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# Collective And Individual Rationality: Robert Malthus's Heterodox Theodicy<sup>1</sup>

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## Abstract

In previous research, investigating economists' conceptions of the relationship between micro-level self-seeking behaviour and the desirability of macro-level outcomes, I identified two rhetorical strategies of *laissez-faire*, characterised by reductionism, and by holism plus an invisible-hand mechanism. The paper suggests that Malthus switches from the latter to the former. Opposing literary Jacobins by means of the principle of population, he is drawn far from Smith's providentialism. In 1798 he presents a novel theodicy to reconcile his theory with providentialism, but by 1803 abandons this in favour of a reductionist argument that unaided individual self-interest can guide us to socially desirable outcomes.

## 1 Introduction

This paper forms part of a research project investigating conceptions of the relationship between micro-level self-seeking agent behaviour (individual rationality), on the one hand, and the desirability or otherwise of the resulting macro-level social outcomes (collective rationality), on the other, in the history of economic thought. I have previously (Denis 2004) identified two "rhetorical strategies of *laissez-faire*", a strategy based in a reductionist ontology, and one based in a more holistic view of the world. By reductionism I mean a standpoint according to which the whole is just the sum of the parts, and by holism, the opposite, the view that the whole is not merely the sum of the parts but is emergent (Denis 2004, 342-343).

Reductionist *laissez-faire* writers such as Friedman and Lucas argue that important aspects of the society we live in can straightforwardly be reduced to the behaviour of individuals: individual utility maximisation leads directly to social welfare maximisation by a process of aggregation. More holistic economic proponents of *laissez-faire*, however, writers such as Hayek and Adam Smith, who also would like us to rely on the spontaneous interaction of self-seeking agents, recognise that macro-level rationality – or irrationality – may be *emergent* at the macro-level, and not reducible to the rationality of micro-level behaviour. They have proposed various 'invisible hand' mechanisms which can, in their view, be relied upon to 'educate good from ill'. This is not to suggest that any of these writers were necessarily conscious of facing this choice, or of adopting these strategies. Rather I am suggesting that this taxonomy allows us retrospectively to make sense of what they have said and done in ways that other interpretations do not.

The purpose of the present paper is to extend this study to the case of Robert Malthus<sup>2</sup>. Specifically, my goal is to try to identify a rhetorical stance which we can plausibly associate with Malthus, and to investigate whether the previously worked out taxonomy of reductionism and holism makes any sense when applied to his writings on population. The focus of the paper will mainly be on the *Essay on Population* of 1798, and subsequent editions, and *A Summary View of the Principle of Population* of 1830. The latter is a revised version of an article on population Malthus wrote for the *Supplement to the Encyclopaedia Britannica*. These are Malthus's first and last words on the topic of population. Following the usage introduced by Flew (1970, 13), the first, anonymous, edition of the *Essay on Population* of 1798 is referred to in this paper as the *First Essay*, while the five subsequent editions of 1803, 1806, 1807, 1817 and 1826 – essentially a new work – are referred to as the *Second Essay*. The *First Essay* and the *Summary View* are referred to in the Pelican Classics edition edited by Antony Flew (Malthus 1970). The version of the *Second Essay* used is the Everyman edition (Malthus 1958), actually a reprinting of the seventh – or first posthumous – edition of the *Essay*.

Like Smith and Hayek, like Friedman and Lucas, Malthus is a defender of "the present order of things" (Malthus 1970, 68), and an advocate of dependence on spontaneous forces, "the natural and necessary order of things"

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<sup>1</sup> This paper was presented at the annual conference of the Association for Heterodox Economics, Nottingham Trent University, July 2003, at the UK History of Economic Thought conference, University of Leeds, September 2003, and at the European Society for the History of Economic Thought annual conference, University of Stirling, June 2005; I am grateful to participants and to Mary Denis, William Dixon and Geoff Harcourt for their comments and support. I am particularly grateful to two referees for this journal for their meticulous scholarly criticism of two earlier drafts.

<sup>2</sup> Thomas Robert Malthus, like John Maynard Keynes, was always known by his middle name.

(Malthus 1808, 347). I suggest that we may read Malthus, like those *laissez-faire* economist just mentioned, as facing a choice of rhetorical strategy: of adopting either reductionism, or holism plus an invisible hand mechanism. The argument of the paper is that we may plausibly read Malthus as starting out within the eighteenth-century providentialist paradigm epitomised by Adam Smith and Dugald Stewart, but then, around the turn of the nineteenth century, as abandoning providentialism and adopting a more reductionist rhetorical strategy. Like Smith and Stewart, he takes a political stance that opposes fundamental reform of society. But in taking on the arguments of the leading radicals of the day, the English Jacobin and anarchist Godwin, and Condorcet, secretary of the French Legislative Assembly following the Revolution, he is drawn by the logic of his argument to a position very far removed from Smith's stoic optimism. The weapon he deploys against these Jacobins is the principle of population, by means of which he is able to portray the present state of society as something natural, eternal and inevitable, something in common with the animal and vegetable kingdoms. The weapon is extremely potent against the ideological enemy, but causes considerable collateral damage to the providentialism which had hitherto been deployed in defence of the *status quo*. In the *First Essay* he tries to mitigate this by presenting a theodicy to reconcile his theory with a version of providentialism, but the result is not a providentialism acceptable to contemporary thought: it is heterodox, and within weeks of publication he begins work on its replacement. In subsequent editions of the *Essay* the relevant chapters are excised. Their place is taken by a secular and reductionist argument that unaided individual self-interest can guide us to socially desirable outcomes.

The purpose of this paper, therefore, is to apply the methodology already developed elsewhere to Malthus's work on population, and, in particular, to show that Malthus may be interpreted as shifting from a holistic to a reductionist rhetorical strategy, between the first and subsequent editions of his *Essay on Population*.

The structure of the paper is as follows. The second section sketches the 'two rhetorical strategies' apparatus developed in previous papers. The third section shows that we may plausibly associate with Malthus a rhetorical project of the defence of the established order. The fourth section examines his original heterodox theodicy of 1798. The fifth section looks at the link between the micro and the macro in Malthus's works on population from 1803 onwards, the link which we may see as replacing the theodicy of 1798. The new link is *moral restraint*, which, Malthus argues, is in the interest both of the individual and of the collectivity. The final section concludes.

