is not competition, it is choice between what he sees as the essential (but boring) and the indulgent (but exciting). If, however, the striving can in essence be described as really for the available cash in the potential purchasers' purses, then arguably it can be legitimately described as competition, i.e. as "striving of two or more for the same object." In the sense in which "competition" is used in orthodox economics, however, this is describing choice rather than competition *per se*.

Luther's attitude to pricing was based on particular transactions with a specific individual, who was to be regarded primarily as a neighbour in the exchange relationship, and not to be taken advantage of opportunistically. This focus on the other as "neighbour" also stems from Luther's natural law conception, i.e. that such a cooperative, relational approach is "hard-wired" in human beings. Additionally, he argued that prices should be based on the seller's costs plus the value of his own labour at the community standard rate, interestingly with an (unspecified) allowance for risk.<sup>134</sup>

Luther's understanding of competition is clearly psychological in nature. He views it in the positive sense of what he sees around him, based in greed (whilst he views cooperation in the normative sense of that to which he exhorts his readers, based in love of neighbour). His specification of prices based on a labour theory of value is also consistent with a psychological view of "fairness" (rather than efficiency) in the exchange relationship.

One might ask if Luther is describing (and castigating) a different type of competitive striving in the exchange relationship than that normally considered in economics – striving for the separate and different objectives of the parties in exchange, the competition as "striving of two or more for the same object" being for the goal of supremacy in the economic basis of the exchange.<sup>135</sup>

---

<sup>134</sup> The merchants have among themselves one common rule, which is their chief maxim and the basis of all their sharp practices. They say: I may sell my goods as dear as I can. This they think their right. Lo, that is giving place to avarice and opening every door and window to hell. What does it mean? Only this: "I care nothing about my neighbour; so long as I have my profit and satisfy my greed, what affair is it of mine if it does my neighbour ten injuries at once?" There you see how shamelessly this maxim flies squarely in the face not only of Christian love, but of natural law. Now what good is there in trade? How can it be without sin when such injustice is the chief maxim and the rule of the whole business? On this basis trade can be nothing else than robbing and stealing other people's property.

In deciding how much profit you ought to take on your business and your labour, there is no better way to reckon it than by estimating the amount of time and labour you have put on it and comparing it with that of a day labourer, who works at another occupation, and seeing how much he earns in a day. On that basis reckon how many days you have spent in getting your wares and bringing them to your place of business, how great the labour has been and how much risk you have run, for great labour and much time ought to have so much the greater returns. That is the most accurate, the best and the most definite advice that can be given in this matter; if anyone dislikes it, let him better it. My ground is, as I have said, in the Gospel, "A labourer is worthy of his hire," ... (Luther, 1524)

<sup>135</sup> In many such cases supremacy is not easily defined. To use a contemporary example where supremacy can be defined, purchase or sale of shares for cash, or exchange of one type of share for another (e.g. BHP for Rio Tinto), are primarily about winners and losers (dependent on the different and generally mutually exclusive beliefs of the party(ies), about whether the share price will rise or fall, in the latter case relative to that of the price movement of the other share. This is just in respect of price movements, separate from any differences of factors such as tax treatment of the parties involved, or

Maximising selling price, borrowing at interest, and providing surety (guarantees) were, to Luther “the three fountainheads from which the whole stream of abomination, injustice, low cunning, and trickery flows far and wide.” (Luther, 1524) Among these consequent business practices, which Luther believed were “corrupt,” he included the following:

- cornering the market, elimination of competitors by cut-price tactics, and cartels – which most contemporary Western Christians would agree with him are unethical – but also
- selling on credit at a higher price than for cash, raising prices in conditions of shortage,<sup>136</sup> short-selling, and funding a trader by lending on fixed terms - which most contemporary Western Christians might accept (in some cases, perhaps reluctantly) as part of business practice, albeit in certain circumstances some might object to, for example, short-selling.

Thus Luther’s attitude to competition, which he tends to conflate with more aggressive, rivalrous competitiveness, was that it was unchristian, as those who would otherwise be our competitors are our neighbours in the kingdom, and hence we should cooperate with them as far as possible. Of course this overlooks the fact that minimisation of competition between sellers would be at the expense of potential economic efficiency in the cooperative exchange between buyer and seller. Luther’s social model is based on a relatively small, contained economic community, and while there would be some division of labour and a measure of internal trade, as already pointed out it was expansion of trade external to the community which he believed caused a focus on non-essentials and hence poverty. The relatively limited trade within his preferred economic community would likely tend to local monopoly, which consequence he may well have overlooked, or at least minimised its potentially

---

the needs of the party(ies) for liquidity). Such exchanges might be classed as speculation, and are quite different from gains from exchange as understood by Adam Smith (being due to the cost advantages of the division of labour and specialisation) and David Ricardo (who includes gains due to imported goods delivering cost savings relative to domestic production).

<sup>136</sup> There is a literature arguing against bans on or ethical objections to what is usually termed price gouging – for example Zwolinski (2008: 347-378), who argues that “standard cases of price gouging provide great benefit to those in desperate need, that they tend to lack the morally objectionable features often ascribed to them such as coercion and exploitation, and that attempts to prohibit the practice will harm individuals who are already vulnerable and can least afford to bear further harm.” (Zwolinski, 2008: 348) I think Luther’s response would probably be to argue that price gouging represents a category of selfish opportunism totally inconsistent with loving one’s neighbour as oneself.

negative consequences. Luther seems to limit the term “monopoly” to cornering of markets, a practice he strongly condemns.<sup>137</sup>

Because of the social context in which Luther applies his understandings of competition, he sees it as involving individual interactions and hence psychological in nature; there is no sense in which he sees competition as structural.

### 6.3.2 John Calvin

Despite both being fathers of the Reformation, and barely one generation apart in time, there are significant differences between Luther and Calvin as regards their social ethics. If Luther was the last Christian medievalist looking backwards and clinging to the rural German world that was passing, Calvin was the first Christian modernist looking forward, and engaging with the Genevan business-focused world that was emerging. (McGrath, 1990: 230f) It is therefore unsurprising that Calvin’s influence on Christian attitudes to business has been immense, far surpassing that of Luther, and not only in his influence on the so-called Protestant work ethic.<sup>138</sup> While Calvin did not comment directly on competition, we can infer his attitude from his other injunctions on cooperative and altruistic social relations, based in loving one’s neighbour as oneself.

In his classic work on Calvin’s social and economic ethics, André Biéler emphasises this love of neighbour, expressed in work and business as cooperation and fellowship. He summarises Calvin’s views as follows:

“God has created man,” Calvin says, “so that he may be a creature of fellowship.” ... Companionship is completed in work and in the interplay of economic exchanges. Human fellowship is realised in relationships which flow from the division of labour wherein each person has been called of God to a particular and partial work which complements the work of others. The mutual exchange of goods and services is the concrete sign of the profound solidarity which unites humanity. (Biéler, 1961: 321)

---

<sup>137</sup> Again, there are some who buy up the entire supply of certain goods or wares in a country or a city in order to have these goods entirely under their own control; they can then fix and raise the price and sell them as dear as they like or can. Now I have said above that the rule by which a man may sell his goods as dear as he will or can is false and un-Christian. It is far more abominable that one should buy up a whole commodity for that purpose. Even the imperial and secular laws forbid this; they call it *monopolia*, i.e., transactions for selfish profiteering, which are not to be tolerated in country or city. (Luther, 1524)

<sup>138</sup> The phrase was coined by Max Weber in the early 20th century in his classic work *The Protestant Ethic and the Spirit of Capitalism*, in which he argued that hard work, frugal lifestyle and generous support of Christian causes and charities was a potential sign of the grace that indicates salvation.

This deeply Christian understanding of the diversity of skills and callings in the unity of human fellowship, rooted in the Pauline image of the body (1 Cor 12), and expressed in the division of labour and the cooperative nature of exchange, resonates very obviously with Adam Smith. And, in a way, Calvin had an inkling of an idea which Smith would express much more clearly two and a half centuries later in the concept of the invisible hand: “Something that is neither blessed nor desirable in itself can become something good for the devout.” (Calvin, quoted in McGrath, 1999)

Calvin’s predominant focus was that participation in social and economic life is to show a care and concern for others, including in competitive situations. Relevantly, in his commentary on “blessed are the merciful ...” in the Sermon on the Mount, Calvin says:

Christ says that those are happy who are not only prepared to endure their own afflictions, but to take a share in the afflictions of others, – who assist the wretched, – who willingly take part with those who are in distress. (Calvin, 1555, on Mt 5:7)

Those who have lost in, or are distressed by, the competitive economic “game” should be supported by Christians, who should not use an advantageous position to oppress others.

While he did not disagree with their participating in competitive situations, Calvin disagreed vigorously with Christians using market advantage for personal gain, or having what he regarded as inappropriate motives, such as ambition, pride and excessive displays in victory.<sup>139</sup> Rather, they are to use any market advantage for the benefit of the whole Christian community:

[N]o member has its function for itself, or applies it for its own private use, but transfers it to its fellow-members; nor does it derive any other advantage from it than that which it receives in common with the whole body. (Calvin, 1997/1559, Book III, 7.5)

As Christians are to be thankful for and involved in their own government (Calvin, 1997/1559, Book IV, Chapter 20: 652), so we can infer Calvin says they are also to be grateful for the economic system, including its competitive elements, and are to use it to worship God. While this system is in varying degrees corrupt, rather than seek to withdraw from it, Christians must conduct themselves according to biblical standards

---

<sup>139</sup> He states: “there is no other remedy than to pluck up by the roots those most noxious pests, self-love and love of victory.” Calvin, 1997/1559, Book III, 7.4.

in their participation in it, including its competitive elements, provided they use their participation to worship and honour God.<sup>140</sup>

Christians must not compete with deceitful intention, but deal with others honestly and openly:

Christ does not at all agree with carnal reason, when he pronounces those to be happy, who take no delight in cunning, but converse sincerely with men, and express nothing, by word or look, which they do not feel in their heart.  
(Calvin, 1997/1559, Book III, 5.8)

Calvin's significant influence on business stems from his injection of three unorthodox ideas into the economic thinking of his day, counter to medieval church orthodoxy. His views at a functional level are summarised by Chewning (2010: 193):

- Work was intended to glorify God – not a means of meriting salvation, but a means of manifesting the ability to work, with which God had endowed each human.
- Interest paid on money borrowed to enhance one's business was not to be thought of as usurious in nature, but as "rent" for the use of another's capital, just as one might rent a building.
- Profits are good – a revolutionary thought – a mark of good works and to be used for beneficent purposes.

This new world view, specifically Calvin's support of work, business and profit, set the ground for the so-called Protestant work ethic which was so influential in the growth of capitalism (at least in predominantly Protestant countries) over the ensuing centuries. Chewning's characterisation of Calvin's view of profits as "good" is adequate as far as it goes: McGrath gives a better understanding of Calvin's overall view of capitalism (and hence of profit, the oxygen which sustains it):

Calvin's contribution may be regarded as functioning at two levels: at one, disincentives (such as the social and religious opprobrium with which the generation of capital was invested in the medieval period) were removed; at the other, positive incentives encouraged the fostering of attitudes and practices favourable to the emergence of capitalism. Bourgeois values – thrift, diligence, perseverance, hard work and dedication – were all religiously

---

<sup>140</sup> This and the following discussion of Calvin's view of competition relies to a considerable degree on Smith, Johnson & Hiller, 2012).

sanctioned by Calvin's theories. Capitalism is, however, a spin-off, rather than the intended product, of his religious outlook. (McGrath, 1990: 233f)

Thus it is Calvin's approval of bourgeois values, by which people show their worship of God, which leads to his positive view of capitalism; capitalism may reinforce those bourgeois values, but it is the values rather than the economic system which is primary for Calvin.

In summary, Calvin believed that human social activity, carried on in subjection to divine law, was a sign of the coming fulfilment of the creation, the new heavens and the new earth. By extension, economic competition is part of that social activity, and Christians can participate, subject to using it to show genuine love of neighbour. But the caution is that the attitudinal traps of market advantage – pride, vindictiveness, deceit and love of victory – are to be shunned in the process.

The contrast with Luther is interesting. Both Calvin and Luther disapproved of monopoly. As regards their attitudes towards the emerging competitive commercial order, Luther was negative, seeing it as antipathetic to love of neighbour, whereas Calvin was positive, seeing it as enhancing love of neighbour (subject to beneficent use of the profits). Their differing attitudes to the emergence of the new social structures of business-focused towns and cities, as opposed to the medieval agrarian village communities, probably provides some of the explanation.

For my main thesis, then, Calvin's understanding of competition (and cooperation) has both psychological and structural elements. While the Christian's participation in competitive activity might not involve rivalry, it and his cooperative endeavours were both *intentional* means by which he showed love of neighbour in his worship of God through social interactions, and hence had a psychological dimension. There is, however, a structural element also, in that those interactions, including their competitive and cooperative elements, are part of Calvin's vision of the social order of the redeemed in their community.

### **6.3.3 John Wesley**

In the mid-eighteenth century, in one of his most famous sermons,<sup>141</sup> Wesley enjoins "Gain all you can, save all you can, give all you can," indicating Calvin's influence on

---

<sup>141</sup> *The Use of Money*, alternatively dated as 1744 by Timothy L. Smith or 1760 by Albert C. Outler.

him. In 1786, nearing the end of his career, Wesley expressed significant misgivings about the negatives resulting from growing diligence and frugality, and the consequent increases in wealth, amongst Methodists: “increase in pride, in anger, in the desire of the flesh, the desire of the eyes, and the pride of life... [s]o although the form of religion remains, the spirit is swiftly vanishing away.” He nevertheless reiterated this famous triad at that point, indicating it remained at the core of his social ethical theology:

There is one way [to prevent this continual decline of pure religion], and there is no other under heaven. If those who “gain all they can,” and “save all they can,” will likewise “give all they can;” then, the more they gain, the more they will grow in grace, and the more treasure they will lay up in heaven. (Wesley, 1786)

Thus Wesley’s concern is with the Methodists’ attitude: the material outcome of their gaining and saving is being seen by them as their own, to be used as they wish, for their own purposes and enjoyment, and as evidence of their own moral superiority. Rather, he believes, it should be used to demonstrate love of others by giving to them, and as a consequence will acquire heavenly (rather than selfish temporal) reward. The Methodists are seeing their economic activity as a source of personal aggrandisement rather than a means of worshipping God.

Wesley specifies the conditions to which each of these necessary activities (gaining, saving and giving) should be subject, among them being the following ethical limitations relevant to the question of competition for Christians pursuing the first (economic gain):

We are ... to gain all we can without hurting our neighbour. But this we may not, cannot do, if we love our neighbour as ourselves. We cannot, if we love everyone as ourselves, hurt anyone *in his substance*. ... [W]e are not allowed to "do evil that good may come." We cannot, consistent with brotherly love, sell our goods below the market price; we cannot study to ruin our neighbour's trade, in order to advance our own; much less can we entice away or receive any of his servants or workmen whom he has need of. None can gain by swallowing up his neighbour's substance, without gaining the damnation of hell! (Wesley, 1744 or 1760, I.3, emphasis original)

Thus we see a similar concern and priority for neighbours in Wesley as in Luther and Calvin, and given he accepts the inevitability of competition between Christians engaged in economic activity, Wesley enjoins major limitations on the extent of rivalry in that competition. But contra Luther, he propounds a focus on gain, honestly and (by

his lights) ethically pursued. And, like Calvin, gain is not for personal indulgence and luxury; personal and family lifestyle is to be modest, and the wealth is to be saved and donated. After one's own, and the family's and employees', basic needs, the priority is for the "household of faith" (which presumably includes Christian churches and organisations), and finally the poor and others in need, whether believers or not. (Wesley, 1744 or 1760, III.3)<sup>142</sup>

Like Luther, Wesley focuses on the market relations between sellers, rather than between seller and buyer, and the limitation on the buyer's advantage imposed by the strict conditions he proposes. Wheeler contrasts the unacceptability to Wesley of the more benign competitive practices on his list with their routine acceptability today, what would be accepted as evidence of healthy competition, and inseparable from capitalism. For example, Wesley's prohibition on soliciting employment of a neighbour's workers, or even offering employment to any of them who are critical to his business (it seems, even if the employee makes the approach), in the contemporary context seems to me to go too far. In particular Wesley ignores the point that the employee is also a neighbour to be loved as oneself, as well as the competing employer. The possibility that competition for labour might be a factor in that love of others, in potentially improving wages and other working conditions, does not seem to figure in Wesley's thought in framing this prohibition. (Wheeler, 2007)

Reflective of the focus of Christian thought on motives as fundamental (in contrast with economic thought, where the primary focus is on actions), there is a strong strand of underlying intentionality rather than just the actions themselves running through Wesley's prohibitions. So, "we are ... to gain all we can ... but this we may not, cannot do, *if we love our neighbour as ourselves,*" and "we cannot, consistent with brotherly love, sell our goods below the market price; we cannot *study to ruin* our neighbour's trade ..." (Wesley, 1744 or 1760, emphasis added)

Wheeler's conclusion on Wesley's prohibition that "[t]o the extent that competition in trade is constructed as a zero-sum game in which my benefit depends upon your loss,

---

<sup>142</sup> Wesley himself practised what he preached. He was reportedly one of the highest earning preachers ever, making the current equivalent of \$US1.4 million in his best year (from donations, speaking, books and "penny tracts"), and giving 98% of it away. His lifetime earnings were reportedly the current equivalent of \$US30 million, but when he died he left only a few miscellaneous coins and a couple of silver spoons. (Drury, 1997)

Wesley regards it as contrary to Christian duty” may be somewhat too strong. (Wheeler, 2007) It seems to depend on how far Wesley intended to take the meaning of “hurting our neighbour” – would he outlaw our winning in competition which is fair (by his own lights) with a neighbour for business which neither of us has at present? Not winning would presumably cause our neighbour some disadvantage compared with the situation had he won the business. Or is “hurt” restricted to disadvantage compared to the situation prior to the competitive situation in question? If the business in question is currently that of a third party who is not (for whatever reason) competing to retain it, does “hurt” apply to the competing neighbour if I decide to bid also? What if it is a new piece of business which no-one has at present (which is of course a breach of Wheeler’s “zero-sum” assumption, but very relevant in the context of the emerging industrial revolution of Wesley’s time)? Thus there is a need to understand Wesley’s meaning a little more precisely before concluding as definitively as Wheeler does here.

Wheeler also argues Wesley prioritises the contemporary social conditions rather than the biblical text itself in his prescriptions for the ethical Christian conduct of business:

What is evident here is Wesley’s resistance to economic changes that were part of the transition from a predominantly rural agrarian society toward an urban manufacturing economy, the prototype of early industrial capitalism. The subject of his interpretation is less the biblical text than his own society; its emerging patterns of commerce, and the ethos they are fostering. Wesley regards the kind of direct competition for a limited market that we take for granted as the fundamental mechanism of capitalism, and valorize the engine of efficiency and progress, as a violation of human solidarity: a transgression of our basic duty not to harm. Thus he calls into question its whole mechanism for profit-seeking itself. (Wheeler, 2007)<sup>143</sup>

While I agree with Wheeler that the contemporary social conditions are a strong factor in Wesley’s biblical interpretation and his resulting application in the form of prohibitions, I think she may well go too far in her conclusions. First, biblical interpretation and application has to be conducted in the context of social conditions, and accordingly has to be reworked in every age; the implication of Wheeler’s second sentence in this paragraph seems to be that biblical interpretation is rather more fixed than I think should be the case. And secondly, as already pointed out, Wheeler’s

---

<sup>143</sup> It is interesting to note that Luther, over 200 year earlier, similarly seems to resist similar economic social changes and their consequences.

conclusion in her last sentence (that Wesley “calls into question its [presumably that of ‘direct competition for a limited market’] whole mechanism for profit-seeking itself”) critically depends on exactly how and in what competitive and/or market circumstances Wesley would define “hurt” which would infringe Jesus’ command to love our neighbour.

My conclusions on Wesley as regards my main question – whether he treats competition (and/or cooperation) psychologically or structurally – are very similar to those on Calvin (who preceded Wesley by about 200 years, and was clearly a significant influence on him). Competition (and cooperation) for Wesley are important intentional elements in the economic means by which Christians worship God through their social interactions, and highly likely to include a psychological element. They are also significantly defined and constrained in scope (extremely so, by the standards of modern western Christians) by the overriding requirement that they demonstrate love of neighbour. As with Calvin, there is also a structural element in that economic activity, including its competitive and cooperative elements, which form an important part of Wesley’s vision of the Christian’s engagement in the community, and which sits alongside the likely psychological understanding to which I refer.

#### **6.3.4 Eighteenth and Nineteenth Century Theology and Political Economy in Britain**

Economics was not an independent discipline in the eighteenth century, but was part of what was called “natural theology,” along with the natural sciences, ethics and religion, based in the Enlightenment idea of divine revelation through the application of reason to the understanding of nature, as well as through scripture. Heavily influenced by Isaac Newton’s *Principia* (1687), this perceived alignment of theology and economics (*Christian Political Economy*)<sup>144</sup> continued well into the nineteenth century, particularly in Britain; however the alignment eventually ended, with the various disciplines becoming separate and subsequently developing their own distinct methodologies. This is an important period of intellectual history for my project, because it is the last chronologically in which there was an integrated understanding of the roles of Christian theology and political economy. Accordingly, I summarise and

---

<sup>144</sup> The title is that adopted by Anthony Waterman in his seminal analysis *Revolution, Economics and Religion: Christian Political Economy 1798-1833*, published in 1991, elaborating on an earlier article in 1983, in which Waterman laid out the broad basis of his argument. The following discussion relies heavily on Waterman’s comprehensive treatment.

respond to Waterman's account of this process of alignment in some detail; my ultimate purpose is to discuss how the theological understanding of competition was affected through this period of change and into the Victorian era and the twentieth century.

This integrated understanding of the various intellectual components of natural theology in the eighteenth century moved in the first third of the nineteenth century from a focus on the evidence of divine wisdom in creation, to an understanding of divine ordering in the practical application of those intellectual components in contemporary social, including economic, structural arrangements. Economic thought in the eighteenth century was generally optimistic, and its compatibility with the natural theology prevalent at the time derived from the view that national wealth was increased by capital accumulation, which in turn was enhanced by increased wage rates and the consequent rate of increased population growth. (Hollander, 1973) This optimism was particularly stimulated by the hope of greater economic productivity suggested by the publication in 1776 of Smith's *Wealth of Nations* (particularly the productivity resulting from specialisation), and in the 1790s by the hope of a more equal, liberated society in Europe generally in the wake of the French Revolution, with the destruction of the power of the aristocracy and the church.

A critical counteraction to this optimistic outlook occurred in 1798 with the publication of Malthus's first edition of his *Essay*, in which he influentially rejected this wave of optimism, which had swept across Europe. In particular, Malthus was concerned to reject the radical suggestions of William Godwin in the latter's *Enquiry Concerning Political Justice, and its Influence on General Virtue and Happiness* (1793 and later editions). In this treatise, Godwin argued for human perfectibility in the absence of any original propensity to evil, and for the absence of controls over human freedom, leading to each person, guided by pure reason, acting rightly in their own eyes, and also doing what is in the community's best interests. Godwin was arguably the father of philosophical anarchism, and his politics were generally anti-statist; he preferred the abolition of private property, religion and marriage, and believed that in an ideal society children would be raised communally. But Godwin was not a revolutionary in the sense that, despite his radical views, he argued for a gradual transformation of society.

By the time Malthus wrote in the late 1790s, enthusiasm in Britain for the social liberation promised by the French Revolution had waned considerably. Louis XVI was executed in January 1793, followed by more than 40,000 during the Reign of Terror of 1793/94; the First Republic was engaged externally in a series of wars with neighbouring powers; and internally there was a virtual state of civil war between rival factions in parts of the country.

Malthus is best known for his bleak prescription of the social condition of the masses, inevitably and necessarily restricted to subsistence living due to any growth of food production always being fully consumed by population growth rather than improving living standards.<sup>145</sup> Malthus argued that, unless there were strong checks on population growth, there would be mass starvation:

The power of population being ... so much superior, the increase of the human species can only be kept down to the means of subsistence by the constant operation of the strong law of necessity, acting as a check upon the greater power. (Malthus, 1970/1830: 21)

Malthus saw checks on population growth falling into two categories:

- positive (via increased death rates): war, famine and pestilence;
- preventative (via reduced birth rates): moral restraint, contraception and abortion.

He disapproved morally and theologically of contraception and abortion, and forecast that moral restraint alone would be insufficient to prevent excess population growth. Hence, the best that could be hoped for was a subsistence economy for the vast majority, which would restrict the opportunity for marriage and hence limit population growth to the level the rate of food production could sustain. The economic implication of Malthus's thesis was that if wages rose above the natural subsistence level consistent with replacement level reproduction, birth rates would increase (and perhaps death rates would also reduce); hence the population and future labour force would increase unsustainably. Conversely, if wages fell below that subsistence level, the population and future labour force would reduce, due to starvation and disease. This highly mechanistic, even animalistic, view of human population dynamics was

---

<sup>145</sup> The origins, development and consequences of Malthus's theory of geometric increase in population (if unchecked), but at best arithmetic increase in food production (due to the need to cultivate less arable land) are discussed in some detail in Waterman (1991: 37-45).

controversial at the time, and Malthus hedged it with qualifications in the later editions of his *Essay*. Nevertheless the thesis had significant impact on contemporary intellectual debate, and while (in Waterman's view) Malthus's own theology was suspect, it also gave rise to the development of a parallel theological rationale (particularly by Paley, and further developed by Sumner, Copleston and Whately).

Turning now to Malthus's theology specifically, in an extensive discussion of his theological formation, Waterman concludes that, while Malthus was more widely read than most of his contemporaries, he was specifically more interested and competent in political economy than theology. (Waterman, 1991: 82-97) After 17 chapters of the 1798 edition of his *Essay* on politics, philosophy and economics, Malthus devoted only two chapters (XVIII and XIX) to theological issues, specifically his theodicy of scarcity, in which Waterman judges him to be aiming primarily at rebutting Godwin. (Waterman, 1991: 100) In Waterman's view, Malthus's primary focus on the "book of nature" rather than divine revelation through Christ and scripture, his emptying of sin and redemption of any real content, and his denial of divine omnipotence, *inter alia*, meant he was quite unorthodox theologically. (Waterman, 1991: 110f)<sup>146</sup> In subsequent editions of the *Essay*, Malthus was convinced (most likely, in Waterman's view, pressured) to delete the theological chapters. (Waterman, 1991: 112)

At the end of a long and influential career, William Paley (1743-1805) became convinced of the validity of Malthus's social theory, though not his theological rationale.<sup>147</sup> Paley's final significant contribution, his *Natural Theology*, appeared soon after the first edition of Malthus's *Essay*, and provided what Waterman terms a "preliminary sketch" of the alignment of theology and political economy which was to be filled out by his successors. (Waterman, 1991: 135) Searle summarises Paley's final position as follows:

---

<sup>146</sup> Pullen (1981) analyses Malthus's theology in some detail, not only that in the two deleted chapters, but also that implicit in the rest of the *Essay*. He concludes that the unacceptable theological positions in the first edition were: criticism of the view of earthly life as a state of trial or probation; limitations on divine omnipotence; rejection of original sin; and conditional immortality (annihilation of the unregenerate).

<sup>147</sup> Paley's *Principles of Moral and Political Philosophy* (1785) was a set undergraduate text at Cambridge University well into the Victorian era, followed by his *View of the Evidences of Christianity* (1794), which was on the Cambridge syllabus until the 1920s. His *Natural Theology, or, Evidences of the Existence and Attributes of the Deity* (1802), in which he propounds the "watchmaker analogy," has been highly influential, even up to the present day amongst proponents of Intelligent Design.

Distinctions in social rank and wealth ... were said to fit in with God's plans for the world, because they stimulated competition by appealing to the ambitious and providing work-incentives to the labouring poor, which in turn led to the development of meritorious traits of character: 'In a religious view', Paley concluded, 'privation, disappointment, and satiety, are not without the most salutary tendencies'. (Searle, 1998: 10)

Smith makes a related but contra point in Part IV of *The Theory of Moral Sentiments* (on the subject of utility), when he argues that social distinctions produce a positive social outcome, but not through the impact of work incentives on the poor of privation and disappointment (as argued by Paley), but rather through a "trickle-down" effect of the excessive desires and hence production of the rich. In one of his three famous "invisible hand" passages, Smith makes this point, his conclusion from which is increased wages, leading to population growth and further increased wages (whereas Malthus sees the outcome of wage increases and population growth as reversion to subsistence income levels):

The rich only select from the heap what is most precious and agreeable. They consume little more than the poor, and in spite of their natural selfishness and rapacity, though they mean only their own conveniency, though the sole end which they propose from the labours of all the thousands whom they employ, be the gratification of their own vain and insatiable desires, they divide with the poor the produce of all their improvements. They are led by an invisible hand to make nearly the same distribution of the necessaries of life, which would have been made, had the earth been divided into equal portions among all its inhabitants, and thus without intending it, advance the interests of the society, and afford means to the multiplication of the species. (Smith, 2002/1759: 215f)

Malthus produced a second version of the *Essay* in 1803, completing the foundations of Christian Political Economy in conjunction with Paley's theology. (Waterman, 1991: 150) The details of the theological and economic pact represented by Christian Political Economy was further explicated subsequently, ameliorating Malthus's ultra-Toryism, by the following:

- Sumner, who in 1816 "imbedded the concept of moral restraint within a larger theodicy<sup>148</sup> which included the beneficence of the market economy, the key

---

<sup>148</sup> Sumner's theological correction of Malthus's emphasis on the positive check on population growth of wars, famines and pestilence, towards the preventive check of sexual restraint, is described by Hilton as follows:

To quote Whately, it was not a case of God having made 'man too prolific or the earth too barren', but rather that God had made man rational and then placed him in such an ecological trap that he would be forced to exercise that reason in order to escape the positive checks to the growth of his own species.

importance of universal public education, the need for accident and sickness insurance and of financial institutions to mobilize the savings of the poor, and with private charity as the last resort.” (Waterman, 1991: 170)<sup>149</sup>

- Copleston, who in 1819 amended Malthusian population theory consistent with the right of the poor to self-preservation, consistent with Paley, though not extending to a particular level of support, consistent with Malthus, and with the Christian duty of private charity (freely given), quite contrary to Malthus. He met the Malthusian argument that population pressure would (re-)emerge if incomes rose above subsistence level by the argument that the “subsistence” standard of living in a civilised and prosperous society could exceed the biological subsistence level.<sup>150</sup> He further argues that, while incomes could fall below that socially-determined level for reasons other than population pressure, they would only revert to that biological subsistence level if incomes so remained for sufficiently long for that biological level to be (again) recognised as the social norm. (Waterman, 1991: 189-195)
- Whately, who in 1831, in the context of the emergence during the 1820s of multiple overlapping and often conflicting political and theological ideologies,<sup>151</sup> endeavoured to find a middle position in which political economy, which had become seen to have been hijacked by the characteristically anti-clerical, even godless, Westminster radicalism, could be rehabilitated to its Christian roots. Whately’s contribution was to distinguish “scientific” economics from “theological” ethics, and to apply Paley’s method to the evidence of “design” in the body politic, thereby finding a way in which

---

(Whately, 1831) Natural evil was thus productive of good by stimulating human adaptation and moral ‘exertion’. (Hilton, 1985: 144)

<sup>149</sup> Sumner’s contribution “seems to have been enormously influential in Anglican circles and ... according to ... Copleston, ‘beautifully developed the high moral and religious blessings which hang over Malthus’ discovery’.” (Copleston, 1819, 23), quoted in Hilton, 1985, 144.

<sup>150</sup> An argument consistent with the modern distinction between “absolute” and “relative” measures of poverty, and the case for the linkage of the “poverty line” to contemporary social conditions and living standards. See, for example, Davidson, 2012.

<sup>151</sup> For a detailed discussion, see Waterman, 1991: 196-204, where he analyses six different ideological positions (termed “Orthodox” Christianity, “liberal” or critical theology, “Romanticism,” “whiggism,” “radical,” and “Political economy”), and includes a very helpful Venn diagram demonstrating the relationships, overlaps and conflicts between and amongst them.

the epistemic claims of political economy were not at variance with theology, including all parties except radicals and romantics. (Waterman, 1991: 203-216)

These contributions can be summarised as correcting and enhancing the original Malthusian construct: Copleston refined Sumner's theology and corrected Malthus's economics, and Whately corrected Paley's theology. (Waterman, 1991: 215)

Finally, Chalmers, a prominent, charismatic, and eloquent but disruptive evangelical Scottish churchman, also made controversial contributions to the understanding of Christian Political Economy, which Waterman judges to be "distinctly inferior" to those of his English counterparts already mentioned. (Waterman, 1991: 217) While that opinion may be justified in relation to the opinions of the elite of British economist/theologians, Chalmers had very considerable influence for quite some period on politicians and commentators of a low church disposition. (Hilton, 1985: 141f)

However Chalmers persisted with the original Malthusian idea of the prospect of overpopulation and consequent hardship being a divinely intended tuition in moral restraint; he did not accept the concept of social mitigation introduced by Sumner and Copleston particularly, and by mid-century his influence had waned. (Hilton, 1985: 151-153)<sup>152</sup>

By the mid-1830s the generally agreed, "equilibrium" theological/economic position was as follows:

[A]ccording to Christian Political Economy, poverty and social inequality are the inevitable outcome of scarcity: more particularly of population pressures in a world of limited resources. Because of original sin and redemption by Christ, human life on this earth is to be regarded as a state of 'discipline and trial' for eternity. Though poverty and inequality entail some genuine suffering – to be accounted for by the Fall – they may be regarded, for the most part, as a deliberate 'contrivance' by a benevolent God for bringing out the best in His children and so training them for the life to come. The social institutions of

---

<sup>152</sup> Interestingly, Milbank suggests that the Malthusian/Chalmerian influence lives on in contemporary Anglo Christianity and social theory, despite what to Milbank is its highly questionable theology:

Once one has seen how unfounded Malthusian pessimism and finitism was, and how governed by theodicy, the Chalmers' social theory appears not as a Christian adaptation to contemporary science, but simply as a heretical redefinition of Christian virtue and a heretical endorsement of the manipulation of means by ends. Economic theodicy is conjoined with an evangelicalism focused on a narrow, individualist practical reason which excludes the generous theoretical contemplation of God and the world (this is thinned down to a simple acceptance of positive revealed data which ensures salvation). However, this strange conjuncture goes on providing a background legitimation for capitalism which long survives its specifically Malthusian form. Indeed, such a mean little heresy today increasingly defines 'Christianity', and once again helps to shape Anglo-Saxon social reality. (Milbank, 1990: 45)

private property and marriage are economically necessary (and indeed inevitable), suited to human nature, and consistent with scriptural teaching. A combination of the institution of private property with the competition produced by scarcity<sup>153</sup> results in the market economy. The efficacy of the latter in organizing human activity for the maximization of wealth is evidence of the divine wisdom and mercy in turning human frailty to social beneficent ends. (Waterman, 1991: 258)

Turning now to my basic thesis of competition understood as primarily psychological or structural, under this agreed formulation of Christian Political Economy, and assuming many employers (i.e. absent monopoly or oligopoly), competition by employers for labour and by workers for basic provisions for sustenance (in particular, grain) are likely to be structural, or substantially so. In the first case, this is because there are assumed to be many workers seeking very similar unskilled jobs, and the second because the purchasing power of those workers will be much the same for a limited range of subsistence provisions.

This agreed formulation seems to be predicated on the great mass of people living in or close to poverty with little prospect of improving their economic or social condition, and the ownership of the means of production and growth in wealth accruing to a relatively small moneyed, property owning class. What this essentially backward-looking social/theological formulation does not account for is the growth in Victorian Britain of the middle class that actually occurred, and the resulting middle class wealth, driven by the expansion of opportunity for the enterprising as a result of the industrial revolution. However, to the extent that Christian Political Economy continued to be influential throughout the balance of the nineteenth century, the rise of the labour movement and socialism is hardly surprising.

After the mid-1830s, little more of significance was written on Christian Political Economy: Malthus was dead and the other main protagonists were occupied with other interests and roles; the old order (which the protagonists had originally sought to defend from the threat of radicalism) was gone. (Waterman, 1991: 254-257) The theological corrections to Malthus's original version of his *Essay* had established the

---

<sup>153</sup> In my use of the terms, this is an error, in that scarcity does not produce competition in any institutional, structural sense, nor does it necessarily imply rivalry. What Waterman may mean here is *rivalness*, which produces competition, used here in its *natural* sense (i.e. as a property of rival goods), rather than in either of the psychological or structural senses of the term. On the other hand, perhaps Waterman is talking here of the fundamental roles of private property and (perfect) competition in the optimum market economy, in which case the reference to scarcity is redundant.

boundary between Christian theology and what was to become economics, and the appetite for interaction at that boundary (such as was demonstrated by Whately only a few years previously) had dissipated. (Waterman, 2001: 54-58) The disciplines of economics and theology then began to go their separate ways, in common with other disciplines and areas of inquiry.<sup>154</sup>

Waterman assesses the permanent achievements of Christian Political Economy as follows:

- first, a singling out of the concept of scarcity as the central organizing principle of all scientific accounts of social phenomena;
- secondly, the demarcation between scientific and theological knowledge;
- and thirdly, related to the second, a recognition that ‘positive’ explanations of social phenomena are necessary but not sufficient for ‘normative’ prescriptions of social policy. (Waterman, 1991: 259)

The first of these conclusions constitutes a big claim, in particular because the scope of the expression “social phenomena,” which Waterman does not limit, seems to me to be huge. If the scope is limited to social phenomena which involve some type of economic exchange, I have the further issue that my response to his claim depends on whether Waterman is using “scarcity” in its economic usage as “rivalness and the necessity it creates for choices to be made,” or with its broader, dictionary meaning of “insufficiency of supply.” I doubt he can mean the former, since, while many goods which are the subject of economic exchange are rival, by no means all are (such as commercial provision of a cable TV program, which is an example of a non-rival good). (see Section 5.1)

Assuming Waterman means the latter, I find it difficult to see how “insufficiency of supply” is germane to *all* economic exchanges (for example, a barter exchange of one apple for one orange, where each party has one piece of fruit, but wants one and only one piece of the other type). In a more normal market situation, perhaps there is usually insufficiency of supply, either of a particular good (from the point of view of all the potential purchasers), or of demand, perhaps due to a shortage of purchasers with sufficient funds (from the point of view of the sellers). However, one can imagine market situations where all parties are satisfied exactly (i.e. where the wants of the

---

<sup>154</sup> This process of separation acquired a finality for many thinkers in Britain once Darwin’s *Origin of Species* was published in 1859, which event also signalled the end of the idea of the “flat plane” of natural theology.

purchasers exactly satisfy the wants of the sellers). But even in this common case, it is not obvious to me that insufficiency of supply is the central organising principle of the market.

In any case, I wonder why this general conclusion regarding social phenomena generally derives from Christian Political Economy. Perhaps Waterman has in mind the theological concept of God using insufficiency of supply to satisfy all human wants as a central organising principle of earthly life as moral testing ground for the hereafter, but this does not seem to lead to the generalisation in respect of all social phenomena.

There is a substantial strand of Christian ethical thought which argues that abundance rather than scarcity (understood as insufficiency of supply) is a primary feature of God's good creation. The redeemed should therefore trust God's abundant provision, be satisfied with modest material resources and share with others, rather than seek (rivalrously or otherwise) to accumulate ever more, presumably out of pride or fear of scarcity. (e.g. Brueggemann, 1999) Economic thought, on the other hand, seeks efficient means of dealing with the positive reality of scarcity (more usually understood as rivalness).<sup>155</sup> Christians plausibly endorse this objective, but have other priorities, in particular the virtue of participants in the functioning of the institutional arrangements adopted to pursue these efficient means.

An important legacy of Christian Political Economy is that it raises a fundamental element of theodicy – how to explain scarcity (whether understood as rivalness or insufficiency of supply) in the divine plan, as an aspect of the goodness of God. However, the dynamics of the debate have changed considerably in the last two centuries. Modern-day neo-Malthusians argue that the division of labour, plus improving education levels and rising wealth, have led to the development and increasingly widespread use of effective contraception, and as a result the negation of Malthus's primary assumption of lack of human control over fertility and hence population growth. (e.g. MacFarlane)<sup>156</sup>

---

<sup>155</sup> And generally with a strong ethical focus of utilitarian ethical methods.

<sup>156</sup> The result has been a flattening out of contemporary maximum world population estimates at 8 to 10.5 billion between 2040 and 2050, which some commentators argue is already beyond the earth's carrying capacity. Compared with a few decades ago, the doomsday scenario of unrestrained world population growth is now focused on the environmental challenge of sustainably supporting a world population at this level. See [https://en.wikipedia.org/wiki/Human\\_overpopulation](https://en.wikipedia.org/wiki/Human_overpopulation) accessed 16 February 2016.

Turning now to Waterman's second conclusion, he is correct in identifying that Whately's work in 1831 established the demarcation between economics and Christianity.<sup>157</sup> The focus of subsequent Christian social ethics as regards economic questions in general, and the consequent majority Christian attitudes towards competition as rivalry in particular,<sup>158</sup> have been based in a *normative* understanding, derived from theological/biblical analysis, but frequently with minimal if any regard for a *positive* analysis of actual human behaviour, and structures which might produce better outcomes normatively in the light of that behaviour.<sup>159</sup>

Economics as a scientific enterprise, on the other hand, has generally focused on a *positive* analysis of human social behaviour and the design of "efficient" structures to optimise the achievement of human wants, independent of a *normative* assessment of those wants; indeed, some economists frequently make a "virtue" of the discipline's frequently stated objective of freedom from values. That said, many economists have not been backward in giving *normative* advice, both on economic structural issues, but also on occasion on the actual wants those structures are designed to address.

I agree with Waterman's third conclusion, which I interpret as encouraging economists who regard their discipline as a purely scientific endeavour to engage more rigorously in the normative application of their conclusions. What often passes for normative assessment in society generally (and Christians are often as guilty as any in this regard) often seems to overlook the necessity of rigorous positive assessment of the issues involved before moving to more normative prescription of recommended actions. Independent of the specifics of their particular arguments, the attempts of the protagonists of Christian Political Economy to integrate their economic and theological theories indicates the value which can result from what we would now term cross-disciplinary intellectual activity.

---

<sup>157</sup> This separation of the two disciplines, which has generally widened into isolation over much of the last 185 years, has been mitigated to some small degree in recent decades, mostly due to the interest in the integration of their two intellectual disciplines by the minority of professional economists who are also Christians.

<sup>158</sup> The economic concept of competition as a structural state is almost always a foreign concept in Christian social ethics.

<sup>159</sup> Albeit those more recent normative Christian understandings have generally been very different from those of the theologian/economists of the period in which Christian Political Economy flourished, indicating a substantial shift in Christian social ethical interpretation of economic issues, at least in Britain, since the 1830s.

These differences of fundamental focus dealt with in Waterman's second and third conclusions highlight the Christian understanding of competition as psychological, contrasted with the usual economic understanding as structural. However it is not obvious that his first conclusion, dealing with the consequences of Christian Political Economy for the understanding of scarcity and the implications for theodicy and the scientific analysis of social phenomena, has anything to say about the understanding of competition in either discipline.