## 2. The two rhetorical strategies of *laissez-faire*

This section sketches the view developed in previous publications, that proponents of a policy prescriptions of *laissez-faire* may be understood as being compelled, to the extent that they are confronted with ontological issues, to make a choice between reductionism and holism, and, if they choose the latter, to attach to it an invisible hand mechanism, to underpin the reductionist policy prescription of *laissez-faire*.

The research project of which this paper forms part is summarised in Denis (2004), and set out more extensively in Denis (2001). I have tried to show two things: Firstly, that in a world of partially overlapping and partially conflicting interests there is good reason to doubt that self-seeking agent behaviour at the micro-level will spontaneously lead to desirable social outcomes at the macro-level. The presence of externalities and prisoners' dilemmas (formally the same thing), in such a world, imply that Nash equilibria cannot be assumed to be socially desirable outcomes, even in the minimal sense of Pareto efficiency. And, secondly, that we can usefully distinguish between two kinds of argument for *laissez-faire*. Reductionist *laissez-faire* writers argue that important aspects of the society we live in can straightforwardly be reduced to the behaviour of individuals: individual utility maximisation leads to social welfare maximisation by a process of aggregation. Apparent macro-level irrationality, such as unemployment, can thus be reduced to micro-level decisions on the trade off between leisure and labour. This is the well-known stance of Friedman and Lucas.

There are, however, more holistic economic proponents of *laissez-faire*, writers who also would like us to rely on the spontaneous inter- action of self-seeking agents, but who recognise that social or collective rationality, or irrationality, may be emergent at the macro-level, and not reducible to the rationality, or otherwise, of substrate-level behaviour giving rise to it. In order then to present the macro-level outcomes as desirable, they have proposed various 'invisible hand' mechanisms which can, in their view, be relied upon to 'educe good from ill'. Smith, I argued, defended the 'simple system of natural liberty' as giving the greatest scope to the unfolding of God's will and the working out of 'natural', providential processes, free of interference by 'artificial' state intervention – the expression not of divine order but of fallible human reason. Hayek, adopting a similar policy stance, based it in an evolutionary process in which those institutional forms best adapted to reconciling individual agents' interests would, he believed, spontaneously be selected for in the inter-group struggle for survival.

The alternative to both of these approaches is to combine Smith's and Hayek's recognition of the holistic nature of the world we live in with rejection of their postulate of an invisible-hand mechanism. In this view, rational self-seeking behaviour on the part of individual agents is by no means either the necessary or the sufficient micro

substrate for the desirability of social outcomes. Rather, behaviour must be *directly* social if desirable social outcomes are to be obtained. According to Keynes, e.g., egotistical activity uncoordinated by the State may lead to inefficient outcomes. The price system aggregates rational individual actions but the aggregate is an unintended outcome as far as those individuals are concerned. There is no particular reason why unintended outcomes should necessarily be desirable and often they are not. Individuals take responsibility for maximising their own welfare, given what everyone else is doing, but society as a whole has to take responsibility for organising the aggregate outcome if undesirable aggregate outcomes are to be avoided: “there is no design but our own ... the invisible hand is merely our own bleeding feet moving through pain and loss to an uncertain ... destination” (Keynes 1981, 474).

Marx, on the other hand, takes the argument a stage further by arguing, on the contrary, that there is, indeed, a design which is not our own, a design without a designer. Like Hayek, Marx believes this design to be ‘emergent’ at the macro level, but for Marx, unlike Hayek, *because* it is not our own design, it is alien to us. In the absence of directly social activity, atomistic behaviour spontaneously arranges itself into a self-augmenting parasitic network of social relations which he calls ‘capital’. A society of individual humans thus becomes dominated by an interest alien to that of the individuals comprising it.

The purpose of the present paper is to extend this study to the case of Malthus. We therefore need to investigate the policy goals, the over-arching social philosophy, and the rhetorical approach for sustaining a desired prescription which we may plausibly associate with Malthus.

A *caveat* is in order. I focus exclusively on the issue I start out with – the choice which I argue faces political economists between a reductionist and a holistic methodology, and the necessity which I further argue faces proponents of a *laissez-faire* policy prescription who adopt a holistic methodology, to supplement it with an invisible-hand mechanism. That is what the paper and the research project of which it is a part is about. But that by no means implies that this is a necessary and sufficient explanation of the entire history of economic thought! Very much more is going on. No political economist remains wholly consistent throughout his life: to do so would imply either that he knew everything to start with, or that he was incapable of learning. Adam Smith is an instance of an economist displaying an exceptional degree of consistency, yet he changes tack, contradicts himself, shifts emphasis and learns. No single bipolar taxonomy can hope to explain the intricacy of the actual development. Malthus, I believe, displays greater changes in standpoint than Smith on key issues. My claim is that the framework adopted here may be an enlightening way of looking at these changes, not that it displaces other undoubtedly valid interpretative stances, or is uniquely right, or that it explains everything.

### 3. Malthus’s project in the works on population

This section examines the evidence for a rhetorical project on Malthus’s part and argues that, as in the cases of Smith and Hayek (Denis 1999, 2001, 2002, 2004, 2005), that he may be reasonably ascribed a rhetorical project of defence of the established order against Jacobin and utopian plans for revolutionising the social institutional structure.

The full title of Malthus’s *Essay* of 1798, is “An essay on the principle of population, as it affects the future improvement of society with remarks on the speculations of Mr. Godwin, M. Condorcet, and other writers.” The preface starts by pointing out that the *Essay* was prompted by a conversation with “a friend” – actually, his father – on Godwin’s essay of 1797 on “Avarice and Profusion”. His father, Daniel Malthus, was an enthusiastic participant in the eighteenth-century enlightenment, a friend of both Hume and Rousseau, both of whom visited the family before Robert was a month old. Daniel was particularly influenced by the more left-leaning amongst *les philosophes*, such as Condorcet and Godwin, who contrasted the existing order with various utopias founded on equality, and the abolition of marriage, private property and the state. Robert Malthus’s *Essay* is explicitly couched as a contribution to the debate between these Jacobins, on the one hand, and supporters of the institutional *status quo*, on the other, and equally explicitly takes the side of the latter.

Malthus’s argument is that the “perfectibility of society”, the image of a future society without misery, is a chimera: “To prevent the recurrence of misery, is, alas! beyond the power of man” (Malthus 1970, 102). It is not institutions, such as property and inequality, which cause this misery, but ineluctable natural laws, in particular, the laws of population. Malthus identifies two conflicting forces: firstly, the tendency of population, unchecked, to increase in a geometrical progression. This is both true and profound, and Malthus deserves credit for clearly articulating this insight, notwithstanding its prior suggestion by both Wallace and Franklin, neither of whom realised its significance. The other, according to Malthus, is the – at best – arithmetical rate of increase of the production of the means of subsistence. This assertion is of quite different status. Despite everything Malthus says on the topic, there is no reason in principle why the production of the necessaries of subsistence should not grow geometrically.