### **6.3.5 Nineteenth Century Christian Socialism in Britain**

After the end of Christian Political Economy in the mid-1830s, the main Christian movement in Britain of some interest for my thesis is Christian Socialism,<sup>160</sup> a reform movement arising from the social conditions in Victorian England after the collapse of Chartism in 1848. The founders of the movement, socialist J. M. Ludlow, theologian F. D. Maurice and Anglican priest Charles Kingsley, believed in the compatibility of socialism with Christianity. They commenced with the publication of a penny journal aimed at a wide audience, including articles arguing from a Christian perspective for reform on political and social issues. They then quickly moved to providing night-schools for workers, and the formation of cooperative associations (where the workers would own the business and share profits). The objective was to get the church out of sanctuary and into the world. (Chadwick, 1971: 346-363)

Chadwick describes Ludlow's specification of the movement's objective:

... the ideal of a state where every citizen was well employed and well educated. To this end the economy of the state must be controlled. He attributed the ills of 'godless' society in the slums to the theories of political economists who proposed that economic life must be allowed to follow its laws without interference. Christianity is not consistent with a system of trade and economy based wholly on profit. Free economy ended up in unemployment and the wages of starvation. In a free economy the interests of the employer and of the employed are opposite and can agree in nothing better than an armed truce. ... Therefore associations or co-operative societies must be formed to end the antagonism of capitalist and labourer by making the labourer his own capitalist. (Chadwick, 1971: 356)

As well as sidelining "the antagonism of capitalist and labourer," Ludlow's aim was the spread of the movement nationally such that it "was able to fix wages and prices for

---

<sup>160</sup> The name was chosen by F. D. Maurice to distinguish the Christian Socialists from "the unsocial Christians and the unChristian socialists" (Maurice, 1884: Vol. 2: 35).

the well-being of all the citizens of the nation.” (Chadwick, 1971: 357) The extent to which these, and others of Ludlow’s aims (such as sweeping reform of the established church), were shared within the movement’s leadership varied considerably, There was also variability in the extent to which Ludlow’s aims played a role in the relatively short duration of this original version of the movement. What was generally agreed was opposition to the concept of the invisible hand, and the unrestrained *laissez-faire* capitalism to which they believed acceptance of the concept led. (Norman, 1987)

These cooperative associations were, of course, very similar structurally to privately owned businesses; indeed, those which succeeded were frequently converted into joint-stock companies, owned and run by one or more of the workers previously involved collectively. In any case, while conflict between employer and employee could be replaced with a potentially cooperative set of arrangements internal to the association, the associations still needed to compete in the market economy with traditional businesses to sell their product.

There was considerable tension between the movement and elements in the established church, arising from the connection being made between Christianity and socialist activism. In 1853 Maurice was ejected from his chair at King’s College, London, ostensibly for theologically heterodox views on the question of the eternal punishment of the unregenerate. (Chadwick, 1971: 545-548) Within a year or so this initial version of the Christian Socialist movement was spent, but its influence continued and a less radical, more broadly-based version was revived in the late 1870s, which played a significant role in the growth of the labour movement.

The point for my thesis on the Christian understanding of competition and cooperation of the nineteenth century Christian Socialist movement generally, and in particular the structure of the cooperative associations the movement formed, is that it did not really add anything to the way in which competition and cooperation were viewed by many Victorian Christians. Competition was still viewed primarily as psychological competitiveness,<sup>161</sup> and while there might have been a greater level of cooperation

---

<sup>161</sup> J. S. Mill, a supporter of cooperative associations, disagreed with the leadership of the movement as regards their criticism of competition; he wrote that one of their “greatest errors ... is to charge upon competition all the economical evils which at present exist.” He makes a quite nuanced argument for the benefits of competition to workers and capitalists alike, without minimising its inconveniences and moral objections, and then continues: “If competition has its evils, it prevents greater evils.” Mill quotes M. Feugueray approvingly:

within the cooperative associations than in the employer/employee structure they replaced, the deployment of cooperation was still primarily in reference to its psychological sense.

### 6.3.6 Specimen Twentieth Century Anglican Views up to the 1950s

The two commentators on competition briefly considered here were especially influential British Anglicans:

- William Temple, who was the highly influential Archbishop of Canterbury during World War II, but who wrote on competition (with others) as a young man during World War I. I consider his work in detail in Chapter 7, and include my summary from that chapter here for completeness.
- C. S. Lewis, probably the most influential British churchman of the twentieth century, commented briefly on competition in one of his best-known books, *Mere Christianity* (2001/1952).

Temple's critique of competition is based in his socialist orientation, a good dose of nostalgic conservatism, and a dominant focus on the rivalrous aspect of competition's definitional spectrum. He sees competitiveness, and the resulting competition, as fostering selfish individualism, contra Christianity's dominant social focus on love of neighbour. Selfish individualistic competitiveness is, at core, anti-Christian, particularly given its tendency to pervasiveness in all of life, not just its economic dimension. Temple believes competitiveness and the consequent lack of cooperation lead to social problems, particularly under-optimisation of social resources and capital. He does acknowledge positive as well as negative character traits potentially developed by competition, but limiting the dominant negative from overwhelming the positive very much depends on the exercise of restraint. Lack of this restraint, especially in business life, leads to dehumanisation of many, spiritual isolation, and loss of any sense of purpose in their work. Temple is an advocate of State Socialism, as potentially

---

The deepest root of the evils and iniquities which fill the industrial world, is not competition, but the subjection of labour to capital, and the enormous share which the possessors of the instruments of industry are able to take from the produce ... If competition has great power for evil, it is no less fertile of good, especially in what regards the development of the individual faculties, and the success of innovations. (Mill, 1973/1852/1848, Book IV, Chapter VII: 792f)

fostering a deeper commitment to serving God in the world, and transforming both individuals and society's institutions.

In a chapter of *Mere Christianity* entitled "The Great Sin," Lewis states that pride is the greatest sin:

Pride leads to every other vice: it is the complete anti-God state of mind. (Lewis, 2001/1952: 122)

The Christians are right: it is Pride which has been the chief cause of misery in every nation and every family since the world began. (Lewis, 2001/1952: 123f)

And it is competition (which Lewis clearly sees as rivalrous competitiveness) which is fundamental to pride:

... each person's pride is in competition with every one else's pride. ... Pride is *essentially* competitive – is competitive by its very nature – while the other vices are competitive only, so to speak, by accident. Pride gets no pleasure out of having something, only out of having more of it than the next man. We say that people are proud of being rich, or clever, or good-looking, but they are not. They are proud of being richer, or cleverer, or better-looking than others. If everyone else became equally rich, or clever, or good-looking there would be nothing to be proud about. It is the comparison that makes you proud: the pleasure of being above the rest. Once the element of competition has gone, pride has gone. That is why I say that Pride is essentially competitive in a way the other vices are not. (Lewis, 2001/1952: 122, emphasis original)

Thus these two influential twentieth century Christians see competition as competitive rivalry, and clearly motivated by psychological factors.

### **6.3.7 Catholic Social Thought**

Beyond its historic roots in Aristotelian-Thomistic philosophical and theological traditions, the primary economic influences since the Reformation on what has come to be known as Catholic Social Thought need to be understood in the context of the social and political forces, particularly in Europe, unleashed by the break-up of Christendom as well as the impact of the Reformation. These forces led to a progressive diminution of the political and social power of the Roman Catholic Church, obviously in Protestant countries and spheres of influence, but also in Catholic countries, by virtue of the assertion of greater independence by monarchs, as well as by political revolutions such as that in France in the late eighteenth century. (Charles, 1998: 358-363)

The progressive separation of the study of economic matters in Britain from its origins in an overarching framework of Christian thought, discussed in the previous section, also had its counterpart in continental Europe. Charles mentions three Jesuits (Molina (1535-1600), Lessius (1554-1623) and de Lugo (1583-1660)), intellectual Catholic “insiders” who were influential in the emergence of this separation of economic thought as a distinct discipline, but guided by the principle of the “public good.” In due course this separation, and the influence of developing economic thought, particularly in Britain, led to the general acceptance amongst continental thinkers of, for example, value being represented by competitively determined market prices. (Charles, 1998: 367f) At the same time the overarching ethical principle of the “public good” understood in theological terms, has continued to have a strong influence in Catholic Social Thought.

When one comes to modern Catholic Social Thought, the primary documentary sources are the papal social encyclicals, commencing with *Rerum Novarum* by Pope Leo XIII in 1891 and then those by more recent popes. Also useful is a compendium of the Church’s social doctrine on the Vatican website.<sup>162</sup>

The major focus of Catholic Social Thought is based on a comprehensive vision of the human person, understood in terms of Catholic moral theology, and hence clearly “moral psychology” in the quite specific sense of virtue ethics. Disciplines such as economics are engaged with in terms of their contribution to this vision at the *practical* level, rather than as an alternative *theoretical* explanation, and in this sense the engagement is quite different to what is typically understood in the academy as interdisciplinary engagement.<sup>163</sup> Economic activity is to be “considered and undertaken as a grateful response to the vocation which God holds out for each person.” (*Vatican compendium*, 326) Integral to that vocation is care for others and stewardship of the creation. Hence material progress must be placed at the service of others and society as a whole, to contribute to the growth of a new humanity that anticipates the world to come. (cf. John Paul II, 1981, paras 25-27) And “the Church’s social doctrine insists on the moral connotations of the economy” (*Vatican*

---

<sup>162</sup> *Compendium of the Social Doctrine of the Church*, under the auspices of the Pontifical Council for Justice and Peace; referred to as *Vatican Compendium*, and paragraph number.

<sup>163</sup> The basis of Catholic engagement with economics, beyond my present scope, is helpfully discussed in Yuengert (2014).

*Compendium*, 330; cf. Pius XI, 1931, paras 190-191) and that “the economy is at the service of man.” (Paul VI, 1967, para. 26)<sup>164</sup>

In this context, one can see that while competition is accepted by the Church as part of an efficiently functioning economic system, the Magisterium maintains it must be constrained so it functions to serve people as a whole, and not just the interests of the wealthy and powerful, thereby helping to advance social cohesion:

The production of goods is a duty to be undertaken in an efficient manner, otherwise resources are wasted. On the other hand, it would not be acceptable to achieve economic growth at the expense of human beings, entire populations or social groups, condemning them to indigence. The growth of wealth, seen in the availability of goods and services, and the moral demands of an equitable distribution of these must inspire man and society as a whole to practise the essential virtue of solidarity, in order to combat, in a spirit of justice and charity, those “structures of sin” where ever they may be found and which generate and perpetuate poverty, underdevelopment and degradation. These structures are built and strengthened by numerous concrete acts of human selfishness. (*Vatican Compendium*, 332)

One may therefore deduce that there is a structural element to the Catholic understanding of competition, as germane to efficient production and maintenance of social cohesion, which in turn are elements in Catholic anthropology and social ethics. Interestingly, structural processes which help alleviate poverty may well lead to more competition in providing material resources efficiently.

However the great majority of the specific references to competition in papal social encyclicals, starting with Leo XIII in 1891, is in the context of a psychological understanding of competition, particularly involving a significant risk of economic exploitation of the poor by the rich through unequal competition over employment conditions and wages:

... by degrees it has come to pass that workingmen have been given over, isolated and defenceless, to the callousness of employers and *the greed of unrestrained competition*. The evil has been increased by rapacious usury ... And to this must be added the custom of working by contract ... so that a small number of very rich men have been able to lay on the masses of the poor a yoke little better than slavery itself. (Leo XIII, 1891, para. 2, emphasis added)

This reference to the socially disruptive effects of “unrestrained competition” is further expanded by Pius XI forty years later, as the Great Depression was gathering

---

<sup>164</sup> Interestingly, utilitarians and modern economists would not dispute this latter claim; the differences lie in important questions of anthropology and ethics.

strength, in particular indicating the injustice resulting from the dangerous individualism which follows from unregulated competition:

Just as the unity of society cannot be built upon “class” conflict, so the proper ordering of economic affairs cannot be left to the free play of *rugged competition*. From this source as from a polluted spring have proceeded all the errors of the “individualistic” school. This school, forgetful or ignorant of the social and moral aspect of economic activities, regarded these as completely free and immune from any intervention by public authority, for they would have in the market place and in *unregulated competition* a principle of self-direction more suitable for guiding them than any created intellect which might intervene. *Free competition*, however, though justified and quite useful within certain limits, cannot be an adequate controlling principle in economic affairs. ... It is very necessary that economic affairs be once more be subjected to and governed by a true and effective guiding principle. Still less can this function be exercised by the economic supremacy which within recent times has taken the place of *free competition*: for this is a *headstrong and vehement power*, which, if it is to prove beneficial to mankind, needs to be curbed strongly and ruled with prudence. (Pius XI, 1931, para. 88, emphasis added)

The argument here is that “free competition,” while a useful economic principle and hence arguably partly a structural factor, must be subject to strict controls, because otherwise it will lead to “economic supremacy” (presumably oligopoly or monopoly). So competition is beneficial if it is stable, but this requires controls. Unrestrained, the resulting “economic supremacy” is a “headstrong and vehement power” (this appears to be a type of will to power, suggesting a psychologically motivated dimension), and is therefore seen in the encyclical as predominantly domination of political processes by monopolistic business groups.<sup>165</sup>

Much the same argument is made (more simply) by Paul VI in 1967, when he writes

Individual initiative alone and the mere free play of competition could never assure successful development. One must avoid the risk of increasing still more the wealth of the rich and the dominion of the strong, while leaving the poor in their misery and adding to the servitude of the oppressed. (Paul VI, 1967, para. 33)

The regulated economic competition enjoined by the Magisterium implies a type of cooperation which one might argue has some structural qualities, but the primary type of cooperation discussed in the documents is one in which economic, moral and social

---

<sup>165</sup> The same type of point is repeated more briefly later in the encyclical. (Pius XI, 1931, para. 107), and the editors remark in their introduction to the encyclical that “[i]n fact, unrestricted competition, because of its own inherent tendencies, had ended by almost destroying itself.” (O’Brien & Shannon (eds), 2002/1992: 89)

elements are inextricably linked, and which is necessarily of a more intentional, and hence psychological, kind, e.g.:

In seeking to produce goods and services according to plans aimed at efficiency and satisfying the interests of the different parties involved, businesses create wealth for all of society, not just for the owners but also for the other subjects involved in their activity. Besides this typically economic function, *businesses also perform a social function, creating opportunities for meeting, cooperating, and the enhancement of the abilities of the people involved.* In a business undertaking, therefore, the economic dimension is the condition for attaining not only economic goals, but also social and moral goals, which are all pursued together. (*Vatican Compendium*, 338, emphasis original)

Thus I conclude that Catholic Social Thought treats competition (and the cooperation associated with the “managed competition” it recommends) as having both structural and psychological features. This nuances the thesis I have been discussing: that is, that Christian thought typically treats competition (and cooperation) as psychologically driven, as contrasted with economics which typically treats them structurally.

The extent of examples of Christian thought where both psychological and structural understandings co-exist, and the suggestion lurking here, that perhaps certain structural arrangements produce (or at least facilitate) certain attitudes – in the current case, markets produce or facilitate greed – is discussed (in the context of objections to and nuances of Adam Smith’s positive view of markets) in Sub-section 4.4.9.

### **6.3.8 Contemporary Christian Attitudes**

A highly critical Christian theological analysis of capitalism and neoclassical economics is that of Bell (2012), which emphasises fundamental, and apparently irreconcilable, differences between economic and Christian thought. Bell argues that the Christian question to be asked of capitalism is not “Does capitalism *work*?” but rather “*What work does capitalism do?*” He goes on to argue that capitalism perverts human desire away from “worshipping and enjoying God”<sup>166</sup> and from the divinely ordained communitarian plan for humanity, towards the pursuit of corrupted, insatiable, individualistic desires. (Bell, 2012: 84-91) Bell is going beyond arguing that capitalism *facilitates* undesirable attitudes, and is clearly asserting that the capitalist institutional structure *is responsible for* those attitudes.

---

<sup>166</sup> Quoting the Westminster Confession of 1647.

In a section entitled “The Agony of Competition” (Bell, 2012: 103-109), Bell argues that the “oft-repeated boast of capitalism’s advocates that economy tames bellicose passions” (the *douce-commerce* argument) “diverts the clash of self-interested individuals in accord with the golden rule of production for the market.” (Bell, 2012: 104) He even recruits Hayek in support of his argument:

[T]he peace that capitalism offers is, like its freedom, essentially negative; it is not the peace of genuine solidarity but the absence of open conflict. (Hayek, 1960: 19, and Hayek, 1988: 19 & 36)

Bell argues that competition under capitalism instrumentalises people, and in the worst cases commodifies them (Bell, 2012: 104-106); it is destructive of human relationships, and even where cooperative relationships are formed, they are “decidedly contractual – limited, temporary and voluntary.” (Bell, 2012: 106) There is an assumption here that comprehensive, permanent and compulsory relationships are superior, or at least preferable for Christians, and in an ideal, redeemed world comprehensive, permanent cooperative relationships which everyone willing chooses may well be normative. But in a fallen world, the point is worthy of some discussion; I argue cooperative relationships can include the features Bell criticises:

- limited cooperative relationships can often respect the rights of both parties (such as when there is agreement on one issue but disagreement on others),
- temporary cooperative relationships can often be valuable when the alternative of a permanent relationship is impossible or impractical (such as when the parties are interacting only for a limited period), and
- voluntary cooperative relationships very frequently have positive aspects compulsory ones do not (illustrated by Harper Lee’s memorable line “You can choose your friends but you sho’ can’t choose your family”).

Bell accepts the productive advantages of the division of labour, but (along with Adam Smith) concedes its potentially detrimental impact on the individual labourer and his/her relationships. (Bell, 2012: 107-109) The narrow range of focus of the limited and repetitive tasks under the division of labour have to be balanced against the increased efficiency of production and the resulting improved living standards of the whole population.

It is perhaps a rather fine distinction, but I think it is capitalism itself that Bell is criticising, rather than “competition under capitalism” – competition as he understands it is a key expression of what he sees as the deleterious effects of capitalism. And the concept of competition in Bell’s analysis is both structural and psychological on my structural/ psychological divide. He attributes what he sees as the growing systemic perversion of human desire towards selfish individualism, away from love and worship of God and from the creator’s intended communitarian anthropology, as largely due to the modern development of capitalism, the competitive attitude which underpins it, and the instrumental selfishness which he believes it engenders. Competition as Bell understands it, primarily as the result of rivalrous competitiveness and instrumental selfishness, is “structural” in his concept of modern capitalism, and a fundamental component of it. It is also his thesis of modern capitalism’s perversion of human desires, and the resulting destructive attitudes, which leads to Bell’s concept of competition as also psychological.

While Bell’s negative view of capitalism, economics and competition is not uncommon in theologically-focused Christian thought on the subject, as I discuss below, there are also theologians who seek to engage more positively with capitalism and mainstream economic thought in general and competition in particular. But when one turns to more popular contemporary Christian attitudes on these issues, the spectrum of attitudes is even wider.<sup>167</sup>

A helpful analysis is that of Bretsen (2010)<sup>168</sup> who categorises a number of examples of Christian attitudes to competition (almost always understood as competitiveness, and often as rivalry) in a style consistent with Niebuhr’s famous approach in analysing the relationship between Christianity and culture. (Niebuhr, 2001/1951) Bretsen categorises a selection of the cases he mentions as follows (Bretson, 2010: 111-113):

- Beed concludes that Christ’s teaching does not seem to tolerate or encourage competition, and best falls into the “Christ resists competition” category (Beed, 2005: 41-57);

---

<sup>167</sup> For example, Sadler (two contributions in March 1989), and subsequent correspondence in *Zadok Perspectives*, June 1989: 18-20.

<sup>168</sup> Following Johnson & Smith, 2002.

- Smith *et al* argue that scripture is neutral, accepting competition as part of the human condition<sup>169</sup> which must be managed carefully by Christians: they appear to adopt a “Christ and competition in paradox” approach (Smith, Johnson & Hiller, 2012: 267-291);
- Grudem argues that all aspects of business, including competition, glorify God, because they are reflective of God’s nature, and so the approach he advocates is close to “Christ and competition in partnership” (Grudem, 2003);
- Rundle and Steffen advance the concept of “Great Commission” companies, which promote business as mission; their approach falls into the “Christ reforms competition” category (Rundle & Steffen, 2003).

The diversity of these views usually stem from one of the following:

- a particular and sometimes literalistic reading of scripture, without “translating” it from its first century, Roman occupied, agrarian social context into a modern, western, corporatised, globalised economic setting; or
- a pastoral concern for those negatively impacted by the negative effects of the changes caused by competition (usually viewed as rivalry) and competitive markets, rather than primarily as a celebration of the improved living standards of those benefitting from its effects; or
- a pragmatic, pro-business understanding of competitive markets as a fact of life, which can bring out the best or worst in people, including Christians, according to their motivations and responses.

At the idealistic extreme of this remarkably wide spectrum of views is the strand of Christian thought in which its adherents reject any acceptance of competitiveness, particularly between members of the community of faith. At the same time, their actions often exhibit an unconscious ignorance of their own aggressively competitive attitude vis-à-vis alternative – sometimes apparently marginally different – Christian views, frequently dismissing them as “unchristian”. Indeed, when it comes to the practice of competition and/or cooperation *within* the wider church, especially across

---

<sup>169</sup> Many Christians accept that human competitiveness is an aspect of our fallen nature; those who accept an evolutionary explanation of human origins see competitiveness as part of human evolutionary heritage.

ethical, ecclesiastical and/or doctrinal divides, one often sees rivalrous competitiveness (or even exclusion) on the grounds of doctrinal or other “purity” grounds being a pre-requisite of cooperation (or even dialogue).<sup>170</sup>

I agree with Bretsen, who prefers the “Christ reforms competition” approach, connecting the concept of those faithfully running a business organisation to the view of the reformers such as Luther and Calvin, dignifying everyday work as a means of glorifying God. (Bretson, 2010: 113)<sup>171</sup> Such companies willingly adopt “multiple bottom line” measures: in addition to the standard financial bottom line, they adopt the “broader, more meaningful goals” of the visionary companies of seminal business strategists Collins and Porras. (Collins & Porras, 2002/1994)<sup>172</sup>

This “Christ reforms competition” approach accepts the competitive nature of human beings as part of the created order, but which aspect of human nature in its fallen state easily causes Christians to become unlovingly rivalrous in attitude towards their business competitors, such as adopting a “win at any cost” mentality. The “Christ reforms competition” approach seeks the reformation of competition, not its elimination, but by making a difference in both the means and the ends of competition. (Johnson & Smith, 2002: 13)

In whatever way these contemporary Christian commentators diversely approach the issue, most seem to assume competition (and cooperation) as psychologically-driven. The possible exception is Grudem, who in his support for competition (as well as cooperation) as a means of glorifying God, might be seen as considering competitive activity as structural because it is built into the way the world functions (including how human beings operate in their economic interactions).

Returning to more theologically focused contemporary reflection on competition, one can also see a range of attitudes and conclusions. However for the purpose of this part of the discussion, and given my preference for Bretson’s preferred “Christ reforms

---

<sup>170</sup> For example, see articles listed in <http://www.9marks.org/journal/fellow-workers-truth> accessed 7 February 2013.

<sup>171</sup> This important reformation doctrine opposed the Roman Catholic limitation of godly vocation to priests and religious, and treating the work by the laity as merely for the earthly provision of material needs (their own, and those of the church).

<sup>172</sup> The most widely used is Triple Bottom Line, adding performance on environmental and social issues to the normal financial bottom line; Bretsen adds what he terms “spiritual bottom line” for mission-focused companies.

competition” approach, I introduce here for completeness three contemporary Christian writers endeavouring to understand how competition and competitiveness might be dealt with in a positive Christian engagement with the economic process of the wider (predominantly Western) society:

- Michael Novak, who argues pragmatically that, accepting human fallenness (specifically, our tendency to individualistic competitiveness), democratic capitalism is the politico-economic system with the best record of maintaining religious freedom and alleviating poverty: one might argue that his thesis is that, as a practical matter, democratic capitalism is the alternative actually available which is least inconsistent with Christian teaching (Novak, 1991);
- Kathryn Tanner, who seems to ignore human fallenness; unlike many theological critics of economics, she recognises both economics and theology as alternative modes of thought with their distinct methodologies: however she then undertakes the seemingly impossible task of reframing economics according to Christian ethical principles (in the absence of total divine transformation of the participants), specifically as a non-competitive economy which responds to the gift of God’s grace (Tanner, 2005);<sup>173</sup>
- John Atherton, whose comprehensive work *Transfiguring Capitalism* engages constructively with economics, and includes a substantial section seeking Christian-inspired applications which point in the direction of Tanner’s *Economy of Grace* (Atherton, 2008).

Without describing any of these contemporary approaches in any more detail, I conclude that the psychological understanding of competition and cooperation is predominant in their writings, albeit Novak’s pragmatic understanding hints at competition and cooperation as essential elements in the economic structure.

---

<sup>173</sup> However in her 2015/16 Gifford lectures at the University of Edinburgh, in which she critiques what she terms “finance-dominated capitalism” (and which she distinguishes from the earlier “production-dominated capitalism” under which Weber’s protestant work ethic arose), Tanner joins the ranks of the theological critics of modern capitalism. (Tanner, 2016) Specifically, as regards competition, she argues that individual economic agents are forced to be in rivalrously competitive relationships with others, and as a result alienated from them. (Lecture 6). <http://www.ed.ac.uk/humanities-soc-sci/news-events/lectures/gifford-lectures/gifford-lectures-2015-2016/professor-tanner-christianity-and-capitalism/6-which-world>. accessed 25 July 2016.

## 6.4 OVERVIEW AND CONCLUSION

A Christian understanding derived from scripture in respect of the economic concept of the rivalness of certain goods is based in fundamental Christian ethical normativity: how goods should be used in social relations with others; i.e. with radical generosity (even in situations of conflict).<sup>174</sup> Though not directly psychological in nature, it does resonate with this feature of a Christian understanding of competition and rivalry derived from scripture.

Focusing particularly on the more directly relevant New Testament record, there is a repeated biblical theme enjoining followers of Jesus to generous sharing and giving of their rival goods, to the needy and even to enemies. There is clearly a strong psychological element in this understanding. The relevant gospel parables (of the shrewd manager, and of the talents) dealing with competition, while posing some interpretational and hermeneutical uncertainties, are also psychological rather than structural in their underlying understanding. And in the epistles, the athletic and boxing metaphors used by the authors are more to do with persistence than competition as such, and hence psychological, albeit one might argue that competition is structural to the nature of these sports.

Hence there is a primary psychological element in the biblical texts directly and indirectly relevant to a Christian understanding of rivalness, competition and rivalry.

Turning to the understanding of seminal historical Protestant writers (Luther, Calvin and Wesley) on competition (often in the sense of rivalry), this primary psychological sense predominates. This particularly true for Luther, who has no sense of competition as structural, and sees it primarily as evidence of the absence of love of neighbour, his primary Christian social ethical principle. Calvin and Wesley also see competition primarily as psychological, but there is also a structural strand in their thought. They see competition as part of the ordered social interactions of worshipping God through hard work and production, which are fundamental to their vision of the place of the redeemed in community, subject to the proviso that the result is a demonstration of love of neighbour and not love of self or other consequences of unchristian motives.

---

<sup>174</sup> This illustrates a fundamental difference of orientation between Christian and Economic ethics: the former is normative, focused on the "ought," whereas the latter is positive, focused on the "is."

In nineteenth century Britain, two very different movements occurred which bear quite differently on the Christian understanding of competition:

- in the first third of the century, in which theologian/economists developed an integrated theological and economic theory (Christian Political Economy), competition was seen as part of the divine plan for disciplining believers, as well as for the orderly conduct of economic life, and thus admitted of a structural understanding, without removing the possibility that competition in specific situations could be psychological;
- the rise of Christian Socialism in mid-century led to the development of cooperative associations intended to provide workers with an alternative to destructive employment relationships, but did not really change anything in the way in which Christians predominantly saw competition – as psychologically-based rivalry.

The views of Christian writers since the late nineteenth century on the place of competition in Christian ethics are generally somewhat more diverse than those from the earlier periods:

- Temple (discussed in detail in Chapter 7) viewed competition as aggressively individualistic rivalry in his early writings, and remained critical in his later writings of the role it played in the progressive breakdown of communitarian attitudes and policies, which he regarded as originally unleashed by Calvinism but which end position would have dismayed the Reformer. He regarded competition as psychologically driven, a negatively and selfishly individualistic force which it was the task of the Christian commentator to confront; he did not seem able to regard competition as a natural human attribute which, under appropriate structural constraints, could be harnessed for social good.
- C. S. Lewis viewed competition (which he clearly understood as competitive rivalry) as fundamental to human pride, which he regarded as the greatest human sin from a Christian perspective.
- Catholic Social Thought treats competition as part of the good of economic activity, but which needs to be constrained to ensure the rich and powerful do not dominate and exploit the poor and weak. While there is some sense of

competition being part of the structure of economic activity, the primary Catholic view is of it being a psychologically rivalrous aspect of the combatants in the class war which the Church must confront.

- The various contemporary writers reviewed by Bretsen on their attitudes towards competition in Christian ethics demonstrate a wider range of positions. They vary from opposition to competition as a valid part of Christian ethics, through acceptance of it as part of the human condition which must be carefully managed, to embracing it as a means of Christians glorifying God in social interactions, and finally an opportunity for demonstrated reform of the conduct of competitive activity by Christians, through a “business as mission” approach.<sup>175</sup> While there are some elements of a “structural” view of competition in most of these writers (mostly, acceptance of it as part of the human condition and hence social interactions), the primary view adopted is psychological.
- As a consequence of my preferred approach (i.e. Christian reform of the conduct of competitive activity in business), I examined the work of three contemporary writers who actively attempt to engage positively with competition and competitiveness in the Christian life. I conclude that, again, and in each case, the primary view of competition is psychological, with some structural overtones.

Despite there being some variation in the attitudes of writers on the place of competition in Christian social ethics, a dominant psychological understanding is evident in writers stretching back over the more than five centuries to the Reformation. In quite a number of the cases reviewed there is a structural element to the understanding, but they almost all treat competition in the main as a given feature of the human condition and hence of social interactions, which has negative and unchristian propensities, and hence needs to be carefully managed and/or controlled. In only a minority of the writers reviewed is the structural aspect of their view of competition more positive.

---

<sup>175</sup> This latter approach is, to me, the most appealing categorisation.

## 7. COMMENTATORS ON COMPETITION: KNIGHT AND TEMPLE

### 7.1 INTRODUCTION

My purpose in this chapter is to discuss the thought on competition of two twentieth century figures, one an economist (Knight) and the other a Christian (Temple), who happened to be close contemporaries, and who wrote at length on competition. I describe the understandings of each, particularly how those understandings relate to my thesis of the essence of competition normally having either a structural or a psychological orientation.

### 7.2 FRANK H. KNIGHT

Frank H. Knight (1882-1975) is described variously as “one of the [twentieth] century’s most eclectic economists and perhaps the deepest thinker and scholar American economics has produced”<sup>176</sup> and “among the most broad-ranging and influential economists of the twentieth century” (Emmett, 2000). Robert Nelson compares his influence on economics in the twentieth century with that of John Maynard Keynes, not because of his advice at the highest levels of government or his public influence through his popular writings (both of which were part of Keynes’s legacy). In Nelson’s view, Knight’s influence was because of his teaching, though not in inspirational lecturing, but in the spirit of radical questioning that he inculcated. (Nelson, 2001: 5f). The notoriously belligerent Knight was an influential thinker in a wide range of economic and social policy areas,<sup>177</sup> but because of his focus on the question rather than the answer, and refusal to endorse any particular approach, he did not establish his own “school.”<sup>178</sup>

Knight is widely attributed (e.g. by Stigler, 1965/1957), in his best-known and most enduring book, *Risk, Uncertainty and Profit* (Knight, 2014/1921), with the most complete statement of the conditions for perfect competition, the ubiquitous, idealised economic concept of competition as structural.<sup>179</sup> Knight wrote extensively

---

<sup>176</sup> “Frank H. Knight” on *History of Economic Thought Website*.

<sup>177</sup> Knight’s students included three Nobel laureates in economics – Milton Friedman, George Stigler and James Buchanan.

<sup>178</sup> Even though, along with Jacob Viner, Knight is widely regarded as father of the highly influential Chicago school.

<sup>179</sup> I have summarised the historical development of the concept of competition in economic thought, from before Smith and through the classical and neoclassical periods, up to and including Knight’s

on the nature of competition, exhibiting Austrian process influences in his understanding of competition's role in entrepreneurial activity. (Fu-Lai Yu, 2002) Additionally, Knight ranged beyond purely economic concerns to the wider social questions of the place of competition in society, its ethical implications, and the role of Christianity (as the foundational basis of Western ethics) in that discussion. His primary economic contribution on competition was in the 1921 book, which was followed in 1923 by an essay, "The Ethics of Competition," one of a number of essays in which he addresses the wider social and ethical issues, of which competition is a critical example. (Knight, 2004/1935/1923).<sup>180</sup>

My purpose here is discussion of Knight's nuancing of his understanding and consistency of treatment of competition, beyond his statement of the conditions for the archetypically structural form of perfect competition. But I also question which of those conditions are vitiated by monopoly, and raise the question as to whether Knight's criticisms are of competition *per se*, or of the economic model itself.

### **7.2.1 Risk, Uncertainty and Profit**

Knight's statement of the conditions for perfect competition, widely accepted as the most complete, came from his 1921 book based on his PhD thesis. After an extended discussion of the nature and relevance of "scientific" analysis of social (including economic) enterprises, and the relevance and limitations of the developing economic methodologies (Knight, 2014/1921: 51-76), Knight set out detailed and comprehensive conditions and assumptions

"[i]n order to study ... the most essential features of exchange relations," including perfect competition, as developed in classical and neoclassical thought. (Knight, 2014/1921: 76-79)

A (very brief) summary of his eight key criteria for perfect competition is as follows:

- (1) The relevant population is a random sample of (then) contemporary westerners;

---

statement of those conditions for perfect competition, and then subsequently in the twentieth century development of monopolistic competition and the Austrian response, in Section A3.5 of Appendix 3.

<sup>180</sup> Subsequent to original publication, the essay was collected by a group of Knight's students with ten other essays by him and published in 1935 with the title, *The Ethics of Competition and Other Essays*. This book has been reprinted with a new introduction by Richard Boyd (Knight, 2004/1935/1923), and it is to this latter edition that the page references here refer.

- (2) They act rationally, know what they want, and seek it intelligently, consistent with stable motives, and know absolutely the outcomes;
- (3) They act free of any constraints, and are the absolute and final judges of their welfare and interests;
- (4) There are no obstacles to their chosen actions: changes are costless, commodities are continuously divisible, production is continuous;
- (5) Perfect, costless, continuous intercommunication ensures everyone knows and chooses among all commodities on offer;
- (6) They act individually and independently, free of prejudices etc. (other than reflected in market dealing), and of collusion or monopoly;
- (7) Goods are only acquired in open markets, free of fraud, deceit or theft;
- (8) Motives for division of labour being present and operative, each person produces a single commodity at any given time.

Knight describes these primary conditions and assumptions as “idealisations or purifications of tendencies which hold good more or less in reality. They are the conditions necessary to perfect competition.” (Knight, 2014/1921: 79)

Subject to certain additional assumptions to those he specifies as definitive for perfect competition (Knight, 2014/1921: 79f), Knight pursues his analysis and rejects the idea that perfect competition produces an exchange result which is socially ideal:

All that can be said about the adjustment which results from perfect competition is comprised in three statements:

(1) *Under the conditions* (the price alternatives as they are fixed) each individual achieves the goal of rational action, maximizing the want satisfaction procurable with his given resources (whatever they are) in purchasing power, by distributing them among the alternatives according to the law of choice;

(2) The conditions themselves, the prices or exchange ratios being the same for all individuals, and the relative utilities adjusted to equality with these, it follows that the *relative* utilities of all goods (which any individual purchases at all) are the same to every individual;

(3) The exchange ratios will be so adjusted that *at those ratios* no individual will wish to exchange anything in his possession for anything in the possession of anyone else.

(Knight, 2014/1921: 85, emphasis original)

These are statements about the economic model of markets, based on the assumption of the individual's pursuit of rational action to maximise want satisfaction,<sup>181</sup> rather than about perfect competition itself. Knight says as much at the start of his attempt to define and analyse perfect competition:

The argument is to be regarded as a condensed summary of classical economic theory, with especial reference and emphasis upon those premises and implications which have not been adequately emphasized in the theory itself and have been liable to escape the observation of its readers.  
(Knight, 2014/1921: 51)

However these statements could also be true of monopoly markets, subject to certain conditions, in particular the monopolist not excluding any class of buyers or imposing differential pricing. Indeed, Knight makes a related point regarding conditions permitting both perfect competition and monopoly later in his book:

Perfect competition implies conditions, especially as to the presence of human limitations,<sup>182</sup> which would at the same time facilitate monopoly, make organization through free contract impossible, and force an authoritarian system upon society. (Knight 2014/1921: 193)

This is a much more specific, and at face value rather extreme, opinion of the consequence of perfect competition than that in Knight's earlier statement: that perfect competition would not produce a socially ideal exchange result.

For Knight, the theory of perfect competition offers a theoretical starting point rather than an end point, in that its hypothetical absence of profit gave clues to the real sources of profit. He argues that

...deductions from theory are necessary, not because literally true – that in the strict sense they are useful *because not* literally true – but only if they bear a certain relation to literal truth and if all who work with them constantly bear in mind what that relation is. (Knight, 2014/1921: 14f, emphasis original)

In explaining the source of profit, Knight distinguishes between risk (which could be quantified adequately such that its impact could be anticipated and provided for, by insurance or otherwise) and uncertainty (which could not be so quantified and hence

---

<sup>181</sup> Buchanan argues that Knight's commitment to the maximisation paradigm, rather than focusing on a catallactic perspective, is at the root of Knight's ethical criticism of capitalism, discussed below. (Buchanan, 1987)

<sup>182</sup> Knight seems to think the result of these human limitations, necessary to perfect competition, "would have to be some arbitrary system of distribution under some sort of social control, doubtless based on ethics or political power or brute force, according to the circumstances – providing that society or someone in it had sufficient intelligence and power to prevent a reversion to the *bellum omnium contra omnes*." (Knight 2014/1921: 193)

“laid off,” and which as a result could be a source of profit [or, doubtless, loss] to the entrepreneur or speculator). (Knight, 2014/1921, Part Three)

One might be forgiven for thinking that Knight is merely replacing zero profit with “random profit” (perhaps a random variable with an expected value of zero?) as the result of perfect competition. But he goes on at length, spending five chapters and 144 pages exploring a wide range of matters of varying degrees of relevance to the conditions for profit under uncertainty, in particular such aspects as consolidation of risks, speculation and the psychological character of speculators, and entrepreneurs and their ability to assess opportunities and manage people. (Knight 2014/1921: 233-376) It is in this extended discussion that Knight shows the influence of the Austrian school, with his treatment focusing on competition as process.

As in his opinions elsewhere on the basis of human choices, Knight does not regard business decision-making as particularly rigorous or rational:

The importance of uncertainty as a factor interfering with the perfect workings of competition in accordance with the laws of pure theory necessitated an examination of foundations of knowledge and conduct. The most important result of this survey is the emphatic contrast between knowledge as the scientist and the logician of science uses the term and the convictions or opinions upon which conduct is based outside of laboratory experiments. The opinions upon which we act in everyday affairs and those which govern the decisions of responsible business managers for the most part have little similarity with conclusions reached by exhaustive analysis and accurate measurement. The mental processes are entirely different in the two cases. In everyday life they are mostly subconscious. (Knight, 2014/1921: 230)

Clearly Knight views most everyday business decision-making in conditions of uncertainty as contrary to his condition number (2) for perfect competition (which in summary is “[t]hey act rationally, know what they want, and seek it intelligently, consistent with stable motives, and know absolutely the outcomes”). The stark distinction Knight draws here between business decision-making on the one hand and “conclusions reached by exhaustive analysis and accurate measurement” on the other suggests he had a very low opinion of the extent of rational mental processes amongst business people generally. In the absence of any expressed evidence for this opinion, one can only wonder how Knight came to this view, particularly assuming he applied his stated support for rational and rigorous conclusions to the formation of his own views, and in the light of the likelihood that the large amounts of money involved in many business decisions would focus the minds of the business people involved.

Knight points out that “the principle of specialisation is exemplified in the tendency for the highly uncertain aspects or speculative aspects of industry to become separated from the stable and predictable aspects and be taken over by different establishments.” (Knight, 2014/1921: 257) It is the business of the speculator or promoter to consolidate a number of these relatively highly uncertain industrial aspects or undertakings with the successes offsetting the losses of the failures.

The issue of specialisation raises the question of whether maximal specialisation is consistent with perfect competition. On the one hand, if every participant in a market finds a different market segment (albeit one very marginally different from adjacent segments) in which to trade, then each participant is effectively a “monopolist” in his particular segment (though generally a monopolist highly dependent on other participants for the viability of the overall activity of the particular market). In this situation monopolistic competition would seem the better model. On the other hand, at some point some participants will conclude that further specialisation in ever more limited market segments is less rewarding and/or efficient than competing with one (or more) existing participants in existing market segments, and the trend to ever greater specialisation of segments of the market will slow or stop. Existing participants in a particular market segment may conclude that some degree of vertical integration or broadening of product offering may provide opportunities for profitable expansion, or offer some protection from similarly-based competition initiated by other market participants.

It therefore seems there will emerge a point at which the extent of specialisation in a market will reach a maximum, where the extent and nature of competition lies between the extremes of perfect competition and maximally specialised monopolistic competition. This point is not necessarily (or even probably) stable over time, in that fashions of business practice change as the perceived balance between the advantages and disadvantages of either specialised or consolidated business activity changes, often appearing to be an example of “the grass seeming greener on the other side of the fence.”

I argue that one can categorise two types of psychological influence in Knight’s understanding of the factors underlying competition as a practical economic

phenomenon, contrasted with his understanding of the conditions for perfect competition as a theoretical, analytical, structural concept:

- firstly, as integral to his understanding of *choice* in economic exchange, choice being a fundamental causative element of competition;
- secondly, in the reservations and limitations he expresses about several of the underlying assumptions of and conditions of the economic model of perfect competition.

On the first point, Knight sees economic analysis as concerned with behaviour “in the Spencerian sense of acts adapted to ends, ... ruled by conscious motives” (Knight, 2014/1921: 52), which limits substantially the behaviour economics addresses:

It appears that a relatively small fraction of the activities of civilized man are [sic] devoted to the gratification of needs or desires having any foundation beyond the mere fact that an impulse exists at the moment in the mind of the subject. ... The basis of a *science* of conduct must be fixed principles of action, enduring and stable motives. It is doubtful, however, whether this is fundamentally the character of human life. What men want is not so much to get things that they want as it is to have interesting experiences. (Knight, 2014/1921: 52-54, emphasis original)

Thus, according to Knight, most choices are excluded from the domain of economic analysis; they are the consequence of transitory impulses, the product of largely unconscious psychological factors, rather than behaviours “ruled by conscious motives” and therefore more susceptible to economic analysis. His suggestion that these choices are impulsive (and presumably inconsistent with one another), and not analysable because they are subconsciously motivated, is highly questionable. But perhaps developments in psychological understanding of subconscious influences on human choices in the century since Knight wrote mean that one must be careful to avoid assessing his opinions anachronously. I suggest that Knight’s requirement as a condition of perfect competition that agents “act rationally, know what they want, and seek it intelligently, consistent with stable motives, and know absolutely the outcomes”<sup>183</sup> would be generally seen today as too restrictive a view of competition capable of economic analysis, including perfect competition.<sup>184</sup>

---

<sup>183</sup> See my summary (above) of Knight’s condition (2) for perfect competition.

<sup>184</sup> A contemporary online encyclopaedia specifies the following as the only agent’s condition for perfect competition: “Buyers have complete information about the product being sold and the prices charged by each firm.” <http://www.investopedia.com/terms/p/perfectcompetition.asp> accessed 1 April 2016.

Knight's assertion of the priority of pursuit of interesting experiences as the motivation of human conduct clearly indicates the significance of psychological factors in his view of the choices people make.<sup>185</sup> Beyond questioning whether it is true that pursuit of interesting experiences is the priority for the great majority of people – I doubt that it is – there is also the question in the case of people for whom it is a priority, of whether it is irrational, unpredictable, or inconsistent with perfect competition. Knight seems to be suggesting that “pursuit of interesting experiences” is by nature ephemeral or changeable; that suggestion seems to discount the actions of those who find lifelong interest in birdwatching or detective novels, for example. And for those who do change their area of interest frequently, it does not follow that their choices are either irrational or unpredictable.

Of course economic activities, including competition, frequently have psychological factors influencing them. But this does not necessarily mean that competition itself in such cases is psychological, although it may be the case in certain circumstances. While there are examples in Knight's thought of competition viewed in psychological terms, I doubt such is necessarily the case here. Unless the “impulse [which] exists at the moment in the mind of the subject” and that subject wanting “interesting experiences” (which are highly likely to involve psychological elements), also have competitive activity as a core component, I doubt such an implication can be drawn.

Turning now to examples of Knight's reservations and limitations on some of his detailed conditions for perfect competition (summarised above), his view is that psychological factors are fundamental to a number of the factors bearing on the way the system operates in practice. The system itself is ethically neutral, reinforcing the human inputs, including psychologically driven inputs such as motives, which its participants deliver to it:

It is imperative that we bear in mind that the serpent's tail is always in the serpent's mouth, that what the competitive system tends to give back is just what is put into it in the way of human motives and human powers, natural, acquired, or conferred, and has in itself no moral attribute whatever. (Knight, 2014/1921: 180)

---

<sup>185</sup> One might well argue that interesting experiences are a lower priority than material comforts up to a certain level at which basic needs of food, clothing and shelter are satisfied, and that beyond that level, there is an increasingly integrated relationship between getting things and having interesting experiences. Knight seems to acknowledge this point to some extent in his 1933 “Preface to the Re-Issue” of the 1921 book. (Knight, 1933: xiiif)

The uncompromising nature of this statement denies an assumption underlying most economic thought: the purpose of the competitive system is the satisfaction of human wants expressed in the form of preferences, such satisfaction is an element in human well-being, and well-being should be promoted. It is surely unlikely that Knight is saying that the promotion of human well-being is not desirable; rather I assume he is saying that satisfying preferences has no role in human well-being. Most economists (and non-economists) would agree that preference satisfaction is not the only element of ethical significance, but to deny that it is of any ethical significance seems perverse.

Of all his eight primary conditions for economic markets to sustain perfect competition, Knight sees number (5) (“Perfect, costless, continuous intercommunication ensures everyone knows and chooses among all commodities on offer”) as the least realistic:

The main condition of perfect exchange not realized in real life is that of “perfect intercommunication,” which is to say perfect knowledge of what they are doing on the part of all exchangers. ... It is a familiar fact that in consequence of imperfect intercommunication appreciably different prices for the same commodity may obtain at different points in the general market area. Certain factors aggravate the effect of uncertainty in disturbing the theoretical adjustment: (1) Inertia or inflexibility of prices, due to habit, indifference, ...; (2) variations in the “commodity” ... both in the crude physical ware, and still more in by-perquisite utilities, convenience or fashionableness of place of sale, ornamental containers, trade names, personality of vendor, etc.; (3) (Knight, 2014/1921: 86f)

Knight’s condition for perfect competition that all exchangers “have perfect knowledge of what they are doing” must mean they all know what quantities other exchangers are offering, what prices they are charging, etc. I assume Knight does not mean they all have the same opinions on such matters as intrinsic value and market prospects, since exchange depends at least in part on differences of opinion.

These “aggravating factors” (such as habit, inertia, indifference, fashionableness and personality) indicate the potentially disruptive influence of psychological factors on perfect intercommunication, which lie at varying points across the intentional/subconscious spectrum.

Knight discusses monopoly at quite some length (Knight, 2014/1921: 184-194); the subject is covered in his condition (6) for perfect competition (“They act individually and independently, free of prejudices etc. (other than reflected in market dealing), and

of collusion or monopoly”). Within the normal meaning of monopoly (control of supply), Knight specifically mentions “the threat of local underselling, boycott, and other forms of ‘unfair competition,’” the concept of unfairness indicating an ethical judgment and hence implying a psychological attitude to the monopolist’s activity. (Knight, 2014/1921: 185)

These examples serve to illustrate the actual or potential psychological elements in the factors which Knight sees as imposing practical limitations on the economic understanding of competition in real life, compared with the theoretical conditions he specifies for the idealised structural state of perfect competition.

In his “Preface to the Re-Issue” in 1933 of *Risk, Uncertainty and Profit*, Knight ranges widely on key economic issues in a post-Enlightenment democratic society. Given I have commented (albeit briefly) on the role of competition in political processes in Sub-section 5.2.2, Knight’s analysis here is of interest, particularly as he focuses on the place of economic processes within the wider social context.

Knight questions the reasons for what he terms the “Enlightenment faith in popular government”:

Insofar as it was faith in mass decisions in any sense, the more or less defensible element seems to have centred in the ability of the mass of men to judge personality, as to honesty and competence, an essentially mystical faculty of “liking” the proponents of right procedures to right ends rather than those opposed, without understanding the arguments involved. At best it would seem to be necessary that the contest should take the form, in the main, of some kind of treatment of issues, rather than pure oratory, buffoonery or bribery. But in the nature of the case, the crowd must determine the form of the contest as well as judge the winner. (Knight, 1933: xxvii)

Here Knight focuses on psychologically-based characteristics of electors’ assessment of candidates for elective office when he includes the “ability ... to judge personality, as to honesty and competence, an essentially mystical faculty of ‘liking’ the proponents.” He implies that those psychological characteristics too often influence the form of the competitive electoral process, as well as its outcome, rather than would a more objective focus on policy issues. It does not, however, follow that the competitive electoral process is necessarily itself psychologically based, rather than influenced by factors which are in turn so influenced. While it often appears to involve psychologically-based competitive attitudes on the part of politicians, candidates and

electors, as argued in Sub-section 5.2.2, there is a good argument that the competition is largely structural, at least as regards politicians and candidates.

Knight's wider prescription for the education of economists, beyond their rather immediate "professional" concerns, includes some understanding of a rather bleak view of the prospects for rational, participatory, democratic government:

... the need is for some grasp of the infinitely complex, intangible and downright contradictory character of men's interests, conscious and unconscious, and their interaction with equally intricate mechanical, biological, neural and mental processes in forming the pattern of behaviour.  
(Knight, 1933: xxix)

In case economists see themselves as engaged in an intellectually superior category of enquiry, Knight has this to say about their place in the overall societal enterprise:

We "intellectuals" may condemn the crowd-mind for unintelligent conceptions of economy, but we should recognize that the more vital problems are not problems of economy, but of maintaining social unity in the face of economic interests. And the foundations of unity lie not in intelligence, but in habit, emotion, and ideals of value. (Knight, 1933: xxx)

Knight's statement of the conditions for perfect competition, the ultimate structural form of competition, is really a statement of the economic model within which perfect competition operates, and is in a number of respects quite extreme. On the basis of the above discussion of selected quotations from his 1921 book and his 1933 preface to its re-issue, it is clear that Knight is critiquing not so much perfect competition itself, but the whole economic model of perfect competition, where there are clearly psychological factors at play. While some of his criticisms indicate a psychological view of competition, some do not.

Knight's critique in *Risk, Uncertainty and Profit* is therefore somewhat peripheral to my central thesis, in which I seek to distinguish the psychological and structural views of competition. He seems to regard the conditions for perfect competition to be quite removed from the reality of economic life, and that in some respects he seems to be more interested in competition as process than in the concept of perfect competition.

The most I can say is that despite his reputation as the formulator of the comprehensive conditions for perfect competition, Knight seems to be quite ambivalent about the relevance of a structural understanding of competition rather than a competitive, psychological understanding.

### 7.2.2 *The Ethics of Competition*

In his 1923 essay, “The Ethics of Competition”, Knight begins by summarising his argument that attempts to establish “scientific” ethics, based in objective, measurable human wants, and reducing ethics to “a sort of glorified economics,” are doomed to failure.<sup>186</sup> The argument is important in coming to an understanding of Knight’s view of the ethics of competitive economic activity, and its significance in society’s value structure.

His rejection of ethical values based on measurable utilitarian wants is based on the contention that

what we call progress has consisted largely in increasing the proportion of want-gratification of an aesthetic or spiritual as compared to that of a biologically utilitarian character, rather than in increasing the “quantity of life.” (Knight, 2004/1923: 33)

Whether or not one agrees that wants of an “aesthetic or spiritual” kind are separate from and able to be contrasted with those of a “biologically utilitarian character,” I think a good case can be made that the *proportion* of total wants which can be given the former description rises with living standards, and perhaps also with progress, both broadly defined. While Knight is making a different argument here, the rising proportion of these “higher” wants (as he terms them) seem to me to be much more likely to emanate from a conscious, intentional motivation than the subconscious source of the “lesser” wants, with their more biologically utilitarian character. Of course, both categories of want arise from more or less psychologically-driven impulses.

But Knight goes further, and argues that wants themselves are ephemeral:

We cannot accept want-satisfaction as a final criterion of value because we do not in fact regard our wants as final; instead of resting in the view that there is no disputing about tastes, we dispute about them more than anything else; our most difficult problem in valuation is the evaluation of our wants themselves and our most troublesome want is the desire for wants of the “right” kind. (Knight, 2004/1923: 34)

Knight goes to considerable further lengths (which I do not rehearse here) to argue his point that wants are an inadequate basis of social ethics. (Knight, 2004/1923: 40-49)

---

<sup>186</sup> Knight makes this argument in more detail in his earlier 1922 essay, “Ethics and the Economic Interpretation.”

As a consequence, Knight rejects *laissez-faire* as a theoretical construct for the ethical assessment of wants. He goes further, concluding that “the competitive system, simply viewed as a want-satisfying mechanism, falls far short of our highest ideals,” but that “[i]t is expressly excluded from the field of the present paper to pass any practical judgment upon the competitive system in comparison with any possible alternative.” He states that many of “these problems” [presumably those he has described at length in the preceding 10 pages] are “exceedingly difficult,” and that “radical critics of competition as a general basis of the economic order generally underestimate egregiously the danger of doing vastly worse.” (Knight, 2004/1923: 49f) He does not say who these radical critics of competition are, though he does go on to suggest types of objector across the economic spectrum from poor to wealthy, discussed below. Overall, after his wide-ranging criticism of the competitive system, Knight’s conclusion that it is all too difficult is rather nihilistic as he offers no alternative.

Knight then moves from the want-satisfaction aspect of economic activity to what he sees as the more difficult question of the ends of the economic process itself, beyond productive activity. His argument is that the process involves social motivations beyond the need to consume, increasingly, so as one moves up the economic scale, from a focus on the satisfaction of physical needs at the bottom of the scale, to aesthetic and social amenities further up the scale, to “the joy of activity not dependent on any use to be made of its results” in the scale’s higher reaches. (Knight, 2004/1923: 51)

One might argue against this characterisation with examples of “conspicuous consumption” at the “top end.” However there is a strong case to make for conspicuous consumption being more about perceived prestige than consumption as such. Equally, the extremely wealthy who continue to “work” hard to accumulate even more can legitimately be argued to be motivated by interest in the activity itself, to dominate a market or sector, to gain the esteem of others as one who has succeeded and can afford expensive activities and tastes, rather than in any desire to consume as such.

Knight sees the question of a satisfactory explanation or justification for competition as one moves up the economic scale being whether the motivation is increasingly the prospect of winning at the economic “game,” beyond its function of helping satisfy the

need to consume. He uses this image of economic activity as a “game” to explain much of the radical opposition to the system:

The propertyless and ill-paid masses protest not merely against the privations of a low scale of living, but against the terms of what they feel to be an unfair contest in which being defeated by the stacking of the cards against them is perhaps as important to their feelings as the physical significance of the stakes which they lose;

In a higher social class, resentment is aroused in the hearts of persons who do not like the game at all, and rebel against being compelled to play it and against being estimated socially and personally on the basis of their success or failure at it. (Knight, 2004/1923: 52)

So in Knight’s view, much of the opposition to the competitive system is less to do with inequality in the sharing of its produce than with the sense of self-worth the system imposes on people, differing according to their relative economic status. But whether “haves” or “have-nots,” Knight’s view is that people feel diminished by the competitive economic system.

Knight takes his analysis of business as a game further; he suggests that, measured against the three essential elements of a well-designed game – skill, effort and luck – business compares unfavourably. The domination of life by business means “a considerable fraction of the most noble and sensitive characters will lead unhappy and even futile lives.” (Knight, 2004/1923: 58)

Thus, for Knight, the psychological aspect of economic activity viewed as a game is evident for the various categories of participant, across the various levels of the economic scale, not just those at the top for whom the game metaphor might seem at first blush to be the most apt. To what extent Knight thinks this judgment is true for those nearer the bottom of the economic scale, where one would think economic activity is more likely to be viewed as a means of consumption, he does not say.

In addition to Knight’s examples of competitive games of the indoor variety – cards and checkers – there are of course those of the outdoor variety, particularly various sports. In both categories the best examples are games both clearly specified by rules but sufficiently nuanced to provide interest and challenge, intellectual and/or physical. The attraction of such games for most people, compared with their everyday activities including their economic activity, is in diversion of leisure, particularly in the freedom of choice, if they wish, of a competitive game which provides them with a more

attractive balance of rules and nuance than their everyday activities. As Nuechterlein points out (in the context of sport):

Sport relieves the weight of life. It satisfies, in an innocent way, our competitive urges. It reminds us, precisely in the absurd elevation of the trivial, not to take ourselves so seriously. (Nuechterlein, 1998)

But just as competitive economic activity can become compulsive and all-consuming, so can competitive games. Nuechterlein continues:

There are those, it is true, whose preoccupation with sports becomes so all-consuming as to constitute a moral disorder ... but for the great majority of us, sports provide a pleasurable interlude in life ...

Knight's use of the game metaphor in describing competitive economic activity is clearly in this disordered, compulsive sense; he does not see the game's "pleasurable interlude in life" imaging economic activity's rewarding sense of vocation and achievement (at least in most cases).

Finally, Knight turns to what he regards as the primary ethical question: the ethics of competition as such. The specific questions he raises to illustrate his concerns indicate he is discussing the external ethical assessment of competition itself, rather than the internal ethics with which competitive activity is conducted:

- Is emulation as a motive ethically good or base?
- Is success in any sort of *contest*, as such, a noble objective?
- Are there no values which are real in a higher sense than the fact that people have agreed to strive after them and to measure success in life by the result of their striving? (Knight, 2004/1923: 58, emphasis original)

In seeking to answer these questions, Knight describes the then contemporary American culture as one of "competitive business, and its concomitant, the sporting view of life," where there are two sorts of virtue: the greater is to win regardless of methods, and the lesser is to die gracefully having lost. (Knight, 2004/1923: 59)<sup>187</sup> For the great majority of people participating in business, the goal of pleasure is subsumed by the goal of efficiency, which has become the primary emergent property of competitive economic life. Knight's belief in a hierarchy of pleasures is a characteristic he attributes to people generally, with "playing a decent game" among the higher pleasures; however in his detached querulousness, in my view he is insensitive to the

---

<sup>187</sup> Presumably as well as "die" in the extreme example of competition (e.g. warfare), Knight would include in the more normal economic example, "concede supremacy" or "accept secondary status."

consequences for most people of trying to do so. Most neither “win” nor “die gracefully” in the business game, but are content just to do well enough to achieve an acceptable standard of living in comparison with their peers.

And even if the goal of business is to get things done, Knight still has misgivings about competition due to the indiscriminating nature of its *telos*. However he acknowledges the effectiveness of competitive business in bringing about material progress. He concludes that the primary ethical feature of competitiveness in business and in life generally is in terms of power. While popular reservations about power are challenged by tough-minded scientific naturalism, Knight still has significant reservations it as an acceptable basis for social ethics.

He then assesses competition in the light of the major historical ethical theories. Nineteenth century utilitarianism is essentially the ethics of power; Knight dismisses this as an ethical basis for competition, arguing that Spencer showed utilitarianism was nothing more than the biological urge for species survival, and an ethical absurdity in that it excludes choice. Greek eudaimonism relies more on the costless things of life, particularly relationships, rather than material satisfaction; it leads to an emphasis on cooperation rather than competition, especially as regards the economic essentials of life. Competition does not figure as an appropriate motive in either Aristotelianism or Platonism, so Knight finds no joy there either in his search for an ethical rationale for competition. (Knight, 2004/1923: 62-64)

Finally Knight comes to the Christian ethical assessment of competition. He says that even though Christian ethics has been interpreted in so many conflicting ways, Christian goodness is the antithesis of competitive. In coming to this view, his selected utterances of Jesus are that “the last should be first” and that “he who would be chief should be the servant of all.” Knight contrasts the Greek ideal, which he describes as “an essentially aesthetic conception of ethical value ... summed up in ‘beauty’ or ‘perfection’,” with Christianity’s focus upon “the motive, and its ideal of life [which] may be summed up by the word ‘spirituality’.” (Knight, 2004/1923: 65)

Taking the comparison further, he contrasts his perception of the Greek identification of virtue with knowledge and the inconceivability that one would not act in accordance with one’s understanding of true values, with what he understands as Christian virtue consisting of conscientiously doing what one believes to be right rather than having a

correct understanding of goodness. The biblical texts Knight quotes (Rom 7:15 and Gal 5:19-23) go some way towards justifying his interpretation: the missing piece is the necessity of openness to the transforming power of the gospel through the Holy Spirit. Without this ongoing process, the Pauline theological position is that human action will always fall short of the divine ethical standard. It is only under this continuing process of renewal that “what one believes to be right” moves in the direction of alignment with the divine will, and consequently, the Christian’s actions move in the direction of the divine ethical standard. (e.g. Rom 12:2-3)

The difficulty of defining either beauty or spirituality in terms that are intelligible in a scientific and utilitarian age points to the difficulty of reconciling Greek and Christian ethical principles (which are qualitative) with economic ethical principles - such as they are - (which are quantitative). However it is from Christianity that modern Western society gains its conception of what is ethical; hence the ethical disorder in contemporary economic life.

What strikes Knight about the ethics of modern society is “the virtually complete separation between the spiritual ethics which constitutes its accepted theory of conduct and the unethical, uncriticised notion of efficiency which forms its substitute for a practical working ideal ...” (Knight, 2004/1923: 65) He points to the declining influence of institutional Christianity, and the rising influence of economic ethics in church life, and he describes the dilemma thus:

And all the while there are multiplying evidences of a genuine spiritual hunger in the modern peoples. They have got away from the spiritual attitude toward life, and do not know how to get back. Science is too strong for old beliefs, and competitive commercialism too strong for old ideals of simplicity, humility, and reverence. (Knight, 2004/1923: 66)

There is a strong indication here that Knight believes the ubiquity of markets of whatever kind breeds commercialism and competitiveness, and that this is not an environment in which the Judeo-Christian ethics (within which Western culture, including economic life, arose) can thrive.

So Knight concludes that he has searched in vain for a genuinely ethical basis for competition. All he has is a utilitarian ethic, the only justification for which is that it gets things done, but leaves unanswered the communal ethical question of “what

things”<sup>188</sup> – each individual is left to work out his/her own answer. For Knight, competition’s aesthetic ideals are unappealing and it has rendered the spiritual ideal incomprehensible to most people.

The decline of Christianity as the basis of an ethical consensus in western societies has continued since Knight wrote; the concept of an ethical consensus beyond basic norms has become even more improbable in an increasingly integrated and globalised, and also increasingly secularised but also pluralist, world. His conclusion that we are left with a utilitarian ethic, particularly but not only in economic activities, has been vindicated, albeit localised attempts are made at other ethical structures in (usually internal) economic activities (such as in Islamic countries and environmentally-based communities).

Nearly a century after Knight wrote, the features of markets and society generally have transformed remarkably, and a conclusion can now be ventured on how Knight’s judgment has worked out. It is certainly true that the increasingly global economy fosters a commercial and competitive culture, but much greater availability of information means there is also the potential and, I suggest, reality of a greater level of cooperativeness, particularly with the general lowering of trade barriers. There is also an increase in the extent of both structural competition and cooperation, borne of globalised markets and the greatly increased extent of division of labour. It therefore seems to me that these features – commercialism, competition and cooperation, whether structural or attitudinal – all exist in varying degrees alongside each other, depending on the particular setting and context. But this was almost certainly true in Knight’s day also, the main difference now being the enormously greater level of economic activity and complexity, particularly as a result of greatly increased globalisation of markets. His negativity about competition in economic activity has proved to be unbalanced: for example, it has played a significant role in the reduction in the proportion of the world’s poorest living on means at or even below those deemed to be necessary for survival.<sup>189</sup>

---

<sup>188</sup> Interestingly, this is the question Bell raises in his Christian critique of competition (discussed in Sub-section 6.3.8) – and I make the same point here as there: that the criticism is of the capitalist economic model itself, rather than of competition as such.

<sup>189</sup> <http://www.un.org/millenniumgoals/> accessed 13 April 2016.

Much of Knight's critique does not sufficiently distinguish the structural forms of the competitive and cooperative inter-relationships in economic activity on the one hand, and the psychological factors which influence their inputs or the effects they produce. This definitional distinction is important, and is not vitiated by the fact that economic models involve psychologically-induced inputs and/or assumptions, such as rationality and motives (leading to preferences). Questions about the nature of structure should be distinguished from questions about the nature of attitudes.

Despite Knight's apparent critiques

- in his 1921 book on the conditions for perfect (structural) competition, and
- in his 1923 essay on the ethics of competition, seen primarily in its psychologically-motivated understanding,

he has not really dealt with competition as such, but has rather critiqued the economic model of human behaviour and its relationship with ethics. He makes some challenging points, but he is not really a commentator on competition itself, or its ethics.

### **7.3 WILLIAM TEMPLE**

Anglican priest and bishop William Temple was active in the British labour movement and in support of economic and social reforms. While he is best known for his short incumbency as Archbishop of Canterbury during World War II, relatively early in his career (in 1917) he wrote extensively (with others) on competition and its place in British social life. Specifically, he was one of a number of joint authors of a substantial work analysing and critiquing competition from a Christian perspective.<sup>190</sup> The general orientation of the book is socialist, representative of the communitarian strands within Christian thought. Because the five authors spent considerable time coming to a common mind, I feel justified in attributing the views expressed to Temple, who became the best known of them. However, he was a relatively young man when involved in this project, and his opinions may have changed later in life, though as mentioned below I think the question remains open.

---

<sup>190</sup> The book was written as part of the activity of "The Collegium," described as "An experiment in the corporate study of the will of God in modern life", with the authors spending considerable time and effort in endeavouring to come to a common mind under God's guidance on the matters covered.

I also mention occasionally his statements from his most important book entitled *Christianity and Social Order*, written a quarter of a century later in 1941, just before he became Archbishop of Canterbury, and towards the (untimely) end of what by then was a highly influential career.<sup>191</sup> While he does not deal with competition and competitiveness specifically in this later work, other than in passing, at times it suggests his views may have moderated somewhat. In his twenties he was uncompromising: “socialism ... is the economic realization of the Christian Gospel” (Temple, 1908), whereas by the time of the later book, his views may have become more representative of the mainstream of Christian thought. On the other hand, in his introduction to the later book, Preston says that “it could be held that the radical questions in *Christianity and Social Order* point that way [i.e. that Temple continued to hold to a socialist position], and it might be asked whether it was anything more than diplomatic caution which prevented him saying so.” (Preston, 1976: 23f)

The definition of competition adopted by Temple in the 1917 work is “Competition arises when men strive for identical objects which cannot be possessed in common. Indeed, the act of such striving is the very essence of such competition.” (Temple *et al*, 2009/1917: 8) Thus Temple recognises the rivalness of goods (discussed in Section 5.1 and Sub-section 6.2.1), for the existence of which characteristic it might be argued to be the “responsibility” of God or nature. Human responsibility is thus limited to how the resulting limited availability of the particular good is handled, and Temple’s definition of competition as an act of striving is one such possibility.

Temple divides competition into two categories:

Deliberate competition is the act of striving with other people in order to

- (a) do something better,
- (b) be thought of more,
- (c) obtain more power,
- (d) possess more material wealth than those other people.

(Temple *et al*, 2009/1917: 10)

Involuntary competition is the act of striving ... solely for the sake of the object and not with reference, conscious or unconscious, to the other people concerned. (Temple *et al*, 2009/1917: 18f)

---

<sup>191</sup> As an example of Temple’s influence in British society, former (Conservative) Prime Minister Edward Heath commences his foreword to the 1976 edition with “[t]he impact of William Temple on my generation was immense,” and continues that “...Temple was foremost among the leaders of the nation [in the 1930s], temporal or spiritual, in posing radical, challenging questions about the nature of our society and its economic basis at a time of world recession, massive unemployment and social despair.”

As well as Temple's "deliberate competition" reflecting a clearly intentional psychologically-driven impulse, it also resonates well with Wilson's "contesting," and his "involuntary competition" may include a more basic psychological impulse, unrelated to other people; it also resembles Wilson's "scrambling."<sup>192</sup> However both Temple's definitions' concentration on "striving" is consistent with the popular understanding of competition (then and now). While one might question the relevance of popular understandings in the context of a more disciplined discussion, particularly if they involve ambiguities, in this case the widespread nature of the popular understanding in other disciplines also (see Section 2.1) may well help explain the relative disciplinary isolation of the economist's structural understanding of competition.

In terms of the economic understanding of the term, Temple's "deliberate competition" category equates closely to rivalry. However the definition of "involuntary competition", though it still includes striving, because of the absence any reference to or focus on the competitors, bears some resemblance to relations applying under perfect competition – relations that reflect the rivalness of goods but not competitiveness of attitudes. Despite making this distinction in his definition, Temple's general use of undifferentiated "competition" throughout the work and generally in the sense of rivalry, implying the "deliberate" category, or perhaps indicating he did not think the distinction significant.

In fact, Temple's view of competition, its impact in society generally, and within business and work in particular, attributes to it some of the more extreme aspects of rivalry. Rather than any sense of competition having the potential to improve the conditions of life for the British masses (or having a counterpart in the cooperation between "competing" firms and their customers), the sense of the 1917 book is of an established order clinging for dear life to a social, religious and economic system that had delivered advantage for generations, but which had been undergoing considerable change for a century or more. That this change might have been perceived as coming to a crisis is perhaps explained by placing the book in its historical context (i.e. during World War I), as the decline of the British Empire was becoming clear, the role of Britain in the world was changing, the influence of the established church was waning,

---

<sup>192</sup> Wilson's concepts are discussed in Section 2.2.

and the signs were quite evident that the class system that had underpinned British social and economic life was breaking down. (e.g. Schama, 2002: 421-450)

In the later (1942) book, a much wider ranging work, again written during the social upheaval of a major world war, and after the economic tragedy of the Great Depression, Temple reviews Christian involvement in social issues over much of the church's history, and takes a communitarian line in recommending social policy. He was advised by J. M. Keynes, who read the manuscript. Temple believed that it was Calvinism which opened the door to economic and social individualism: it "began as a system of regimentation, where economic activity was subject to severe moral restraint, [and] became ultimately the mainspring of unrestricted enterprise and competition." But "[t]he Reformers never intended to produce such a monster as the Economic Man of the last hundred and fifty years." (Temple, 1976/1942: 55) I doubt there is any evidence for the implication that there had been moral regress over that period; perhaps Temple is succumbing to the common human tendency to regard contemporary problems as more risky and severe than those of the past - past risks have largely been resolved, and the inclination is often to view the past through rose-tinted spectacles.

The overall thesis of the 1917 book is the all-consuming nature of competitive market activity and competitive attitudes in economic and social life, driving out much of the cooperative relationships which make us human, and which are enjoined in Christian ethics. These include relationships between employee and employer, as well as within marriages and families, neighbourhoods and communities, and within society generally – but interestingly ignoring the cooperation, albeit largely invisible, of the economic system. Indeed, Temple's view is that, despite the economic advantages to some in society of competition (which in his view are very limited, and in no way offset its widespread economic and other social disadvantages), "competition" is fundamentally anti-Christian at its core. The economic distinction between competition and market economic activity is not in Temple's mind (and in the minds of many other non-economic commentators) in discussing "competition" – he uses the term to mean "rivalrous competitiveness."

Temple does not seem to understand the advantage to all in society of competition, and the cooperation to which it gives rise, based in the division of labour. The

distinction between competition as a driver of efficient exchange, and adequate social policy and regulation aimed at ensuring competition functions for the benefit of all in society, including restraint on excessive competitiveness, seems to elude him. All these quite distinct elements seem to be wrapped up in the single word, competition. And Temple's enthusiasm for the benefits of cooperation seem rather un-nuanced: for example, to avoid anti-social consequences such as usually result from inefficient cooperative structures such as cartels, markets and regulation need to function effectively.

This competitive dominance Temple sees in economic and social life contrasts with his view of the cooperative social calling of the Christian (he still regarded Christianity as the "national faith" in the Britain of a century ago):

But it is apparent that Christianity always appeals to the motives of service or vocation, while competition appeals to the self-centred motives, and of these more to the selfish than the self-regarding. (Temple *et al*, 2009/1917: 20)<sup>193</sup>

Again, there seems to be a muddled conflation of ideas here: Temple seems to be talking about the more socially objectionable extremes of unrestrained rivalry operating in an inadequately regulated economic structure, rather than a well-functioning competitive market-based economic structure. While regulation and punishment may be limited in their capacity to change motives, they can limit the negative effects in particularly antisocial cases. Economic structures which operate in communities which are small enough for people to know one another, or where there is a deep commitment to common values, are most likely to avoid these problems, but obviously there are significant limits to the applicability of such structures in the modern world. While there will always be some level of antisocial rivalry and extreme selfishness evident amongst the participants in most modern economic systems, a well-functioning regulatory system will limit its impact.

In a set of lectures he delivered a few years before the publication of the 1917 book, Temple emphasises quite bluntly this distinction between the competition based in self-interest which he observes in economic and business life – indeed its pervasiveness in all of life – on the one hand, and the care for others and cooperation he sees as essential to Christianity on the other:

---

<sup>193</sup> Temple's distinction between selfishness and self-regard is discussed below.

[C]ompetition is not a thing limited to business; it is a thing that pervades our whole life. It is simply organised selfishness ... A great deal has been said in praise of competition and most of it is rubbish ... It is sometimes said that if you want to get the best out of a man you must appeal to his own interest. That brings us to the crucial point. For if that is true Christ was wrong. The whole gospel rests on the denial of that statement. If you want to get the best out of a man, you must appeal to his loyalty, his affection, his devotion, his perception of what his conduct involves for others whom he cares for or who care for him. (Temple, 1914)

“Getting the best out of a man” seems to imply someone (or a group) external to the man determining the content of what is “best” and getting him to act on it, whereas discovering “the best in a man” seems to imply the man, perhaps in conjunction with others, coming to know that content for himself, and determining himself what if any action to take as a result. The two ultimate understandings of what is “best” may well be the same or at least similar, but the process seems quite different. In the Christian context of Temple’s passage, there is also the role of the gospel transformation of the Holy Spirit, which can be through inner revelation to the individual, and/or through the agency of some person, community or institution external to the individual or of which he is a member.

When Temple decries motivating the man by an “appeal to his own interest” he almost certainly means the man’s own, narrowly-defined, selfish interest. But if that gospel transformation has taken place, whether through the agency of someone else etc., or by revelation to the individual alone, the man’s “interest” will be transformed also. Temple seems guilty here of a confusion of (myopic) selfishness and (enlightened) self-interest, the latter being the underlying principle of well-functioning competition, and which for the Christian participating in the marketplace *includes* action based on “his perception of what his conduct involves for others whom he cares for or who care for him.” Like many Christian commentators, Temple’s assumption seems to be that Christian ethics is solely based in an altruistic focus on the interests of the other, rather than also cooperatively encompassing the interests of oneself as well as those of the other.<sup>194</sup> Temple seems to overlook the assumption underlying a number of Jesus’

---

<sup>194</sup> Based biblically on Christ’s second great commandment to love one’s neighbour as oneself (Mt 12:31) and Paul’s injunction to look not only to one’s own interests, but also to the interests of others (Phil 2:4). See the more detailed discussion in Section 4.5.

parables that self-interest is natural humanly, and that what is needed redemptively is the enlightened focus of that interest on care for the other also.<sup>195</sup>

The issue is, of course, how one might get a positive response to an appeal to a person's "better" instincts (which Temple's experience of bosses and owners – most likely second-hand – might suggest to him is unlikely). The socialist answer usually seems to end up being that this can only be obtained by compulsion (whether by taxation, other legislation, or ultimately by force); in some twentieth century examples we observe extreme consequences. The Christian socialist presumably believes that the transformative power of the gospel will progressively do this work, but that this may be a prolonged process, and that in practice that some more temporal "encouragement" will be required in the meantime. Ironically for Temple's position, this encouragement will almost certainly be achieved in part by competition, particularly democratically through the ballot box.

There is a contentious theological question lurking here: the type and extent of transformation of a particular Christian's character, and also that of the members of a Christian group (e.g. church community), which it is reasonable for a Christian community to expect, given that all believers are still fallen and continue to fall short of those expectations even though the process of transformation has begun, but will not be completed till the hereafter.

Temple seems to accept that competition in social life is an inevitable consequence of its root cause – acquisitiveness and individualism, rooted in self-interest:

Any form of organised life must be in large measure competitive. ... The real evil is not competition itself, but the spirit of acquisitiveness and the acceptance of individual rather than social standards of success.  
(Temple *et al*, 2009/1917: 23)

For once Temple here avoids the conflation, evident in most of the book, of competition as a process and competitiveness as a human attribute. As a hint of his later maturity, but at a more general level, in the 1942 book he seems to understand the distinction and the relationship between the politico-economic structure, and the

---

<sup>195</sup> For example in the parable of the good Samaritan (Lk 10:25-37), the Samaritan's self-interest in going about his business is assumed, but his care for the injured traveller is Jesus' redemptive teaching; and in the parable of the workers in the vineyard (Mt 20:1-16), the employer's self-interest in the management of his vineyard is assumed, but his care for the needs of the workers who were only able to find part of a day's work is Jesus' redemptive teaching.

motivations and actions of the individual politico-economic actors within it. (Temple, 1976/1942: 78-84)

Temple blames competitiveness and lack of cooperation between the different bodies and powers which are most significant and influential in industry (most particularly big business<sup>196</sup>) for many of the problems and much of the neglect of individuals and communities, and for the failure to utilise society's resources to the full or best advantage. He believes that, while there are advantages of the competitive system, they come at considerable human cost:

It is a grave defect of the present competitive order that the excellences it achieves are secured at great social cost. Competition may bring a number of the right people to the right positions, but it assigns a larger number to positions which are not right for any human being even if we could assume their failure to be their fault. It means penalties for failure as well as rewards for success. (Temple *et al*, 2009/1917: 59)

Temple's charge here is that the consequences for those people who are deemed "failures" in the competitive economic system, in that the positions in life they are compelled to occupy are "inhuman" in their import, even if the reason for failure can be attributed to their own fault.<sup>197</sup> Underlying this statement is an understanding (in Christian terms, a theology) of the human being, in whom a certain minimum standard of dignity applies, and of an obligation on society (expressed through the actions of others) to ensure that this is maintained, even in cases where social failure can be attributed to the individual.<sup>198</sup> This latter requirement, without qualification or condition, seems significantly to limit human freedom, and almost seems to suggest society has no right to impose requirements on its members in return for access to the protections it grants.

Temple's attitude implying a negative reflection on a competitive economic system producing penalties for failure and rewards for success is perhaps curious in the context of orthodox Christian theology accepting an ultimate divine judgment resulting

---

<sup>196</sup> He presumably targets big business rather than SMEs, because of the latter's diversity and lack of coordination, or government, because as a state socialist he sees government action as the possible means of addressing the perceived problems largely caused by big business.

<sup>197</sup> There is an issue in how we define "failure," whether against some absolute standard, or in comparison to the consequences from time to time for others.

<sup>198</sup> There is also an issue in how we understand the human being, whether based in the Christian idea of being made in the image of God (Gen 1:26), or the idea proposed by Peter Singer that what is relevant in determining how society treats a particular being is the degree to which it is sensate. (Peter Singer, *Practical Ethics*, 2011/1993/1980)

in the reward of eternal life for the redeemed and punishment or annihilation of the unregenerate. That said, a Christian (or, indeed, a humane secular) society will want to limit the extent to which those deemed to “fail” continue to suffer as a result of what may well have proved to be foolish choices or have been unfortunate life circumstances. Minimum wage levels, social security systems and other types of safety net are commonly adopted mechanisms to deal with financial aspects of this issue.

In the last-mentioned quotation (Temple *et al*, 2009/1917: 59), for only the second time in this early work, we have a distinction between competition (some measure of which Temple sees as inevitable and even in some circumstances advantageous), and competitiveness (which is the source of the underlying problem when it is “anti-social” (assuming that rather slippery concept can be adequately defined)). There is the further issue he does not address in his enthusiasm for cooperation over competition: cooperative but mostly anti-social structures such as cartels. What Temple does not explore is how one might manage and achieve the advantages while avoiding the disadvantages: the task is one of balancing conflicting aims.

Similar to Luther almost four centuries earlier (Luther, 1524), Temple argues that competitive economic structures lead to an individualistic, anti-communitarian focus by the winners on personal luxuries, at the expense of basic necessities for the losers. (Temple *et al*, 2009/1917: 62)

What character traits are fostered by competition? Temple lists them, both positive and negative:

- grit, endurance, self-reliance, energy, initiative, power, OR
- despair, suspicion, greed, cunning, enmity, pride, hardness of heart.

He concludes that competition can develop character, but the outcome very much depends on restraint if the negative effects of competition on character are to be avoided; the result is highly variable according to individual ability and personality. (Temple *et al*, 2009/1917: 70-73)

Continuing the theme of restraint being necessary to a positive outcome, he writes (when considering rivalry in the case of commerce and industry):

[as] in the case of rivalry in racing or other sport, it is good to have an able antagonist. But this bracing only results where the tension is not too high, nor

the hazards too great, and where the relation with fellow-workers is one of friendliness rather than of antagonism. ... The difference is well illustrated by considering the comparative effect of rivalry between friends who are competing for the best places in life without the likelihood of any of them badly failing, as against those who are competing for a single lifebelt in a wreck. (Temple *et al*, 2009/1917, 75f)

Unrestrained competitiveness has a dehumanising effect – Temple cites as examples the system of daily pick-up on the London docks (Temple *et al*, 2009/1917: 85f), and in commerce:

There are many who are eternally in the position of being almost dependent for their livelihood on the ruin or considerable impoverishment of persons they know and with whom they consciously compete. (Temple *et al*, 2009/1917: 62)

The examples Temple cites are those where there is heavily skewed balance of power in favour of the employer and against the employees (or, mostly, day labourers or contractors), often due to an oversupply of unskilled or low skilled workers. In other, more balanced, situations, the situation of workers is very different. In the last century in developed economies, the actions of unions in collective bargaining, and of governments in areas such as competition policy, have removed many of the extreme examples. In some modern skilled areas, especially as employer/employee loyalty has diminished, the “boot is on the other foot,” and the employee (or more often, contractor) is the “rival good” being wooed by several employers, rather than the reverse situation referenced by Temple.

Temple turns to the impact of competitive business and employment on the spiritual and religious aspects of life:

- competitive business tends to “absorb men’s energies in material pursuits to the stultification of the spiritual side of their nature” (Temple *et al*, 2009/1917: 101)
- in a survey of business people, there was a perception of conflict between Christ’s law of love and law of competitive business, which those surveyed accepted as necessary, even if it made them hypocrites as Christians (Temple *et al*, 2009/1917: 103f)
- Temple concludes that if competition results in “the acquisition of great personal wealth,... [it] is apt in very many cases to destroy the spiritual relation between a man and his fellows and so to pervert his relations with his God. The

self-made man, whom the competitive system encourages, quite frequently grows harsh or apathetic towards poorer and less successful men.” Such a person loses their sense of dependence on God.

(Temple *et al*, 2009/1917: 106f)

In the modern context, competitive business is one of many factors which may tend to adversely impact the spiritual side of life. While there are aspects of Temple’s diagnosis which ring true today in some cases, it does not follow that absence of competition in an individual’s business life (say if he is a monopolist) will make him any less likely to be overly “absorbed in material pursuits.” And while it is true that the wealthy successful person can be smug, or as Temple suggests, harsh or apathetic towards his less-fortunate fellows, it is also true that some who have made good feel they have been very fortunate, and make generous philanthropic gestures for the benefit of the less well off.<sup>199</sup>

When Temple turns to the question of human motives (a subject of fundamental Christian concern and focus, discussed detail in Chapter 3), his conclusion is that only if the self-centredness underlying an attitude of competitiveness is transformed into a desire to carry out God’s work in the world and serve others, can Christians obey God’s will:

...the competitive system is defended upon the ground that it is adapted, as no other system is, to the facts of human nature. The work of the world must be carried out, and men will only do it, it is claimed, either to get more wealth, or power, or fame than other people, or for the sake of material reward. ... So long as these are the motives which animate men to work, so long will the fundamental evils of competition remain. ... What is needed is a change of heart with regard to the motives for work. It is because the motives for which men work are wrong that the system which is the expression of these motives is also wrong. In a genuine commonwealth all work should be performed either from a desire to carry out God’s work in the world, or from a desire to serve the community, or from the joy of creation. ... Indeed, for a Christian there must always be some joy in work and some sense of serving the community in any work that is carried out in obedience to God’s will.

(Temple *et al*, 2009/1917, 147f)

The conclusion that the competitive economic system is wrong because the motives with which some participants approach it are wrong, is a *non-sequitur*. Indeed, the great advantage of a well-structured competitive economic system is that, regardless

---

<sup>199</sup> A contemporary example is Bill Gates; doubtless there were examples in Temple’s time also.

of the motives, good or bad, of the participants, it tends to produce better outcomes than alternatives. A commonly suggested alternative is a very heavily regulated or centrally planned economy, which all the experience suggests produces much worse outcomes, and is ethically corrupting of its participants. The important point is that an appropriately regulated economy functions better than the centrally planned alternative, assuming of appropriate legal, property, regulatory and social settings; such an economy may well encourage better behaviour.

Temple believes this joy in work and serving others of which he writes in the above quotation is more likely to be evident for missionaries, social workers, church workers, statesmen, trade unionists, quite a few business men, and artists. But what of those areas of work which on any objective basis represent drudgery (of concern to him presumably because it is concentrated with those at the bottom of the economic pyramid)? While some may be able to see such work as serving others and the community, Temple believes the only real solution is to share it more evenly among all. (Temple *et al*, 2009/1917: 148-152) He does not really indicate how this redistribution of drudgery might be brought about, except to say that the only basis for change will come from change in human attitudes, with those receiving more than they need either refusing to accept it or giving the excess away.

(Temple *et al*, 2009/1917: 153-155)

Temple effectively argues for a Christianised version of State Socialism (which latter he believes is “essentially a religious doctrine,” except the underlying concept is more of the joy of work than serving God):

If the compelling motive of all work was the desire to carry out God’s work in the world, the whole basis of modern competition would disappear, while the adoption of the spirit underlying the words “from each man according to his ability, to each man according to his need”, would take away all that is bad in “involuntary competition”. (Temple *et al*, 2009/1917: 157)

Under such profound changes, Temple believes society’s institutions would be radically transformed. Indeed if the “compelling motive of all work was the desire to carry out God’s work in the world,” and all competition had consequently disappeared, presumably Christ’s millennial reign would have begun, and the renewal of all creation, including of human beings and their work, would have been achieved. In the meantime, however, before the perfection of humanity is achieved, an appropriately

regulated economic system which produces the best outcomes possible is the appropriate approach in the absence of utopia.

Under his more this-worldly objective of the adoption of the spirit underlying the socialist objective “from each according to his ability to each according to his need,” it seems Temple envisages a lesser transformation of society, including of competition (by his use of his more benign category of “involuntary competition”). He does not appear to think that the evils caused by the more aggressive category (“deliberate competition”)<sup>200</sup> would be similarly removed; but perhaps they would be reduced. The problem with the socialist doctrine is that it works best within relatively homogeneous, smaller societies; once society becomes larger, and diverse socially and culturally, it is very difficult to sustain the cohesion necessary – the evidence is that such societies end up having to be controlled repressively and often violently.