Given this proposed disparity between the two rates of growth, something has to give. The *actual* rate of growth of population can- not exceed the rate of growth of the supply of the necessities of subsistence. The important question is, how the potentially geometrical unchecked rate of growth of population is brought down to what it is

possible for the earth to sustain, what indeed are the *checks* on population? Malthus's answer in the *First Essay* is different in an important detail from that in subsequent editions. But the basic pattern remains. There are two kinds of checks: preventive and positive, affecting the birth and death rates respectively (Flew 1970, 44). Alongside this positive classification Malthus proposes a normative one. It is here that the difference between the first and subsequent editions is manifest: in the former, the normative classification of checks on population is into vice and misery, in the latter an additional category of "moral restraint" is introduced. There is a strong, though imperfect, correlation between vice and preventive checks – both include prostitution, abortion and contraception, and another between misery and positive checks – war, disease and famine are examples of both. Moral restraint, however, is an instance – indeed, the only one – of a preventive check which is not vicious. It is also the case that, unlike the categories of positive and preventive checks, those of misery and vice are not mutually exclusive: war, e.g., is both vicious in its practice, and miserable in its consequences (Malthus 1970, 85).

The message of the *First Essay*, therefore, is that a state of misery and vice – misery certainly, and vice very probably – is the inevitable consequence of human nature. Naturally, as an Anglican parson, Malthus deplures vice and would much prefer misery, but that it is immaterial. The point is that we cannot avoid misery, except perhaps by vice (which in any case, as in the cases of war or the exposure of children, e.g., is itself likely merely to change the form of misery):

the race of man cannot, by any efforts of reason, escape from [Necessity, that imperious, all pervading law of nature]. Among plants and animals its effects are waste of seed, sickness, and premature death. Among mankind, misery and vice. The former, misery, is an absolutely necessary consequence of it. Vice is a highly probable consequence, and we therefore see it abundantly prevail, but it ought not, perhaps, to be called an absolutely necessary consequence. The ordeal of virtue is to resist all temptation to evil. (Malthus 1798, 72)

Checks to population are an inevitable and permanent feature of our lives, and all are "fairly resolved into misery and vice" (Malthus 1970, 103, 106). Attempts to remove the condition of misery by institutional change, as advocated by utopians and radical reformers, are therefore doomed.

Repeatedly, throughout the *Essay*, Malthus returns to this central point: the laws of population mean that misery is unavoidable, and institutional change is powerless to affect it. Though he concedes that the behaviour of some elements of society can mitigate or exacerbate the evils he identifies, he emphasises that it cannot remove them. Concluding the first and second chapters respectively, he writes:

This natural inequality of the two powers of population and of production in the earth, and that great law of our nature which must constantly keep their effects equal, form the great difficulty that to me appears insurmountable in the way to the perfectibility of society ... I see no way by which man can escape from the weight of this law which pervades all animated nature. No fancied equality, no agrarian regulations in their utmost extent, could remove the pressure of it. (Malthus 1970, 72)

[T]hough the rich by unfair combinations contribute frequently to prolong a season of distress among the poor, yet no possible form of society could prevent the almost constant action of misery upon a great part of mankind, if in a state of inequality, and upon all, if all were equal. (Malthus 1970, 79)

In chapter V Malthus presents the argument that transferring purchasing power from the rich to the poor will not help the latter, and, in particular, that the Poor Laws should be abolished. The taxes and benefits involved in redistribution might reallocate wealth, but would not change the fact of poverty: "The rich might become poor, and some of the poor rich, but a part of the society must necessarily feel a difficulty of living, and this difficulty will naturally fall on the least fortunate members" (Malthus 1970, 95-96).

An escape route from this dreary fate appears in the *Second Essay*, however. In addition to misery and vice, a critical third category of 'moral restraint' is introduced. Moral restraint has a very specific meaning. It does not mean restraint from sexual intercourse, and certainly not contraception, which Malthus abhorred as vice. What it meant was marrying later and with lower probability. To postpone or to refrain altogether from marriage was to practice moral restraint. Both of these would lower the birth rate and – *nota bene* – they were the only non-vicious method of doing so. Monogamy was assumed throughout – "violations of the marriage bed" he naturally condemned as vice.

This difference between the earlier and later versions of the *Essay* is critical and lies at the heart of this paper: the contrast between these two visions constitutes the focus, indeed, of the rest of the paper. The earlier version presents us with an extremely gloomy view of the world. So gloomy, indeed, that Malthus was driven to write an extensive theodicy constituting the last two chapters, about one eleventh of the *Essay*, reconciling his findings with the existence of a benevolent and providential deity. In the later version, however, individuals can opt for moral restraint, and, to the extent that they do so, the actual rate of growth of population falls below that of production, leaving us all better off. Note that this escape route from the Scylla and Charybdis of misery and vice still does not imply a role for institutional change: it is individual behaviour which is key, and, as we shall see, the incentives are already in place to guide those individuals to socially desirable behaviours. Hence, again, the project is one of defence of the existing institutional order: institutional change in the direction of greater equality or of inroads into

property are not required: individual self-seeking behaviour leads directly into socially desirable social outcomes, without the necessity for collective action.

This is not the place for a full discussion of the extent to which Malthus can be fairly described as a proponent of *laissez-faire*. Like Smith and Hayek, Malthus firmly believes that spontaneous, 'natural' forces were to be relied upon. But, also like them, he is prepared to concede that there may be exceptions, though he is never quite so confident about the exceptions as he is about the underlying principle: James writes of "Malthus's uncomfortable belief that government interference might sometimes be necessary [though] he was never quite sure of it himself" (James 1979, 313).

James (1979, 153-155) has an interesting discussion of Malthus's attitude to poverty in Ireland during the population explosion which preceded the famines of the 1840s. His strong defaults for reliance on spontaneous processes and withdrawal of the State from intervention come out very clearly. The modern reader, she writes, will find it difficult to follow Malthus's "*laissez-faire* approach to the economic situation" (James 1979, 153), and his advocacy of abandonment of the children of the imprudent to "the punishment of nature" (James 1979, 313).