In response to the criticism that self-interest, and hence competitiveness, are ineradicable from human nature, Temple’s understanding is instructive: human nature has certain basic characteristics, but also can be shaped by motive and experience. So too can society’s institutions:

We at least must take our stand on the issue that humanity, as we know it, is no fixed and constant quantity. Our ideal is the ideal of Christianity, and whatever be true of reform in general, Christianity, at any rate, stands or falls with a faith in the redemption of man. And are we to admit that individuals can be redeemed, and yet assert that society cannot? Such a position is dangerously near an open avowal that Christianity is an esoteric cult, a minority religion, wholly unable to impress itself broadly upon the world, wholly unable to dominate public life and social conduct. Temple, *et al*, 2009/1917: 165f)

The nature and extent of transformation of a Christian’s character, and now particularly that of the members of a Christian community, arises again, with Temple’s suggestion that, not only the individual, but also society, can be redeemed. The idea of a Christian nation is now largely abandoned in the West, with the rise of both pluralism and secularism, but Judeo-Christian ethics still exert an influence, particularly through long-established political, legal and social institutions. The extent to which the negative effects of self-interest and competitiveness can be restrained in

---

<sup>200</sup> As already indicated, Temple defines “involuntary competition” as striving for identical goals but without reference to the competitor(s), whereas “deliberate competition” specifically targets the competitor(s).

contemporary society is more limited than when a nation such as Britain could reasonably have been regarded as “Christian.”

It is reasonably clear that the experience of Western society generally over the period of a century since Temple wrote, is of the progressive isolation of Christianity, and of the once (apparently) ubiquitous faith’s decreasing ability “to impress itself broadly upon the world ... [and] ... dominate public life and social conduct.” It is true that the extent of this isolation varies by country and culture, but the trend is clear.<sup>201</sup> Whether much of that situation can be sheeted back to society’s continued focus on competitiveness (as opposed to an economic system based on competition) is questionable. Indeed, in some areas such as social welfare and public health, compared with Temple’s time, one might argue that there has been some “redemption” of society, even deploying competition (especially in the political arena) rather than shunning it, and regardless of a perceived decline in Christian influence.

One naturally imagines the transformation of society depends on the transformation of individuals, but no doubt there is a heuristic element operating between individual and societal change. The “feed-back loop” (to use an engineering idea) enables the transformation of individuals leading to the transformation of society and thence back to the individual and so on.<sup>202</sup> Thus, as well as starting with the transformation of individuals and thence society, transformation can also start with society’s institutions before impacting on individuals; the process suggests the popular saying concerning chickens and eggs.

Competitiveness was a human attribute valued by the great nineteenth century German philosopher and critic of Christianity, Friedrich Nietzsche. He despised the Christian ethics of pity, empathy and self-sacrificial love, because these inhibited the ambitions of strong, self-motivated, self-interested, competitive people, who should

---

<sup>201</sup> Care is needed in making generalisations about the decline of Christianity and the rise of secularisation, but it is probably fair to say that Christian influence is stronger in USA than most of the countries of Western Europe (where there is nevertheless quite some variation); Australia is one of the more secularised Western countries. However there has also been the development of significant “spiritual” influences, including different “religious” trends and movements. Charles Taylor’s *magnum opus*, *A Secular Age* (2007), charts the complexity and diversity of the rise of secularism.

<sup>202</sup> This concept represents a positive version of John Stuart Mill’s negative assessment of Victorian society: “the deep-rooted selfishness which forms the general character of existing society is so deeply rooted only because the whole course of existing institutions tends to foster it.” (Mill, 1873: 233)

be free to follow their own dreams. In regard to self-interest, self-fulfilment in work and competitiveness, Temple answers Nietzsche:

[T]he common insistence of the necessity for ... an appeal to self-interest as is secured by the present competitive system is due in part to confusion of thought. We confound self-regard with selfishness. ... The Christian ideal of service is not in the least at war with the ideal of a society in which each individual has the joy in his work which comes from a congenial exercise of the faculties. (Temple *et al*, 2009/1917: 170)

Temple's analysis of human nature and motivation as regards competition in one place in the book is more nuanced than his discussion thus far might suggest. He considers the example of a financier who has "cornered" the market in some essential commodity, and used his position aggressively, resulting in widespread distress. As well as asserting that "we should agree that the financier is guilty of gross selfishness, and that (so far) he is an enemy to society", he goes on to look beyond the financier's motivation by the prospect of profit:

But more commonly the man is actuated far more by the love of excitement, the zest of controlling forces, or of pitting his own power and judgment against those of others, than by cold-blooded desire for profit. ... The fault here is not a deliberate preference of his own interest to the social good, but an absorption in the work that is itself anti-social, and a degree of absorption that blinds him to all other interests than his own. (Temple *et al*, 2009/1917: 172f)

Temple's comment here that the financier finds his motivation for competition, not just in the prospect of profit, but in the "love of excitement" resonates with Knight, who concludes that competitive business is a game, albeit a poorly structured one. Both Temple's financier's dysfunctionality and Knight's poorly structured game indicate a lack of appropriate governance accountability to other stakeholders.

In summary, Temple's critique of competition is based in his socialist orientation, a good dose of nostalgic conservatism, and a dominant focus on the rivalrous aspect of competition's definitional spectrum. He sees competitiveness, and the resulting competition, as fostering selfish individualism, contra Christianity's dominant social focus on love of neighbour. In Temple's view, selfish individualistic competitiveness is, at core, anti-Christian, particularly given its tendency to pervasiveness in all of life, not just its economic dimension. He believes competitiveness and the consequent lack of cooperation lead to social problems, particularly under-optimisation of social resources and capital. He does acknowledge positive as well as negative character traits potentially developed by competition, but limiting the dominant negative from

overwhelming the positive very much depends on the exercise of restraint. Lack of this restraint, especially in business life, leads to dehumanisation of many, spiritual isolation, and loss of any sense of purpose in their work. Temple is an advocate of State Socialism, as potentially fostering a deeper commitment to serving God in the world, and transforming both individuals and society's institutions.

## 8. CONCLUSION

To repeat what I said in the Introduction (Chapter 1), my primary thesis in this dissertation is that competition and cooperation are typically understood differently in economics and Christianity:

- in economics, the terms are primarily understood as *structural*: competition (the opposite of which is monopoly rather than cooperation) in its “perfect” form is the economic activity by which efficient exchange is best facilitated, and cooperation results from that structural state of perfect competition;
- In Christianity, the terms are primarily understood as *psychological*. Competition is primarily understood as rivalry, and generally viewed as inconsistent with the Christian injunction to love one’s neighbour as oneself. On the other hand, cooperation (the opposite of competition in Christian thought) is viewed as a psychologically deliberate act of the will to love one’s neighbour as oneself, or even to go beyond self-love to altruistic self-sacrificial love of the other (in the *agapē* sense of “love”).

Clearly the two terms (competition and cooperation) are used very differently in the two disciplines. This difference and the resulting communication difficulties between economists and Christians in relation to their use are largely to do with the difference of fundamental orientation of each discipline – positive (“the way things are”) in the case of economics, contrasted with normative (“the way things should be”) in the case of Christianity. At the simplest level, misunderstandings or lack of effective communication between the disciplines arise because proponents of each tend to assume their own disciplinary orientation in the statements of the other.

Chapter 2 explores the definitions and distinctions in the usages of the two terms (and related concepts: rivalry in the case of competition, and altruism in the case of cooperation). They are, of course, used in other disciplines, usages and resulting insights with which both economic and Christian thought can helpfully engage. One such discipline is evolutionary biology, where psychological elements are not typically considered, and where cooperation and altruism are commonly used interchangeably. However some biological studies do restrict the concept of cooperation to cases where

intentionality is evident and which therefore apply to human interactions, arguably with a psychological aspect.

Strong reciprocity involves sacrificing resources to be kind to the other who is being kind, but sacrificing resources to punish the other who is being unkind. There is the question of whether the responder to the strong reciprocator is taking the cooperative action out of an attitude of cooperativeness, or out of self-interest to avoid punishment, and whether the interaction really involves much by way of reciprocation.

Symbiosis, mostly evident in inter-species cooperation, involves no necessary intentionality.

The history and use of game theory in evolutionary population studies has been apparently particularly fruitful recently in offering theoretical explanations for the circumstances in which cooperation can arise and be sustained, something of a puzzle in evolutionary theory since Darwin. I rehearse some of this history and recent theoretical developments at some length: while those developments might well prove to have application in economic theory, and perhaps also for Christian theology and ethics, they are the subject of considerable continuing controversy in evolutionary biological circles. There is, of course, no necessary suggestion of any psychological aspect to cooperation (or competition) in these applications.

I also provide some preliminary Christian reflections on game theory (particularly prisoner's dilemma examples), pointing out (counter to the views of some Christian commentators that Christians should avoid situations which can be represented by prisoner's dilemma models) that such situations cannot always be avoided. Further, I argue that Christians can sometimes usefully participate in and/or learn from prisoner's dilemma situations, in some circumstances concluding similarly to economists (and utilitarians!).

As indicated in the Introduction, Chapter 3 explores an important example of the positive:normative distinction between economics and Christianity: viz., the primary economic focus on *actions* of agents assuming motives are given, versus the Christian focus on agents' *motives* as the driver of actions, and the primary focus of Christian transformation. This distinction differs from the consequentialist:deontological distinction. I argue that the defining Christian ethical text here is Jesus' second great commandment in Matthew 22: "You shall love your neighbour as yourself," and hence

I explore the meaning and Christian ethical application of “love” (*agapē*), as well as the New Testament term for the seat of motives – “heart” (*kardia*) – in some detail.

As an illustration of the action:motive distinction, the “invisible hand” metaphor in economic thought maintains that good, cooperative outcomes, independent of the virtue of the participants, can result from well-designed social institutions, for example as a result of the division of labour and appropriately regulated exchange. Christian thought in respect of such economic structures is typically more ambivalent. While there is a Christian equivalent to the invisible hand in the theological tradition of God undergirding his good but fallen creation, there is a high degree of Christian scepticism about the role of markets within the creation, particularly the flawed motives of many market participants, and the potential for market processes to further exacerbate that fallenness.

Chapter 4 explores aspects of the major difference in the understandings of cooperation in the two disciplines: specifically, the structural understanding of cooperation in economics through the foundational writings of Adam Smith, and the psychological understanding of cooperation and altruism in Christianity, partly through dialogue with evolutionary biology.

Smith’s insight is the fundamental importance of the division of labour, specialisation and markets to the structural cooperation essential in the increased output which has lifted so many out of poverty, whereas psychologically-based cooperation is much more limited in its economic impact. Smith’s famous examples of the pin factory, in which he demonstrates the enormous gains from the division of labour, and the workman’s woollen coat, in which he demonstrates the enormous range of unconscious, structural cooperation involved in its manufacture, make his points with memorable clarity. I argue that much of Smith’s exposition was emphasising what had been described by previous writers; however the new thought he advances is that specialisation is not so much the result of differing talents but the cause of them. There are some important objections and nuances to Smith’s line of argument, particularly that markets depend on moral character, which they have the tendency to undermine.

I explore the definitions of cooperation and altruism in Christian ethical thought, arguing that cooperation covers situations where there is mutual benefit, which covers

cases where there may be (but not necessarily) a psychological element; and altruism, being the case where there is self-sacrifice, which clearly has a psychological dimension, without any expectation of material compensation. I argue that there are strands of Christian ethical thought where either or both concepts – cooperation and altruism – are normative. The distinction of meaning between the two terms contrasts with their widespread conflation in evolutionary biology, which leads me to conclude that insights there (particularly from game theory applications) are more directly relevant to situations involving cooperation, but not those involving altruism. I discuss the question in Christian thought of what non-material benefits might be involved for the altruist in a Christian understanding of altruism (“agapism”).

The discussion of the economic understandings of rivalness, competition and rivalry in Chapter 5 reinforce the structural focus of the discipline. Rivalness, a property of goods, means most ordinary goods are rival, and the object of natural competition, which does not involve any necessary psychological element.<sup>203</sup> The various economic understandings of types of competition, ranging from its most clearly structural form, perfect competition, through imperfect or monopolistic competition to oligopoly and ultimately monopoly, increasingly have the potential, though not the necessity, for psychological elements. The rationale for the virtues of competition are:

- it leads to greater gains from trade, and
- it protects individual consumers from the arbitrary treatment, exploitation and exclusion which can easily arise under a monopolistic structure.

My lengthy summary of the history of economic thought on competition (Appendix 3) shows how the understanding has moved from a focus on justice in exchange prior to the eighteenth century:

- an increasing structural focus during the eighteenth century, culminating in Smith’s analysis and thereafter during the classical period (up to about 1870);
- the developing understanding of the significance of monopoly as the opposite of competition in the neoclassical period (up to about 1920);

---

<sup>203</sup> A potential confusion arises from economists’ use of “scarcity” to mean the necessity for choices to be made due to rivalness, rather than the common usage of scarcity as “insufficiency of supply.”

- the codification of the conditions for perfect competition in the early 1920s;
- the development of imperfect or monopolistic competition in the early 1930s;
- the focus of “Austrian” economic thought regarding competition on process;
- but the continued use of perfect competition and monopoly as economists’ primary models.

Comparisons of competition in economic processes with its roles in the related social processes of politics and the law show that structural understandings are the norm.

Rivalry, a property of minds and normally understood as psychological competitiveness, can be analysed from an economic perspective as a component of one’s utility, reflecting one’s consumption position relative to that of other(s). I look at an example of comparisons with others of absolute consumption, rank ordering of consumption, and percentages of total consumption. This comparison demonstrates that rivalry is definitionally distinct from self-interest, these comparisons based on rivalry being zero-sum, whereas (in principle) self-interest is positive-sum, and hence the basis of economists’ primary concern.

I also look at examples of “structured rivalry” where rivalry is built into an economic structure, and where there is no necessary psychological element, albeit the particular rivalrous structure chosen may increase the likelihood of a psychological element arising. Rivalry in sporting examples is also generally structural, but can also “spill over” into the psychological, particularly in some contact sports. They can have both competitive and cooperative elements, particularly in the case of team sports.

Frequently zero-sum at the level of the contest itself, sports are often positive-sum when viewed in the wider context of their whole community engagement, often as a sporting industry.

In summary, the various concepts and examples discussed in Chapter 5 are structural in nature. In varying degrees, psychologically rivalrous and/or competitive attitudes may exist as well, and may be more likely to arise in some cases than others, but

without making the primary economic understanding psychological rather than structural.

In Chapter 6 my corresponding discussion of rivalness, competition and rivalry from a Christian perspective reveals an understanding which is very largely psychological in nature. In the New Testament, the Christian is enjoined to radical generosity with her rival goods – sharing them and giving to the needy, even to enemies. The relevant gospel parables dealing with competition reveal a psychological understanding. And the metaphors in the epistles using competitive sports (running and boxing) are more to do with persistence than competition, but clearly still have a psychological understanding.

An extensive review of Christian writers from the Reformation to the present reveals a broadly psychological understanding of competition, this being the view of the majority of Christian writers examined who deal with (or touch on) the subject. But there are some structural hints (for example in Calvin and Wesley, and in Catholic Social Thought), and a few Christian writers have propounded a more structural understanding. The outstanding case is that dominant in Britain during the first third of the nineteenth century, known as Christian Political Economy. There are also one or two contemporary writers who regard all aspects of business, including competition, as structural and providing opportunities to glorify God: other contemporary Christian writers seek to engage creatively with a competitive economic world, while acknowledging a primarily psychological understanding of competition itself.<sup>204</sup>

Finally, Chapter 7 examines the detailed contributions on competition, both around 1920, of economist Frank Knight and Christian (later bishop) William Temple.

Knight, who is widely credited with finally codifying in 1921 the conditions for perfect competition (the ultimate structural form of competition), and then sets out a critique, not so much of perfect competition itself, but of the whole economic model of human behaviour, where there are clearly psychological factors at play. He seems to regard the conditions for perfect competition to be quite removed from the reality of

---

<sup>204</sup> This range of opinion raises the question of what exactly constitutes an authentic Christian view of competition. Is a “Christian view” merely what anyone who claims the title “Christian” says about it; i.e. is one faced with a kind of irreducible pluralism? Or are there fundamental Christian principles which can be deduced from scripture, theological reflection, etc? These are not questions I can answer here, and have wider applicability than just in relation to the Christian understanding of competition.

economic life, and he also seems quite ambivalent about the relevance of a structural understanding of competition rather than a psychologically competitive understanding. In his 1923 essay on the ethics of competition, Knight is agnostic about the possibility of finding an ethical basis for competition. He does not sufficiently distinguish the structural forms of the competitive and cooperative inter-relationships in economic activity from the psychological factors which influence their inputs. Questions about structure should be distinguished from questions about the nature of attitudes.

Temple, who wrote (with others) on competition in 1917, does not get past railing at competition, without reflecting on its place in a theological anthropology. He writes very much as a Christian socialist, with a good dose of nostalgic conservatism, viewing competition very much as rivalry and primarily psychological. His view of competitiveness and its role in the resulting economic activity as fostering selfish individualism, sees it as anti-Christian due to its opposition to the faith's dominant social focus on love of neighbour. He is critical of what he sees as the pervasiveness of individualistic competitiveness in all of life, not just its economic dimension. He believes competitiveness and a consequent lack cooperation lead to social problems. While Temple acknowledges some positive characteristics of competition, he thinks the exercise of restraint is necessary to prevent these positives from being overwhelmed by the negatives. His understanding of competition, while seeing it as endemic in British economic life, is psychological rather than structural.

My overall conclusion confirms my original thesis – that in economics, competition and cooperation are primarily understood as structural, whereas in Christianity, they are seen as psychological – with occasional recognition of the alternative understanding within each disciplinary community.

A better understanding by Christians of the primarily positive orientation of economics, and by economists of the primarily normative orientation of Christian theology and ethics, might well go some way towards ameliorating what has frequently been an unproductive dialogue. If Christians could see that an economic focus can be best used to design social institutions which produce preferable (if not ideal) outcomes, in spite of the fallenness of the economic agents engaged in the use of those institutions, it would help them realise that economists can help design the

institutions to help produce those preferable outcomes, without requiring the complete ethical transformation of those economic agents. And if economists could see that the Christian focus could help them better understand what ambitiously preferable outcomes might be, it would help them better design the economic institutions which would go as far as possible towards the achievement of those outcomes, in spite of the fallenness of the economic agents who will be engaged in the use of those institutions.

The prospect for a more productive dialogue on these particular issues between proponents of each discipline's viewpoint lies in a better appreciation of the understandings within the other discipline. Indeed, this point is relevant to a much wider range of subjects than competition and cooperation. Some economists who are also Christians have made efforts in exploring aspects of their alternative intellectual traditions, but my observation is that there are rather fewer Christian theologians or ethicists who have systematically explored economic understandings. There are other categories of potentially interested parties who might benefit in due course from a better conversation at the "professional" level, such as the many Christians who work or take an interest in business, and non-Christians interested in what society's Judeo-Christian ethical foundations have to say to business and society's capitalist structure.

## APPENDIX 1: GAME THEORY METHODOLOGY

### A1.1 Prisoner's Dilemma – Methodological Outline

The Prisoner's Dilemma (PD) is a foundational methodology in game theory, which in its original form shows why two purely "rational" self-interested individuals might not cooperate, even if it appears to be in their best collective interests to do so.

Suppose Scarpia has Cavaradossi and Tosca imprisoned in separate cells, with no ability to communicate with one another. Scarpia does not have sufficient evidence to convict them on the principal charge, but hopes to get both sentenced on a lesser charge. Simultaneously he offers each of them a deal: betray the other by testifying that the other committed the principal crime; the alternative is to remain silent. Here is the deal:

- If Cavaradossi and Tosca each betray the other, each will get eight years;
- If Cavaradossi betrays Tosca, but Tosca remains silent, Cavaradossi will be set free, but Tosca will get ten years, and vice-versa;
- If Cavaradossi and Tosca both remain silent, both will get one year on the lesser charge.

Considering the options from Cavaradossi's point of view:

- If Tosca remains silent, and he does also, he will get one year; if he betrays her, he will get off; hence his rational self-interested response in this case is to betray her;
- If Tosca betrays him, but he remains silent, he will get ten years; if he betrays her, he will get eight years, hence his rational self-interested response in this case also is to betray her;
- Hence whatever she does, his rational self-interested response is to betray her.

On exactly the same reasoning, Tosca's rational self-interested response is also to betray him; hence we can say the "betray" option dominates the "remain silent" option.

But the “cooperative” option (both remain silent) dominates any of the other options *in total*, because the total penalty (two years) is less than the sixteen years they will get if they both respond rationally and betray the other, or the ten years if one remains silent and the other betrays. While gaol terms cannot be shared (and the betrayed individual who stayed silent still has to serve ten years), in an analogous example involving money penalties, where sharing the total penalty would be possible, and if collective cooperation could be predicted with certainty by both Cavaradossi and Tosca, it would dominate the other responses.

This example can be represented diagrammatically as follows, in the form

[Cavaradossi’s sentence; Tosca’s sentence]:

		TOSCA	
		Betray	Silent
CAVARADOSSI	Betray	[ 8 ; 8 ]	[ 0 ; 10 ]
	Silent	[ 10 ; 0 ]	[ 1 ; 1 ]

Thus Cavaradossi’s potential sentence (first number in the brackets) is always less for his betraying Tosca than remaining silent, regardless of what she does ( $8 < 10$  if she betrays,  $0 < 1$  if she remains silent), and so his rational self-interested response is to betray her. By the same logic, her rational self-interested response is to betray him.

If Scarpia knew that each of the lovers each wanted to minimise the other’s gaol time (at their own cost), he could frame the deal as follows:

		TOSCA	
		Betray	Silent
CAVARADOSSI	Betray	[ 8 ; 8 ]	[ 10 ; 0 ]
	Silent	[ 0 ; 10 ]	[ 1 ; 1 ]

Again considering Cavaradossi’s point of view:

- If Tosca remains silent, and he does also, she will get one year; if he betrays her she will get off but he will do ten years; thus if he wants to minimise her gaol time, he will betray her and do the ten years;

- If Tosca betrays him, but he remains silent, she will get ten years; if he betrays her, they will both get eight years; thus if he wants to minimise her gaol time, he will betray her and do the eight years (while she will also get eight years);
- Hence whatever she does, he will betray her if wants to minimise her gaol time, and collectively they will do ten or sixteen years respectively.

As before Tosca's response is the same if she wants to minimise Cavaradossi's gaol time, and on this basis the "betray" option dominates the "remain silent" option if they both wish to minimise the other's gaol time. But as before, in total the "cooperative" option dominates any of the options involving betrayal, involving a total of only two years' gaol.

Interestingly, we know from empirical trials that people do not generally behave in practice with quite this degree of rational self-interest, and some of the more sophisticated applications of the methodology attempt to allow for this.

The assumption in the above "single trial" examples is that neither party has any opportunity to punish or reward the other (except via Scarpia's gaol sentences, or alternative money penalties), and their actions are not conditioned by reputational implications for the future.

There is also the category of Iterated PD applications, where in repeated trials each party can reward/punish the other on the basis of prior actions. Such cases can be for a specific number of iterations (in which case by backward induction it can be shown that two classically rational, self-interested players will betray repeatedly), indefinite or infinite lengths (in which cases there is no fixed optimum rational self-interested strategy).

In economic examples, the payoffs are usually understood in terms of their impact on individual material well-being (measured by one or more of income, consumption and wealth). In evolutionary biological applications, the payoffs are understood in terms of their impact on evolutionary fitness (measured by the probability that the line of descent of an individual or group with a particular trait will not die out).

There are various strategies outlined in the main thesis for iterated PD applications, as well as for some of the more complex applications of the methodology.

## **A1.2 Game Theory and Christian Applications**

### **A1.2.1 Introduction**

This section is a modified version of an extended commentary, written jointly with my Primary Supervisor, Professor Geoffrey Brennan, on a paper published in *Faith & Economics*, by Dr Ben Cooper, entitled “Game Theory in Christian Perspective.” (Cooper, 2015). Cooper’s paper lays out an intelligent and wide-ranging account of “game theory” as a potentially useful explanatory and normative device in Christian social and economic thinking. Brennan’s and my objective is to adumbrate and clarify Cooper’s account of game theory and its relevance to Christian thought (as compared and contrasted with the more frequent application of the theory, *inter alia*, in economics and evolutionary biology).

### **A1.2.2 Interdependence of What?**

At the outset, Cooper describes game theory as

... a discipline which considers the behavior of decision-makers in interactive situations, focusing on cases where there is more than one decision-maker, where the outcome depends upon the combination of decisions, and where each decision involves considering what the other decision-makers will choose. (Cooper, 2015: 1)<sup>205</sup>

In this quotation, Cooper lists a trio of properties that together define game theory. Our substantive quibble focuses on the third element – what we might refer to as the distinctively ‘strategic’ element in the cases with which game theory deals. This is the idea that in choosing how to act, the rational individual is required to make predictions about the behaviour of other actor(s) in the game. Cooper’s definition here tracks, to be sure, what many game theorists *say* when they describe their enterprise, but this definition often diverges from what they actually *do*. In particular, some of the most common forms of ‘interactive situations’ with which game theory deals – including in particular the Prisoner’s Dilemma (PD)<sup>206</sup> – do *not* involve “each decision[-maker] ...

---

<sup>205</sup> We put to one side the quibble here over whether game theory is itself a “discipline” or is better thought of as an “approach” or an “analytic technique” that is deployed in a variety of domains more commonly thought of as disciplines (e.g. economics, political science, sociology, social psychology, and evolutionary biology).

<sup>206</sup> In Section A1.1 of this Appendix, I have set out an introductory outline of the PD methodology. However, beyond this, in this commentary Brennan and I refer to various “games” – e.g. PD or the “ultimatum game” – without specifying the structure that defines them. Cooper’s paper seem to us to do this entirely sufficiently.

considering what other decision-makers will choose.” These are games in which at least some decision-makers have a ‘dominant strategy’ – a choice of action that is best for the chooser *whatever* the other chooses. Since such ‘games’ are taken to be representative of many important social situations (and are explicitly discussed by Cooper in his paper), it seems odd to adopt a definition of game theory that effectively excludes them at the outset.

To be fair, Cooper’s definition does not specify that actors are ‘rationally required’ to consider what other decision-makers will choose – merely that they *do* so consider. But in games where both players have a dominant strategy (like the PD) any such ‘considering’ will be entirely gratuitous. The critical point is that, in this class of (genuine) games, decision-makers do not have any reason to consider how others will choose.

In any event, Cooper is later quite explicit on the relevant point:

For a given agent (now called a “player”), the resulting outcome depends not just on that player’s choice, but on the choices of the other player or players.

This much is correct; but Cooper immediately goes on to say:

The choice a player makes is therefore influenced by what he or she believes the other players will choose. (Cooper, 2015: 2)

This second “*therefore*” conclusion does not follow, as the standard PD illustrates.

The general point is that game theory deals with the structure of interdependence between decision-makers, but the interdependence can be in terms of either *action* or *payoff* structure. In the n-person PD for example, the rational action of each is independent of the action of others – but the payoff of each is *not* independent.<sup>207</sup> The payoff to each depends on what others do; and that is so for all players. So even though the behavioural choices that each makes do not require asking what others will do, each is nevertheless *affected* by what others do.

---

<sup>207</sup> Actually, in the PD case, a characteristic feature is the property that the difference made to the payoff of each depends more on what the other does than on what each does herself. It is perhaps for this reason that some commentators have thought there is a close resemblance between the PD and the situation involving mutually agreeable exchange in goods.

A relevant topical example for Christians (as many others) is carbon emission. When you emit carbon, the rest of the world suffers from the atmospheric degradation thereby created; and you certainly endure the atmospheric degradation caused by the emission actions of others (as well as your own). But the net ‘payoff’ to each from her own reduction in carbon emissions (if any) is such that it does not pay any of us to reduce emissions unilaterally. And each does not need to know what others are doing or how others might respond to her actions in order to know that it is better for her material well-being to emit than to refrain from emitting.<sup>208</sup> There is no *action*-interdependence; but there is *payoff*-interdependence.

This distinction between action- and pay-off interdependence matters, because it connects to a distinction between three different purposes to which game theory might be put:

- (1) The purpose might be to explain (or predict) behaviour within the context of the interaction;
- (2) The purpose might be to explain (or predict) behaviour at the more abstract level of responding to the fact of the predicament itself;
- (3) The purpose might be essentially normative – to analyse what people *ought* to do, either within the game or in response to the predicament that the game reveals.

To exemplify, consider again the PD case, as illustrated by carbon emissions: you might be interested to predict behaviour in relation to carbon emissions when the costs of any increase in your emissions are almost entirely borne by others. (purpose (1)). That could be a rather uninteresting (and disappointing) exercise if everyone is motivated exclusively by payoff maximisation (as is often assumed), since it follows from the claim that the carbon emissions case has the PD payoff structure that everyone will emit to the point that is in their individual interest – and well beyond the level that is collectively optimal.<sup>209</sup> Or you might want to explain why – given the PD structure of the game – countries might have reason to make agreements to reduce their

---

<sup>208</sup> To protest that to emit unilaterally might be in her short-term but not long-term material interests (e.g. because of the potential damage to the environment with which her children and grandchildren will have to cope) is to miss the point that her *unilateral* action alone will not address the problem in the long-term either.

<sup>209</sup> We have more to say about this motivational issue in Sub-section A1.2.4.

emissions and try to enforce those agreements both on other countries and on their own citizens. (purpose (2))<sup>210</sup> Or you might want to work out what is the right thing to do in the face of the PD predicament. (purpose (3)) And that “right thing” might include: undertaking morally responsible action yourself; encouraging others (including corporations and investors) to do so as well; encouraging your government to introduce carbon emission restrictions (perhaps via a carbon tax); and/or encouraging your government to be pro-active in pursuing international agreements about introducing such policies across the globe.

If your purpose was the first, then you might wish to focus attention on cases where what each chooses to do depends on what others choose to do. So you might want to restrict game theory to those cases where the *actions* of players are interdependent. That is what Cooper’s specification involves, strictly interpreted.

However, we think that Christians in general would not wish to rule out the normative purposes of game theory. Most Christians want to understand the way the social order works in order to make that order work better. So, in fact, do many economists – and others who use game theory as a tool. Christians may, of course, have a distinctive understanding of what “better” means. We shall need to say a little about that issue – the Christian understanding of “betterness” – in Sub-section A1.2.3, because it is relevant to how Christians might use game theory. But the basic point here is that securing an outcome in PD predicaments that generates the higher payoff outcome is *presumptively* a matter of normative significance. Appealing again to the carbon emissions case, securing a situation in which carbon concentrations in the atmosphere are reduced to levels consistent with acceptable climatic conditions is something that everyone has reason to want to achieve – Christian and non-Christian alike. The grounds for that outcome offered by Christians might differ from those offered by a secular utilitarian. But here, as in many other cases, Christians have common cause with all people of good will. Achieving outcomes that are preferred by everyone is something that is ethically desirable in many cases, on any plausible rendering of “ethically desirable”.

---

<sup>210</sup> Note that this explanation depends on the idea that the carbon emission game *is* a PD (or something very like it). One wouldn’t need government action if it genuinely were in the interests of individual emitters to restrict their own emissions.

### **A1.2.3 Payoff Maximisation and Ethics**

We have said that in order to incorporate the full range of normative concerns that game theory is useful in illustrating, game theory ought to be defined in terms of payoff interdependence, rather than action interdependence.<sup>211</sup> Specifically, game theory ought to be defined to allow for PD interactions,<sup>212</sup> where there is no action interdependence in the terms that Cooper's definition specifies. But it is worth noting that the claim that PD predicaments are helpful in illuminating normatively relevant social situations commits one to the view that in many cases, increasing payoffs to the players is ethically desirable. That is, the payoffs themselves are of normative significance.

But that is not always so; and it is important to show this because we might otherwise import normative presumptions where none is justified. Cooper himself offers an example – but he uses it to draw a tendentious conclusion.

Cooper's example is this. A drug lord and a cartel of local suppliers are engaged in a potential transaction involving the purchase of drugs. But in this exchange there is an incentive on both sides to defect. The suppliers can adulterate the drugs; the drug lord can pay in counterfeit money that will turn out to be worthless. Both parties know of the risk of defection and so the transaction does not occur – even though both parties would be better off if the unadulterated drugs were exchanged for real cash. (Call this latter case, the 'deal'). The interaction has the structure of a PD. And on that basis, Cooper seems to think that a simple utilitarian ethicist (or the standard economist) would be obliged to conclude that the deal should go through. A Christian by contrast would not be so obliged, because the Christian is not committed to payoff maximisation as the only normatively relevant consideration.

However, this is only half right. It is true that the Christian's normative framework is concerned with more than pay-off maximisation; but it is not true that the utilitarian (or the economist for that matter) would be obliged to think that the failure of the deal is a bad thing. Utilitarians are not so obliged because the drug transaction affects

---

<sup>211</sup> Any case of action interdependence will also involve payoff interdependence and so a definition of game theory in terms of payoff interdependence will be more inclusive.

<sup>212</sup> And for that matter so-called 'prisoner's delight' interactions (outlined in Section A1.1 of this appendix), which likewise involve dominant strategies for all players.

more people than those involved in the deal. At the very least, it affects the drug addicts who would be the final users. And it affects the drug addicts' families, and (frequently) others in the addicts' communities. Such effects are normatively relevant and they imply, as a matter of simple logic, that identifying a situation as a PD *for a certain set of actors* is not necessarily the end of normative evaluation (even for, and perhaps especially for, a utilitarian!).

Indeed, this is a point that economists are familiar with, at least in one specific case. Perfect competition – which economists generally think of as a desirable institutional form for many ordinary market transactions – depends on the instability of producer cartels. Perfect competition depends, that is, on the relation between members of a potential cartel having a PD structure, so that it will be in the interests of each member to defect from the cartel and charge a lower price than the price that maximises profits across cartel members. (By doing so, any former cartel member can expect to gain at the expense of all those others who maintain the monopoly price). This case, at least, provides one important (and familiar) instance where the PD is good not bad: and it is so, because the parties to the cartel are not the only parties who matter normatively.

The bottom line here is that there are two reasons why PDs may *not* be bad:

- a) Because the 'players' in the PD are not the only parties affected by the outcome of the interaction. Utilitarians, economists and Christians alike would want to include the effects on all those affected. Focussing on the payoffs to *players* alone in any case where there are others affected is too narrow.
- b) Because the understanding of ethical desirability deployed by the Christian is rather different from that deployed by utilitarians and typically by economists. As Cooper rightly points out, economists are much disposed to take individuals' preferences at face value – so when the PD produces outcomes that the players do not prefer (as it characteristically does), economists are inclined to think that that's bad news *for the players*.<sup>213</sup>

---

<sup>213</sup> The picture in relation to utilitarianism is more complicated. "Utility" may not be defined in terms of pay-off maximisation, or preference satisfaction. It might instead be thought of as "well-being" – with

Christians are certainly not committed to that view; rather, Christians are, we take it, committed to a more substantive view of what constitutes human flourishing – one in which certain attitudes and beliefs and intentions play a central role.

This is hardly the occasion on which to develop even a minimal account of the content of Christian ethics and how it differs from its secular or other religious rivals. What we would emphasise here is just the following point: the fact that Christian ethics considers more than pay-offs (and/or preference satisfaction) does not imply that payoffs or preference satisfaction are normatively irrelevant. That man does not live by bread *alone*, as Jesus reminds Satan, does not deny that bread is good – something which the various accounts of Jesus’ miracles involving loaves and fishes suggest Jesus himself believed.<sup>214</sup>

This point relates to another example that Cooper offers, which we think deserves further development. Cooper considers the case in which individuals are motivated by a desire for “social status”.<sup>215</sup> Cooper’s thought is that both players can be better off if they agree to moderate the ‘rat-race’ that each is involved in: when both strive equally hard to outdo the other, they end up, in *relative* terms, in the same relation as they would have been in if they had both striven proportionately less. So, Cooper concludes, buying “useful” goods rather than “status” goods will be better for both. The thought here is that by changing individuals’ preferences – if each becomes less pre-occupied with how she stands in the eyes of others – the PD structure can be subverted: each can achieve a larger material pay-off than she otherwise would.

We want to put pressure both on this particular example and the general argumentative structure that it represents. So consider the example first. For the purposes of the exercise, let us concede that social status is itself a positional good (either directly in that status reflects an ordinal ranking or indirectly in that social

---

the relation between an individual’s well-being and specific payoffs or preference satisfaction more generally left as an open question.

<sup>214</sup> Of course, those miracles are capable of a variety of interpretations – but we think all such interpretations are consistent with the simple proposition that, when the thousands are fed, Jesus has done something good!

<sup>215</sup> Cooper’s exposition tends to treat the desire for social status as coterminous with envy. Those motivations are not strictly identical. And it is not clear that envy exhibits a prisoner’s dilemma structure: an outcome where both have a higher material payoff may not involve greater preference satisfaction to either if each is preferred to sacrifice some material benefit to impose a material loss on the other. So we shall focus on the social status case.

approval is fixed in aggregate terms, so that an increase in your level of approval will reduce others' social approval, other things being equal. After all, social status does reflect the approval that third parties provide when a player acts in socially approved ways. And that social approval may be more or less justified. If observers themselves have debased values (so, for example, they give A approval based on the age and luxury of A's car) then social approval will reflect that fact. But suppose social approval is given for honesty or kindness or professional conscientiousness (as it surely normally is in all three cases) then acting to achieve that social approval will be to act in ways that are properly normatively approvable. And if the desire for social approval stimulates both A and B to invest greater energy in being honest/kind/professionally proper, then the net effects of the desire for social approval/status are likely to be positive.<sup>216</sup> Here, we are making appeal to point a) above. The mere observance of a PD structure for the players (the status-seekers) does not settle the issue as to whether status-seeking produces desirable consequences or not.<sup>217</sup>

It is however the argumentative structure that is our chief source of anxiety here. The point of Cooper's treatment seems to be to suggest that changes in agent motivation of the kind seen by St Paul as characteristic of 'Christian virtue' have the effect of solving PD predicaments – and perhaps by implication other kinds of game theoretic problems as well. But even supposing that that claim were true (which we do not concede), what is the force of any such observation? That this fact gives extra reason to adopt Christian virtues? That it provides evidence that Paul was right in specifying Christian virtue in the way he does?

The first possibility involves a logical error related to the PD itself – because what maximises my payoff is that *everyone else* be virtuous. If I'm the only virtuous person

---

<sup>216</sup> The rationale of overt recognition in the form of awards for charitable and other public-spirited behaviour is just such a case in point.

<sup>217</sup> For a much more detailed treatment of related issues, see Brennan & Pettit, *The Economy of Esteem* (2004). Adam Smith deals with a somewhat similar case to Cooper's, in a famous passage in his *Theory of Moral Sentiments* [Smith, 2002/1759, Part IV Chapter 1, Sections 8 to 10: 211-215]. Smith refers to "the poor man's son, whom heaven in its anger has visited with ambition..." and who labours long and hard to achieve distinction, only to find at last "...that wealth and greatness are mere trinkets of frivolous utility, no more adapted for procuring ease of body and tranquility of mind than the tweezer-cases of the lover of toys." But, Smith goes on to assert, "it is well that nature imposes on us in this manner. It is this deception that rouses and keeps in continual motion the industry of mankind." So, importantly, the consequences of this 'deception' are cities and commonwealths, arts and sciences, and an advancement in "the interest of society and ... multiplication of the species."

among the group, the PD isn't "solved;" it just ensures that I am "exploited" relative to others. So each individual might wish that others become virtuous, but each has no reason derived from PD logic to become virtuous herself.

And the second possibility seems just wrong-headed in itself. It seems like an attempt to reduce Christian ethics to a form of rule-consequentialism. It makes the final arbiter of different motivational structures whether they solve various kinds of dilemmas or not – that is, whether they allow players to achieve outcomes that involve maximal mutual objective payoffs. But what doth it profit a man to gain a maximal objective payoff (or a minimal prison sentence) and lose his soul? If that question is taken seriously, then it remains unclear just what the examples Cooper deploys are supposed to show.

Just for the record in this connection, it is worth pointing out that there is an important category of games in which changes in motivation – at least those of the kind St Paul is discussing – have no effect. This is the range of coordination games, the characteristic feature of which is that each player does need to predict what the other is going to do in order to determine what is best for her to do. The classic example is deciding on which side of the road to drive, in some context where there is not already an established convention. In such settings no amount of altruism or benevolence alters the basic structure. You may desire that coordination be secured because it is good for the other (as well as or rather than for yourself). But that feature is a fifth wheel: it does not alter the nature of the predicament and it does not in any way proffer a solution!

But the more significant problem in Cooper's approach lies not so much in cases where Christian virtue cannot solve predicaments that game theory isolates, but where changes in motivation *can* solve predicaments – and where that fact is used as a mechanism for inducing the content of Christian virtue. The problem is worth an extended illustration.

Consider the original classic version of the PD in which each of two (alleged) criminals has a choice of whether to confess or not confess to a particular crime. The district attorney presents each with the following payoff structure:

If you confess and your partner doesn't, they'll get ten years and you'll go free;

If you both confess, you'll each get eight years;

If neither confesses, you'll each get one year for a lesser crime.

There is a dominant strategy for each player: namely, to confess. Both confessing is the Nash equilibrium in this game and is clearly worse for each player than if both kept quiet.

Suppose now we consider the operatic version of this game, by returning to the example in Part A in which the lovers Cavaradossi and Tosca are arraigned before the wicked Scarpia. However, being opera, Cavaradossi cares only for Tosca and Tosca cares only for Cavaradossi. Each seeks to minimise the sentence for the other. Then, under the original payoff structure, neither confesses – in that way the beloved gets at most one year. But Scarpia, being smart as well as evil, and knowing that this is the way the lovers will choose, simply reverses the sentences:

If you confess and your lover doesn't, you'll get ten years but they'll go free;

If both confess, eight years each;

If neither confesses, one year each as before.

Subject to both behaving “rationally” as defined, both will confess – preserving the characteristic feature that the Nash equilibrium is ‘Pareto-dominated’ (that is, the game gives rise to a less-desired outcome for both players than might have been achieved if both had stayed silent). Perhaps the example is a little far-fetched; but the general point is a logical one, not an empirical one. It is after all a common thought that attending only to the interests of others is more virtuous a motivation than attending exclusively to one's own interests. One might think that such extravagant self-sacrificial love is precisely what Christians are called to (as Cooper perhaps implies in his reference to John 13:34-35). Perhaps that is so – perhaps not. Our point is simply that such virtue does not make a community impervious to PD predicaments.

A possible response is that such problems would not arise for any player who treated her neighbour *as herself*. Such a player would not disregard the interest of the other; but neither would she disregard her own interest (as Paul says in Philippians 2:4).<sup>218</sup>

---

<sup>218</sup> For a more thorough discussion of this text, see Section 4.5.

She might, for example, simply add the payoffs for each possible outcome and choose the action that had the highest expected total payoff.<sup>219</sup> Sometimes, this motivation will produce ‘cooperation’ in PD interactions: sometimes it will confront each player with a coordination game (see below).<sup>220</sup> Perhaps one might appeal to such considerations as giving reason for ‘treating neighbour and self symmetrically’ rather than ‘counting oneself as of nothing’ as in the Cavaradossi/Tosca case.

But we think that this is a very slim reed indeed on which to base the correct interpretation of Christian virtue! And if that is so, one must wonder exactly what to make of Cooper’s argumentative strategy. To be sure, sometimes players who exhibit Christian virtue will be able to avoid PD predicaments; but sometimes they won’t. And sometimes what might plausibly be thought of as Christian virtue will render players subject to PD predicaments that other interpretations of Christian virtue might avoid. So what? The most natural interpretation of Cooper’s argumentative strategy involves the thought that game theory can be deployed to show why Christian virtue is a “good thing.” But that strategy serves to elevate ‘payoff maximisation’ to the status of a trump card (a sort of ultimate justifier) in Christian interpretation. And that is just a mistake – and a serious one, in our view.

#### **A1.2.4 Preferences vs Payoffs**

Cooper draws a distinction (one we think important) between preference satisfaction and money pay-off maximisation – especially in relation to the ultimatum game. He thinks (totally correctly in our view) that the assumption that players will maximise the monetary value of the pay-offs is a substantive assumption about the content of preferences: it is not something that follows from the rationality of players. The proper conclusion to be drawn from the ultimatum game, for example, is not that players are typically ‘irrational’ but rather that there is more at stake for the players than monetary pay-offs.

---

<sup>219</sup> Which incidentally is exactly what a simple utilitarian would do – a fact worth noting because utilitarianism has had at best an ambivalent reception in Christian circles!

<sup>220</sup> Which it will be depends on the precise *values* of the various payoffs, not just the *ranking* of outcomes.

The manner in which Cooper prefers to deploy terms is to define “rationality” as requiring “pay-off” maximisation<sup>221</sup> but to insist that pay-offs must reflect the full benefit in terms of preference satisfaction that is associated with different actions (by all players). So, in laboratory experiments of the ultimatum game for example, most second-movers veto offers that give them anything less than a third of the total stake. Cooper’s formulation involves insisting that the players “are playing a different game from the ultimatum game.” (Cooper, 2015: 11)

Our own terminological preference here is to allow the game to specify the pay-off structure in monetary or equivalent terms, but to leave it an open question as to how players will behave in the face of the monetary (or other material) incentives that different strategies offer. The payoffs specified within the game might be expressed in terms of money or (as in the classic PD narrative) years in prison or (as in the evolutionary case) survival value or probability of reproduction. But the structure of what we might call these “objective” pay-offs can be used to define the game, leaving it open as to whether behaviour will track those objective payoffs (or whether alternatively there might be “subjective” factors that will lead to outcomes other than those the “objective pay-off maximisation” hypothesis would predict).

Our reason for this preference is twofold. First, we think it is useful to maintain a distinction between objective pay-offs and subjective ones for *normative* purposes. Typically the normative agenda in game theory is to reconstruct material incentives so as to secure a specific outcome where the objective pay-offs have appropriate normative features (maximal aggregate material payoffs or desirable distributive properties or some such). The exercise is to devise material incentives to achieve those goals – taxes on carbon emissions, or subsidies for carbon substitutes, or penalties for littering, etc.

Second, the social predicament that the game is designed to illustrate is often characterised by the interdependent structure of those *objective* pay-offs, and something important is lost if we do not allow that structure to define the interaction. So for example in the climate change predicament, we think it important to represent

---

<sup>221</sup> “Rational” must be defined quite specifically in game theory, and generally does not have the same meaning as in common usage, such as “sensible.”

the situation as an n-person PD, even if many individuals of good conscience make some efforts to reduce their own individual emissions. For example, representation in terms of material payoffs indicates why the same PD structure applies not just to each individual carbon-emitting individual but also to nation-states. We are thereby alerted to the following challenge: if individuals ‘free-ride’ in (not) reducing their emissions, then we have some reason for thinking that national governments<sup>222</sup> will also do so and for exactly the same reasons. And so we are led to an understanding as to why international treaties to reduce carbon emissions are so difficult to consummate (or if treaties are made, why countries might prove recalcitrant in sticking to their terms).

Now, it is surely the case some individuals will choose to reduce their own emissions (say by consuming non-carbon-intensive products or by buying carbon off-sets<sup>223</sup>) even though it is not in their narrow interests to do so. Such individuals may be motivated by Christian principles or moral considerations of other kinds: they may want to have the satisfaction of ‘keeping their own hands clean’. Larger numbers of individuals may express a similar preference for atmospheric hygiene at the ballot-box, placing some pressure on their governments to introduce policies designed to effect carbon emission restrictions on a national scale. But so far, the trend in global carbon emissions (and corresponding atmospheric carbon concentrations) has not reversed: sadly, individual carbon reducers remain decidedly in the minority. The incentives that are characteristic of the n-person PD explain why this outcome is likely to arise – and also suggest why multi-national agreements might be required to secure a genuine solution to the world’s looming climatic problems.<sup>224</sup>

So, like Cooper, we want to distinguish between the objective pay-off structure specified in a game and the subjective preferences that determine how individuals will act. And in the same spirit, we think it a straight-forward mistake to identify

---

<sup>222</sup> It is perhaps not self-evident that it is not in the ‘national interest’ of individual countries to introduce carbon emissions reductions unilaterally. That is something the PD representation makes more salient. We should perhaps not be surprised that the Copenhagen conference failed so dismally; or that the Kyoto round earlier produced largely token action by only a handful of governments.

<sup>223</sup> As John Broome recommends in *Climate Matters* (2012).

<sup>224</sup> Assuming that the scientific consensus on the relation between carbon concentrations and climate change are correct. Of course, part of the difficulty here is that by the time we know for sure that there is a problem it is likely to be too late to do much about it. What the PD representation shows us, however, is that even if everyone was certain as to the effects, each would be materially better off if the burden of carbon restriction fell upon everyone else. And of course, if the result is that everyone waits for someone else to act, in the longer run everyone is materially worse off.

‘rationality’ with ‘objective payoff’ maximisation. But since the role of game theory in many significant social applications is to diagnose predicaments of one kind or another, and since the objective pay-offs often play an important role in defining those predicaments, we think those objective payoffs ought to be retained (alongside subjective ones). Of course, this usage betrays an underlying assumption that objective pay-offs play *some* role (and sometimes a predominant one) in motivating players’ behaviour in many social interactions.<sup>225</sup>

But like Cooper (and presumably most Christians and many non-Christian moralists) we do not think that individuals are *exclusively* motivated by self-interest and it is just a descriptive mistake (and sometimes a very major one) to make that assumption. As Alexander Hamilton puts the point in Federalist 76:

the supposition of universal venality is little less an error in human reasoning than the supposition of universal rectitude.

Or as the Christian might put the point, both sin and virtue belong in any proper Christian anthropology – to ignore either is to overlook something of great significance, descriptively as well as theologically.<sup>226</sup>

### **A1.2.5 Normative and Theological Considerations**

Christians are most likely to be interested in game theory because game theory is useful in exposing features of social interactions that are normatively significant. Of course, Christians have no monopoly on such normative concern. Virtually all public policy is driven by normative considerations and game theory helps reveal the structural nature of many important public policy challenges. However, as Cooper emphasises, the normative approach used by economists in public policy tends to be broadly utilitarian, and certainly consequentialist. And he is perfectly correct to register that “ethical assessment from a Christian point of view” will be concerned *as well* with the ‘virtue’ of agents – their motives and modes of calculation, and attitudes. At the same time, we think he is also right to emphasise that a concern with Christian

---

<sup>225</sup> Simon Blackburn (1998) chapter 6 draws a distinction between “empirical games” and “interpreted games” (or perhaps better between an empirical and an interpreted representation of the same game) in exactly the same spirit as our distinction between the objective and subjective representation.

<sup>226</sup> We do not mean to suggest that any action that increases one’s own material payoffs is presumptively sinful – merely that it forms part of any overall assessment of human virtue and sinfulness.

virtue does not obliterate a concern with outcomes. As Jesus emphasises, the Sabbath was made for man, not man for the Sabbath! So, the general conclusion is that, for the Christian, outcomes matter – and material well-being matters – but it is not the *only* thing that matters. Christian normative evaluation differs importantly from more typical economic normative frameworks in insisting that that is so.

In what we take to be the most plausible rendering of a Christian normative position, there are two elements that are of significance:

1. Individual moral attitudes and conduct – what we might think of as individual virtue (understood in distinctively Christian terms). When we refer to “attitudes” here, we have in mind such things as an awareness of one’s own creatureliness and sinful nature and need of redemption – as well as a conviction that such redemption becomes possible through the death and resurrection of Christ.
2. The properties of the social outcomes to which individual interactions give rise. These properties will include the material wellbeing of the human race (and especially of those members whose levels of well-being are lowest) – with ‘well-being’ here interpreted broadly to include health and liberty, as well as economic well-being, and fairness in the distribution of these things.

These two broad elements interconnect. Sometimes they will be complementary – efforts to make progress on the first will have positive effects on the second. Sometimes, they will be essentially independent – as we claim is the typical case in coordination predicaments. And sometimes, as Mandeville (1714) notoriously contended, they will be in conflict. And even where they are not in direct conflict, choices will have to be made as to where to locate one’s efforts. Often ‘compromises’ will be required and those compromises will often involve ways of securing as much of the second as can be achieved without making heavy demands on the first. (For example, if climate change/carbon emission problems cannot be solved by appeal to Christian virtue alone, then Christians might plausibly seek to find ways of solving those problems in ways that make minimal demands on virtue. This enterprise is what one might characterise as “economising on virtue” and on certain readings it is largely in this that good policy design in the economic tradition resides.)

There is a danger here that we need to be alert to. If one thought that it was axiomatic that Christian virtue promotes best outcomes, then it would be possible to work backwards from those motivations that are maximally effective in solving various social problems to an understanding of what true Christian virtue consists in. This seems to be the object of one strand of Cooper's discussion – indeed, for him, throwing light on what St Paul has to say about Christian virtue seems to be one of the central points at which game theory and theology come together. We think that latter project is misconceived.<sup>227</sup> We think that proper understanding of Christian virtue is an independent exercise, in which a good understanding of game theory plays at best a minimal role.

#### **A1.2.6 The Bottom Line**

Game theory can be useful in understanding structures of interdependence and in isolating cases where material incentives are ill-tuned to achieving good outcomes. As we see it, the Christian normative scheme recognises a proper place for such understanding. Presumably, for some Christians, a proper conception of their Christian vocation might include developing ways in which better outcomes can be achieved – in the mixed world of human sin and human virtue that we inhabit. And Christians can perhaps contribute something distinctive to the study of game theory by being more sensitive to the fact that players are often motivated by a wider range of concerns than their own material pay-offs. But the idea that game theory can illuminate the idea of Christian virtue by focussing on cases where putatively 'virtuous' motivations avoid predicaments that would dog more selfish players – that idea is, we think, seriously misconceived.

---

<sup>227</sup> It is not of course an entirely unfamiliar project in the history of moral philosophy: on one reading that is precisely what rule utilitarianism attempts to do for utilitarianism.

## APPENDIX 2: NOWAK’S FIVE RULES FOR THE EVOLUTION OF COOPERATION

Nowak terms “evolutionary dilemmas” the problem of how cooperation adds to evolutionary success, when we contrast it with our basic expectations from the operation of the other fundamental factors of competitive evolutionary theory (mutation and selection). He develops evolutionary applications of game theory, starting with a standard one period PD model and developing it further to explain the increasingly more complex/less genetically related examples of cooperation. The following description is based on Nowak’s 2006 paper in *Science* magazine.<sup>228</sup>

Suppose a game between co-operators (C) and defectors (D) is given by the payoff matrix (entries for the row player):

	C	D
C	$\alpha$	$\beta$
D	$\gamma$	$\delta$

Without any mechanism for cooperation, defectors dominate, i.e.  $\alpha < \gamma$  and  $\beta < \delta$ . He then derives the following mechanism for the evolution of cooperation:

- If  $\alpha > \gamma$ , cooperation is an evolutionarily stable strategy (ESS), and an infinitely large population of co-operators cannot be invaded by defectors under deterministic selection dynamics;
- If  $\alpha + \beta > \gamma + \delta$ , cooperation is risk-dominant (RD), when the *basin of attraction*<sup>229</sup> of defectors  $> \frac{1}{2}$ ;

---

<sup>228</sup> In Nowak’s evolutionary mathematical terms the standard payoff matrix between co-operators, C, and defectors, D, for the “row” participants, is given by:

	C	D
C	$b-c$	$-c$
D	$b$	$0$

where interacting with a co-operator leads to a benefit  $b$ , and  $c$  is the cost of cooperating. Thus C versus C gives a payoff of  $b - c$ , C vs D:  $-c$ , D vs C:  $b$ , and D vs D:  $0$ . Usually assume  $b > c$ , since otherwise cooperation of both participants leads to a worse result than defection of both.

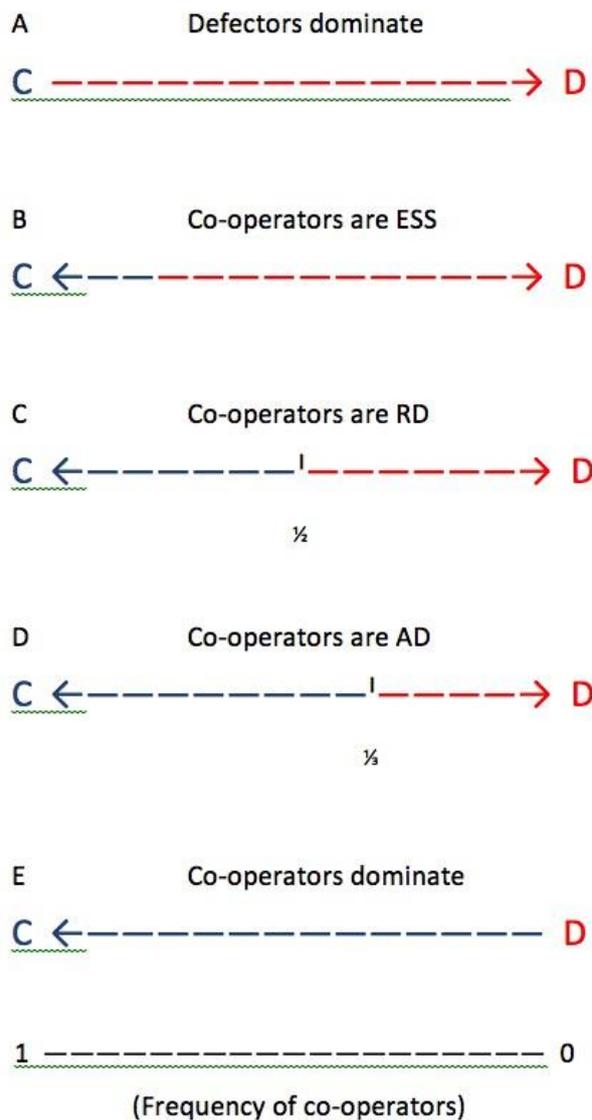
For Nowak’s methodology and description of his five “rules” see Nowak, 2006: 1560-1563 and supporting online material at [www.sciencemag.org/cgi/content/full/314/5805/1560/DC1](http://www.sciencemag.org/cgi/content/full/314/5805/1560/DC1).

<sup>229</sup> The concept of the “basin of attraction” is helpfully explained in Eglash & Garvey (2014).

- If  $\alpha + 2\beta > \gamma + 2\delta$ , cooperation is advantageous (AD), when the basin of attraction of defectors  $> \frac{1}{3}$  (importantly for stochastic game dynamics in finite populations).

Some mechanisms can even allow co-operators to dominate defectors, i.e.  $\alpha > \gamma$  and  $\beta > \delta$ .

Diagrammatically, the conflict between co-operators (C) and defectors (D), is as follows:



Nowak's five "rules" can then be summarised and assessed as to ESS, RD and AD, as follows:

Kin Selection: Nowak's approach uses the Hawk-Dove game and results in Hamilton's Rule ( $rb > c$ ) for analysing the effect of relatives in a population; assuming  $r$ , the

relatedness coefficient expresses the *average* relatedness of the population ( $1/2$  for siblings,  $1/4$  for half-siblings,  $1/8$  for first cousins, etc.),  $b$  the benefit of cooperation, and  $c$  the cost of cooperation. The payoff matrix is:

	$C$	$D$
$C$	$(b - c)(1 + r)$	$b - c$
$D$	$b - rc$	$0$

and co-operators dominate defectors if  $b/c > 1/r$ , or  $rb > c$ . On this analysis, kin selection is ESS, RD and AD.

Direct Reciprocity: To deal with the problem of cooperation between unrelated individuals, various researchers have proposed approaches based on repeated encounters between the same two individuals (the repeated PD game), where if I cooperate now, you may cooperate later, so it may pay to cooperate. Various versions have been tested, e.g.

- “Tit-for-tat” starts with cooperation, then does whatever the other player does in response (i.e. cooperate if the other cooperates, defect if the other defects), and it works well, but performance declines if “trembling hands” or “fuzzy minds” lead to mistakes; “tit-for-tat” cannot correct mistakes, which lead to a long sequence of retaliation.
- “Generous tit-for-tat” starts with cooperation, and sometimes cooperates even though the other defects (with frequency  $1 - c/b$ ).
- Subsequently both forms of “tit-for-tat” were replaced with an even simpler method, “win-stay, lose-shift”, where you repeat your previous move when doing well, or change if not; by various measures of success, “win-stay, lose-shift” is more robust than either “tit-for-tat” method – “tit-for-tat” is more efficient in encouraging cooperation in a society in which nearly everybody is a defector, but once cooperation is established, “win-stay, lose-shift” better maintains it.

There are endless possibilities here, but Nowak’s method of testing the robustness of repeated PD approaches is to test “tit-for-tat” (TFT) against “always defect” (ALLD), on

the grounds that if TFT cannot hold out against ALLD, then no cooperative strategy can. TFT starts with cooperation and in this case always defects thereafter, so the first round payoff for TFT vs ALLD is  $-c$ ; ALLD vs TFT is  $b$ ; thereafter all results are  $0$  for both players. The payoff for ALLD vs ALLD is  $0$ , whereas the payoff for TFT vs TFT is  $(b - c) / (1 - w)$ , where  $w$  is the probability of another encounter between these two players, and the average number of rounds is  $1 / (1 - w)$ . Hence the payoff matrix is as follows:

	$C$	$D$
$C$	$(b - c) / (1 - w)$	$-c$
$D$	$b$	$0$

From this analysis Nowak deduces the general conclusion that a necessary condition for the evolution of cooperation is  $b / c > 1 / w$ , which is ESS. The further mechanisms for cooperation are as follows: RD:  $b / c > (2 - w) / w$ , and AD:  $b / c > (3 - 2w) / w$ .

Indirect Reciprocity: The basic idea here is that in the interaction between a donor and a recipient, cooperation increases the donor's reputation, while defection reduces it. Can natural selection lead to strategies based on the decision to cooperate (at least to some degree) on the recipient's reputation? Using an admittedly simplistic definition of reputation ("good" or "bad" – more graduated reputational scales have thus far proved mathematically difficult), Nowak considers the interaction of co-operators (who cooperate unless the reputation of the other person indicates a defector), and defectors (who always defect). If  $q$  indicates the probability of knowing the other's reputation, a co-operator always helps another co-operator, and helps a defector with probability  $(1 - q)$ . Hence the following payoff matrix:

	$C$	$D$
$C$	$(b - c)$	$-c(1 - q)$
$D$	$b(1 - q)$	$0$

Both participants are assumed to be both donor and recipient; if only one is donor and the other recipient, all entries are halved, and the conclusions are the same. The results are the same as for Direct Reciprocity, if we set  $w = q$ , and so analogous conditions hold for Nowak's three mechanisms of cooperation:

$$\text{ESS: } b/c > 1/q, \text{ RD: } b/c > (2 - q)/q, \text{ and AD: } b/c > (3 - 2q)/q.$$

Network Reciprocity: The argument for natural selection of defection is based on a well-mixed population, where all the players interact equally with one another. But in real populations, spatial structures or social networks mean that some individuals interact more frequently than others. An approach to analysing this aspect is termed evolutionary graph theory, which is easy to study by computer simulation, but difficult to analyse mathematically because of the enormous numbers of possible configurations. In the structure adopted by Nowak, a co-operator pays a cost,  $c$ , for each neighbour to receive a benefit,  $b$ ; defectors pay no costs and their neighbours receive no benefits. In this setting, co-operators can prevail by forming network clusters, where they help each other. Nowak has deduced a surprisingly simple rule for determining whether network reciprocity can favour cooperation, which ends up with a payoff matrix in the following form:<sup>230</sup>

	C	D
C	$b - c$	$H - c$
D	$b - H$	0

where  $H = \frac{(b-c)k-2c}{(k+1)(k-2)}$ , and  $k$  is the average number of neighbours per individual;

hence the condition for co-operators to dominate defectors is  $b/c > k$ ; they are also ESS, RD and AD.

Group Selection: An area which has been the subject of much study (and some controversy) is group selection, the idea that a group of co-operators might be more successful than a group of defectors. Nowak proposes a simple model in which a population is divided into groups, in which co-operators help others in their own group

---

<sup>230</sup> For more detail of the approach and the mathematics see [www.sciencemag.org/cgi/content/full/314/5805/1560/DC1](http://www.sciencemag.org/cgi/content/full/314/5805/1560/DC1) 4-5.

but defectors do not help. Offspring are added to the same group, but if the group reaches a certain size it can divide, and another group becomes extinct in order to contain the total population size. Selection emerges on two levels, individual and group: there is competition between groups because some groups grow faster and split more often. In particular, pure co-operator groups grow faster than pure defector groups, but within mixed groups, defectors reproduce faster than co-operators. Nowak then makes a very interesting mathematical move – he combines two matrices, one for interactions within a group, and a (hypothetical) second for interactions between groups, to produce the following matrix for a single two-person game:<sup>231</sup>

	<i>C</i>	<i>D</i>
<i>C</i>	$(b - c)(n + m)$	$bm - c(m + n)$
<i>D</i>	$bn$	$0$

where  $n$  is the maximum size of a group, and  $m$  is the number of groups, and hence  $b/c > 1 + n/m$  is the condition for co-operators to dominate defectors; they are also ESS, RD and AD. This payoff matrix is the same as that for kin selection if we set  $r = m / (m + n)$ , indicating an interesting connection between group and kin selection.

---

<sup>231</sup> For more detail of the approach and the mathematics see [www.sciencemag.org.org/cgi/content/full/314/5805/1560/DC1](http://www.sciencemag.org.org/cgi/content/full/314/5805/1560/DC1) 5-7.

## APPENDIX 3: HISTORY OF ECONOMIC THOUGHT ON COMPETITION

Of significance for my argument for a structural economic understanding of competition in markets (summarised in Sub-section 5.2.1) is the developing history of the economic understanding of competition. This I survey in some detail below, in the wider context of developments closely related to competition.

### A3.1 Prior to the Eighteenth Century

Economic questions before the eighteenth century were encompassed within theological social ethics; economics as a separate independent field of enquiry is of course a later development. Nevertheless, sample understandings from that period are important for the subsequent insights as economics develops as a separate discipline.

#### A3.1.1 Thirteenth Century Scholasticism

In the economic thought of the thirteenth century scholastic thinkers, the primary focus was on the morality of exchange transactions, and in particular on the justice of the arrangements:

The scholastics were mainly interested in economics because exchange situations involve their participants in *a particular type of moral conflict*. The market is either a place or an analytical construct. The moral reality is the individual person encountering his neighbour in the context of exchange, each possessing something which the other wants, each obliged, as a mere steward under God, to consider his neighbour's need. Focus on exchange, for our authors, meant focus on the individual, in order to advise him on proper terms of exchange with his neighbour. (Langholm, 1992: 24, emphasis original)

Simple and straightforward as this sounds, the likely outcome is moral chaos: showing love of one's neighbour as oneself by offering the most favourable exchange terms possible likely means "the crooks will get the best of all deals and end up possessing all wealth, while the virtuous will suffer." In this context, establishing processes and rules for a "just price" for exchange transactions was seen as the church's duty. (Langholm, 1992: 24)

Thomas Aquinas (1225-1274), the most prominent of the scholastics, generally regarded commerce as a necessary evil, in line with the Aristotelian economic tradition. Not all the scholastics agreed; Alexander of Hales (c. 1185-1245) regarded

exchange as useful, provided abuses such as cornering the market and the resulting monopoly pricing are curbed:

Since the purpose of exchange is thus to satisfy mutual needs, Alexander concludes (breaking away from Aristotle), it cannot be unlawful or evil; on the contrary, it is approved of by natural law! (Langholm, 1992: 133)

For Aquinas, the primary focus of justice in exchange transactions, particularly expressed in the concept of the “just price,” and the protection to buyers provided by competition between sellers in public markets. (Backhouse, 2002: 43-45) Aquinas’s concept of a just price is rooted in his concept of the “common good;” the just price must benefit both parties, not imposing a burden on one more than the other. It is neither necessarily the market price nor that which covers the costs of production, but rather a “just person price” – that voluntarily arrived at by two just persons (buyer and seller) who consider the good of each other in the exchange. Aquinas is also concerned with the bargaining process by which the just price is arrived at – adequate information, absence of compulsion, etc. (Aquinas, 1981: II-II, Q77; Hagan, 2013; Langholm, 1992, Chapter 9)

Aristotle had insisted on the equality of things given and received in exchange for the price to be just, but most scholastics agreed that both parties should benefit from a transaction. Giles of Lessines (c. 1230-c. 1304) seems to suggest a consumer surplus: “That surplus which derives from a just exchange or sale, does not possess the vice of inequality.” (*De usuris*, III, 416, quoted by Langholm, 1992: 303) Richard of Middleton (c. 1249-c. 1308) makes a detailed analysis of just exchange, and approves of use of the advantage of a moderate level of arbitrage due to price differences between different regional markets. (Langholm, 1992: 335)

No doubt in any particular transaction there would be psychological aspects between the parties, but the externally-imposed concept of the just price based in the common good, plus the appeal to protection afforded by marketplace competition and appropriate bargaining conditions, suggests a predominantly institutional, structural understanding by the thirteenth century scholastics.

### **A3.1.2 Mercantilism**

During the early Mercantile period (in the sixteenth century), “upper level” economic activity was often dominated by monopolistic practices, frequently under rights granted by the sovereign. The story of competition in this period relates to how these monopolies were exercised by the holders and challenged by alternative providers, sometimes aided by the courts. For example, rent-splitting between the English crown and a particular provider of saltpetre and gunpowder continued for almost fifty years, but persistent counteraction by other merchants and the common law courts finally brought down the monopoly privilege. Subsequently the manufacture of both saltpetre and gunpowder became the object of open competition. (Ekelund & Hébert, 2007: 58) Again, there would likely be psychological elements in the interaction, but the predominant understanding is structural, because the central issue is pro- and anti-monopoly, and the eventual emergence of a competitive structure.

### **A3.1.3 Becher**

The seventeenth century German mercantilist Johann Joachim Becher opposed both monopoly and unrestricted competition on justice grounds. The former (*monopolium*) enriched one individual at the expense of the proper subsistence of the many, while the latter (*polypolium*) also forced many to work for below subsistence rewards. He said of *monopolium* that “it robbed many people of their proper subsistence and a single person received as much as many could live on and therefore it was a great evil.” On the practice of *polypolium*, he said that craftsmen fight among themselves for work, and are “game for the merchants and dealers, for thereby the worker is maintained in continual poverty and work.” (Heckscher, 1962: 271) Becher’s primary focus on justice means his emphasis leans to the psychological, in that he criticises both (unrestrained) competition for creating conflict between workers, and monopoly for leading to unfairness in the workers’ rewards vis-à-vis those of the monopolist. While there are hints of structural thinking in Becher’s focus on competition and monopoly, his main point is to deprecate both rather than contrast them.

### **A3.1.4 Summary**

Thus there is evidence of a focus by thinkers on economic matters prior to the eighteenth century on the desirability of ensuring “justice” in the basis of exchange, rather than allowing self-interest and competitive pressures under supply and demand

to set prices. The more psychological aspect one might expect associated with a focus on justice is there, but so also is the structural aspect of the contrast between competition and monopoly.

### **A3.2 The Eighteenth Century Prior to Smith**

It is in Smith's eighteenth century predecessors that the idea of competition as a structural force, a significant element in what came to be known as the "invisible hand" guiding overall social benefit, was about to emerge.

#### **A3.2.1 Boisguilbert**

Prominent among Smith's early eighteenth century intellectual predecessors was Pierre le Pesant de Boisguilbert (1646-1714), one of the earliest to espouse competition as (in Schumpeter's words) an "economic principle of order ... quite as clearly as did A. Smith more than half a century later. ... [H]is conception of competitive 'proportionate equilibrium' was as definite as A. Smith's ..." (Schumpeter, 1986/1954: 216)

Groenewegen connects Boisguilbert's ideas on the impact of self-interest and self-love on social harmony with those of Mandeville, who may have studied the former's work prior to 1714, when the first edition of the latter's *Fable of the Bees* appeared.

Groenewegen suggests that both were influenced in their view of the providential role of competition by the seventeenth century theological and philosophical views of the Jansenists, Nicole and Domat. (Groenewegen, 2002: 113)<sup>232</sup> The Jansenist view of the relationship between fallen human nature, private property and social inequality included the idea that there was a providential system which enabled human society to withstand the effects of the Fall. "God was not the author of 'human malice,' he was the author of arrangements devised to keep it in check." (Sonenscher, 2006: 471).

As Faccarello states, this providential system in Boisguilbert's writings relies on the rules of free competition:

An equilibrium is reached "*provided nature is left alone*, in other words, that nature is given its freedom" ... Competition is the coercive power, the "general authority" that governs markets "invisibly" and "assures the harmony of the Republic." It is in the interest of each seller, it is stated, to face the greatest

---

<sup>232</sup> See also Hutchison, 1988: 100-103 (on Nicole's and Domat's social theology) and 111-114 (on the Jansenist influence on Boisguilbert); also Faccarello, 2014: 76-78.

possible number of buyers, as well as to be free to sell goods everywhere to anybody he wishes. From the buyer's point of view, the symmetrical situation prevails. ... Thus, Boisguilbert asserts, free competition must prevail throughout the economy in order to balance these opposite forces and to eliminate the succession of buyer and seller's market that characterizes crises. (Faccarello, 2014: 79)<sup>233</sup>

Thus in Boisguilbert there is a clearly emergent sense of competition as a fundamental force in the economic structure, balancing the opposing forces of buyers and sellers. The psychological aspects of the human fallenness underlying these opposing forces is taken as a given; Boisguilbert's primary contribution is in his structural understanding.

### **A3.2.2 Cantillon**

If there is an alternative, earlier contender to Smith for the title of Father of Economics, arguably it is the colourful Richard Cantillon (1680?-1734) – banker, entrepreneur and speculator, but also deep economic thinker and author of the *Essai sur la nature du commerce en général* of c. 1730 (published 1755). Hayek describes Cantillon as

[a] gifted independent observer, enjoying an unsurpassed vantage point in the midst of the action, coordinated with what he saw with the eyes of the born theoretician and was the first person who succeeded in penetrating and presenting to us almost the entire field which we now call economics. (Hayek, 1985: 227)

Cantillon saw competition, not as a set of conditions defining a specific market structure, but as a rivalrous interaction between contestants vying for customers. Consistent with his own practical business experience, his particular contribution on the economic understanding of competition was on the importance of entrepreneurial activity, the essence of which is accepting uncertainty and bearing risk. For Cantillon, entrepreneurial activity, an integral part of economic activity, is subject to much the same processes that allocate labour or goods:

All these Entrepreneurs become consumers and Customers of each other; the Draper, of the Wine Merchant; the latter of the Draper. They adjust their numbers in the State to their Customers or to their Market. If there are too many Hatters in a City or in a street for the number of persons who buy hats there, those having the fewest customers will have to become bankrupt; if there are too few, it will be a profitable enterprise, which will encourage some new Hatters to open shop there, and it is thus that Entrepreneurs of all kinds, at their own risk, adjust their numbers in a State. (Cantillon, 1931/1755: 52)

---

<sup>233</sup> Quotations included from Boisguilbert in Hecht, 1966: 891-892, emphasis original.

Cantillon's discussion of the establishment of market price relies more on bargaining than was the concept subsequently employed by Smith, but in several respects he anticipates Smith's treatment, particularly on the impact on prices of varying levels of supply and demand. Cantillon's focus on rivalrous interaction between contestants vying for customers suggests a psychological rather than a structural understanding of competition is more likely in his thought. However his interest in bargaining as the means by which that interaction is given effect,<sup>234</sup> as well as his discussion of the impact of competitive supply and demand (illustrated in the quotation above) indicates that his primary contribution on the economic understanding of competition was in the structural role it plays in markets.

### **A3.2.3 The Third Quarter of the Eighteenth Century**

The third quarter of the eighteenth century is often regarded as a (perhaps the) most important period in the history of economic thought; it is at the end of this period that economics is widely accepted as having emerged as a separate discipline from political economy. (Groenewegen, 2002: 3)<sup>235</sup> Following Cantillon as the "key contributor to the development of political economy" before mid-century (at least in Hayek's view), Groenewegen attributes this title of "key contributor" in this critical third quarter to three polymaths, albeit they are generally given widely differing levels of recognition today:

- Adam Smith (who is today widely regarded as the father of modern economics),
- Anne Robert Jacques Turgot (who is generally given a minor place in the history of economic thought, but still of some importance), and
- Cesare Beccaria (who has almost been totally ignored).

(Groenewegen, 2002: 4)<sup>236</sup>

---

<sup>234</sup> The clearest example of bargaining is bilateral monopoly, where the interaction is between a monopolist and a monopsonist, and which informs the structural understanding of competitive markets, at the opposite extreme from perfect competition.

<sup>235</sup> See also Winch, 1970 and Schumpeter, 1986/1954: 38 & 534f.

<sup>236</sup> Groenewegen vacillates about whether Steuart (discussed later) should be added to this trio, but excludes him on the (rather flimsy) basis of space, as well as (the more substantive reason of) his lesser importance in the general Enlightenment. (Groenewegen, 2002: 40 n.4) Schumpeter refers to Turgot, Beccaria and Smith as the "great triumvirate." (Schumpeter, 1986/1954: 245)

Smith's contribution is examined in some detail in the next section; for the present, what contributions did his lesser- (or un-) known contemporaries make to the subject?

### **A3.2.4 Turgot**

Turgot (1727-1781) anticipated Smith by distinguishing a commodity's market price or "exchange value" (the product of supply and demand), and its "fundamental value" (the aggregate cost basis to which price would tend if the market for the commodity was competitive, and resources could be effectively reallocated).<sup>237</sup> Clearly this is a contribution to the structural understanding of competition.

Turgot also anticipated the treatment a century later by the neo-classical economists of the subjective aspects of market value. He approached the question of value to the individual by considering how they change with his circumstances, e.g. "When the savage is hungry, he values a piece of game more than the best bearskin; but let his appetite be satisfied and let him be cold, and it will be the bearskin that becomes valuable to him." (Turgot, 2011: 169) He introduced the concept of "esteem value" (*valeur estimative*), reflecting the individual's present and future needs, as well as the relative scarcity of the commodity; in this insight he foreshadows the basic neo-classical concepts of diminishing utility, or rate of substitution, and opportunity cost. (Hutchinson, 1988: 315f)

Turgot then develops his theory of exchange and price determination in more complex situations by considering six different examples involving isolated, multiple and intertemporal exchanges. (Groenewegen, 2002: 282-298) Groenewegen discusses each in turn and gives the following assessment:

From this analysis Turgot correctly concluded that under competition the current price will be equal for all parties in the exchange. The solution to the problem of price determination presented by him, based on the concept of a midway price obtained by averaging individual esteem values, is of course not correct. Despite this shortcoming, the analysis can still be described as an important contribution to the theory of exchange and price determination. (Groenewegen, 2002: 292)

Thus, as for the earlier eighteenth century economists, Turgot's contribution is to the structural understanding of value and price in competitive markets. While there is a

---

<sup>237</sup> This distinction is clearly seen in a footnote in his *Observations on a Paper by Saint-Peravy of 1767*, cited by Groenewegen, 1977: 120, and also by Hutchison, 1988: 315.

psychological element to the subjective elements of preferences, Turgot's primary contribution here is in foreshadowing the structural understanding of these basic neo-classical concepts in competitive markets. Despite certain shortcomings which were not resolved until much later by the neo-classical economists, to quote Groenewegen's assessment, Turgot's contribution "can safely be called a brilliant achievement for an eighteenth-century economist." (Groenewegen, 2002: 293)

### **A3.2.5 Eighteenth Century Italian Economists**

In the case of Beccaria (1738-1794), the main relevant document is his *Elementi di Economia Pubblica* (written around 1770, published posthumously in 1804), effectively his lecture notes, and not readily available in English translation. He spent only two years in an academic role, spending the great majority of his (relatively short) professional career in the Milanese administration. Primarily known for his work as a penologist, and the remainder of his economic writing dominated by his government work, the *Elementi* represents a remarkable contribution to economic theory from a relatively small part of his career. (Schumpeter, 1986/1954: 179)

Beccaria's position on value was clearly based on the twin drivers of utility and scarcity:

Goods may be considered to have value, first, to the extent to which they contribute to satisfying needs, or adding to the conveniences, or promoting the pleasures of life; and secondly, to the extent that they are scarce and difficult to obtain. Goods which are common, and to be found everywhere, however essential, such as air, and, almost always, water, have no value.<sup>238</sup> In the same way, things which are of no use or convenience, or give no pleasure, however scarce, are of no value. But this utility and scarcity of goods is not always absolute and universal, but varies, or is relative. Many things cease entirely to have utility because other goods, which are easier to obtain, and more useful, replace them, so the value of the former ceases, or is diminished. Many goods, on the other hand, increase in value because they are discovered to have new uses and new utility. Many, too, are scarce in one country and abundant in another.<sup>239</sup>

Clearly, then, Beccaria's contribution is in the structural understanding of competition and its impact of price and value.

---

<sup>238</sup> Though in parts of the world (e.g. deserts, in relation to water) and in certain conditions (e.g. extreme pollution, in relation to air), both do have value.

<sup>239</sup> Cesare Beccaria, *Elementi di Economia Pubblica*, c. 1770: 344f, cited by Hutchison, 1988: 300.

In an article on eighteenth century Italian economists, Bianchini lists several who played a role in the progressive development of value and price theory, especially the following (in addition to Beccaria):

- Giammaria Ortes (1713-1790), who demonstrated the limits of value in the water-diamond paradox in terms of supply and demand;
- Pietro Verri (1728-1797), who developed the argument by associating price with two factors: “the apparent abundance” of a commodity (which he associates approximately with the numbers of sellers), and the need for it (which he associates approximately with the numbers of buyers), in which we find expressed a hyperbolic demand law. (Bianchini, 1989: 58f)

The contributions of all three of these Italian economists contributed significantly to the structural understanding of competition in the decade or so before Smith published *Wealth of Nations*. Schumpeter rates their achievements highly, but it is Beccaria’s contribution for which he reserves his highest praise, comparing it more than favourably with Smith’s. (Schumpeter, 1986/1954: 177-181)

### **A3.2.6 Stuart**

Sir James Steuart (1713-1780) was a Scottish mercantilist (though often classified as English, even though his Jacobite sympathies meant he spent a significant part of his life on the Continent). His writings on political economy, despite his analysis of competition being described by McNulty as probably the most complete of all the pre-Smithean contributors (McNulty, 1967: 396), paradoxically have been largely ignored until relatively recently. (Yang, 1994: 1 & esp. extended note 3)<sup>240</sup> His contemporary Adam Smith appears to have completely ignored him, even where Smith’s arguments directly confront Steuart’s, and despite evidence Smith was aware of his work. (Blaug, 1991: x)<sup>241</sup>

Steuart’s concept of value distinguishes “real value” (or “fundamental price”) and “current” or “ordinary price.” “Real value” depends on three factors: the labour

---

<sup>240</sup> Steuart’s work has been taken more seriously more recently, such as by Yang, but in the nineteenth century he was generally treated contemptuously, described in 1876 by Stephen, a well-known historian, as “amongst the most tiresome individuals of the most tiresome of all literary species – the inferior political economists,” quoted by Hutchison, 1988: 350.

<sup>241</sup> Also see Hutchison, 1988: 336.

employed, the producer's expenses incurred, and the raw materials and intermediate goods used; it is therefore the prime cost. "Current price," which is made up of the "real value" and "profit upon alienation," (Steuart, 1998, Vol 1: 202f) is however the main measure on which Steuart focuses his analysis, in which he addresses the strongly subjective influences to which current price (referred to as "value" in the following quotation) is subject:

Value is a relative term; there is no such thing as absolute value; that is to say, there are no two substances in the universe different in themselves which can be so proportioned in their parts, as to be permanently of the same value at all times ... Value is the estimation mankind put upon things; and this estimation, depending upon a combination of their own wants, fancies, and even caprices, it is impossible it should be permanent. The measure of value, then, must be that which measures not the positive worth of any thing; but the relative worth of all things compared with one another. (Steuart, 1805: 345)

The individual circumstances underlying this uncertainty of current price leads Steuart to distinguish the idea of elasticity of demand: "Demand has not always the same effect in raising prices: we must therefore carefully attend to the difference between a demand for things for the first necessity for life, and for things indifferent." He defines the equilibrium price as that which arises when the quantity supplied is "in proportion to" the quantity wanted, and when "the balance stands justly poised, prices are found in the adequate proportion of the real expense of making the goods, with a small addition for profit to the manufacturer and the merchant." (Hutchison, 1988: 345, incl. quotations from Steuart)

This "justly poised" balance arises in conditions of what Steuart terms "double competition," probably his most significant contribution to the understanding of competitive processes:

When *competition* is much stronger on one side of the contract than on the other, I call it *simple*, ... This is the species of competition which is implied in the term *high demand*, or when it is said that *demand raises prices*. *Double competition* is, when, in a certain degree, it takes place on both sides of the contract at once, or vibrates alternately from one to the other. This is what restrains prices to the adequate value of the merchandize.

.....

*Double competition* is what is understood to take place in almost every operation of trade; it is this which prevents the excessive rise of prices; it is this which prevents their excessive fall. While *double competition* prevails, the balance is perfect, trade and industry flourish. (Steuart, 1998, Vol 1: 215-217, emphasis original)

Thus for Steuart, “simple competition” disturbs the balance of supply and demand, and causes a fluctuation in the price of a commodity, but “double competition” restores equilibrium, and ensures an “adequate” price. This applies to most commodities traded in markets, including the rate of interest applying to borrowed funds. (Yang, 1999: 278) However in the area of subsistence commodities, specifically grain, Steuart believed the asymmetry between the merchant and the buyer meant intervention was necessary (in the form of stockpiling) to limit volatility in prices. (Augier & Théré, 1999: 151-168)

Steuart’s structural contribution on the understanding of prices and competition were quite important for his time; perhaps its being largely ignored at the time as well as until relatively recently can be explained by Schumpeter’s comment on the enormous variability of quality in his *magnum opus*, the *Inquiry*:

[O]ne cannot fail to be struck by the number of points that indicate more originality and deeper thought than does the “Wealth of Nations;” but also by the number of definite mistakes and infelicitous formulations. ... [In most of the areas Steuart discusses] it is a hard job to get the wheat out of the unpromising chaff or even, in some instances, to be quite sure that there is any wheat at all. (Schumpeter, 1986/1954: 184)<sup>242</sup>

### **A3.2.7 Summary**

The main overall point I make following this discussion of the contributions of Smith’s eighteenth century predecessors to the understanding of the importance of the role played by competition in the developing understanding of value and prices, and of their interaction, is that the structural understanding of competition was well established by the time Adam Smith published *The Wealth of Nations* in 1776.

### **A3.3 Adam Smith**

In his seminal statement, *The Wealth of Nations*, Adam Smith (1723-1790), the widely accepted father of modern economics, describes the enormous advantages of the division of labour, by which specialisation enables vastly increased output and improved living standards. Those improved living standards arise from the cooperation between members of the trading nexus which enables them to dispose effectively of production surplus to their own needs, or goods produced specifically for the purpose

---

<sup>242</sup> Although the one area in which Schumpeter believed Steuart had made a significant contribution was not prices or competition, but population.

of sale, and hence secure all the other goods necessary or desirable to their needs or wants. (Smith, 1999/1776, Book 1, Chapters 1-3)

This is Smith's rationale of the competitive market as the vehicle for efficiently pricing these excess or deliberately produced goods, and adjusting their supply in the light of demand. Smith's market model is of many buyers and many sellers of uniform products or commodities, where there is nothing inherent by way of rivalry between competing sellers or buyers, but where the emphasis is on the economic mechanism, both efficient and cooperative, for acquiring the necessities and wants not personally produced. This structural market model is arguably as much one of cooperation as it is of competition.

However Smith was not ignorant of the potential for this "pure" competition, and the broad-based cooperation it produces, to be corrupted; he famously says

People of the same trade seldom meet together, even for merriment and diversion, but the conversation ends in a conspiracy against the public, or in some contrivance to raise prices.

(Smith, 1999/1776, Book 1, Chapter 10, Part 2: 232)

Indeed Smith saw "pure" competition as a useful analytical tool rather than an accurate description of rivalrous competition as it exists in "real" economic life. His main contribution is on the structural impact of competition, coming from his discussion of the concepts of "price" and "value," rather than in the understanding of competition *per se*.