Malthus does indeed call for legislative activity, but its *direction* is generally towards the curtailment of non-market forces, and rendering more uniform their burden: so he calls for tithes and rates to be both reduced and regularised (James 1979, 155; Malthus 1808, 346), that is, he wants significantly lighter and much more uniform taxes. But *rents* are another matter: they arise from market forces, and are therefore sacrosanct: "every effort should be used to relieve the people from the pressure of tithes ... but that any man of common sense should [wish to relieve them from] *rents* is inconceivable". On closer analysis of rents, he is happy for legislation to regulate rents in kind, which are not a product of the market system, but a hangover from the past, but, he says, we cannot prevent "the natural rise of pecuniary rents which takes place from the principles of free competition in the progress of wealth and population" (Malthus 1808, 346). A "continued rise of rents is in the natural and necessary order of things, to clamour against it is folly – to interfere in it would be madness" (Malthus 1808, 347).

Malthus takes a similar line on wages. Where falling wage levels are caused by the market forces of the demand for and supply of labour, they are beyond the power of the Legislature to relieve. However, the cause of low wages for the Catholic majority in Ireland was the political discrimination against them on religious grounds. Here the State had a real responsibility to put things to rights: "*the first step* ... must be the full and complete emancipation of the Catholics ... to begin with the ignorance and poverty, is manifestly to begin at the wrong end, and to labour in vain" (Malthus 1808, 353-354).

It is the case that Malthus supported, albeit reluctantly and uncertainly, State regulation of trade in foodstuffs. A full discussion is outwith the scope of this paper<sup>3</sup>. Nevertheless, it is worth pointing out that, like Hayek (1988, 20), who argues that intervention may be necessary "if for no other reason, because there has so often been coercive interference" in the past, Malthus, too, predicates intervention on the suboptimalities induced by previous intervention. State regulation, he says, was called for by the imbalance between urban and rural production, an imbalance which would not have arisen had things been allowed to follow their natural course:

but the high profits of commerce from monopolies, and other peculiar encouragements, have altered this natural course of things, and the body politick is in an artificial, and in some degree diseased state, with one of its principal members [ie agriculture] out of proportion to the rest. (Malthus 1803, 449-450)

By "monopolies" Malthus means legal monopolies granted by the crown, not the spontaneous emergence of market-dominating firms from the process of competition – a much later conception. Commerce and industry had been encouraged by grants of monopoly and subsidies – "peculiar encouragements" – to the detriment of agriculture, he felt, and therefore protection of the latter in the form of the corn laws, had some merit in his view, as a measure to mitigate the evils of past intervention.

My judgement, then, is that while Malthus, like Smith and Hayek, was prepared to endorse exceptions to the rule of *laissez-faire*, his loyalty to the principle was on a level with theirs, and it does him no injustice to place him, with them, in the category of advocates of *laissez-faire*.

#### 4 Malthus's heterodox theodicy

This section examines Malthus's original theodicy of 1798, compared with the general providentialism of the time, as evidenced, e.g., in Adam Smith and Dugald Stewart.

Adam Smith thought the world a great machine, supervised by an omnipotent, omniscient and beneficent deity, with

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<sup>3</sup> As is the very interesting question as to how Malthus's later theory of effectual demand sits with the points made in this paper.

the sole aim of the maximisation of happiness:

all the inhabitants of the universe, the meanest as well as the greatest, are under the immediate care and protection of that great, benevolent, and all-wise being, who directs all the movements of nature; and who is determined, by his own unalterable perfections, to maintain in it, at all times, the greatest possible quantity of happiness. (Smith 1976a, VI.ii.3.1)

[T]hat divine Being[s] ... benevolence and wisdom have, from all eternity, contrived and conducted the immense machine of the universe, so as at all times to produce the greatest possible quantity of happiness. (Smith 1976a, VI.ii.3.5)

So the world is perfect: we *do* live in the “best of all possible worlds” Smith is a true Panglossian. Since the world is really perfect, our apparent troubles stem from our finite, partial view of the world. In contrast to the infinite mind of God, our finite minds fail to discern “all the connexions and dependencies of things” (Smith 1976a, VI.ii.3.3). All the imperfections of man are given us with good reason by a wise providence and by acting in what may seem to us an imperfect way, we fulfil the divine plan. We follow the dictates of self-love in our economic activity, while the invisible hand of the Deity ensures that the social outcomes are consistent with maximising human happiness. The policy prescription is “the obvious and simple system of natural liberty” (Smith 1976b, IV.ix.5), which will give the greatest scope to the working out of the Deity’s intentions for us.

Dugald Stewart emphatically shares this standpoint, consciously echoing Smith’s pronouncements. “In every state of society which has yet existed”, he writes, “the political order ... is chiefly the result of the wisdom of nature”.

The motivations of each individual act in subserviency to [nature’s] designs, and ... conduct him ... to certain beneficial arrangements ... he is led by an invisible hand, and contributes his share to the execution of a plan, of the nature and advantages of which he has no conception. (Stewart 1842, 144)

A firm conviction that the general laws of the moral, as well as of the material world, are wisely and beneficently ordered for the welfare of our species, inspires the pleasing and animating persuasion, that by studying these laws, and accommodating to them our political institutions, we may ... [consider] ourselves ... as *fellow-workers with God* in forwarding the gracious purposes of his government. It represents to us the order of society as much more the result of Divine than of human wisdom; the imperfections of this order as the effects of our own ignorance and blindness. (Stewart 1854, 491-492)

For Stewart this standpoint had immediate policy implications, as indeed it had for Smith. Taking up a matter close to Malthus’s heart, Stewart raises the rhetorical question

whether the existing system of our poor laws may not be added to the many other instances which human affairs afford, of an officious attempt on the part of statesmen, to accomplish artificially, by the wisdom of man, those beneficent ends, for securing which so beautiful an arrangement has been made by the wisdom of Providence. (Stewart, 1855, 45-46)

The standpoint of Smith and Stewart here is just the common currency of the eighteenth and early nineteenth century. Malthus starts out entirely in this camp, referring to the Deity in the *First Essay* as “that Being who first arranged the system of the universe, and for the advantage of his creatures, still executes, according to fixed laws, all of its various operations” (Malthus 1970, 70-71). As in Smith, the world is a machine tended by a Deity for the maximisation of human “advantage”. But the specific argument that Malthus uses to counter the utopians – the laws of population – places an intolerable strain on providentialism, forcing him to abandon it as the main rhetorical device for the defence of the *status quo*. This can be seen from the progress of Malthus’s theodicy between the first (1798) and subsequent editions (1803 onwards) of the *Essay on Population*, and finally in the *Summary View* (1830). What we see is not so much changes in Malthus’s view on key points about the nature of the world that he is observing, as changes in strategy as to how those points are to be communicated to his audience. The “infamous theodicy” (Poovey 1998, 288)<sup>4</sup> of the first edition is the spoonful of sugar to help down the bitter medicine of the principle of population. In the subsequent editions, Malthus may be interpreted as choosing a wholly different rhetorical strategy. The theodicy is abandoned, and in its place an argument, that self-interest alone, without external assistance, conduces to the general interest, is imported.