Similar to his contemporaries Turgot and Steuart, for example, Smith distinguished "natural price" and "market price," and the role competition plays in their market interaction. He described his understanding in the following terms:

When the price of any commodity is neither more nor less than what is sufficient to pay the rent of the land, the wages of the labour, and the profits of the stock employed in raising, preparing, and bringing it to market, according to their natural rates, the commodity is then sold for what may be called its natural price.

.....

The actual price at which any commodity is commonly sold is called its market price. It may either be above, or below, or exactly the same with its natural price.

The market price of every particular commodity is regulated by the proportion between the quantity which is actually brought to market, and the demand of those who are willing to pay the natural price of the commodity, ... Such people

may be called the effectual demanders [whom Smith distinguishes from those who might want the commodity but cannot afford it].

When the quantity of any commodity which is brought to market falls short of the effectual demand, all those who are willing to pay the whole value of the rent, wages and, profit [i.e. the natural price], which must be paid in order to bring it thither, cannot be supplied with the quantity which they want. Rather than want it altogether, some of them will be willing to give more. A competition will immediately begin among them, and the market price will rise more or less above the natural price, according as either the greatness of the deficiency, or the wealth and wanton luxury of the competitors, happen to animate more or less the eagerness of the competition.<sup>243</sup> ... Hence the exorbitant price of the necessaries of life during the blockade of a town or in a famine.

When the quantity brought to market exceeds the effectual demand, it cannot be all sold to those who are willing to pay the whole value of the rent, wages and profit, which must be paid in order to bring it thither [the natural price, which as Smith shows, will not in fact be paid]. Some part must be sold to those who are willing to pay less, and the low price they give for it must reduce the price of the whole. The market price will sink more or less below the natural price, according as the greatness of the excess [supply] increases more or less the competition of the sellers, or according as it happens to be more or less important to them to get rid immediately of the commodity. The same excess in the importation of perishable, will occasion a much greater competition than in that of durable commodities; in the importation of oranges, for example, than in that of old iron.

(Smith, 1999/1776, Book I, Chapter vii: 158f)

Smith then goes on to explain how, when the quantity of a commodity brought to market varies, either above or below the level of effectual demand, one or more of the components of natural price (i.e. rent, wages and profit) is adjusted either down or up respectively, in such a way as to move the quantity of the commodity brought to market towards the level of effectual demand. This in turn permits the relevant component(s) to move back towards their “natural” level and the market price toward the natural price. (Smith, 1999/1776, Book I, Chapter vii: 160)

Smith’s emphasis on the natural price (based in a labour theory of value) is rather static, based as it is on the concept of “natural” levels of rent wages and profit, and was the basis of later criticism by, *inter alia*, Ricardo. (MacDonald, 1912: 549-592)

While Smith’s concept of natural value did clarify the understanding of earlier writers,

---

<sup>243</sup> Discussing this concept of competition in Smith, Stigler comments as follows: “It will be noticed that “competition” is here (and usually) used in the sense of rivalry in a race – a race to get limited supplies or a race to be rid of excess supplies.” (Stigler, 1965: 235)

it contained the tautology that it explained prices in terms of costs of production, themselves prices. (Ekelund & Hébert, 2007: 114)

However some modern commentators have argued Smith's emphasis on natural price is an element in a moral, normative connection between his views on ethics and jurisprudence, particularly as set out in his earlier *Theory of Moral Sentiments* (1759), and his economic analysis in *The Wealth of Nations* (1776);<sup>244</sup> these issues are beyond my present scope.

In an omission which has puzzled commentators, Smith's discussion of the question of "value" in *The Wealth of Nations* does not get to the fundamental point of relative scarcity or abundance, which he shows he did understand in his earlier *Lectures on Jurisprudence*.<sup>245</sup> He only gets as far as "value in use" and "value in exchange" in the later work:

The word VALUE, it is to be observed, has two different meanings, and sometimes expresses the utility of some particular object, and sometimes the power of purchasing other goods which the possession of that object conveys. The one may be called "value in use"; the other, "value in exchange." The things which have the greatest value in use have frequently little or no value in exchange; and, on the contrary, those which have the greatest value in exchange have frequently little or no value in use. Nothing is more useful than water: but it will purchase scarce anything; scarce anything can be had in exchange for it. A diamond, on the contrary, has scarce any value in use; but a very great quantity of other goods may frequently be had in exchange for it. (Smith, 1999/1776, Book 1, Chapter iv: 131f)

However in the earlier work he succinctly answers what has come to be known as the "diamond-water paradox" in terms of their relative scarcity:

It is only on account of the plenty of water that it is so cheap as to be got for the lifting, and on account of the scarcity of diamonds (for their real use seems not yet to be discovered) that they are so dear. (Smith, 1978/1763: 487)

On the subject of monopoly and oligopoly, Smith writes as follows:

---

<sup>244</sup> For example, Young, 1997, esp. Chapter 3 *The Impartial Spectator and Natural Price: Markets as Social Phenomena*: 55-77.

<sup>245</sup> The explanation may be amnesia; alternatively it may be no more than that Smith no longer regarded it as a paradox, and so did not bother mentioning it in *The Wealth of Nations*. See Matthews & Ortmann. The suggestion by Skousen that the omission of the earlier explanation may reflect that "Smith was a Presbyterian, steeped in Calvinist values," and that diamonds were "vain luxury items" and relatively 'useless' compared to water and other 'useful' products is interesting, but seems questionable in that it suggests, without evidence, that Smith would allow his personal religious beliefs (or those of his community) to cause him to suppress a previously deduced rational explanation. (Skousen & Taylor, 1997: 29) For a variety of essays on Smith's religious beliefs and the religious ideas which may have influenced him, see Oslington, 2011.

The price of monopoly is upon every occasion the highest which can be got. The natural price, or the price of free competition ... is the lowest which can be taken ... The one is upon every occasion the highest which can be squeezed out of the buyers ... The other is the lowest which the sellers can commonly afford to take, and at the same time continue their business.

The exclusive privileges of corporations ... and all those laws which restrain, in particular employments, the competition to a smaller number than might otherwise go into them, have the same tendency, though in a lesser degree. They are a sort of enlarged monopolies, and may frequently ... keep up the market price of particular commodities above the natural price, and maintain both the wages of the labour and the profits of the stock employed about them somewhat above their natural rate.

(Smith, 1999/1776, Book 1, Chapter vii: 164f)

Despite a major objective of Smith's in *The Wealth of Nations* being the debunking of the monopolism inherent in the Mercantilist thinking widespread at the time (Ekelund & Hébert, 2007: 113), none of the above is particularly insightful. Indeed Schumpeter rather dismissively describes Smith's first sentence above (i.e. "The price of monopoly is upon every occasion the highest which can be got.") as possibly "the product of a not very intelligent layman – taken literally, it is not even true." (Schumpeter, 1984/1954: 309)

However Smith makes an important point about the impetus competition provides to efficiency and innovation (which he calls "good management") by breaking down monopolistic barriers. He discusses the advantages of improved infrastructure (such as roads and canals), which "[t]hough they introduce some rival commodities into the old market [with, he implies, its monopolistic and/or oligopolistic elements], they open many new markets to its produce." Nevertheless, Smith concludes that the overall advantage of greater efficiency and innovation still always needs the impetus of competition to break established monopolistic structures:

Monopoly, besides, is a great enemy to good management, which can never be universally established but in consequence of that free and universal competition which forces everybody to have recourse to it for the sake of self-defence. (Smith, 1999/1776, Book I, Chapter xi: 251)

When one comes to the overall assessment of Smith's achievement in my areas of interest, it is not that he broke new intellectual ground. As already discussed, and as McNulty demonstrates and summarises, "Adam Smith's employment of competition as the force tending to equate market and natural price was ... not original but was eminently in the tradition of the economic literature of his time." And as Schumpeter

says, after recounting the actual and possible influences on Smith, and the material available to him at the time of his writing *The Wealth of Nations*, “[b]ut no matter what he learned or failed to learn from predecessors, the fact is that the *Wealth of Nations* does not contain a single *analytic* idea, principle, or method that was entirely new in 1776.” (Schumpeter, 1986/1954: 184)

Rather, Smith’s achievement was to codify in more rigorous and generalised language what a number of his predecessors or contemporaries had written previously and, to quote McNulty’s assessment, “more importantly, [to elevate] competition to the level of a general organizing principle of economic society – an achievement far greater, surely, than that of any of his predecessors.” (McNulty, 1967: 396) Schumpeter also points out that, while *The Wealth of Nations* was not in the same class as regards intellectual achievement as Newton’s *Principia* or Darwin’s *Origin of Species*, “it is a great performance all the same and fully deserved its success.” The time for meticulous and methodical consolidation of what had been achieved had arrived, and Smith was the ideal candidate for the task. (Schumpeter, 1986/1954: 183f)

But Smith’s work is not without its critics. For example, in spite of Schumpeter’s overall positive conclusion, there is a sense in reading his further, detailed discussion of Smith’s much-lauded *magnum opus* that he is damning it with faint praise: he regards it as at best workmanlike, but often tedious and sometimes just wrong. (Schumpeter, 1986/1954: 187-189) Interestingly, he regards Book I Chapter vii, my main area of interest in Smith’s examination of value, price and competition, as the best of it:

The rudimentary equilibrium theory of Chapter 7, by far the best piece of economic theory turned out by A. Smith, in fact points towards Say and, through the latter’s work, to Walras. The purely theoretical developments of the nineteenth century consist to a considerable degree in improvements upon it. (Schumpeter, 1986/1954: 189)

### **A3.3.1 Summary**

My assessment of Smith’s contribution, specifically on the fundamental issue of the structural nature of competition and the economic cooperation to which it gives rise, is that he codified established knowledge to that point in a comprehensive way, and at a politically and socially important point of time. It may well be true that he did not add anything new or make any significant intellectual breakthroughs, and while he did make some errors and follow some paths which proved ultimately to lead to dead

ends or wrong destinations, his influence by writing *The Wealth of Nations* when he did proved at the time and in the more than 200 years since to have been very significant. Some of the criticism which has been levelled at Smith's understanding on these issues has been anachronistic, in that it has been made with the benefit of hindsight rather than in the light of contemporary knowledge at the time he wrote.

### **A3.4 The Classical Period after Smith**

The classical period is taken as approximately the century following the publication of *The Wealth of Nations*, and the term "classical economist" is widely used to describe the English "school" from Smith to John Stuart Mill.<sup>246</sup> The classical economists generally used competition to explain why prices moved the way they argued they did, rather than examine competition analytically in and of itself.<sup>247</sup> As with Smith, a major focus of the key subsequent classical economists was the way in which the extent and nature of competition caused the market price to vary around natural price (the components of which were the subject of considerable focus and analysis).

#### **A3.4.1 Malthus**

Rev. T. Robert Malthus (1776-1834) impacted economic thought in the nineteenth century, primarily through his highly influential work, the *Essay on the Principle of Population*.<sup>248</sup> Malthus reacted to what he regarded as the extreme optimism following the French Revolution of the philosophers Godwin and Condorcet, who forecast that social evils would be eliminated, and all would seek the good of all. His thesis, which he advanced without much in the way of empirical evidence, was that population increased exponentially, but that agricultural output at best only increased arithmetically:

Population, when unchecked, increases in a geometrical ratio. Subsistence increases only in an arithmetical ratio. A slight acquaintance with numbers will shew the immensity of the first power in comparison of the second.  
(Malthus, 1798: Chapter 1)

---

<sup>246</sup> The transition from the classical period to the neoclassical is usually regarded as occurring in the 1870s, the decade of the death of Mill (1873), and the publication of key works by significant neoclassical figures (e.g. Jevons (1871), Menger (1871) and Walras (1874-1877); see below).

<sup>247</sup> Augustin Cournot, the French economist of the period is an exception (see below), but is often regarded as outside the strict classical tradition (e.g. in their influential history of economic thought, Ekelund and Hébert classify Cournot as "early neoclassical." (Ekelund & Hébert, 2007: 267).

<sup>248</sup> Originally published in 1798, and five later editions, followed by *A Summary View of the Principle of Population* in 1830.

He argued that unless there were strong checks on population growth, there would be mass starvation:

The power of population being ... so much superior, the increase of the human species can only be kept down to the means of subsistence by the constant operation of the strong law of necessity, acting as a check upon the greater power. (Malthus, 1970/1830: 21)

The impact in the first third of the nineteenth century on what has been called Christian Political Economy of Malthus's population thesis and the associated theology is the subject of discussion in Sub-section 6.3.4.

More relevantly to his understanding of competition, and more particularly its impact on value and price, Malthus also wrote *Principles of Political Economy* (1820), in which he accepted Smith's distinction between "value in use" and "value in exchange," though it was the former on which he focused his attention. He was seeking a measure of "real" value, and argued it was command over labour, represented by Smith's labour *command* doctrine, rather than Smith's *embodied*-labour doctrine, adopted by Ricardo, that best met this requirement. Thus the real value of a commodity could vary according to its power to purchase labour, while the quantity of labour embodied in its production remained unchanged. Hence he did not need to differentiate between absolute value and exchangeable value, since the two were the synonymous, the approach adopted by the later utility economists. (Henderson, 1997: 511-514)<sup>249</sup> Malthus clarified this point in *The Measure of Value* (1823), and in a second edition of the *Principles* (published posthumously). (Malthus, 1836)<sup>250</sup>

Malthus's understanding of the competitive market process which gave rise to his concept of value was clearly structural in nature.

#### **A3.4.2 Ricardo**

A contemporary of Malthus, David Ricardo (1772-1823) was highly influential on a wide range of social matters, including in the rapidly developing area of political economy. He wrote over a relatively short period, with such impact that Stigler is able to say of him:

---

<sup>249</sup> Also Schumpeter, 1986/1954: 590 n.7 & 591 n.9, clearly distinguishing these two labour values, which have been commonly conflated.

<sup>250</sup> However the second edition apparently omits many of Malthus's manuscript revisions. (Hollander, 1995: 250-257)

The period [the early nineteenth century] teemed with able economists; yet David Ricardo, within a decade of his debut, was the acknowledged leader of the young science of economics. Within this decade, indeed, his chief work was done; and it was sufficient to make him the most influential economist of his century. This was an extraordinary achievement of an extraordinary man. (Stigler, 1965: 156)

As indicated above, he adopted Smith's embodied-labour doctrine of natural price, about which market price varies in accordance with the competitive effects of supply and demand:

In making labour the foundation of the value of commodities, and the comparative quantity of labour which is necessary to their production, the rule which determines the respective quantities of goods which shall be given in exchange for each other, we must not be supposed to deny the accidental and temporary deviations of the actual or market price of commodities from this, their primary and natural price.

(Ricardo, 1817, Chapter 4, "On Natural and Market Price," 4.1)

Ricardo then goes on to explain in considerable detail how the owners of capital, being subject to a "restless desire" to maximise their returns, after allowing for risk and other relevant factors, adjust their capital investments in the various commodities in such a way as to cause continuous movement of those returns around an underlying natural level, reflected by the natural prices of those commodities. He concludes as follows:

It is then the desire, which every capitalist has, of diverting his funds from a less to a more profitable employment, that prevents the market price of commodities from continuing for any length of time either much above, or much below their natural price. It is this competition which so adjusts the exchangeable value of commodities, that after paying the wages for the labour necessary to their production, and all other expenses required to put the capital employed in its original state of efficiency, the remaining value or overplus will in each trade be in proportion to the value of the capital employed. (Ricardo, 1817, 4.2-4.9, quotation 4.9)

In the chapter *On Foreign Trade* in his *Principles*, Ricardo argues that, counter to the arguments of comparative advantage between countries (climate, skills and experience, etc.), the equalisation of prices, wages and returns caused by competition should theoretically occur if there were freedom of movement between countries. However that freedom is not observed, for reasons Ricardo discusses in relation to capital, and comparative advantage can continue to exist:

Experience, however, shews, that the fancied or real insecurity of capital, when not under the immediate control of its owner, together with the natural

disinclination which every man has to quit the country of his birth and connexions, and intrust himself with all his habits fixed, to a strange government and new laws, check the emigration of capital. These feelings, which I should be sorry to see weakened, induce most men of property to be satisfied with a low rate of profits in their own country, rather than seek a more advantageous employment for their wealth in foreign nations. (Ricardo, 1817, 7.1-7.19, quotation 7.19)<sup>251</sup>

Ricardo shows a response to Malthusian population theory in his consideration of the effect of an increase in the market price of a staple commodity (in his discussion, corn, i.e. food). A summary of his argument in his chapter headed “Taxes on Raw produce” (Ricardo, 1817: 9.23) runs as follows (my comments in *italics* in square brackets):

- If the price increase results from increased demand, it is the result of increased wages, in turn resulting from increased competition for labour.
- Initially the increase in wages is not always expended on food, but on the labourer’s “other enjoyments;” however his improved condition induces and enables him to marry, and then his increased wages need to be spent on food [*which appears to presuppose wage levels before the increase are only sufficient to support a single labourer, though Ricardo agrees elsewhere with Smith’s theory that the natural level of wages is just sufficient to sustain a steady population – i.e. that labourers have sufficient resources to marry and procreate at population replacement level*].
- The increase in demand for food and the resulting price increase leads to additional capital being deployed in food production, and the increased competition will either lead to prices reverting to their former level if land of similar fertility can be used for the increased cultivation (all other things being equal), or remaining at a higher price if land of poorer fertility has to be used because of the greater costs [*presumably providing a windfall opportunity to producers from the original, higher fertility land to increase profits*].
- Once demand has been met, and if the price reverts to its former level, wages will fall to their former level [*and presumably labourers who have married and*

---

<sup>251</sup> Whether Ricardo assumed an adequate supply of labour would be available in the host country to service the employment needs created by the (hypothetical) capital investment of a foreign investor, or whether labour could be imported to meet any shortfall, is not clear. The availability or otherwise of alternative subsistence employment, either in the host country in the first case, or in the labourers’ home country in the second, is a key question.

*now have families and hence increased food costs will be in significant financial difficulties, putting pressure on them to get their children working as soon as possible].*

- When population growth is stimulated in this way, it generally exceeds the growth in demand for labour *[no doubt in part due to the non-working family members of labourers who were “induced and enabled” to marry]* and wages will fall below their natural level until balance between supply and demand is restored *[further aggravating the financial problems of such labourers]*.
- Ricardo concludes: “In this case, then, the rise in the price of corn is preceded by a rise in wages, and therefore entails no distress on the labourer” *[this is difficult to accept in the case of the labourer who has used his temporarily increased wages in the prior period to either spend on himself or undertake family responsibilities, rather than, in the unlikely event of his having read and analysed Ricardo, saved the excess wages to help feed himself during this period when wages are below their natural level]*.

One might deduce from this analysis that competition is a comparative concept, its level either increasing or reducing wages and/or food prices, and leading to the conclusion that whether competition has a desirable or undesirable effect depends on whether that resulting increase or decrease in wages and/or food prices is either desirable or undesirable. Competition might be argued on this view to be independent of the outcomes it causes, and hence structural.<sup>252</sup>

What also emerges from this particular example of Ricardo’s thought is an apparently mechanistic view of the responses of labourers to competitive market forces, and a rather unsympathetic attitude to their situation in the consequentially changing employment conditions. Particularly in his debates with Malthus and Buchanan, however, there are other instances where Ricardo deals with these issues in a more balanced manner as between the interests of capital and labour, and which nuance the apparent position indicated in the above passage.<sup>253</sup>

---

<sup>252</sup> This argument is analogous to the gun lobby argument that people not guns shoot other people; it is no argument against policies aimed at managing gun availability and use.

<sup>253</sup> See for example, the extended discussion in, Hollander, 1979, Chapter 7 “Capital, employment, and growth:” 308-411, esp. 329ff on this passage and related references.

However my primary purpose here is to illustrate some of Ricardo's expressed views on competition-related economic issues, rather than explore in any detail the thought of such a broad ranging political economist.<sup>254</sup> His fundamental understanding of competition is structural, for example illustrated by his theory of the reversion of exchangeable value to natural price, or his understanding of the functioning of competitive labour markets, albeit nuanced by his understanding of the psychological factors which motivate economic activity (such as those which lead a manufacturer or trader to refrain from competitively more profitable activities in foreign countries or cultures).

### **A3.4.3 Cournot**

Augustin Cournot (1801-1877) is described by Ekelund and Hébert as early "neoclassical," because of the revolutionary rigour with which he approached economic problems, by means of analytical mathematical methods, using geometry and graphs, algebra and calculus. (Ekelund & Hébert, 2007: 267)<sup>255</sup> Prior to Cournot, economists had only used mathematics computationally, relying on a literary approach to develop their ideas, but he recognised the limitations of that approach. (Cournot, 1960/1838: 4) He also argued that economic analysis also "had to be *grounded* in empirical observation and in facts," rather than the speculative approach used by his contemporaries and predecessors. (Ekelund & Hébert, 2007: 269) His revolutionary and original approach<sup>256</sup> does indeed make him more neoclassical than classical, but, because he fits chronologically with the classical economists, he is dealt with here. His

---

<sup>254</sup> Ricardo's works have stimulated a substantial literature on the diversity of his thought, most of it on issues much more theoretically significant than our example. As an overall assessment, in his "Introduction" to his monumental work on Ricardo's economic thought, Hollander refers to the difficulty of categorising Ricardo's thought: "'The judgments of economists on Ricardo,' it has been observed, 'suggest the opinions of the nine blind men who felt various parts of the elephant and then described the animal.'" Hollander also mentions Hutchison's opinion that "the 'dynamic' process of development was crammed into so comparatively few years that no decisive trends in his thinking get much chance of emerging definitely." (Hollander, 1979: 2). On the other hand, Henderson, in the final words of the concluding essay in his substantial collection on Ricardo, says "Ricardo's Ricardo was the economist's economist. Far from being muddled, he possessed insights into the intricacies of economic theory which escaped not only his contemporaries, but the traditional followers of orthodoxy." Henderson, 1997: 656.

<sup>255</sup> They also classify another Frenchman, Jules Dupuit (1804-1866) in the same way.

<sup>256</sup> Stigler more than applauds Cournot's originality. He contrasts it with J. S. Mill's lack of it, describing the latter as "only a great expositor," but then going on to describe Mill's originality at some length, thereby emphasising the high view with which he regards Cournot's innovative contribution. (Stigler, 1965: 1 & 6-11).

mathematical approach to the analysis of competition fits within a structural framework, without psychological nuance.

An example of Cournot's contribution of relevance in the developing understanding of competition, is his analysis of monopoly and then duopoly.<sup>257</sup> He expresses the relationship between price and quantity as a mathematical function, reflecting the change in one variable caused by a change in the other, *ceteris paribus*.

He takes the example of the sole proprietor of a mineral spring with unique properties, whom he argues will charge whatever price for the water maximises his net revenue. He assumes the price:quantity (or demand) function is downward sloping, left to right (quantity on the x-axis, price on the y-axis). In mathematical terms, he expressed the demand function as  $D = F(p)$ , such that  $dD/dp < 0$ . In the case of zero costs and the optimum result is (obviously) at maximum receipts, the proprietor adjusts  $p$  so as to maximize  $p D(p)$  (which Cournot derives by differential calculus) when

$$D + p dD/dp = 0.$$

In the more (usually) realistic case where there are costs [ $\varphi(D)$ ], he shows that the maximum value of *net* receipts is where the profit function  $\pi = p D(p) - \varphi(D)$  is a maximum, again derived by differential calculus: this is where

$$D + dD/dp \{ p - d[\varphi(D)]/dD \} = 0.$$

In words, this is where the marginal revenue equals the marginal cost, or

$$dD/dp = d[\varphi(D)]/dD$$

As Cournot says, "[w]hatever may be the abundance of the source of production, the producer will always stop when the increase in expense exceeds the increase in receipts." (Cournot, 1960/1838: 59)

Cournot is particularly famous for his analytical development of the demand:price relationship in a duopoly (Cournot, 1960/1838: 70-83): he introduces a second proprietor of an identical mineral spring to that in his monopoly case analysis. He proceeds by assuming that each seller (1 or 2) knows the total demand curve for their

---

<sup>257</sup> As well as relying on Cournot's own work (1960/1838), I have also benefited from Ekelund & Hébert, 2007: 270-274.

(identical) water products, but otherwise is ignorant of the other's actions, and that each proceeds (initially) assuming the other keeps his quantity sold constant. He also makes the simplifying assumption that both sellers 1 and 2 could supply all the mineral water demanded, the production of which is costless.

He assumes the demand of each seller is  $D_1$  and  $D_2$  and reverses the functional equation of the monopoly case  $D = F(p)$  to  $p = f(D)$ , from which he expresses the profit of each seller as

$$D_1 f(D_1 + D_2) \text{ and } D_2 f(D_1 + D_2), \text{ or } D_x f(D_1 + D_2) \text{ for } x = 1, 2.$$

In line with the assumption of each seller's ignorance of any response the competitor might make, each assumes the current value of the competitor's value of  $D$  in his attempt to maximise this function, i.e. by solving

$$d[D_x f(D_1 + D_2)]/dD_x = 0 \text{ for } x = 1, 2;$$

$$\text{hence } f(D_1 + D_2) + D_x f'(D_1 + D_2) = 0 \text{ for } x = 1, 2.$$

Cournot then introduces a new concept – the reaction curve – which shows each seller's choice of output in relation to his competitor's choice of output, by plotting these two equations with  $D_1$  on one axis and  $D_2$  on the other. He then demonstrates that each seller progressively adjusts his value of  $D$  in the light of his competitor's corresponding adjustments, and the two values of  $D$  progressively move along their respective reaction curves until a point of equilibrium is reached at the point at which the curves intersect.

Thus  $D_1 = D_2$  as we expect, and by addition

$$2 f(D) + D f'(D) = 0 \text{ (if } D = D_1 + D_2),$$

which can be transformed into

$$D + 2 p dD/dp = 0$$

Cournot compares this result with that for the monopoly case

$$(D + p dD/dp = 0,$$

which produces a higher income ( $p D_x$ ) for each if they had colluded). He then explains why they do not stop the adjustment process when the price reaches  $p$ . (Cournot, 1960/1838: 83)

Cournot goes on to demonstrate that the function governing the corresponding oligopoly of  $n$  sellers is, as we expect,

$$D + n p \frac{dD}{dp} = 0. \text{ (Cournot, 1960/1838: 83f)}$$

He also develops functions for the case of an oligopoly where there are producers with limited production (Cournot, 1960/1838: 84f), where there are costs (Cournot, 1960/1838: 85-89), and in the case of unlimited competition. (Cournot, 1960/1838: 90-98)

My purpose here is not to describe the whole of Cournot's contribution using mathematical methods, but to illustrate its power, and to recognise his singular contribution to the structural understanding of the "competition spectrum" from monopoly to unlimited competition, and initialising the subsequent era of analytical methods.

Schumpeter acknowledges the significance of Cournot's contribution in his analytical work, culminating in the unlimited competition case, the forerunner of the vastly influential structural concept of perfect competition. (Schumpeter, 1986/1954: 973)<sup>258</sup> Cournot's work was ground-breaking, in that "practically no *theory* of monopoly had existed before him, in spite of all the talk about it, and that even his starting point, the 'Marshallian' demand function (*loi du débit*) had not been properly defined before 1838." (Schumpeter, 1986/1954: 976)

And Cournot's contribution to the understanding of oligopoly marked an important starting point, albeit his simplifying assumptions limited the relevance of his conclusions as later economic analysts developed the theory. Without adequately acknowledging the benefit of hindsight, in respect of all the development of theory deriving from Cournot's work on oligopoly over more than a century separating their times, Schumpeter is rather too harsh:

---

<sup>258</sup> He particularly refers to the importance of Cournot's having derived the conditions for perfect (or pure) competition, rather than to "posit it as an institutional datum." (footnote 5)

The criticism that may be directed at him, ... , is that he neglected or overlooked the fact that, as we leave the case of pure monopoly, factors assert themselves that are absent in this case and vanish again as we approach pure competition, in other words, that the unbroken line from monopoly to competition is a treacherous guide. (Schumpeter, 1986/1954: 981)

#### **A3.4.4 Mill**

The next economist of the classical period is John Stuart Mill (1806-1873). He was a remarkable thinker whose early education by his father James Mill, and his subsequent intellectual output (while working for the East India Company) on method in the social sciences, utilitarianism, individual freedom, and representative government, are legendary. (Ekelund & Hébert, 2007: 167f) He also wrote on other subjects including economics (Mill, 1973/1852/1848), though perhaps rather less remarkably on the latter. Many economic historians have described him as an expositor rather than an originator. This widespread view of Mill as purely an economic expositor is, however, rather unfair: he did make a number of important theoretical contributions.<sup>259</sup>

However they were sometimes in passing, and he is best known for his synthesising work on practical applications of theoretical concepts, as well as for some important challenges to established ideas. I mention examples of each of these three aspects of Mill's contribution in relation to competition. (Ekelund & Hébert, 2007: 171)

In "Of Competition and Custom" (Mill, 1973/1852/1848, Book II, Chapter IV: 242-248), Mill argues that political economists, particularly in England, have placed far too much weight on the significance of competition, and far too little on the significance of custom. He claims his examples of the predominance of custom are

cases in which there is nothing to restrain competition; ... yet in which the result is not determined by competition, but by custom and usage; competition either not taking place at all, or producing its effect in quite a different manner from that which is ordinarily assumed to be natural to it."  
(Mill, 1973/1852/1848, Book II, Chapter IV: 242f)

The examples Mill cites relate to land rental, and arise more frequently the further back in history we look. He argues they show custom being the rationale of the most powerful protection of the weak against the strong, in societies where patronage is

---

<sup>259</sup> As noted above, Stigler briefly compares Mill unfavourably with Cournot as an originator, but then goes on at some length to describe Mill's original theoretical contributions. (Stigler, 1965: 1 & 6-11)

more significant than individual rights and freedoms. Initially, “[t]here is always a master who throws his sword into the scale, and the terms are such as he imposes.” Subsequently and over time, the impact of a progressive relaxation of the law of the strongest is the emergence of custom (expressed as accepted bases of the economic relationship between peasant farmers and landowners), and eventually, sometimes, codified rights. The specific examples Mill mentions are Indian and European, including in the latter case the *métayer* (sharecropping) system, under which the land is divided into small farms and the farmer pays the landowner a specified proportion (mostly half) of the produce. (Mill, 1973/1852/1848, Book II, Chapter IV: 243-245, quotation 243)

Such customary practices may have been common more than a century and a half ago, and still operate to some degree today, particularly in less developed countries today. However, in the developed world more competitive mechanisms have become the norm.

Mill’s comments have more contemporary relevance when he turns to prices for commodities and other goods, which he says are more subject to competition than are rents for land. Nevertheless he correctly points out that retail prices are still frequently affected (usually increased) by influences other than just competition – for example the class of customer the retailer is seeking to attract. Proximity to and mobility of customers, and convenience, are other factors reducing the impact of competition on retail prices. But Mill agrees competition is the more dominant factor in wholesale prices, where markets function more efficiently than in the retail case.

(Mill, 1973/1852/1848, Book II, Chapter IV: 245-248)

He summarises his overall case for the priority of custom, rather than competition, as the primary explanatory factor in economic transactions:

The states of economical relation which stand first in order to be discussed and appreciated, are those in which competition has no part, the arbiter of transactions being either brute force or established usage.

(Mill, 1973/1852/1848 Book II, Chapter IV: 248)

His explanatory division was addressed by subsequent neoclassical and later interest in imperfect competition in particular (which addresses aspects of what Mill terms “custom” as part of the competitive interaction), as the significance of “brute force” and “established usage” reduced, and as economists sought more rigorous

explanations. Mill's conclusion, with its psychological implications for economic relations, appears to be an overstatement of the significance of custom, at least in the modern, developed world. It seems also an overstatement in the contemporary developing world, and may well have been in the economic world of Mill's own time also.

Subsequently in his *Principles*, Mill discusses the impact of competition, risk-taking, innovation and efficiency on workers' cooperative associations, which flourished in the nineteenth century, with the objective of protecting workers collectively from exploitation by their employers. He notes that once they become successful, there is a tendency for such associations to convert to joint stock companies, owned and run by a limited number (in the ultimate case, one) of the workers previously involved collectively. The propensity of "a private capitalist, exempt from the control of a body, if he is a person of capacity, is considerably more likely than almost any association to run judicious risks, and originate costly improvements." This change is enabled by sharing profits from this more effective management system with workers. The obvious risks the approach poses are mitigated by "the competition of capable persons who in the event of failure are to have all the loss, and in the case of success the greater part of the gain, [which] will be very useful in keeping the managers of co-operative societies up to the due pitch of activity and vigilance." Mill believed that this process would enhance the effectiveness of co-operative associations and ultimately lead to their becoming a significant economic force.

(Mill, 1973/1852/1848, Book IV, Chapter VII: 790-794, quotations 790f)<sup>260</sup>

Much of this vision of a positive future for cooperative associations Mill shared with socialist writers. However, one area of disagreement with them was in relation to competition; he wrote that one of their "greatest errors ... is to charge upon competition all the economical evils which at present exist." (Mill, 1973/1852/1848, Book IV, ch VII: 792) He makes a quite nuanced argument for the benefits of competition to workers and capitalists alike, without minimising its inconveniences and moral objections: "If competition has its evils, it prevents greater evils," and he quotes M Feugueray approvingly:

---

<sup>260</sup> The fact that such cooperative associations (as opposed to trade unions) have not become an enduringly significant economic force is an interesting question but beyond my present scope.

The deepest root of the evils and iniquities which fill the industrial world, is not competition, but the subjection of labour to capital, and the enormous share which the possessors of the instruments of industry are able to take from the produce ... If competition has great power for evil, it is no less fertile of good, especially in what regards the development of the individual faculties, and the success of innovations. (Mill, 1973/1852/1848, Book IV, Chapter VII: 793)<sup>261</sup>

Finally, in this assessment of competition's practical role, Mill argues that, even if it causes immediate pain to some classes of worker, it is always ultimately beneficial. Competition saves people from idleness and mental dullness, and if it means some more highly paid class of workers is underbid for a particular employment by those whose pay is lower, so much the better. Bolstering up old customs is not what is required, but allowing new competitive practices which benefit everyone.

(Mill, 1973/1852/1848, Book IV, Chapter VII: 793f)

Mill addresses in these three examples aspects of competitive activity which include a psychological aspect to the economic interaction. In the case of the first (where he argues for the predominance of custom over competition) I think he overstates his case. In the second and third (where he argues for the benefits of competition despite the objections of socialist writers of the time) he effectively supports a structural view, while acknowledging the psychological influences on the participants in the competitive process.

Turning now to his theoretical contributions bearing on the impact of competition, Mill was the first British economist to specify the functional relationship between price and quantity (demanded and supplied) in the modern sense. He expressed his analysis in prose, but distinguished the appropriate mathematical relationship between demand and supply as an *equation* rather than a *ratio*, clarifying the terminological confusion which previous writers in English had shown. As he stated, a ratio was only appropriate between *quantities* demanded and supplied, but the quantity demanded varies with price, and so an equation including *price* is necessary to show the equality.

(Mill, 1973/1852/1848: 446-448)<sup>262</sup>

---

<sup>261</sup> It might be said that nothing has changed since Mill's day.

<sup>262</sup> This equation had been shown mathematically ten years earlier by the French economist Cournot.

He also made an important theoretical contribution on the study of jointly supplied goods, such as beef and hides. Ekelund and Hébert state the problem Mill addressed and his solution as follows:

Problem: Given a single cost function, how are profits from the two separate productions to be allocated to the jointly produced goods?

Solution: In the case where goods are produced jointly in fixed proportions, the equilibrium price of each product must be such as to clear the market, *subject to the condition that the sum of the two prices equals their (average) joint costs.* (Ekelund & Hébert, 2007: 173, emphasis original)

They comment: "His apparently complete understanding of this special aspect of competitive pricing, without benefit of mathematical analysis, seems incredible today." Mill's insight on this point is frequently attributed to Marshall, but he only added the graphics which make the solution clearer.

Mill's understanding on these theoretical points make an important contribution for his time to the structural understanding of competition. Interestingly, Mill also says that only through "the principle of competition has political economy any pretension to the character of a science." (Mill, 1973/1852/1848, Book II, Chapter IV: 242)<sup>263</sup> In this he implies that the economics profession of his day had exaggerated the importance of competition as an explanatory factor in economic behaviour at the expense of custom, to enhance the profession's status. Aspiration to a status corresponding to that of the physical sciences, and the use of mathematics as a perceived marker of scientific status, are features still seen today in social disciplines such as economics.

#### **A3.4.5 Marx**

Karl Marx (1818-1883), the last of the economists of the classical period considered, is probably the best known writer on the history of social thought. Marx wrote very

---

<sup>263</sup> Schumpeter includes a discussion "But is Economics a Science" (Schumpeter, 1986/1954: 6-11) and expresses doubt that economics is a science, even basing his concept of science on so broad a definition as "any kind of knowledge that has been the object of conscious efforts to improve it," "refined common sense," or "tooled knowledge." (p 7) Obviously if we adopt a more limited definition of a science such as that of Karl Popper, based on the requirement of the falsifiability of a theory or hypothesis for it to be "scientific," much of the activity and theory of what are commonly termed the social "sciences," including economics, would generally fail the test, because of the difficulty of specifying a repeatable experiment capable of falsification. This limited definition recalls the famous saying of Pauli of an argument that fails to be scientific because it cannot be falsified by experiment, "it is not only not right, it is not even wrong!" (Peierls, 1960, 5: 186)

influentially on philosophy, sociology, psychology, social theory, and also economics. He is widely regarded by economists as an unsuccessful builder of classical economic models, but his influence beyond strict questions of economic theory has been much more extensive amongst modern interpreters, particularly his treatment of economic theory within the broader context of social theory and the philosophy of history.

(Sandmo, 2011: 134)

Marx's economic thought, including his price theory, was based in a Ricardian labour theory of value. As with Ricardo, not only did the value of an article for Marx include the direct labour involved, but also the labour involved in the production of all the inputs in the production process. However, beyond the "cost of production" approach of his classical predecessors, Marx believed the article "has value *only because* human labour in the abstract has been embodied or materialised in it."

(Sandmo, 2011: 127, emphasis added)

On my subject of interest, Semmler describes Marx's conception of competition as rooted in the classical tradition, but posing a radical challenge to it. (Semmler, 1987) Smith and Ricardo conceived of free competition as the moderating force restraining the variation of market prices around natural prices, and thus the central concept in the capitalist market structure. However, from the standpoint of perfect competition, free competition was understood more in terms of economic behaviour. (Stigler, 1965: 234-267, esp. 262-267) Marx's concept, rooted in the classical understanding, also includes the behavioural aspect; however, he challenged the classical idea of competition providing a stabilising influence on the volatility of market prices.

(Semmler, 1987: 540)

Marx's concept of the capitalist firm is of a pro-active entity, focused on growth and expansion, resulting in economic evolution including the failure of some firms and the centralisation of capital, leading to ever fiercer competition and rivalry. (Marx, 1967/1894/1893/1867, Vol 1, Chapter 25) This pro-activity is reflected in firms actively reorganising production and market activity in the light of competitors' potential responses: being price setters rather than price takers, and differentiating prices even for homogeneous products under disequilibrium conditions.

(Marx, 1967/1894/1893/1867: Vol 2, Chapter 10) The main competition weapons in production activities are firm reorganisation and technical change

(Marx, 1967/1894/1893/1867: Vol 1, 623f), leading to the firm capturing transient surplus profits and transforming them into long-run growth potentials.<sup>264</sup>

With the classical economists, Marx also sees competition as driving the free flow of funds between industries in search of higher rates of return. The impact of competitive forces is argued in classical theory to lead to market prices gravitating towards long run prices of production. Marx believed the intuitive argument underlying this theory, based in analogy with the Newtonian model of gravity within the planetary system, and meaning that profit levels vary within bounds and prices are drawn towards their long run natural values, was not rigorous. The shorter or longer-term disequilibrium caused by movement of capital, and its likely concentration, would not necessarily lead inter-firm and inter-industry competition becoming less intense as capitalism evolved. (Semmler, 1987: 540f)

This recognition of the role of competition in the progression of market prices did not lead him, however, to resile from his support of a labour theory of value. It is worth quoting this excerpt from *Capital* Volume 3, written late in his career:

What competition does *not* show is the way in which value is determined and the movement of production dominated by this determination. It does not show the values that stand behind the prices of production and determine them in the last instance. Competition *does* show, on the other hand, the following things:

- 1) The average profits independent of the organic composition of capital in the different spheres of production, and therefore independent of the mass of living labour appropriated by any given capital in any given sphere of exploitation.
- 2) A rise and fall of prices of production as a result of changes in the level of wages, a phenomenon which flatly contradicts at first sight the law of the value of commodities.
- 3) The fluctuations of market-prices, which reduce the average market-price of commodities in a given period of time, not to the *market-value*, but to a *market-price of production* differing considerably from this market-value.

All these phenomena *seem* to contradict the determination of value by labour-time as much as the fact that surplus-value consists of unpaid surplus-labour. *Everything appears upside down in competition*. The existing conformation of economic conditions, as seen in reality on the surface of things, and consequently in the conceptions which the leading human agents of these conditions form in trying to understand them, are not only different from the

---

<sup>264</sup> This does all read like an excerpt from a contemporary business strategy manual!

internal and disguised essence of these conditions, and from the conceptions corresponding to this essence, but actually opposed to them, or their reverse. (Marx, 1967/1894/1893/1867, Vol 3, Chapter 12, emphasis original)

This quotation by no means sets out the extent Marx's defence of a labour theory of value, his reply to the so-called "Great Contradiction" (i.e. if he is right, that labour-intensive industries should exhibit higher profits, which is contra the empirical evidence). However, it does suggest an ideological commitment to labour as the dominant economic force, evidence of competing (sic) factors to the contrary.<sup>265</sup>

Beyond this ideological commitment, Marx challenged the classical institutional idea of competition as a force operating to stabilise otherwise volatile market prices, due to competitive pressure to seek higher returns. Hence, Marx viewed competition as a *structural* factor in long-term *instability* of capitalism.

#### **A3.4.6 Summary**

The classical economists consolidated the structural understanding of competition, particularly in the way it influenced prices to vary, tending towards some measure of underlying "value" or "natural price" (of which there were several concepts, such as Ricardo's adoption of Smith's embodied-labour doctrine). The development of monopoly theory by Cournot, particularly arising from his innovative introduction of mathematics into economic analysis, was an important development in the period. Accepting the existence of psychological factors influencing competitiveness, while continuing to develop the structural understanding of competition, was a feature of the work of several classical economists. There were critics of competition amongst classical writers (such as Marx), and even amongst those who supported it, there was support for restraint when its rivalrous character was judged likely to harm the public good. (High, 2001: xvii)

This view of competition and a rather pragmatic attitude to it adopted by classical economists is reflected in this quotation from High's introduction to his major anthology of key economic writings on the subject:

The classical economists generally favoured competition, not because they viewed it as a moral absolute, but because they were of the considered opinion that it worked for the general good. Where it did not, as in technological

---

<sup>265</sup> For an outline of the "Great Contradiction" and Marx's defence, see Ekelund & Hébert, 2007: 253-255.

innovation or the efficiencies of large-scale enterprise, they frankly said so. The benefits of competition were conclusions derived from observation and analysis; they were not dogma. (High, 2001: xvii)

### A3.5 The Neoclassical Period

By way of introduction, the 1870s have often been described as heralding a revolution in economic thought,<sup>266</sup> specifically in relation to marginalist theory, and, unlike the apparent British dominance of classical thought, were associated predominantly (in the first phase of neoclassical development) with three economists in three different European countries: Jevons (England), Menger (Austria) and Walras (France/Switzerland).<sup>267</sup> While there are differences between their approaches, three broadly agreed characteristics of this new orientation in economic research are as follows:

- A stronger emphasis on erecting economic analysis on the foundation of theories of behaviour for individual economic agents, in other words, firms<sup>268</sup> and consumers.
- Increased focus on the demand side of consumer goods markets and on the supply side of factor markets, accompanied by a critique of the classical labor theory of value. Marginal utility became a new and central concept of economic theory.
- More reliance on mathematical formalization, above all through the use of differential calculus. (Sandmo, 2011: 166)

The work of Cournot, already mentioned, in a number of respects in the 1830s anticipated these developments which flourished from the 1870s. (See Sub-section A3.4.3)

---

<sup>266</sup> High justifies the use of term “revolution” when applied to the neoclassical developments; he describes the change as not incremental, but “a fundamental rethinking of the causality of market prices.” Thus, because “[t]he prices of producers’ goods are derived from the prices of consumer goods, not the other way around as the classical economists had reasoned,” the question is whether the understanding of competition is affected. (High, 2001: xviii) Stigler also points out that “[i]n their explanations of the workings of a competitive economy the most striking deficiency of the classical economists was their failure to work out the theory of the effects of competition on the distribution of income.” (Stigler, 1965: 242) This is a subject dealt with in the neoclassical period, notably by J B Clark. However not all commentators agree the neoclassical period represented such a revolutionary change of focus. Hollander questions the appropriateness of the term “revolution” in the light of the classical features evident in especially Walras and Marshall. (Hollander, 1987, Chapter 17) Ekelund and Hébert contend that the conventional wisdom of the revolution of the 1870s is a gross oversimplification: “[T]he tools of neoclassical analysis were widely available across Europe well before 1870, making the notion that neoclassical economics experienced a tripartite immaculate conception around 1870 naïve.” Further, they argue that Marshall’s contribution is undervalued by this characterization of the work of the period’s initial trio. (Ekelund & Hébert, 2007, Chapter 17: quotation at 399)

<sup>267</sup> The traditional conception of the marginalist revolution, and the seminal roles played by Jevons, Menger and Walras, are well described by Sandmo, 2011, Chapters 8 & 9.