Malthus sets out his theodicy in the last two chapters, chapters 18 and 19, of the *First Essay*. He opens chapter 18 with the statement that

The view of human life which results from the contemplation of the constant pressure of distress on man from the difficulty of subsistence, by shewing the little expectation that he can reasonably entertain of perfectibility on earth, seems strongly to point his hopes to the future ... [W]hen ... we turn our eyes to the book of nature ... we see a constant succession of sentient beings, rising apparently from so many specks of matter, going through a long and sometimes painful process in this world, but many of them attaining, ere

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<sup>4</sup> Poovey also refers to “the heterodoxy of the last two chapters” (Poovey 1998, 290), prompting the title of this paper. For a detailed explanation of the differences between Malthus’s theodicy and orthodox Anglicanism, see Pullen 1981 and Waterman 1991.

the termination of it, such high qualities and powers as seem to indicate their fitness for some superior state. (Malthus 1970, 200-201)

“The future” here means the next life, in contrast to “on earth”. So the hardship of this life has the benefit or purpose of turning our attention to the afterlife. The difficulty of subsistence on this earth is justified by the fact that, via a long and sometimes painful process, it generates a succession of sentient beings fit for the “superior state” of the next life.

Infinite power is so vast and incomprehensible an idea that the mind of man must necessarily be bewildered in the contemplation of it. With the crude and puerile conceptions which we sometimes form of this attribute of the Deity, we might imagine that God could call into being ... existences, all free from pain and imperfection. (Malthus 1970, 201)

Like Smith, Malthus resorts to the standard argument of the contrast between the infinite mind of God and the finite mind of man. Man, with his finite mind, might make the mistake of imagining that God had freedom to create worlds without suffering. But, as Smith says, the Deity may “admit into the system of his government, no partial evil which is not necessary for the universal good” (Smith 1976a, VI.ii.3.3); the evil and suffering we see must be logically necessary for the existence of the world. The reason we cannot see this is because of the limits of our finite minds. But the Deity is indeed constrained – it takes time and effort to generate souls fit for heaven:

unless we wish to exalt the power of God at the expense of his goodness, ought we not to conclude that even to the great Creator, almighty as he is, a certain process may be necessary, a certain time (or at least what appears to us as time) may be requisite, in order to form beings with those exalted qualities of mind which will fit them for his high purposes? (Malthus 1970, 201)

Downplaying the omnipotence of the Deity in this way exposed Malthus to the charge of Manichaeism – of which he was accused by Ricardo and James Mill (Waterman 2002, 916). This is where the heterodoxy of Malthus’s theodicy lies.

Pursuing this argument, Malthus is led to consider

the world and this life as the mighty process of God ... for the creation and formation of mind, a process necessary to awaken inert, chaotic matter into spirit, to sublimate the dust of the earth into soul, to elicit an ethereal spark from the clod of clay. And in this view of the subject, the various impressions and excitements which man receives through life may be considered as the forming hand of his Creator, acting by general laws, and awakening his sluggish existence, by the animating touches of the Divinity, into a capacity of superior enjoyment. (Malthus 1970, 202)

The law of population is precisely an instance of these excitements, specifically designed by Providence as a stimulus and implacable need to urge us on to fulfil its designs:

To furnish the most unremitted excitements of this kind, and to urge man to further the gracious designs of Providence by the full cultivation of the earth, it has been ordained that population should increase much faster than food. This general law ... undoubtedly produces much partial evil, but a little reflection may, perhaps, satisfy us, that it produces a great overbalance of good. (Malthus 1970, 204-205)

So this is the position in 1798. Man’s lot is one necessarily of misery, and, to the extent that he succumbs to temptation, of vice as well. But this is absolutely necessary for the execution of God’s plan. We therefore are assured that what seems an evil to our finite minds is in fact the most desirable possible outcome, the execution of the ‘Supreme Creator’s’ plans:

Both reason and experience seem to indicate to us that the infinite variety of nature (and variety cannot exist without inferior parts, or apparent blemishes) is admirably adapted to further the high purpose of the creation and to produce the greatest possible quantity of good. (Malthus 1970, 212)

This is in strong contrast to the conventional pious Anglican providentialism Malthus displays in his subsequent works. Only in the final pages of the *Summary View* do we return to the issue of theodicy addressed in the last two chapters of the *First Essay*. But now the reconciliation with conventional Anglican religion is an afterthought, a footnote, a response to his critics. And its content has changed. In the *First Essay* he was at pains to point out that this life was not a ‘trial’, as, firstly, God would have no need to try souls, since it would imply that he did not know, prior to the trial, what the outcome would be, thus contradicting the omniscience of the Deity, and, secondly, if this life is to try souls, then those souls must have been produced, and, *nota bene*, with a variable quality, in some other, prior arena.

In the *Summary View*, however, he makes no attempt to resurrect his critique of the probatory nature of this life, accepting now that “both the letter and spirit of revelation represent this world as a state of moral discipline and probation ... the principle of population, instead of being inconsistent with revelation, must be considered as affording strong additional proofs of its truth”. So the world now is indeed a trial or ‘state of probation’. His claim now is that the law of population *tries* us more effectively than any other natural force:

in the whole range of the laws of nature, not one can be pointed out which so especially accords with this

scriptural view of the state of man on earth; as it gives rise to a greater variety of situations and exertions than any other, and marks, in a more general and stronger manner ... the different effects of virtue and vice, – of the proper government of the passions, – and the culpable indulgence of them. (Malthus 1970, 272)

Whereas the theodicy of the *First Essay* was unrelievedly gloomy, with misery an absolute necessity, and designedly so, in order to produce souls of the requisite quality to share eternity with their creator, this life in the Summary View has become a *test* leading to happiness for those that pass it:

in a state of probation, those laws seem best to accord with the views of a benevolent Creator which, while they furnish the difficulties and temptations which form the essence of such a state, are of such a nature as to reward those who overcome them, with happiness in this life as well as in the next. But the law of population answers particularly to this description. (Malthus 1970, 272)

##### 5. Individual action and social outcome from the Second Essay onwards

This section looks at the link from the micro to the macro in the *Second Essay* and the *Summary View*, the link which replaces the theodicy of 1798. That link is *moral restraint*, which, Malthus argues, is in the interest both of the individual, and the society.

For Smith, theology was at the core of his world view, of the enticing picture he painted, the “entertaining romance” that he wrote (Smith 1983, ii.134), to reconcile us to our world and to inspire us to act in harmony with the laws of Nature and Nature’s God (Becker 1932, 63). For Malthus, it seems, post 1803, theology has become something external, something detachable and disposable. Smith adopts a holistic standpoint: order is emergent; socially desirable outcomes would not necessarily issue from self-seeking behaviour, but for the intervention of a kindly deity, exempting us from the necessity of our own intervention. But if with the turn of the nineteenth century theology has become peripheral for Malthus’s rhetorical strategy,<sup>5</sup> then what, if anything, can he claim will guarantee the desirability of the social outcomes of spontaneous self-seeking behaviour? If nothing, then there is the case for radical social surgery presented, if not yet by Marx and Keynes, at least by Condorcet and Godwin. Holism plus an invisible hand underpins the reductionist policy prescription of *laissez-faire*. Dropping the rhetorical device of the invisible hand threatens to lead to the abandonment of *laissez-faire*. The suggestion of this paper is that the alternative to a holistic rhetorical strategy with an invisible-hand mechanism, is a reductionist strategy: a *laissez-faire* policy prescription can be sustained in the absence of an invisible-hand mechanism by simultaneously switching from a holistic to a reductionistic ontology. There is no need to suppose the existence of an invisible hand if one’s methodological standpoint is that of reductionism. Social welfare is then just the aggregate outcome of individual self-seeking activity.

The specific self-seeking behaviour he has in mind is ‘moral restraint’:

Moral restraint ... may be defined to be, abstinence from marriage, either for a time or permanently, from prudential considerations, with a strictly moral conduct towards the [female] sex in the interval. And this is the only mode of keeping population on a level with the means of subsistence which is perfectly consistent with virtue and happiness. All other checks, whether of the preventive or the positive kind, though they may vary greatly in degree, resolve themselves into some form of vice or misery. (Malthus 1970, 250)

Malthus considers the role of moral restraint at length in the *Second Essay*. First he sets the scene by discussing what virtue is in general:

Our virtue ... as reasonable beings, evidently consists in educing from the general materials which the Creator has placed under our guidance, the greatest sum of human happiness; and as natural impulses are abstractedly considered good, and only to be distinguished by their consequences, a strict attention to these consequences and the regulation of our conduct conformably to them, must be considered as our principal duty. (Malthus 1958, II, 157)

Turning specifically to the question of prudence, that is, of delaying marriage until one is able to support the resulting family, he says

There are perhaps few actions that tend so directly to diminish the general happiness as to marry without the means of supporting children. He who commits this act, therefore, clearly offends against the will of God; and having become a burden on the society in which he lives, and plunged himself and family into a situation in which virtuous habits are preserved with more difficulty than in any other, he appears to have violated his duty to his neighbours and to himself, and thus to have listened to the voice of passion in opposition to his higher obligations. (Malthus 1958, II, 166)

So the general interest is clear: individuals should exercise moral restraint and postpone or abstain from marriage. But for Malthus, when we adopt moral restraint, we act, not merely in the general interest, but equally in our own

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<sup>5</sup> Though not, of course, for Malthus, the man, whose piety remained undimmed throughout his life. Waterman 1991 is excellent on this.

interests: by acting in our own best interests we thereby automatically act in the social interest:

it is in the power of each individual to avoid all the evil consequences to himself and society resulting from the principle of population by the practice of a virtue clearly dictated to him by the light of nature ... the exercise of this virtue to a certain degree would tend rather to increase than diminish individual happiness ... the Deity[’s] general laws make this virtue necessary and punish our offences against it by the evils attendant upon vice, and the pains that accompany the various forms of premature death ... It is the apparent object of the Creator to deter us from vice by the pains which accompany it, and to lead us to virtue by the happiness that it produces. (Malthus 1958, II, 166-167)

The same point is made in the final two sentences of the *Summary View*:

Each individual has, to a great degree, the power of avoiding the evil consequences to himself and society resulting from [the law of population], by the practice of a virtue dictated to him by the light of nature, and sanctioned by revealed religion. And, as there can be no question that this virtue tends greatly to improve the condition, and increase the comforts both of the individuals who practise it, and through them, of the whole society, the ways of God to man with regard to this great law are completely vindicated. (Malthus 1970, 272)

So the Deity has set things up so that the individual is rewarded or punished for his actions according to their contribution to “promoting or diminishing the general happiness”. Note that individual behaviour only has an effect on social outcomes via its effect on the individual in question – there are no direct or spillover effects: “virtue tends greatly to improve the condition ... of the [virtuous] individuals ... *and through them*, of the whole society”.

These passages, however, are summaries and concluding passages; they are therefore quite allusive and could be neglected as *obiter dicta*. It is therefore worth spelling out in greater detail how Malthus links individual and social interests with respect to population. In the *Second Essay* he spends a chapter, chapter iv of book iv, describing the happy scene, should moral restraint ever be generally adopted. In the subsequent chapter he is wisely concerned to dispel the perception that this was as utopian as any writings of a Condorcet or a Godwin. Of the “improved state of society, which I have supposed in the last chapter”, he writes,

The improvement there supposed ... is to be effected ... by a direct application to the interest and happiness of each individual. It is not required of us to act from motives to which we are unaccustomed; to pursue a general good which we may not distinctly comprehend, or the effect of which may be weakened by distance and diffusion. The happiness of the whole is to be the result of the happiness of individuals, and to begin first with them. No co-operation is required. Every step tells. He who performs his duty faithfully will reap the full fruits of it, whatever may be the number of others who fail. This duty is intelligible to the humblest capacity. It is merely that he is not to bring beings into the world for whom he cannot find the means of support ... It is clearly his interest and will tend greatly to promote his happiness, to defer marrying till by industry and economy he is in a capacity to support the children that he may reasonably expect from his marriage; and ... considerations of his own interest and happiness will dictate to him the strong obligation to a moral conduct while he remains unmarried. (Malthus 1958, II, 169)