<sup>268</sup> Reference to the firm in the thought of the early neoclassical economists is something of an anachronism; as demonstrated by Coase, this is a later concept. (Coase, 1937)

There was a second phase of the neoclassical period, notably reflected in the work of Alfred Marshall, who played an analogous role to Smith in consolidating, codifying and extending the work of the first phase.<sup>269</sup> Also, in dealing with the developments of this period, I discuss the work of Edgeworth and J. B. Clark.

### **A3.5.1 Jevons**

In his *Theory of Political Economy* (1957/1871), William Stanley Jevons (1835-1882) set out the detail of his main claim to fame in the history of economic theory, his independent development of utility theory.<sup>270</sup> The concepts of marginal utility and the equi-marginal principle, developed and applied with the use of mathematical (particularly graphical) methods, were the distinguishing advances of the neoclassical economists generally.

My particular point of focus is Jevons's market concept and statement of the conditions for perfect competition:

- A market, then, is theoretically perfect only when all traders have perfect knowledge of the conditions of supply and demand, and the subsequent ratio of exchange; ...
- ... there must be perfectly free competition, so that anyone will exchange with any one else upon the slightest apparent advantage. There must be no conspiracies for absorbing and holding supplies to produce unnatural ratios of exchange. (Jevons, 1957/1871: 86f)

Stigler points out that there is some ambiguity in the second condition, since "pursuit of advantages is not inconsistent with conspiracies" (Stigler, 1965: 245); however the extent of overlap between the slightest advantage appearing and an exchange taking place promptly thereafter hardly constitutes a conspiracy in the normal sense of the term. Jevons's requirements for perfect competition of a single price (he calls it the "law of indifference"),<sup>271</sup> and, implicitly, a large number of buyers and sellers,<sup>272</sup> mean he had specified two important elements of the conditions for perfect competition, not fully spelled out until 50 years later by Knight. Jevons's merging of the concepts of

---

<sup>269</sup> Sandmo points out that Marshall would have preferred to be considered part of the first phase. Marshall liked to point out that he had worked out much of the new approach in the 1860s; however he did not publish until 1890. (Sandmo, 2011: 213)

<sup>270</sup> Albeit the basic idea had been discovered by Dupuit over two decades previously.

<sup>271</sup> "... in the same open market, at any one moment, there cannot be two prices for the same kind of article" (Jevons, 1957/1871: 91)

<sup>272</sup> "...the conditions of a great market where vast quantities of some stock are available, so that any one small trader will not appreciably affect the ratio of exchange" (Jevons, 1957/1871: 112)

“market” and “competition” in the first part of the quotation above prevents him potentially achieving insights separation of the concepts would have enabled, since (*inter alia*), a market may be perfect and monopolistic or imperfect and competitive. Clearly Jevons advanced the understanding of competition in its structural sense.

### **A3.5.2 Menger**

The main contributions of Carl Menger (1840-1921) of interest in his *Principles of Economics* (2007/1950/1871) is his development of the equi-marginal principle and monopoly theory.

On the former, Menger shows how the individual uses limited funds to purchase the combination of competing goods of varying levels of desirability which maximise satisfaction of wants. (Menger, 2007/1950/1871: 122-128) In this way Menger establishes the equi-marginal principle, under which, given scarce resources, the individual arranges her various consumptions such that, at the margins, satisfactions are equal; she thereby maximises her total satisfaction.

Turning now to his development of monopoly theory, Menger starts with a simple case of potential barter of two goods between two “economising individuals.” He shows how the values (which reflect levels of satisfaction) each places on his own and the other’s goods establishes the range of possible barter rates at which exchange can occur: this is when each individual is prepared to pay a higher rate of barter than the that reflecting the value the other places on their good. The ultimate barter price will lie between the values attributed by the parties, according to their respective characteristics, including particularly business and economic knowledge.

Menger then considers the case of a monopoly seller of an indivisible good where there are multiple potential buyers who place varying values on the good. Subject to the price paid exceeding the value placed on the good by the monopolist, he shows that the winning buyer is he who places the highest value on the good, and the price paid lies between that value and the next highest value of the unsuccessful potential buyers. (Menger, 2007/1950/1871: 199-203)

The next case Menger considers is where the monopoly seller has multiple units of the good (i.e. it is divisible). Using his “satisfaction triangle” method in respect of the potential purchasers of units of the monopolist’s good, he shows that the marginal

value placed on the good is the same for all successful purchasers, and the price achieved lies between the value of the good to the least eager but successful purchaser, and the most eager purchaser. (Menger, 2007/1950/1871: 125-128) Thus the more units of the good the monopolist brings to market in this case, the wider the range of the possible eventual price; *ceteris paribus* the more units brought to market by the monopolist, the lower the price he is likely to achieve. (Menger, 2007/1950/1871: 203-207) And if the monopolist charges a specific price, the quantities sold are exactly what we would expect, in accordance with the buyers who remain able to purchase according to the “satisfaction triangle.” (Menger, 2007/1950/1871: 207-210)

Menger also discusses the monopolistic impact of limitations on markets, such as location, and the factors influencing the frequent development of competitive markets from previously monopolistic ones. (Menger, 2007/1950/1871: 216-218) He then goes on to apply his analytical method to the case of competing sellers of a given quantity of a good to multiple buyers, and deduces that the same characteristics of the exchange apply as in the monopolistic case. (Menger, 2007/1950/1871: 218-225)

Menger’s main contribution was his identification of the fundamental importance of marginal utility, and from my point of interest in competition, its application in expanding the understanding of monopoly. His conception of competition was clearly structural. As with Jevons, he did not connect his measures of utility (“satisfaction” in his terminology) with the demand curve: clear exposition of this insight had to wait for Marshall. Menger’s analysis was non-mathematical, and his verbal treatment was rather laborious; however it was very thorough and for his time, original.

### **A3.5.3 Walras**

The third member of this initial trio of the neoclassical period was Léon Walras (1834-1910), a French econo-engineer, who worked for most of his adult life in Lausanne. His major work was his *Elements of Pure Economics* (1954/1874), in which, and in his subsequent writings, he vigorously propounded his general-equilibrium analysis, in competition with Marshall’s partial-equilibrium analysis.

On competition, Walras explains its fundamental role in market efficiency: “The more perfectly competition functions, the more rigorous is the manner of arriving at value in

exchange.” (Walras, 1954/1874: 83) His examples of the most efficient markets from a competitive standpoint are those using transparent auctions, such as the stock exchange, grain and fish markets of his day. Other produce markets function with lower competitive efficiency, but still function “fairly effectively and satisfactorily,” and retail shops are “markets where competition, though poorly organized, nevertheless operates quite adequately.” (Walras, 1954/1874: 83f)

Walras discusses in considerable detail the mechanism of free competition in the domain of production (he subdivides it into 13 elements, in three broad groupings: capital, income and money). Income is used up as it is deployed (“does not outlast its first use”). Capital endures, rendering services which replace the income consumed, but some capital goods depreciate and can be subject to destructive forces, and so some capital goods must be replaced over time. Aside from its role in saving, money facilitates exchanges and can be disregarded. (Walras, 1954/1874: 218-221)

In addition to the three participants in his three broad groupings – the land-owner, the worker and the capitalist – Walras also introduces the entrepreneur, whose role he analyses separately (even though it may be combined with one or more of the three other roles) in two distinct markets – services and products. (Walras, 1954/1874: 221-224)

After this analysis he is able to define equilibrium in production and exchange, in which

- The effective demand and offer of productive services are equal and there is a stationary current price in the market for these services,
- The effective supply and demand of products are also equal and there is a stationary current price in the products market, and
- The selling prices of products equal the costs of the productive services that enter into them. (Walras, 1954/1874: 224)

Equilibrium in exchange, which applies to the first two of these conditions, and equilibrium in production, which applies to the third, are ideal and not real states and never hold absolutely in practice; “[y]et equilibrium is the normal state, in the sense that it is the state towards which things spontaneously tend under a regime of free competition in exchange and in production.” (Walras, 1954/1874: 224) One or more entrepreneurs create this tendency, by moving into or expanding areas of activity

which are making profits, and moving out of or curtailing areas of activity which are making losses.

In his Lesson 22, Walras deals quite directly (and bluntly) with his critics. He summarises his conceptions of free competition and equilibrium, and argues that it is irrelevant (contra some of his critics) whether or not they can be observed in the real world: they can be “summed up as the attainment, within certain limits, of maximum utility.” (Walras, 1954/1874: 255) His critics, whether proponents of *laissez-faire* or socialism, have adopted their positions ideologically, and without proof. He indicates the limitation of his theory to private and not public wants, and so rejects its application to public services. Because it assumes freedom of entry (and exit) to entrepreneurs, the theory is also inapplicable in the case of natural monopolies. He also points out that because the theory deals with utility, it leaves the question of justice to one side. (Walras, 1954/1874: 256f)

Walras’s theory, as developed more mathematically by Edgeworth (to whose work I now turn), has been extremely influential on economic thought on the question of convergence on perfect competition,<sup>273</sup> and hence on competition’s structural understanding.

### **A3.5.4 Edgeworth**

The mathematical development of competition and related economic theory was significantly advanced by Francis Y. Edgeworth (1845-1926), an Anglo-Irish philosopher and political economist. In his “Economical Calculus” of 1881 he states his general answer on exchange prices under various competitive conditions, which is that “contract without competition is indeterminate, ... contract with perfect competition is perfectly determinate, [and] ... contract with more or less perfect competition is less or more indeterminate.” (Edgeworth, 1967/1881: 20)

To demonstrate the first case without competition (isolated exchange or, as he terms it, “bilateral monopoly”), he introduces the concept of “recontracting” rather than Jevons’s use of barter. He then proceeds to define two parties X and Y with utilities  $P$  ( $= F(x, y)$ ) and  $\Pi$  ( $= \varphi(x, y)$ ) respectively; the equilibrium point is where

---

<sup>273</sup> Despite, as Stigler points out, Walras giving no adequate definition of competition. (Stigler, 1965: 251)

$$(dP/dx) (d\pi/dy) = (dP/dy) (d\pi/dx)$$

which, as he indicates, corresponds to Jevons's mathematical result.

(Edgeworth, 1967/1881: 17-21)

He then defines the task as "to find a point  $(x y)$ , such that, *in whatever direction* we take an infinitely small step,  $P$  and  $\pi$  do not increase together, but that, while one increases, the other decreases." Using quite ingenious calculus, he proceeds to show "from a variety of points of view that the locus of the required point is

$$(dP/dx) (d\pi/dy) - (dP/dy) (d\pi/dx) = 0,"$$

and which has no solutions satisfying the required condition.

(Edgeworth, 1967/1881: 21-26)

Explicit in this development is his original concept of indifference curves (which were implicit in Jevons's work on utility, further developed subsequently by Pareto, and the primary basis of the famous Edgeworth box). Using the indifference concept, he follows his rather more complex mathematical demonstration with a disarmingly simple graphical illustration of the indeterminacy of solutions to isolated exchange: Robinson Crusoe trading wages for Friday's labour. (Edgeworth, 1967/1881: 28f)

Edgeworth's conclusion is that "this simple case brings clearly into view the characteristic evil of indeterminate contract, deadlock, undecidable opposition of interests," and that "[a]n accessory evil of indeterminate contract is the tendency, greater than in a full market, towards dissimulation and objectionable arts of higgling."

(Edgeworth, 1967/1881: 29f)

That the perfect competition (second) case is perfectly determinate has already been explained mathematically by Jevons, Marshall and Walras,<sup>274</sup> so Edgeworth then goes on to discuss and, using even more ingenious calculus as well as other mathematics (which I do not attempt to summarise here), demonstrates the third case, that the extent of indeterminacy is inversely related to the extent of perfect competition.

(Edgeworth, 1967/1881: 34-45)

In 1897 Edgeworth also developed duopoly and oligopoly theory further, following the work of Cournot nearly 60 years earlier. (Edgeworth, 1925/1897: 116-126) In the

---

<sup>274</sup> To whose work Edgeworth refers the reader "who wishes to dig down to the root of first principles, to trace out all the branches of a complete system, to gather fruits rare and only to be reached by mathematical substructure." (Edgeworth, 1967/1881: 30)

interim Bertrand had suggested that it was more realistic to assume the sellers assumed their rivals maintained prices rather than quantities (as Cournot had done). (Bertrand, 1883: 499-508)<sup>275</sup> Edgeworth examined the case where the quantities each seller had available were limited, and shows mathematically that equilibrium is not possible, the locus of the prices depending on how each seller reacts to the actions of the other, and in the light of his remaining stock level.

Edgeworth's ground-breaking analysis of the extent of determinacy of contract according to the extent of perfect competition, and his extension of duopoly and oligopoly theory, places his work at the heart of the neoclassical mathematical treatment of structural competition.

### **A3.5.5 Marshall**

This brings the discussion to Alfred Marshall (1842-1924), who, with Walras, is frequently regarded as one of the founders and towering figures of modern neoclassical analysis. (Vroey, 2009: 709) He is best known as the predominant systematiser and architect of the partial-equilibrium approach, using the *ceteris paribus* assumption as a method of dealing with the complex interaction of variables. Marshall never denied the validity of Walras's contemporary development of the methodologically more difficult general-equilibrium approach, despite that competitor's attacks on his work; however Marshall substantially ignored Walras and his work in his *magnum opus*, the *Principles of Economics*. (Marshall, 1920/1890)

Mathematically more skilled than many of his contemporaries, Marshall nevertheless regarded mathematical methods (preferably graphical rather than algebra/calculus) as a scaffold upon which to develop theory, which, when the theoretical building had been developed, should be removed after the theory had been expressed in clearly written argument, accessible to a wider readership. (Marshall, 1920/1890, P.10-P.11)

Before touching on some examples of the impact of competition in his important neoclassical developments, however, I give a brief outline of his comments on competition itself, and the understanding of the term in its economic context. As his classical and earlier predecessors did to greater or lesser extent, Marshall also begins

---

<sup>275</sup> Edgeworth also states that Marshall had shown that Cournot's conclusion of equilibrium did not hold if cost follows the law of increasing returns, and he (Edgeworth) had shown it did not hold if cost follows the law of diminishing returns. (Edgeworth, 1925/1897: 117f)

with an apparently rivalrous definition: "The strict meaning of competition seems to be the racing of one person against another, with special reference to bidding for the sale or purchase of anything." (Marshall, 1920/1890, I.I.3) But immediately he nuances this understanding with an outline of factors bearing on economic (and other) actions in a more individualistic age, which have the following consequences:

They may and do cause people to compete with one another; but on the other hand they may tend, and just now indeed they are tending, in the direction of cooperation and combination of all kinds good and evil.  
(Marshall, 1920/1890, I.I.14)

The term "competition" has gathered about it evil savour, and has come to imply a certain selfishness and indifference to the well-being of others. However: It is deliberateness, not selfishness, that is the characteristic of the modern age. (Marshall, 1920/1890, I.I.15)

Despite this widespread popular attitude that associates modern competition with evil, and calls to return to the ethics of past, more generous times, there is little evidence that modern business people in the more developed world are harder and harsher than their former or less developed world counterparts; if anything, the reverse. Marshall contends that, while there are widely highlighted anti-social forms of competition, "care is seldom taken to inquire whether there are not other forms of it, which are so essential to the maintenance of energy and spontaneity, that their cessation might probably be injurious on balance to social well being." (Marshall, 1920/1890, I.I.20) But he is not suggesting that competition is a normative virtue:

If competition is contrasted with energetic co-operation in unselfish work for the public good, then even the best forms of competition are relatively evil; while its harsher and meaner forms are hateful. And in a world in which all men were perfectly virtuous, competition would be out of place; but so also would be private property and every form of private right. Men would think only of their duties; and no one would desire to have a larger share of the comforts and luxuries of life than his neighbours. (Marshall, 1920/1890, I.I.21)

However such a utopia is highly improbable, and socialist experiments usually fail:

History in general, and especially the history of socialistic ventures, shows that ordinary men are seldom capable of pure ideal altruism for any considerable time together; and that the exceptions are to be found only when the masterful fervour of a small band of religious enthusiasts makes material concerns to count for nothing in comparison with the higher faith.  
(Marshall, 1920/1890, I.I.22)

Presumably Marshall would confirm economics as fundamentally a positive rather than normative discipline (an important point in the comparison of economic and Christian attitudes to the ethics of competition).

Given that people are capable of more unselfishness than they typically exhibit, “the supreme aim of the economist is to discover how this latent social asset can be developed most quickly, and turned to account most wisely.” But

he [the economist] must not decry competition in general, without analysis: he is bound to retain a neutral attitude towards any particular manifestation of it until he is sure that, ... , the restraint of competition would not be more anti-social in its working than the competition itself. (Marshall, 1920/1890, I.I.23)

Marshall then turns to the term “competition” itself, and, very much in the sense of the positive rather than normative task of economics, says that a term is needed which “does not imply any moral qualities, whether good or evil.” He proposes “freedom of industry and enterprise,” or more briefly “economic freedom,” as the alternative, presumably neutral, expression. (Marshall, 1920/1890, I.I.24)

It seems to me that, by rejecting “competition” because of its perceived negative moral qualities, and using the word “freedom” (which is widely regarded as a moral good) in his preferred term, Marshall has not achieved the ethical neutrality he seeks. As he goes on to say, however, the collective element of his alternative term does permit limitation of individual freedom when cooperation or combination seems the preferable course to adopt.

In his Presidential Address to the Economic Science and Statistics Section of the British Association in 1890, Marshall made some interesting comments on the competitive motivations of businessmen. (Marshall, 1925: 281-284) Comparing the motivations of businessmen with those of scientists, he notes similarities: success for its own sake, for the good it may do others, and last and often not least, for the honour it may do himself. When it comes to the question of making money, beyond having enough to support “a cultured life for himself and his family,” the scientist is often not much concerned with it, as “in scientific work the earning of much money is no proof of excellence, but sometimes rather the reverse.” But in business,

a man’s money-earning power, though not an accurate test of the real value to the world of what he has done, is yet often the best available. ... And so all the best business men want to get money, but many of them do not care for it

much for its own sake; they want it chiefly as the most convincing proof to themselves and others that they have succeeded. (Marshall, 1925, 281f)<sup>276</sup>

However if broad-based competition between the members of society is to ensure the most able reach positions of responsibility and opportunity, then some measure of taxation of the wealthier members of society is necessary to enable education and wholesome living standards to be provided to “those children of the working classes who show the power and the will to use it well,” allowing them the opportunity to rise to their potential. Thus Marshall argues as a liberal, rejecting what he sees as the libertarian attitudes of some of his older economist colleagues:

Economic progress requires as a condition free individual responsibility, but not the maintenance of those rights of property which lead to extreme inequalities of wealth. (Marshall, 1925: 282)

On the other hand, Marshall argues that, despite some positive contributions to society generally, socialists (whose thinking has had some impact on some of his modern economist colleagues)

seem to think too much of competition as the exploiting of labour by capital, of the poor by the wealthy, and too little of it as the constant experiment by the ablest men for their several tasks, each trying to discover a new way in which to attain some important end. (Marshall, 1925: 283f)

When it comes to his application of the concept of competition in his partial-analysis, Marshall proceeds independently of the developing consensus of his contemporaries on the understanding of the term; he is nearer to Smith than to them; similarly to Smith, he does not define competition systematically. (Stigler, 1965: 252)<sup>277</sup>

---

<sup>276</sup> One might agree with Marshall’s argument as regards frequently perceived excessive levels of contemporary executive remuneration only if we limit “real value to the world” to “expected future share value to shareholders.” However he is almost certainly referring to business entrepreneurs who are staking their own capital on the success of the enterprise, rather than business managers, albeit the remuneration of the latter may depend substantially on measures of the success of the business.

<sup>277</sup> Stigler cites Marshall’s main statement on competition in the first edition of the *Principles*: “that the forces of demand and supply have free play in a perfect market; there is no combination among dealers on either side, but each acts for himself; and there is *free competition*; that is, buyers compete freely with buyers, and sellers compete freely with sellers. But though everyone acts for himself, his knowledge of what others are doing is supposed to be sufficient to prevent him from taking a lower price or paying a higher price than others are doing...” (Marshall, 1890: 402, emphasis original) While this reads quite definitively, and while the passage is carried through to the eighth edition in much the same sense, Stigler also points out that Marshall did not carry this level of precision systematically into his analysis, and that he spurned the concept of perfect competition the only time he mentioned it (in the eighth edition of the *Principles*: Marshall, 1920/1890, VI.II.34.)

Following Dupuit,<sup>278</sup> Marshall particularly expounded *consumer surplus* (represented graphically by the area bounded by the demand curve and the horizontal line at the price actually paid for the quantity purchased). This concept is important in his treatment of another important subject at what might be termed the other end of the competitive spectrum from perfect competition – monopoly.

Here Marshall also develops the work of Dupuit and Cournot, showing the conditions for the monopolist to maximise total net revenue, subject to varying assumptions as regards type of organisation (sole trader, private or public company), fixed and variable expenses, and taxes and subsidies. He points out that, despite appearances, it would be wrong to conclude that the amount produced under a monopoly is always less and its price to the consumer always more than if there were no monopoly. A particular example arises if a monopolist can run the whole business with lower total expenses and/or with greater efficiency than a number of smaller competing entities.

He asks if public interest is best served by monopolies in areas of activity we might describe as “natural monopolies,” such as where capital investment is so high as to apparently limit profitable operation to one provider. (Marshall, 1920/1890, V.XIV.19)

Marshall discusses circumstances where a monopolist might not optimise current net revenue in the interests of a better long-term outcome, accepting reduced net monopoly revenue because of greatly offsetting positive revenues in a related business (e.g. a monopoly railway making sale of residential land greatly more attractive). It is here that he makes much of the distinction between monopoly revenue and consumer surplus; in the above case the monopolist is giving up part of his net monopoly revenue to enhance the consumer surplus and hence potentially the community welfare of the overall arrangement (which could be particularly relevant in the case of a government-run monopoly). Given the monopolist would probably value consumer surplus lower than monopoly revenue, his objective might be to optimize the sum of net monopoly revenue and some proportion (say half) of the consumer

---

<sup>278</sup> Jules Dupuit (1804-1866), a French contemporary of Cournot (but who was unknown to him) also made significant early mathematical advances in neoclassical theory. He presented the first systematic discussion of marginal utility and its relation to the demand curve. Significant for my present discussion, Dupuit also developed the concept of consumer surplus (or “utility remaining to consumers” as he termed it – the excess of the maximum price a purchaser is willing to pay over that he must pay) and its role in the understanding of monopoly. For a description of Dupuit’s work, see Ekelund & Hébert, 2001: 274-284.

surplus. This will lead to a larger quantity produced and a lower selling price than would be the case if outright optimisation of the net monopoly revenue was the sole objective. (Marshall, 1920/1890, V.XIV.20-26)

In summary, Marshall was one of the few economists to address the questionable reputation of competition in the wider public mind, where frequently the term is used to mean (an economist would say confused with) “rivalry.” Marshall recognised the very different way in which economists use the term, and proposed an alternative term, “economic freedom,” which he believed had the advantage of being morally neutral.<sup>279</sup> Marshall also argued for the benefits of monopoly in certain situations, and (particularly in the case of a government-run monopoly) the application of part of what would otherwise be monopoly revenue as “consumer surplus”, a contribution to community benefit. Hence, Marshall recognised the widespread psychological response to competition, and sought to address ways in which competitive structures and communication of economic concepts could be modified to enhance community understanding and acceptance. None of this changes the nature of market structures, of course.

### **A3.5.6 Clark**

John Bates Clark (1847-1938) was at the forefront of original development of economic theory in America. After studying in the 1870s in Heidelberg under Karl Knies, Clark returned to the USA and taught in various universities, finally at Columbia, from where he published *The Distribution of Wealth* at the end of the century. (Clark, 1899)

Clark made progress in the understanding of marginal utility, specifically the role of improvements in the quality, rather than just the quantity, of the goods used:

What a man does, as his means increase, is, before anything else, to demand new qualities in the articles that he uses. Often he does not add at all to their number; but he causes them to be made of finer material or to be larger and handsomer. He adds to his wealth for consumption, not new things, but new utilities; and these are mainly attached to the things of the kind formerly consumed. ... The literal effect of spending his last dollar consists in the substituting of a good article for a cheap one, with which he would have contented himself if his available means had been smaller. (Clark, 1899: 214)

---

<sup>279</sup> However I doubt Marshall has achieved his objective of neutrality, given the generally positive moral associations of “freedom.”

He also shows how the competitive impact of the marginal bushel of wheat sets the standard for the whole crop, or of the marginal worker sets the wages standard for all, subject to free and active competition:

It is by assuming perfectly free competition among employers that we are able to say that the man on the intensive margin of an agricultural force of laborers will get, as pay, the value of his product. When such a man offers himself to an employer, he is virtually offering an addition to the farmer's crop. If one farmer will not pay the market price of the additional produce, another will pay it, provided that competition does its work quite perfectly. (Clark, 1899: 99f)

While his development of marginal utility as an explanation of the employment actions of a competitive employer is useful, its independence of supply and demand considerations is a major weakness. (Ekelund & Hébert, 2007: 340) The "perfectly free competition" Clark speaks of in this quotation is elucidated in an earlier passage in *The Distribution of Wealth*. (Clark, 1899: 77-81) He starts by defining the "natural" price as that caused by totally free competition, which he describes as rivalry in serving the public. Natural price can only be approximated "wherever prices are neither adjusted by a government nor vitiated by monopoly," of which there is always a trace in an industry in which labour and capital cannot move with absolute freedom.

He goes on to argue that the "simple and preliminary study of natural or *static* price that the classical economists made ... afforded an imperfect, rather than an incorrect, theory." They overlooked that, contra the competitive tendency towards a cost, no-profit basis of prices, it is the *dynamic* element in an industry and a market which varies price from this natural level, and enables the entrepreneur to make a net surplus. Only if economic friction was removed would totally free competitive movement of wages and capital mean that static prices would be achieved, and wages stabilised. But despite the continuing evidence of economic friction, Clark argues as follows:

It is best to assume that both the dynamic changes and the friction which always obstructs competition cease. Under this hypothesis, labor and capital can instantly go wherever gains are large; and this movement brings prices at once to what is now their static level. As there are hereafter to be none of the changes that alter that level, prices – both actual and normal – must hereafter remain unchanged. ... [T]his is the conception that creates a perfect static state. There is mobility of labor and capital, but there is no motion. Hence we may study static prices, pure and simple. (Clark, 1899: 81)

This specification from Clark moves neoclassical thought close to the conception of competition for analytical purposes to the hypothetical, structural state of “perfect competition,” which is never totally observable in practice.

### **A3.5.7 Knight**

The widely accepted most complete statement of the conditions for perfect competition came at the end of the neoclassical period from Frank Knight in the 1921 book based on his PhD thesis and on the ethics of competition in an essay in 1923. Knight’s work is the subject of an extended discussion in Section 7.2: here, for completeness, I set out a brief summary of the conditions he specified for perfect competition.

Knight’s objective was to set out detailed and comprehensive conditions and assumptions “[i]n order to study ... the most essential features of exchange relations,” including perfect competition, as developed in classical and neoclassical thought.

(Knight, 2014/1921: 76-81) A summary of his eight key criteria are as follows:

- (1) The relevant population is a random sample of (then) contemporary westerners;
- (2) They act rationally, know what they want, and seek it intelligently, consistent with stable motives, and know absolutely the outcomes;
- (3) They act free of any constraints, and are the absolute and final judge of their welfare and interests;
- (4) There are no obstacles to their chosen actions: changes are costless, commodities are continuously divisible, production is continuous;
- (5) Perfect, costless, continuous intercommunication ensures everyone knows and chooses among all commodities on offer;
- (6) They act individually and independently, free of prejudices etc. (other than reflected in market dealing), and of collusion or monopoly;
- (7) Goods are only acquired in open markets, free of fraud, deceit or theft;
- (8) Motives for division of labour being present and operative, each person produces a single commodity at any given time.

Knight describes these primary conditions and assumptions as “idealizations or purifications of tendencies which hold good more or less in reality. They are the conditions necessary to perfect competition.” He goes on to outline three further secondary conditions, the first of which is, in summary,

- (9) All conditions remain unchanged, either from progressive or irregular fluctuation (though (2) – perfect knowledge – overrides it).

The other two conditions are “suppositions quite contrary to the facts” which need not detain us.

Knight’s extended discussion then concentrates on how exchange, subject to these conditions and assumptions, leads to perfect competition. He concludes:

All that said about the adjustment which results from perfect competition is comprised in three statements:

- (1) Under the conditions (the price alternatives as they are fixed) each individual achieves the goal of rational action, maximizing the want satisfaction procurable with his given resources (whatever they are) in purchasing power, by distributing them among the alternatives according to the law of choice;
- (2) The conditions themselves, the prices or exchange ratios being the same for all individuals, and the relative utilities adjusted to equality with these, it follows that the relative utilities of all goods (which any individual purchases at all) are the same to every individual;
- (3) The exchange ratios will be so adjusted that at those ratios no individual will wish to exchange anything in his possession for anything in the possession of anyone else. (Knight, 2014/1921: 85)

### **A3.5.8 Summary**

The neoclassical period witnessed a revolution in economic thought, largely in the causality of market prices – the understanding that the prices of producers’ goods derive from the prices of consumers’ goods, and not vice versa, as the classical economists had argued. But as regards the understanding of competition, “revolution” is too strong a word, the focus being on the theoretical understanding of what came to be known as pure or perfect competition, particularly using mathematical approaches (which had commenced in the 1830s with Cournot).

The early neoclassical economists contributed in varying degrees: Jevons’ focus was elsewhere, but he did clarify some of the conditions for perfect competition; Menger

advanced the understanding of monopoly; and Walras paid considerable attention to competition, but his use of the concept of “perfectly free competition” comes to the same understanding as the classical economists – that competition leads to equality of prices and costs of production. To an extent Edgeworth defines the understanding of competition in the light of the needs of mathematics, continuing the development of marginal theory with a primary focus on price. Marshall’s contribution in drawing the neoclassical developments into a more coherent whole, aimed at a wider audience than just his economist peers, includes consideration of the wider social implications of competition as well as its role in economic theory; he is interested in the effects of competition on productive efficiency in addition to price. And in the later, mature phase of the neo-classical period (1900 to 1920), economists (such as J B Clark) generally further developed on how marginal principles impacted market prices. Finally, at the end of the neoclassical period, Knight spelled out in considerable detail the conditions for perfect competition.

### **A3.6 Imperfect/Monopolistic Competition and Responses**

By the 1920s economists’ focus as regards competition had been on two market conditions - perfect competition and monopoly – under neither of which there was any competitive activity as normally understood. This was widely seen as an inadequate theoretical description of observed market conditions, and so the scene was set for the emergence of a more comprehensive development.

#### **A3.6.1 Chamberlin**

Edward H Chamberlin (1899-1967) adopted the apparently oxymoronic title *monopolistic competition* for his model, aimed at better explaining the functioning of markets with both monopolistic and competitive elements than either pure monopoly or pure competition. (Chamberlin, 1962/1933) Such markets, having competitive elements and many sellers, also have monopolistic elements due to very similar products, but which can be differentiated. As well as price competition, most firms also engage in non-price competition, through such factors as patents and trademarks, brand loyalty, customer service, and location (due to buyers having local allegiances due to distance or local identification). Thus the markets in which they operate have monopolistic as well as competitive characteristics.

In Chamberlin's theory, the actual or perceived unique characteristics of the product itself, as well as its price, are variables over which the firm had control in such markets, and hence his theory departs from standard Marshallian orthodoxy, which focuses solely on price.

One of a number of means of product differentiation in monopolistic competition is advertising, obviously an unnecessary expense in either pure monopoly or pure competition. Advertising is aimed at moving the demand curve to the right, to increase overall demand for the product (and its substitutes), and/or to increase the product's share of demand (i.e. at the expense of substitutes).

Chamberlin argued the monopolistically competitive firm faces two negatively sloped demand curves: one perceived by the individual firm and somewhat sloped, and the other actual for the whole market and more steeply sloped. He starts with the individual firm's product positioned as regards price and quantity at the intersection of these two demand curves; the individual firm is inclined to argue that increasing or reducing price would reduce or increase sales respectively in line with its perceived demand curve, assuming little or no response from the large number of competitors. Reducing price would thus give an advantage over the firm's competitors, assuming they do not follow by also reducing price. The problem is that if the firm can benefit in this way, so can the competitors, and consequentially the demand curve almost certainly moves progressively to the more steeply sloped whole market demand curve below the existing price point. Thus the demand curve is "reconstructed" as the individual firm's perceived curve for prices above the current price point, and the whole market curve for price below the current price point.

(Chamberlin, 1962/1933: 89-92)

The firm may also seek to increase demand by advertising (or other means of product differentiation), and hence moving both demand functions up and to the right, thereby increasing profits; these expenditures are optimized when the marginal additional selling costs equal the marginal additional revenue generated.

(Chamberlin, 1962/1933: 94-96)

Chamberlin then develops the long term equilibrium solution to monopolistic competition, the famous so-called "tangency solution." Any profits the individual firm had been making at the existing price point (because it was above the long-run

average cost curve) are eliminated as the reducing competitive price moves down the more steeply sloped whole market demand curve, until it intersects the long-run average cost curve. Economic profits are zero at this point, and a new individual firm demand curve is established, parallel to the original one and tangential to the long-run average cost curve. (Chamberlin, 1962/1933: 92-94)

The main criticism of long-term equilibrium under Chamberlin's model of monopolistic competition is that, compared with the position under Marshallian perfect competition, it can be argued that it is inefficient. The long-term average cost curve is made up of tangencies to a series of short-term average cost curves (according to the scale of operations). The whole market demand curve is tangential to the long-term average cost curve at a point before the minimum value of the latter curve, which is also the minimum point on the particular short-term average cost curve representing the optimum scale of plant from society's point of view. The gap between price points on the whole market demand curve from the tangential point to that at the minimum of the long- (and optimal short-) term average cost curves represents the inefficiency, for two reasons:

- because the monopolistically competitive firm does not utilize its existing resources to produce a socially optimum rate of output, and
- because a socially optimum scale of plant is rendered impossible as a result of product differentiation, which creates a negatively sloped demand function. (Ekelund & Hébert, 2007: 460)

Chamberlin vigorously rejected this and other criticisms (Chamberlin, 1962/1933, Chapter IX: 191-218), arguing that product differentiation provided customer utility, not measured by the model, and not even allowed by the homogeneous product of perfect competition. Whether this increased social welfare offsets (more or less) the loss in excess social capacity, is beyond my scope here. Chamberlin initiated and stimulated a theoretical controversy which he pursued for the rest of his career. The whole subject of monopolistic competition, including Chamberlin's arguments, has been the subject of considerable further debate.<sup>280</sup> However writers have increasingly argued for an expanded model of perfect competition because of the substantial quantity of empirical evidence for its effectiveness in describing price and quantity in individual markets.

---

<sup>280</sup> See the substantial bibliography in Ekelund & Hébert, 2007: 468-470.

### A3.6.2 Robinson

At the same time as Chamberlin's book was first published, Joan Robinson (1903-1983) produced *The Economics of Imperfect Competition*. (Robinson, 1969/1933) She provided a "box of tools" (her term) for the partial-equilibrium analysis of markets (Robinson, 1969/1933: 1, 327), using the pure monopoly model for all the intermediate categories of imperfect competition (and in this sense her approach was both more traditional and more general than Chamberlin's). However she added little to the roles of product differentiation and advertising to the understanding of imperfect competition; she was unaware of Chamberlin's thesis at the time of writing her book and largely avoided responding to his rather aggressive defence of his views and response to her thesis, either in the second edition of her book or otherwise.

Building on the work of Dupuit and Pigou on *price discrimination* (where differential prices are charged for identical products by a firm with monopoly power to different individuals or groups), Robinson refined and developed the basis of the theory. (Robinson, 1969/1933, Chapter 15: 179-202) The prerequisites for this market segmentation are a downward-sloping demand curve, clearly separable market segments for different individuals or groups (such as cinema tickets for children, adults and seniors), and different relative profitability levels in the separate market segments, measured against the standard monopoly price, for identical products. The fundamental idea is that the monopolist increases profit by transferring output from market segments producing lower additional revenues per unit sold to those producing higher additional revenues per unit sold.

In 1844, ninety years before Robinson, Dupuit had demonstrated the basic idea of price discrimination (Dupuit, 1952/1844: 83-110), and twenty years before her, in 1912, Pigou had shown how marginal analysis quantifies the effect. (Pigou, 1920/1912) Robinson sets out Pigou's verbal model graphically, plotting the demand and marginal revenue curves for the separate market segments on the standard monopoly graph, and demonstrating the price adjustments and inter-market segment quantity movements which equalise marginal revenues, but do not change total quantity produced. (Robinson, 1969/1933: 182f)

One of the main criticisms of monopoly markets was the reduction in economic welfare it created by limiting the quantity produced below that which would result

under perfect competition. Price discrimination (in this example – see below) did nothing to address this since the total quantity produced remained the same as for simple monopoly (though it increased the monopolist's profits).

Robinson's specific contribution was to analyse numerous other cases than those involving the simple, linear curves implicitly used by Pigou. (Pigou, 1920, II.XVII) Robinson shows that his analysis only produces the same output if the concavity/convexity of the demand curves in the market segments are the same. The price discrimination output will be larger or smaller than under simple monopoly if the more elastic market segment has a demand curve which is relatively more concave or convex respectively than the demand curve in the less elastic market segment. (Robinson, 1969/1933: 188-195)

Thus there is no simple conclusion to be drawn about the relative merits of simple monopoly pricing and price discrimination (assuming suitable market segments can be identified). Many forms of price discrimination are outlawed politically because of public perceptions of lack of "fairness," despite the fact that in certain cases price discrimination can be argued to increase social welfare because it leads to increased output.

Robinson examined other aspects of imperfect competition, including the theory of monopsony (which term she coined), particularly applied to the "exploitation" of labour. (Robinson, 1969/1933, Chapter 26: 292-304) As well as situations where there is only one employer (e.g. in a single employer mining town), "[m]onopsonistic exploitation can also arise where firms are not acting in concert, but where the supply of labour to each firm is less than perfectly elastic, just as monopolistic exploitation arises where the market for selling the commodity is imperfect." (Robinson, 1969/1933: 296)

She shows how imperfect discrimination between workers with equal efficiencies, but whose conditions of supply are different, can arise. Analogously to price discrimination under monopoly, discussed above, the example she cites is higher wages for men, who are organised in a trade union which enforces a minimum wage, than for women, who are not unionised. (Robinson, 1969/1933: 302-304)

### **A3.6.3 Austrian Responses**

Criticisms of the theoretical developments of Chamberlin and Robinson led to the focus turning to market structure and behaviour of the firm within that structure, which can be analysed as a spectrum ranging from perfect competition to perfect monopoly. These developments were in turn criticised by Hayek and Schumpeter; Hayek on the grounds that competition was the means by which producers learnt what consumers wanted (Hayek, 2002), and Schumpeter on the grounds that competition was essential to understanding economic development and innovation. (Schumpeter, 1975)

To both Hayek and Schumpeter, competition was a process rather than germane to a structure. Despite their efforts (and of others more recently, notably Kirzner), the market structure approach has dominated, and perfect competition and monopoly were the primary models with which economists worked in the post-World War II period. In 1957, Stigler was able to say “that the concept of perfect competition has defeated its newer rivals [i.e. imperfect and monopolistic competition] in the decisive area; the day-to-day work of the economic theorist... Today the concept of perfect competition is being used more widely by the profession in its theoretical work than at any time in the past”. (Stigler, 1965: 267) Arguably, this conclusion is a reasonable contemporary representation of the situation, though there remain critics (e.g. Blaug, 1996: 594).

### **A3.6.4 Summary**

Imperfect or monopolistic competition was developed, but with quite different approaches, by Chamberlin and Robinson independently in 1933, in response to the widely perceived deficiency of perfect competition and monopoly as models. Chamberlin focused on aspects other than price, by which producers could distinguish their products, such as through advertising and customer service. He analysed the “reconstruction” of the demand function in such markets, arguing that in the long term the advantage any particular producer might enjoy would be lost assuming other producers respond similarly. The main criticism of Chamberlin’s model, which he vigorously rebutted, was that it was inefficient compared with traditional perfect competition. Robinson focused on a “box of tools” using traditional partial-equilibrium methods; she developed price discrimination analyses to markets which could be

segmented, where the producer would endeavour to focus growth in the more profitable segments. She also analysed other aspects of imperfect competition, such as monopsony, particularly as applied to wage discrimination of non-unionised women.

Despite the “competition as process” views of Austrian economists, perfect competition and monopoly have continued to be the main models used by the majority of economists.

## BIBLIOGRAPHY

- Abbot, Patrick and 136 others, "Inclusive fitness theory and eusociality" in *Nature*, brief communication arising, published online on 23 March 2011 at <http://www.nature.com/nature/journal/v471/n7339/full/nature09831.html>
- Adams, Robert M., "Motive Utilitarianism" in *Journal of Philosophy*, Vol. 73, 1976: 467-481.
- Alvey, James E., "The hidden theology of Adam Smith: A belated reply to Hill" in *European Journal of the History of Economic Thought*, 11 (4) February 2004: 623-628.
- Andreoni, James, "Giving with Impure Altruism: Applications to Charity and Ricardian Equivalence" in *Journal of Political Economy* 97 6, 1989: 1447–1458.
- Andreoni, James "Impure Altruism and Donations to Public Goods: A Theory of Warm-Glow Giving" in *Economic Journal* 100 401, 1990: 464–477.
- Andreoni, James, William T. Harbaugh & Lise Vesterlund, "Altruism in Experiments" in (eds.) Steven N. Durlauf & Lawrence E. Blume, *Behavioural And Experimental Economics*, Macmillan, 2010/2008: 6-13.
- Angier, Natalie, "Edward O. Wilson's New Take on Human Nature" in *Smithsonian Magazine*, April 2012. <http://www.smithsonianmag.com/science-nature/edward-o-wilsons-new-take-on-human-nature-160810520/?no-ist>
- Aquinas, Thomas, *Summa Theologiae*, trans. English Dominican Fathers, Christian Classics, 1981.
- Ashraf, Nava, Colin F. Camerer & George Lowenstein, "Adam Smith, Behavioral Economist" in *Journal of Economic Perspectives*, Vol. 19 No. 3, Summer 2005: 1-15.
- Atherton, John, *Christianity and the Market: Christian Social Thought for Our Times*, SPCK, 1992.
- Atherton, John, *Transfiguring Capitalism: An Enquiry into Religion and Global Change*, SCM Press, 2008.
- Augier, Laurent & Christine Théré, "James Steuart's Approach to Stability of Prices and Economic Policy: The example of grain prices" in Tortajada, 1999.
- Backhouse, Roger E., *The Ordinary Business of Life: A History of Economics from the Ancient World to the Twenty-First Century*, Princeton University Press, 2002.
- Bailey, Kenneth E., *Poet & Peasant: A Literary-Cultural Approach to the Parables of Luke*, Eerdmans Publishing, 1976.
- Baird, James, *Happiness Genes*, New Page Books, 2010.
- Barth, Karl, "The Epistle to the Philippians" ET James W. Leitch, SCM, 1962.
- Bauer, Walter "καρδία, ας, ἦ" in *A Greek-English Lexicon of the New Testament and Other Early Christian Literature*, 2<sup>nd</sup> ed., ET by W F Arndt & F W Gingrich), 2<sup>nd</sup> ed., further revised & augmented by F W Gingrich & F W Danker, University of Chicago Press, 1979/1957: 403f.
- Beed, Clive, "Jesus and Competition" in *Faith & Economics* 45, Association of Christian Economists (USA), 2005: 41-57.
- Behm, J, "kardia in the NT," in Gerhard Kittel & Gerhard Friedrich (eds.) ET & abridged in one volume by Geoffrey W. Bromiley, *Theological Dictionary of the New Testament*, William B. Eerdmans/Paternoster Press, 1985: 415f.
- Bell, Daniel M., Jr., *The Economy of Desire: Christianity and Capitalism in a Postmodern World*, Baker Academic, 2012.