So social welfare is just the aggregate of individual levels of utility. The whole is just the sum of the parts. This is very much the line taken by Friedman and Lucas, and it has exactly the same policy implications. Where Lucas (1987, 54) argues that unemployment must be just the aggregate of all the individual decisions allocating time to labour and leisure, and therefore there can be no scope for State intervention, Malthus can blame poverty on the decisions of the poor, with a similar policy prescription. While Lucas has a theory of voluntary unemployment, Malthus has one of voluntary poverty: the parallel is exact. Of a man driven into poverty by conceiving too many children Malthus writes:

In searching for objects of accusation, he never adverts to the quarter from which his misfortunes originate. The last person he would think of accusing is himself, on whom in fact the principal blame lies ... the common people ... are themselves the cause of their own poverty ... the means of redress are in their own hands, and in the hands of no other persons whatever. (Malthus 1958, II, 170)

Interestingly, he was already developing this view within a few weeks of the publication of the *First Essay*; in a letter to Godwin in 1798 he writes that “The very admission [on Godwin’s part] of the necessity of prudence, to prevent the misery from an overcharged population, removes the blame from public institutions to the conduct of individuals” (Malthus 1798, 324). “Removing the blame” for misery from institutions was of paramount importance to Malthus. His first attempt removes the blame from institutions to the Deity, his second attempt removed the blame from institutions to individuals.

In connection with a discussion of the *Second Essay* Santurri summarises Malthus’s policy prescription thus:

For the most part the economic sufferings of the poor can be mitigated only by the poor themselves. Each individual must insure the fulfilment of his own basic needs by planning for the future. If he is not in a position to support a family, then he must refrain from marriage and remain continent. Society can provide its lower classes with no greater service than the cultivation and encouragement of such prudence ... For Malthus the improvement of society, the achievement of the social good, depends only upon the individual

pursuit of self-interest, a pursuit which may be regarded as inevitable ... insofar as people are egoists, the exercise of moral restraint is bound to prevail in the long run. (Santurri 1982, 327-328)

In adopting this reductionist standpoint, Malthus's argument, like Lucas's, must depend on assuming that there are no significant externalities, prisoners' dilemmas or free riders. This is made clear where he argues that the 'full fruits' of individual restraint are enjoyed by the individual practicing it, whatever anyone else is doing. As soon as the question is posed, the answer presents itself: such externalities simply cannot be assumed away.<sup>6</sup> Malthus claims, e.g., that "prudential restraint, if it were generally adopted, by narrowing the supply of labour in the market, would ... soon raise its price ... all abject poverty would be removed from society" (Malthus 1958, II, 161). But the benefit to each individual, of the general increase in real wages caused by *his own contribution* to the practice of moral restraint, would be vanishingly small. Everyone else will practice moral restraint, or not, and he will benefit, or not, according to what they do. His own influence on the outcome is negligible. So why should he contribute? We have a multi-player iterated prisoners' dilemma: the cooperation move is to practice moral restraint, and the defection move is to marry early. The incentive structure leads individuals to defect.

But for Malthus, virtue brings its own reward: we forward society's interest in lowering the rate of reproduction by pursuing our own. This is a completely new argument which nowhere appears in the *First Essay*. No invisible hand is now necessary, as the good of society is just the sum of the condition and comfort of the individuals composing it. Since moral restraint is in the interest of the individual agent as much as of society, the best that the State can do to encourage it is to practise its own restraint and abstain from intervention. All that is required of the State is civil and political liberty and the defence of property.

In the five years between 1798 and 1803 providentialism is quietly dropped (Malthus's own list of changes between the two editions, in the *Preface* to the second edition (Malthus 1958, I, 1-3) fails to note the excision of the final two chapters)<sup>7</sup>, and its place taken by moral restraint.

It is a remarkable fact, given its centrality to the argument of the *Second Essay* and the *Summary View*, that prudential moral restraint was not in the *First Essay*, but first introduced in the 1803 edition. Not only is the idea only introduced in the second edition, but it is in contradiction to the views expressed in the first edition, in which he argues *in favour* of early marriage, stating baldly that "every obstacle in the way of marriage must undoubtedly be considered as a species of unhappiness" (Malthus 1970, 99), indeed "the dictate of nature and virtue seems to be an early attachment to one woman" (Malthus 1970, 73). While it is possible for individuals to foresee the adverse consequences of early marriage, and to abstain therefrom, he says, "this restraint almost necessarily ... produces vice", and in any case the attraction between the sexes is so powerful that no society, "even those that are most vicious", can escape a tendency towards an increase in population causing distress to the lower classes (Malthus 1970, 73). So at the level of the individual, restraint leads to vice, and at the aggregate level it doesn't work.

In spite of the apparently gloomy prognosis of permanent over-population in the *First Essay*, Malthus in the second and subsequent editions is able to propose a strong *laissez-faire* policy prescription. Human happiness is now assured, not in the afterlife by a beneficent and powerful deity, but in the here-and-now by the self-seeking activity of individual agents in the context of a system of private property. Whereas in 1798 everything, including human suffering, conduced to the divine plan for man, showing that every 'partial evil' was only a necessary part of the universal good; now, in 1803 and thereafter, it is individual 'virtue' which will lead to progress in the condition and comfort of individuals, and, *through them*, of society at large. In moving from a holistic to a reductionist case for *laissez-faire*, we move from an *essentially* religious outlook to an *essentially* secular one: while providentialism makes no sense without a deity, the reductionist account of the mature Malthus, whatever his personal religious views, places the individual man, not his god, at the centre of the story. We know that Malthus remained a devout Christian to the end of his days. But we do not know what the religious outlook of Lucas – to whom I have compared Malthus in this paper – may be (indeed, it would be impertinent to ask). In both cases it is irrelevant to the political economy that they adopt. Before the watershed of 1800 religion and political economy are fused to the point that the latter can only be understood in connection with the former; after 1800 they fall apart. Malthus epitomises that change.

## 6. Conclusion

A central tenet of the Enlightenment was the notion of the perfectibility of humanity, the idea of progress. Taking up

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<sup>6</sup> It is precisely in this sense that Santurri (1982, 328-330) points to the irony of "an important lacuna in [Malthus's] theodicy", namely that "Until they are instructed, the poor will not understand that the exercise of prudence and foresight in the form of moral restraint is dictated by their own interests ... Yet a system of public education is not generated naturally by individual pursuit of perceived self-interest".