- Bertrand, Joseph L. F., "Théorie mathématique de la richesse sociale par Léon Walras: Recherches sur les principes mathématiques de la théorie des richesses par Augustin Cournot," *Journal des savants* (Septembre 1883): 499-508, referenced in Ekelund & Hébert, 2007: 586.
- Bianchini, Marco, "Some fundamental aspects of Italian eighteenth-century economic thought" in Donald A. Walker (ed.), *Perspectives on the history of economic thought: Selected papers from the History of Economics Society Conference*, Vol. 1: *Classical and neoclassical thought*, Edward Elgar, 1989.
- Biéler, André, *La Pensée Economique et Sociale de Calvin*, Librairie de l'Université de Genève, 1961, quoted in Paul Marshall, "Calvin, Politics, and Political Science", in Hall & Padgett, 2010: 154.
- Blackburn, Simon, *Ruling Passions: A Theory of Practical Reasoning*, Oxford University Press, 1998.
- Blaug, Mark, "Introduction", in *David Hume (1711-1776) and James Steuart (1712-1780)*, *Pioneers in Economics*, Vol. 11, ed. Mark Blaug, Edward Elgar, 1991.
- Blaug, Mark, *Economic Theory in Retrospect*, 5<sup>th</sup> ed., Cambridge University Press, 1996.
- Bowler, Kate, *Blessed: A History of the American Prosperity Gospel*, Oxford University Press, 2013.
- Brennan, Geoffrey & Alan Hamlin, *Democratic Devices and Desires (Theories of Institutional Design)*, Cambridge University Press, 2000.
- Brennan, Geoffrey & Philip Pettit, *The Economy of Esteem: An Essay on Civil and Political Society*, Oxford University Press, 2004.
- Bretsen, Stephen N., "In Competition with Godless Hordes: Are Some Strategic Approaches More Appropriate for a Faithful Business?" in *Journal of Biblical Integration in Business*, 13, 2010: 110-127.
- Bright, John, *A History of Israel*, 3<sup>rd</sup> ed., SCM Press, 1981/1960.
- Broome, John, *Climate Matters: Ethics in a Warming World*, W. W. Norton, 2012.
- Brueggemann, Walter, "The Liturgy of Abundance, The Myth of Scarcity" in *Christian Century*, 24-31 March, 1999. <http://www.religion-online.org/showarticle.asp?title=533>
- Bruner, Frederick D., *Matthew: A Commentary Vol 1: The Christbook: Matthew 1-12*, William B. Eerdmans, 2004/1987.
- Buchanan, James M., "The Economizing Element in Knight's Ethical Critique of Capitalist Order" in *Ethics* 98 No. 1, October 1987: 61-75.
- Burridge, Richard A, *Imitating Jesus: An Inclusive Approach to New Testament Ethics*, William B. Eerdmans, 2007.
- Calvin, John, *Commentary on Matthew, Mark, Luke – Vol.1*, Christian Classics Ethereal Library, Commentary on Mt 5:7, 1555. <http://www.ccel.org/ccel/calvin/calcom31.pdf>
- Calvin, John, *Institutes of the Christian Religion*, ET Henry Beveridge), Eerdmans Publishing, 1997/1559.
- Cameron, Andrew, Text of homily delivered at St Mark's National Theological Centre, Canberra on Luke 16:1-8 and Romans 15:14-21, Personal communication, 5 February 2016.
- Campbell Douglas A., *The Quest for Paul's Gospel: A Suggested Strategy*, T & T Clark, 2005.
- Cantillon, Richard, *Essai sur la nature du commerce en general*, ed. H. Higgs, Macmillan, 1931/1755.
- Chadwick, Owen, *The Victorian Church, Part One: 1829-1859*, SCM Press, 1971.

- Chamberlin, Edward H., *The Theory of Monopolistic Competition: A Re-orientation of the Theory of Value*, 8<sup>th</sup> ed., Harvard University Press, 1962 (1<sup>st</sup> ed. 1933).
- Charles, Rodger, *Christian social witness and teaching: the Catholic tradition from Genesis to Centesimus Annus, Vol. 1 From Biblical times to the late nineteenth century*, Gracewing, 1998.
- Chewning, Richard C. "John Calvin's Impact on Business" in Hall & Padgett, 2010: 193.
- Claeys, Gregory, "The 'Survival of the Fittest' and the Origins of Social Darwinism" in *Journal of the History of Ideas*, Vol. 61 No. 2, April 2000: 223-240.
- Clark, John Bates, *The Distribution of Wealth*, Macmillan, 1899.  
[http://lf-oll.s3.amazonaws.com/titles/329/Clark\\_Wealth0190\\_Bk.pdf](http://lf-oll.s3.amazonaws.com/titles/329/Clark_Wealth0190_Bk.pdf)
- Coakley, Sarah, *Sacrifice Regained: Evolution, Cooperation and God* (the 2012 Gifford Lectures at the University of Aberdeen), Oxford University Press, forthcoming in 2016; Youtube videos of the delivery of the lectures available at  
<http://www.giffordlectures.org/lectures/sacrifice-regained-evolution-cooperation-and-god>.
- Coase, Ronald, "The Nature of the Firm" in *Economica*, Vol. 4 Issue 16, 1937: 386-405.
- Compendium of the Social Doctrine of the Church*  
[http://www.vatican.va/roman\\_curia/pontifical\\_councils/justpeace/documents/rc\\_pc\\_justpeace\\_doc\\_20060526\\_compendio-dott-soc\\_en.html](http://www.vatican.va/roman_curia/pontifical_councils/justpeace/documents/rc_pc_justpeace_doc_20060526_compendio-dott-soc_en.html)
- Cooper, Ben, "Game Theory in Christian Perspective" in *Faith & Economics*, No. 65 (Spring 2015): 1-23.
- Collins, Jim & Jerry I. Porras, *Built to Last: Successful Habits of Visionary Companies*, Harper, 2004/1994.
- Cournot, Augustin, *Researches into the Mathematical Principles of the Theory of Wealth*, ET N. T. Bacon, Augustus M. Kelley, 1960/1838, 4.  
<https://docs.google.com/file/d/0B-2m8qXYCRrKbIVBN0tJbFJ5NUE/edit?pli=1>
- Darwin, Charles, *The Descent of Man, and Selection in Relation to Sex*, John Murray, 1871.
- Davidson, Peter, *Poverty in Australia 2012*, 3<sup>rd</sup> edition, Australian Council of Social Service, November 2013. [http://acoss.wpengine.com/wp-content/uploads/2015/06/Poverty\\_Report\\_2013\\_FINAL.pdf](http://acoss.wpengine.com/wp-content/uploads/2015/06/Poverty_Report_2013_FINAL.pdf)
- Dawkins, Richard, *The Selfish Gene*, Oxford University Press, 2006/1989/1976.
- Dawkins, Richard, *The Descent of Edward Wilson* (review of *The Social Conquest of the Earth* by Edward O. Wilson), Prospect Magazine, June 2012.
- Dixon, Thomas, *The Invention of Altruism: Making Moral Meanings in Victorian Britain*, Oxford University Press/British Academy, 2008.
- Drury, Keith, *John Wesley's "Trilateral," 1997*.  
[www.drurywriting.com/keith/wesley.htm](http://www.drurywriting.com/keith/wesley.htm)
- Dugatkin, Lee A., "Inclusive Fitness Theory from Darwin to Hamilton" in *Genetics*, Vol. 176 No. 3, 1 July, 2007: 1375-1380.
- Dupuit, Jules, "On the Measurement of the Utility of Public Works," in R. H. Barback (ET), *International Economic Papers*, No. 2, Macmillan, 1952 (1844), 83-110.
- Edgeworth, Francis Y., "Economical Calculus" in *Mathematical Psychics: An Essay on the Application of Mathematics to the Moral Sciences*, Augustus M. Kelley, 1967/1881.
- Edgeworth, Francis Y., "The Pure Theory of Monopoly" in *Papers Relating to Political Economy*, Vol. 1, Macmillan, 1925/1897.  
<http://gallica.bnf.fr/ark:/12148/bpt6k243783/f126.image.r=francis%20edgeworth%20monopoly.langEN>

- Eglash, Ron & Colin K. Garvey, "Basins of Attraction for Generative Justice" in *Chaos Theory in Politics*, Santo Banerjee, Sefika Sule Ercetin & Ali Tekin (eds.), Springer, 2014: 75-88.
- Ekelund, Robert B. Jr. & Robert F. Hébert, *A History of Economic Theory and Method*, 5<sup>th</sup> ed., Waveland Press, 2007.
- Emmett, Ross B., "Frank H. Knight: An Annotated Bibliography" on *The Library of Economics and Liberty Website*.  
<http://www.econlib.org/library/Knight/KnightBib.html> .
- Erickson, Millard J., *Christian Theology*, Baker Book House, 1983.
- Faccarello, Gilbert, "From the Foundation of Liberal Political Economy to its Critique: Theology and Economics in France in the Eighteenth and Nineteenth Centuries" in Oslington (ed.), 2014, 76-78.
- Fautin, Daphne G., "The Anemonefish Symbiosis: What is Known and What is Not" in *Symbiosis*, 10, 1991: 23-46.
- Fee, Gordon D., *The First Epistle to the Corinthians* (The New International Commentary on the New Testament), William B. Eerdmans, 1987.
- Fee, Gordon D., *Philippians*, IVP New Testament Commentary Series, IVP, 1999.
- Fehr, Ernst & Simon Gächter, "Altruistic punishment in humans" in *Nature*, 415 (10 January 2002): 137-140.
- Fehr, Ernst, Urs Fischbacher & Simon Gächter, "Strong Reciprocity, Human Cooperation and the Enforcement of Social Norms" in *Human Nature*, 13, 2002: 1-25.
- Foley, Vernard, "The Division of Labor in Plato and Smith" in *History of Political Economy*, Vol. 6 No. 2, Summer 1974: 220-242.
- Fu-Lai Yu, Tony, "The economics of Frank H. Knight: An Austrian interpretation" in *Forum for Social Economics*, Volume 31, Issue 2, March 2002: 1-23.
- Furnish, Victor P., *The Love Command in the New Testament*, Abingdon, 1972.
- Gintis, Herbert, "Strong Reciprocity and Human Sociality" in *Journal of Theoretical Biology*, 206, 2000: 169-179.
- Gladwell, Malcolm, *Outliers: The Story of Success*, Little, Brown, 2008.
- Godwin, William, *Enquiry Concerning Political Justice, and its Influence on General Virtue and Happiness*, 1<sup>st</sup> ed., G. G. J. & J. Robinson, 1793.
- Grenz, J. Stanley, *The Moral Quest: Foundations of Christian Ethics*, InterVarsity Press, 1997.
- Groenewegen, Peter D., *The Economics of A. R. J. Turgot*, Martinus Nijhoff, 1977.
- Groenewegen, Peter D., *Eighteenth Century Economics: Turgot, Beccaria and Smith and their contemporaries*, Routledge, 2002.
- Grudem, Wayne, *Business for the Glory of God: The Bible's Teaching on the Moral Goodness of Business*, Crossway, 2003.
- Gul, Faruk & Wolfgang Pesendorfer, "The Case for Mindless Economics"  
<https://www.princeton.edu/~pesendor/mindless.pdf>
- Güth Werner & Hartmut Kliemt, "The Indirect Evolutionary Approach: Bridging the Gap Between Rationality and Adaptation" in *Rationality and Society*, August 1998, Vol. 10, No. 3: 377-399.
- Hagan, Michael J., "St. Thomas Aquinas: Economics of the Just Society."  
<http://www2.gcc.edu/dept/econ/ASSC/Papers2013/ASSC2013-HaganMichael.pdf>
- Hagner, Donald A., *Word Biblical Commentary; Vol. 33B; Matthew 14-28*, Word Books, 1995.

- Hall, David W. & Marvin Padgett (eds.), *Calvin and Culture: Exploring a Worldview*, P & R Publishing, 2010.
- Hamilton, Alexander, *Federalist*, No. 72, 1788. [http://press-pubs.uchicago.edu/founders/documents/a2\\_1\\_1s15.html](http://press-pubs.uchicago.edu/founders/documents/a2_1_1s15.html)
- Hamilton, Alexander, *Federalist*, No. 76, 1788. [http://press-pubs.uchicago.edu/founders/documents/a2\\_2\\_2-3s39.html](http://press-pubs.uchicago.edu/founders/documents/a2_2_2-3s39.html)
- Hamilton, William D., "The Genetical Evolution of Social Behaviour" I & II in *Journal of Theoretical Biology*, 7 (1), July 1964: 1-16 & 17-52.
- Hansen, G. Walter, *The Letter to the Philippians*, Pillar New Testament Commentary, Eerdmans/Apollos, 2009.
- Harvey, John, J. St G. C. Heath, Malcolm Spencer, William Temple & H. G. Wood, *Competition: A Study in Human Motivation*, MacMillan, 1917/General Books, 2009 (subsequently cited as Temple *et al*, 2009/1917). <http://www.forgottenbooks.com>
- Hayek, Friedrich A. von, "The Use of Knowledge in Society" in *American Economic Review*, 35(4) 1945: 519-530.
- Hayek, Friedrich A. von, *The Constitution of Liberty*, University of Chicago Press, 1960.
- Hayek, Friedrich A. von, "Introduction to a German translation of Cantillon's *Essai*," Gustav Fischer, 1931, ET by Michael Suilleabhain, *Journal of Libertarian Studies*, 7 (Autumn 1985).
- Hayek, Friedrich A. von, *The Fatal Conceit*, University of Chicago Press, 1988.
- Hayek, Friedrich A., "Competition as a Discovery Procedure," in *The Quarterly Journal of Austrian Economics*, Vol. 5 No. 3, 2002: 9-23., esp. 13-15. [http://direct.mises.org/journals/qjae/pdf/qjae5\\_3\\_3.pdf](http://direct.mises.org/journals/qjae/pdf/qjae5_3_3.pdf)
- Hays, Richard B., *The Moral Vision of the New Testament: A Contemporary Introduction to New Testament Ethics*, Harper, 1996.
- Hecht, Jacqueline, (ed.) *Pierre de Boisguilbert ou la naissance de l'économie politique*, INED, 1966.
- Heckscher, Eli F., *Mercantilism*, Vol. 1, Allen & Unwin, 1962.
- Henderson, John P., "Friendly Critics: Malthus and Ricardo on Political Economy" in John P. Henderson & John B. Davis, *The Life and Economics of David Ricardo*, eds. Warren J. Samuels & Gilbert B. Davis, Kluwer Academic, 1997.
- Heyne, Paul, "Economics is a Way of Thinking" in "Are Economists Basically Immoral?" and Other Essays on Economics, Ethics, and Religion by Paul Heyne, eds. Geoffrey Brennan & A.M.C. Waterman, Liberty Fund, Chapter 16, 2008: 293-301.
- Heyne, Paul L., Peter J. Boettke & David L. Prychitko, *The Economic Way of Thinking*, 13th ed., Pearson, 2013/1973.
- High, Jack, "Introduction Split Personality: A Brief History of Competition in Economic Theory" in *Competition*, ed. Jack High, Edward Elgar, 2001: xiii-xlv.
- Hill, Lisa "The Hidden Theology of Adam Smith" in *European Journal of the History of Economic Thought* 8 (1), Spring 2001: 1-29.
- Hill, Lisa "Further Reflections on the Hidden Theology of Adam Smith" in *European Journal of the History of Economic Thought* 11 (4), 2004: 629-35.
- Hilton, Boyd, "Chalmers as Political Economist," in A. C. Cheyne (ed.), *The Practical and the Pious: Essays on Thomas Chalmers (1780-1847)*, Chapter VII, Saint Andrew Press, 1985: 141-156.
- History of Economic Thought Website*. <http://www.newschool.edu/nssr/het/>
- Hollander, Samuel, *The Economics of Adam Smith*, University of Toronto Press, 1973.

- Hollander, Samuel, *The economics of David Ricardo*, University of Toronto Press, 1979.
- Hollander, Samuel, *Classical Economics*, Blackwell, 1987.
- Hollander, Samuel, "New Editions of Malthus" in *The Literature of Political Economy: Collected Essays II*, Routledge, 1995.
- Hutchison, Terence, *Before Adam Smith: The Emergence of Political Economy, 1662-1776*, Basil Blackwell, 1988.
- Jackson, Timothy P., "The Christian Love Ethic and Evolutionary 'Cooperation'": The Lessons and Limits of Eudaimonism and Game Theory' in (eds.) Nowak & Coakley, 2013: 307-325.
- Jevons, William S., *Theory of Political Economy*, 5th ed., Reprints of Economic Classics, 1957/1871. [www.mises.org/books/political\\_economy\\_jevons.pdf](http://www.mises.org/books/political_economy_jevons.pdf)
- John Paul II, *Laborem Exercens, Encyclical of Pope John Paul II on Human Work*, 1981. [http://w2.vatican.va/content/leo-xiii/en/encyclicals/documents/hf\\_l-xiii\\_enc\\_15051891\\_rerum-novarum.html](http://w2.vatican.va/content/leo-xiii/en/encyclicals/documents/hf_l-xiii_enc_15051891_rerum-novarum.html)
- Johnson, Sharon G. & Galen Smith, "Perspectives on Competition – Christian and Otherwise," Christian Business Faculty Association 19<sup>th</sup> Annual Conference, Boise, Idaho, USA, October 2002. [http://w.cbfa.org/Johnson\\_Smith.pdf](http://w.cbfa.org/Johnson_Smith.pdf)
- Knight, Frank H., *Risk, Uncertainty and Profit*, Martino Publishing/Houghton Mifflin, 2014/1921.
- Knight, Frank H., "Ethics and the Economic Interpretation" in Knight, 2004/1935: 11-32, reproducing the paper from *Quarterly Journal of Economics*, xxxvi, 1922: 454-481.
- Knight, Frank H., "The Ethics of Competition" in Knight, 2004/1935: 33-67, reproducing the paper from *Quarterly Journal of Economics*, xxxvii, 1923: 579-624.
- Knight, Frank H., "Preface" to the reissue of *Risk, Uncertainty and Profit*, 1933. [https://mises.org/sites/default/files/Risk,%20Uncertainty,%20and%20Profit\\_4.pdf](https://mises.org/sites/default/files/Risk,%20Uncertainty,%20and%20Profit_4.pdf)
- Knight, Frank H., *The Ethics of Competition* (Essays of F. H. Knight), ed. and introduction by Richard Boyd, Transaction Publishers, 2004/1935.
- Langholm, Odd, *Economics in the Medieval Schools: Wealth, Exchange, Value, Money and Usury according to the Paris Theological Tradition 1200-1350*, E. J. Brill, 1992.
- Lausanne Theology Working Group, *A Statement on the Prosperity Gospel*, January 2010. <https://www.lausanne.org/content/a-statement-on-the-prosperity-gospel>
- Lehrer, Jonah, "Kin and Kind: A fight about the genetics of altruism" in *The New Yorker*, 5 March 2012: 42.
- Leo XIII, *Rerum Novarum: Encyclical of Pope Leo XIII on Capital and Labor*, 1891. [http://w2.vatican.va/content/leo-xiii/en/encyclicals/documents/hf\\_l-xiii\\_enc\\_15051891\\_rerum-novarum.html](http://w2.vatican.va/content/leo-xiii/en/encyclicals/documents/hf_l-xiii_enc_15051891_rerum-novarum.html)
- Lewis, C. S., *Mere Christianity*, Harper, 2001/1952.
- Long, Brendan, "Adam Smith's Theodicy" in *Adam Smith as Theologian*, (ed.) Paul Oslington, Routledge, 2011: 98-105.
- Luther, Martin (1524) *Trade and Usury*. [http://www.lutherdansk.dk/Martin%20Luther%20-%20On%20trading%20and%20usury%201524/ON%20TRADING%20AND%20USURY%20-%20backup%20020306.htm#\\_Toc129069586](http://www.lutherdansk.dk/Martin%20Luther%20-%20On%20trading%20and%20usury%201524/ON%20TRADING%20AND%20USURY%20-%20backup%20020306.htm#_Toc129069586)
- MacDonald, Robert A., "Ricardo's Criticisms of Adam Smith" in *The Quarterly Journal of Economics*, Vol. 26, No. 4, August 1912: 549-592.

- MacFarlane, Alan, *Thomas Malthus and the Making of the Modern World*, undated  
[http://www.alanmacfarlane.com/TEXTS/Malthus\\_final.pdf](http://www.alanmacfarlane.com/TEXTS/Malthus_final.pdf)
- MacIntyre, Alasdair, *After Virtue: a study in moral theory*, 2<sup>nd</sup> ed., Duckworth, 1985 (1<sup>st</sup> ed. 1981).
- Malthus, Thomas R., *An Essay on the Principle of Population*, Printed for J. Johnson, 1798. <http://www.gutenberg.org/files/4239/4239-h/4239-h.htm>
- Malthus, Thomas R., *A Summary View of the Principle of Population*, ed. A. Flew, Penguin, 1970/1830.
- Malthus, Thomas R., *Principles of Political Economy*, W. Pickering, 1836.  
[http://oll.libertyfund.org/?option=com\\_staticxt&staticfile=show.php%3Ftitle=2188&chapter=202530&layout=html&Itemid=27](http://oll.libertyfund.org/?option=com_staticxt&staticfile=show.php%3Ftitle=2188&chapter=202530&layout=html&Itemid=27)
- Mandeville, Bernard, *The Fable of the Bees or Private Vices, Publick Benefits*, Vol. 1, Clarendon Press. 1732 <http://oll.libertyfund.org/titles/mandeville-the-fable-of-the-bees-or-private-vices-publick-benefits-vol-1> .
- Marshall, Alfred, *Principles of Economics*, 1st ed., Macmillan, 1890.  
<http://archive.org/stream/principlesecono00marsgoog#page/n436/mode/2up>
- Marshall, Alfred, *Principles of Economics: An Introductory Volume*, 8<sup>th</sup> ed., Macmillan, 1920/1890. [www.econlib.org/library/Marshall/marP.html](http://www.econlib.org/library/Marshall/marP.html) .
- Marshall, Alfred, "Some Aspects of Competition" in A. C. Pigou (ed.), *Memorials of Alfred Marshall*, Part II Ch XI, Augustus M. Kelley, 1925: 281-284.
- Marshall, I. Howard, *The Gospel of Luke: A Commentary on the Greek Text*, Paternoster Press/Eerdmans Publishing, 1978.
- Marshall, I. Howard, *The Epistle to the Philippians*, Epworth Commentaries, Epworth Press, 1991.
- Marx, Karl, *Das Kapital: Kritik der Politischen Ökonomie*, ET *Capital: A Critique of Political Economy*, 3 Vols., International Publishers, 1967/1894/1893/1867.
- Matthews, Peter Hans & Andreas Ortmann, "An Austrian (Mis)Reads Adam Smith: A Critique of Rothbard as Intellectual Historian." <http://home.cerge-ei.cz/ortmann/papers/08Rothbardpaper.pdf>
- Maurice, J. Frederick, *The Life of Frederick Denison Maurice, Chiefly Told in His Own Letters*, 2 Vols., Macmillan, 1884.
- McCloskey, Deidre N., *The Bourgeois Virtues: Ethics for an Age of Commerce*, University of Chicago Press, 2006.
- McGrath, Alister E., *A Life of John Calvin: A Study in the Shaping of Western Culture*, Basil Blackwell, 1990.
- McGrath, Alister E., "Calvin and the Christian Calling," in *First Things* 94, 1999: 31-35.  
<http://www.firstthings.com/article/2007/01/calvin-and-the-christian-calling-20>
- McNulty, Paul J., "A Note on the History of Perfect Competition," in *Journal of Political Economy*, Vol. 75 No. 4, Part 1 (August 1967).
- Meier, Samuel A., "Motives," in Walter A. Elwell (ed.) *Evangelical Dictionary of Biblical Theology*, Baker Books, 1996.
- Menger, Carl, *Principles of Economics*, ET James Dingwall & Bert F. Hoselitz, Ludwig von Mises Institute, 2007/1950/1871.  
<http://mises.org/Books/mengerprinciples.pdf>
- Metzger, Bruce M., *Breaking the Code: Understanding the Book of Revelation*, Abingdon, 1993.
- Milbank, John, *Theology and Social Theory: Beyond Secular Reason*, Blackwell, 1990.

- Mill, John Stuart, *Principles of Political Economy: With Some of Their Applications to Social Philosophy*, Augustus M. Kelley, 1973/1852/1848.  
[http://lf-oll.s3.amazonaws.com/titles/101/0199\\_Bk.pdf](http://lf-oll.s3.amazonaws.com/titles/101/0199_Bk.pdf)
- Morris, Leon, *The Revelation of St. John: An Introduction and Commentary*, Tyndale New Testament Commentaries, William B. Eerdmans, 1981.
- Murphy, Francesca A. & Philip G. Ziegler, *The Providence of God*, T & T Clark, 2009.
- Nelson, M. T., "Altruism" in (eds.) David J. Atkinson & David H. Field, *New Dictionary of Christian Ethics & Pastoral Theology*, InterVarsity Press, 1995: 155.
- Nelson, Robert H., "Frank Knight and Original Sin" in *The Independent Review* VI No. 1, 2001.
- Newton, Isaac, *Philosophiæ Naturalis Principia Mathematica*, 1687. ET  
[https://www.archive.org/stream/newtonspmathema00newtrich/newtonspmathema00newtrich\\_djvu.txt](https://www.archive.org/stream/newtonspmathema00newtrich/newtonspmathema00newtrich_djvu.txt)
- Niebuhr, H. Richard, *Christ and Culture*, Harper Collins, 2001/1951.
- Nietzsche, Friedrich, *On the Genealogy of Morality*, ed. Keith Ansell-Pearson, Cambridge University Press, 2007/1984/1887.
- Norman, Edward R., *The Victorian Christian Socialists*, Cambridge University Press, 1987.
- Novak, Michael, *The Spirit of Democratic Capitalism*, Madison Books, 1991.
- Nowak, Martin A., "Five Rules for the Evolution of Cooperation" in *Science*, Vol. 314, 8 December 2006: 1560-1563 and supporting online material at  
[www.sciencemag.org/cgi/content/full/314/5805/1560/DC1](http://www.sciencemag.org/cgi/content/full/314/5805/1560/DC1) .
- Nowak, Martin A., Corina E. Tarnita & Edward O. Wilson, "The evolution of eusociality" in *Nature*, Vol. 466, 26 August 2010.
- Nowak, Martin with Roger Highfield, *Super Cooperators: Beyond the Survival of the Fittest; Why Cooperation, not Competition, is the Key to Life*, Canongate, 2011.
- Nowak, Martin A. & Sarah Coakley (eds.), *Evolution, Games, and God: The Principle of Cooperation*, Harvard University Press, 2013.
- Nuechterlein, James, "The Weird World of Sports" in *First Things*, June 1998.  
<http://www.firstthings.com/article/1998/06/001-the-weird-world-of-sports> .
- O'Brien, David J. & Thomas A. Shannon (eds.), *Catholic Social Thought: The Documentary Heritage*, Orbis Books, 2002/1992.
- O'Donovan, Oliver, *Resurrection and Moral Order: An Outline for Evangelical Ethics* (2<sup>nd</sup> ed.), Apollos/Eerdmans, 1994/1986.
- O'Malley, William J, "Teaching Empathy", *America* 180 (12), 1999: 22-26.
- Okasha, Samir, "Altruism researchers must cooperate" in *Nature*, Vol. 467, 7 October 2010: 653-655.
- Okasha, Samir, "Kin selection, group selection and altruism: a controversy without end?" at OUPblog: <http://blog.oup.com/2015/01/kin-group-selection-controversy/#sthash.cw6OHeWD.dpuf>
- Onions, C. T. (ed.), *The Shorter Oxford English Dictionary on Historical Principles*, Clarendon Press, 2 Vols., 1973.
- Oslington, Paul (ed.), *Adam Smith as Theologian*, Routledge, 2011.
- Oslington, Paul, "God and the Market: Adam Smith's Invisible Hand," in *Journal of Business Ethics*, Vol. 108 No. 4, 2012: 429-438.
- Oslington, Paul (ed.), *The Oxford Handbook of Christianity and Economics*, Oxford University Press, 2014.
- Paley, William, *The Works of William Paley, D.D.*, 6 Vols., Cambridge University Press, 1830/1825 (including *inter alia*, *Natural Theology; or, Evidences of the Existence*

- and Attributes of the Deity* (1802), *Principles of Moral and Political Philosophy* (1785), and *A View of the Evidences of Christianity* (1794)).
- Paul VI, *Populorum Progressio, Encyclical of Pope Paul VI on the Development of the Peoples*, 1967. [http://w2.vatican.va/content/paul-vi/en/encyclicals/documents/hf\\_p-vi\\_enc\\_26031967\\_populorum.html](http://w2.vatican.va/content/paul-vi/en/encyclicals/documents/hf_p-vi_enc_26031967_populorum.html)
- Peierls, Rudolf, "Wolfgang Ernst Pauli, 1900-1958" in *Biographical Memoirs of Fellows of the Royal Society*, 1960, 5.
- Pigou, Arthur C., *Wealth and Welfare*, Macmillan, 1912, republished in a later, expanded edition as *The Economics of Welfare*, Macmillan, 1920. [www.econolib.org/library/NPDBooks/Pigou/pgEW.html](http://www.econolib.org/library/NPDBooks/Pigou/pgEW.html)
- Pius XI, *Quadragesimo Anno, Encyclical of Pope Pius XI on Reconstruction of the Social Order*, 1931. [http://w2.vatican.va/content/pius-xi/en/encyclicals/documents/hf\\_p-xi\\_enc\\_19310515\\_quadragesimo-anno.html](http://w2.vatican.va/content/pius-xi/en/encyclicals/documents/hf_p-xi_enc_19310515_quadragesimo-anno.html)
- Pontifical Council for Justice and Peace, *Compendium of the Social Doctrine of the Church*. [http://www.vatican.va/roman\\_curia/pontifical\\_councils/justpeace/documents/rc\\_pc\\_justpeace\\_doc\\_20060526\\_compendio-dott-soc\\_en.html](http://www.vatican.va/roman_curia/pontifical_councils/justpeace/documents/rc_pc_justpeace_doc_20060526_compendio-dott-soc_en.html) (Referred to as *Vatican Compendium*: paragraph number)
- Preston, Ronald H., "Introduction" in Temple, 1976/1942, 5-26.
- Pullen, John M., "Malthus' Theological Ideas and their Influence on his Principle of Population" in *History of Political Economy*, Spring 1981, 13(1): 39-54.
- Quek, Peter, "Competition" in *The Complete Book of Everyday Christianity*, eds Robert Banks & R Paul Stevens, IVP, 1997: 189-195.
- Radford, Robert A., "The Economic Organisation of a P.O.W. Camp" in *Economica*, Vol. 12 No. 48, November 1945: 189-201.
- Rapoport, Anatol, *Conflict in the Man-made Environment*, Penguin, 1974: 24-25.
- Ricardo, David, *On the Principles of Political Economy and Taxation*, John Murray, 1817.
- Robbins, Lionel, *An Essay on the Nature and Significance of Economic Science*, 2<sup>nd</sup> ed., Macmillan, 1945/1935 (1<sup>st</sup> ed. 1932)
- Robertson Dennis H., "What Does the Economist Economize?" (1954), reprinted in his *Economic Commentaries*, Staples Press, 1956.
- Robinson, Joan, *The Economics of Imperfect Competition*, 2<sup>nd</sup> ed., Macmillan, 1969 (1<sup>st</sup> ed. 1933).
- Rundle, Steve & Tom Steffen, *Great Commission Companies: The Emerging Role of Business in Missions*, IVP, 2003.
- Sadler, D. Royce, "Competition and the Christian Ethic" in *Zadok Perspectives*, March 1989: 6-8.
- Sadler, D. Royce, "Competitiveness, Achievement, and the Christian Ideal" in *Zadok Perspectives*, March 1989: 9-11.
- Samuels, Warren J. (with assistance from Marianne F. Johnson & William H. Perry), *Erasing the Invisible Hand: Essays on an Elusive and Misused Concept in Economics*, Cambridge University Press, 2011.
- Samuelson, Paul A., *Foundations of Economic Analysis*, Harvard University Press, 1983/1947.
- Sandel, Michael, *What Money Can't Buy: The Moral Limits of Markets*, Farrar, Straus and Giroux, 2012.
- Sandmo, Agnar, *Economics Evolving: A History of Economic Thought*, Princeton University Press, 2011.

- Scarantino, Andrea, "On the role of values in economic science: Robbins and his critics" in *Journal of the History of Economic Theory* 31 (04), 2009: 449-473.
- Schama, Simon, *A History of Britain: The Fate of Empire, 1776-2000*, BBC, 2002.
- Schrage, Wolfgang, *The Ethics of the New Testament*, ET David E. Green, Fortress, 1988.
- Schumpeter, Joseph A., *History of Economic Analysis*, Oxford University Press, 1986/1954.
- Schumpeter, Joseph A., *Capitalism, Socialism, and Democracy*, 3<sup>rd</sup> ed., Harper, 1975, Ch. 7 "The Process of Creative Destruction": 81-86.  
<http://digamo.free.fr/capisoc.pdf>
- Searle, Geoffrey R., *Morality and the market in Victorian Britain*, Clarendon Press, 1998.
- Semmler, Willi, "Competition: Marxian Conceptions" in *The New Palgrave: A Dictionary of Economics*, eds. John Eatwell, Murray Milgate & Peter Newman, Macmillan, 1987, Vol. 1: 540-542.
- Singer, Peter, *Practical Ethics*, 3<sup>rd</sup> ed., Cambridge University Press, 2011/1993/1980.
- Skousen, Mark & Kenna C. Taylor, *Puzzles and Paradoxes in Economics*, Edward Elgar, 1997.
- Smith, Adam, *The Theory of Moral Sentiments*, Cambridge University Press, 2002/1759.
- Smith, Adam, *Lectures on Jurisprudence*, eds. R. L. Meek, D. D. Raphael & P. G. Stein, Oxford University Press, 1978/1763.
- Smith, Adam, *The Wealth of Nations*, Vol. 1 (Books I-III), Vol. 2 (Books IV,V) , Penguin, 1999/1776.
- Smith, Yvonne S., Sharon G. Johnson & Erik M. Hiller, "The God of the Games: Towards a Theology of Competition" in *Christian Scholar's Review*, 41 3, 2012: 267-291.  
<http://www.cbfa.org/Smith-Johnson-Hiller.pdf>
- Sober, Elliott & David Sloan Wilson, *Unto Others: The Evolution and Psychology of Unselfish Behavior*, Harvard University Press, 1998.
- Sondregger, Katherine, "The Doctrine of Providence" in (eds.) Murphy & Ziegler, 2009: 144-157.
- Sonenscher, Michael, "Property, community, and citizenship" in *The Cambridge History of Eighteenth-Century Political Thought*, eds. Mark Goldie & Robert Wokler, Cambridge University Press, 2006.
- Sraffa, Piero, "The Laws of Returns under Competitive Conditions" in *Economic Journal*, 36(144), 1926: 535-550.
- Stackhouse, Max L., "Introduction: Foundations and Purposes" in *On Moral Business: Classical and Contemporary Resources for Ethics in Economic Life*, eds. Max L. Stackhouse, Dennis P. McCann, Shirley J. Roels & Preston N. Williams, William B. Eerdmans, 1995.
- Stassen, Glen H. & David P. Gushee, *Kingdom Ethics: Following Jesus in Contemporary Context*, InterVarsity Press, 2003.
- Sterelny, Kim, *Dawkins vs Gould*, Icon Books, 2007.
- Steuart, James (1712-1780), *Works, Political, Metaphysical and Chronological*, ed. James Steuart (1744-1839), T. Cadell & W. Davies, 1805, Vol. V: 175, cited in Hutchison, 1988: 345.
- Steuart, James (1712-1780), *An Inquiry Into the Principles of Political Oeconomy*, Vol. 1, ed. Andrew S. Skinner, Pickering & Chatto, 1998.
- Stigler, George J., *Essays in the History of Economics*, University of Chicago Press, 1965/1957.

- Sun, Guang-Zhen, *The Division of Labour in Economics: A History*, Routledge, 2012.
- Tanner, Kathryn, *Economy of Grace*, Fortress Press, 2005.
- Tanner, Kathryn, *Christianity and the New Spirit of Capitalism* (the 2015-2016 Gifford lectures at the University of Edinburgh); Youtube videos of the delivery of the lectures available at <http://www.ed.ac.uk/humanities-soc-sci/news-events/lectures/gifford-lectures/gifford-lectures-2015-2016/professor-tanner-christianity-and-capitalism/gifford-lectures-blog>.
- Taylor, Charles, *A Secular Age*, Belknap (Harvard University) Press, 2007.
- Temple, William, "The Church and the Labour Party" in *The Economic Review* 18, 1908: 190-202.
- Temple, William, *The Kingdom of God: A Course of Four Lectures*, MacMillan, 1914: 96-98.  
<http://www.archive.org/stream/kingdomofgodcour00tempuoft#page/104/mode/2up>.
- Temple *et al*, 2009/1917: see Harvey, John, J. St G. C. Heath, Malcolm Spencer, William Temple & H. G. Wood, *Competition: A Study in Human Motivation*, MacMillan, 1917/General Books, 2009.
- Temple, William, *Christianity and Social Order*, Shephard-Walwyn, 1976/1942.
- Templeton Foundation, *A Templeton Conversation: Does the free market corrode moral character?* 2008 <https://www.templeton.org/market/>
- Thielicke, Helmut, *Theological Ethics*, ET John W. Doberstein, ed. William H. Lazareth, Fortress, 1966 ET/1958.
- Tiebout, Charles M., "A Pure Theory of Local Expenditures" in *Journal of Political Economy*, Vol. 64, No. 5, 1956: 416-424.
- Tortajada, Ramón (ed.), *The Economics of James Steuart*, Routledge, 1999.
- Turgot, A. R. J., "Value and Money", in *The Turgot Collection: Writings, Speeches and Letters of Anne Robert Jacques Turgot, Baron de Laune*, ed. David Gordon, Ludwig von Mises Institute, 2011.
- Vatican Compendium*: see Pontifical Council for Justice and Peace.
- Vroey, Michel de, "A Marshall-Walras Divide: A Critical Review of the Prevailing Viewpoints" in *History of Political Economy*, 41.4, 2009: 709.
- Waal, Frans De, *The Age of Empathy: Nature's Lessons for a Kinder Society*, Souvenir Press, 2011.
- Walras, Léon, *Elements of Pure Economics*, ET William Jaffé, Irwin, 1954/1874.
- Warsh, David, *Knowledge and The Wealth of Nations: A Story of Economic Discovery*, W. W. Norton, 2006.
- Waterman, Anthony M. C., "The Ideological Alliance of Political Economy and Christian Theology, 1798-1833" in *Journal of Ecclesiastical History*, Vol. 34 No. 2, April 1983: 231-244.
- Waterman, Anthony M. C., *Revolution, Economics and Religion: Christian Political Economy 1798-1833*, Cambridge University Press, 1991.
- Waterman, Anthony M. C., "The Beginning of 'Boundaries': The Sudden Separation of Economics from Christian Theology" in Guido Erreygers (ed.) *Economics and Interdisciplinary Exchange*, Chapter 2, Routledge, 2001: 41-63.
- Weber, Max, *The Protestant Ethic and the Spirit of Capitalism*, ET Talcott Parsons, Routledge, 2001/1930.
- Webster, John, "On the Theology of Providence" in (eds.) Murphy & Ziegler, 2009: 158-175.

- Wesley, John, *The Use of Money*. <http://wesley.nnu.edu/john-wesley/the-sermons-of-john-wesley-1872-edition/sermon-50-the-use-of-money/> (Alternatively dated as 1744 by Timothy L. Smith or 1760 by Albert C. Outler. <http://wesley.nnu.edu/john-wesley/the-sermons-of-john-wesley-1872-edition/the-sermons-of-john-wesley-chronologically-ordered/>)
- Wesley, John, *Thoughts Upon Methodism*, 1786. [http://www.imarc.cc/one\\_meth/vol-02-no-02.html](http://www.imarc.cc/one_meth/vol-02-no-02.html)
- Whately, Richard, *Elements of Logic*, B. Fellowes, 1831/1826.
- Wheeler, Sondra, *Wielding the Sword: John Wesley's Biblical Hermeneutics on Wealth*, 2007 [oimts.files.wordpress.com/2013/04/2007-2-wheeler.pdf](https://oimts.files.wordpress.com/2013/04/2007-2-wheeler.pdf)
- Whitehall, Harold (ed.), *Webster's Twentieth Century Dictionary of the English Language*, World Publishing Company, 1952.
- Whyte, James A., "Ends and Means" in *A New Dictionary of Christian Ethics*, (eds.) John Macquarrie & James Childress, SCM Press, 1967: 191f.
- Wicksteed, Philip H., *The Common Sense of Political Economy and Selected Papers and Reviews on Economic Theory*, George Routledge, 1946/1933.
- Wilson, David S., *Richard Dawkins, Edward O. Wilson, And The Consensus Of The Many*, blog posting on 29 May 2012 at <https://evolution-institute.org/article/richard-dawkins-edward-o-wilson-and-the-consensus-of-the-many/>.
- Wilson, Edward O., *Sociobiology: The New Synthesis*, Belknap (Harvard University) Press, 1975.
- Wilson, Edward O., *The Social Conquest of the Earth*, Liveright Publishing/ W. W. Norton & Co., 2012.
- Winch, Donald, *The Emergence of Economics as a Science 1750-1870*, Vol. 3 Sec. 9, Collins, 1970.
- Wink, Walter, *The Powers That Be: Theology for a New Millenium*, Galilee Doubleday, 1998.
- Yang, Hong-Seok, *The Political Economy of Trade and Growth: An Analytical Interpretation of Sir James Steuart's Inquiry*, Edward Elgar, 1994.
- Yang, Hong-Seok, "James Steuart's Macroeconomic Analysis of Money, Price and Output" in Tortajada, Routledge, 1999.
- Young, Jeffrey T., *Economics as a Moral Science: the political economy of Adam Smith*, Edward Elgar, 1997.
- Yuengert, Andrew, *Roman Catholic Economics*, in (ed.) Oslington, 2014: 153-176. *Zadok Perspectives*, June 1989 18-20.
- Zwolinski, Matt, "The Ethics of Price Gouging" in *Business Ethics Quarterly*, Vol. 18, No. 3, July 2008: 347-378.