<sup>7</sup> In 1799 in a letter to the *Monthly Magazine*, Malthus announced that he would omit the final two chapters in the forthcoming second edition as they were "not necessarily connected" with the main part of the book (Waterman 1991, 112).

this theme and developing it, utopian eighteenth-century writers such as Godwin and Condorcet, not only envisaged a goal, a time of plenty, but connected it with specific institutional changes, such as the abolition of private property. Malthus's aim is expressly and explicitly to counter these utopian views by pointing up the principle of population. This principle means that the present level of suffering that we see about us at the turn of the nineteenth century will, substantially, always be with us. Whatever the growth in productive forces, and whatever the social arrangements we adopt to exploit those forces, we will always be crushed between two great tendencies: the arithmetical growth in the means of subsistence, and the geometrical growth in population. The only checks that Malthus can see, when he starts work on the topic in the 1790s, are vice and misery. Hence we are condemned to vice and misery forever and the prospect of "the future improvement of society" is a chimera.

This paper has argued that we may read Malthus as going to considerable lengths to develop a theodicy, in which suffering and temptation are necessary parts of the Deity's plan, and, in particular, are required to generate minds suitable to dwell with the Deity in the next life, in order to reconcile this gloomy picture with the standard providentialism of the day. This approach is entirely consistent in spirit with that taken by Smith and his biographer, Dugald Stewart. The holism-plus-an-invisible-hand-mechanism approach looks at social life as a whole and portrays human happiness as something guaranteed – by a benign Deity (according to Smith), or a benign evolutionary process (Hayek).

In the interpretation suggested in this paper, it was quickly apparent to the anonymous author, however, that this 'infamous' theodicy would not do: providentialism was stretched to breaking point; within weeks he began work on an alternative rhetorical device, which would remove the blame for misery from institutions to individuals. Happiness was now possible in this life, not merely the next, and it was within the power of individuals to attain it. Each individual – to the extent that he is free, enlightened and self-respecting – may achieve happiness by following his own interest in moral restraint, regardless of the actions of others. Social welfare is just the aggregate of the benefit each individual reaps from their own actions. Moving from the providential world of Smith and Stewart, we enter one where the desirability or otherwise of social outcomes can be safely ascribed to the self-interested behaviour of isolated individuals. Malthus's reductionism makes the whole the sum of its parts, and once again, the scope for significant collective action is denied. Both accounts are Panglossian, indeed: all is for the best in both – but there is a world of difference between the rhetorical strategies deployed in their service.

## References

- Becker C.L. 1932, *The Heavenly City of the Eighteenth-Century Philosophers*, New Haven and London, Yale UP.
- Denis A. 1999, "Was Adam Smith an Individualist?", *History of the Human Sciences*, 12, 3, 71-86.
- Denis A.M.P. 2001, *Collective and Individual Rationality: Some Episodes in the History of Economic Thought*, Ph.D. thesis, London, The City University London.
- Denis A. 2002, "Was Hayek a Panglossian evolutionary theorist? A reply to Whitman", *Constitutional Political Economy*, 13, 3, 275-285.
- Denis A. 2004, "Two rhetorical strategies of *laissez-faire*", *Journal of Economic Methodology*, 11, 3, 341-353.
- Denis A. 2005, "The Invisible Hand of God in Adam Smith", *Research in the History of Economic Thought and Methodology*, 23-A, 1-33.
- Flew A. 1970, "Introduction", in Malthus 1970.
- Hayek F. 1988, *The Fatal Conceit: the errors of socialism*, London, Routledge.
- James P. 1979, *Population Malthus: his life and times*, London, Routledge & Kegan Paul.
- Keynes J.M. 1981, *Activities 1929-31. Rethinking Employment and Unemployment Policies*, in D. Moggridge (ed.), *The Collected Writings of John Maynard Keynes*, vol. XX, London, Macmillan, for the Royal Economic Society.
- Lucas R.E. Jr. 1987, *Models of Business Cycles*, Oxford, Blackwell.
- Malthus T.R. 1798, "Letter from The Rev. R. Malthus to William Godwin, Allbury, August 20", in Ch. Kegan Paul, *William Godwin: His Friends and Contemporaries*, vol. I, London, 1876, 321-325.
- Malthus T.R. 1803, *An Essay on the Principle of Population* 2nd edn., London: J. Johnson; repr. 1996, London, Routledge-Thoemmes Press.
- Malthus T.R.\* 1808, "Newenham and others on the State of Ireland", *Edinburgh Review*, 12, 24, July.
- Malthus T.R. 1958 (1803, 1806, 1807, 1817, 1826), *An essay on the principle of population*, in two vols, London, Dent/Everyman's Library; [referred to as the *Second Essay* in this paper].
- Malthus T.R. 1970 (\*1798, 1830), *An essay on the principle of population and a summary view of the principle of population*, ed. by Antony Flew, Harmondsworth, Penguin (*Pelican Classics*); [referred to as the *First Essay* and the *Summary View* in this paper].
- Poovey M. 1998, *A History of the Modern Fact. Problems of Knowledge in the Sciences of Wealth and Society*, Chicago, Chicago UP.
- Pullen J.M. 1981, "Malthus' theological ideas and their influence on his principle of population", *History of Political Economy*, 13, 1, 39-54.
- Santurri E.N. 1982, "Theodicy and social policy in Malthus' thought", *Journal of the History of Ideas*, 43, 2, 315-330.
- Smith A. 1976a (1759), *The Theory of Moral Sentiments*, in D. D. Raphael and A. L. Macfie (eds), *The Glasgow Edition of the Works and Correspondence of Adam Smith*, vol. I, Oxford, Clarendon Press-OUP; repr. Indianapolis, Liberty Fund, 1984.

Smith A. 1976b (1776), *An Inquiry into the Nature and Causes of the Wealth of Nations*, in R. H. Campbell, A. S. Skinner and W. B. Todd (eds), *The Glasgow Edition of the Works and Correspondence of Adam Smith*, two vols: vol. II, Oxford, Clarendon Press-OUP; repr. 1981, Indianapolis, Liberty Fund.

Smith A. 1983, *Lectures on Rhetoric and Belles Lettres*, in J. C. Bryce (ed.), *The Glasgow Edition of the Works and Correspondence of Adam Smith*, vol. IV, Oxford, Clarendon Press-OUP; repr. Indianapolis, Liberty Fund, 1985.

Stewart D. 1842 (1792) *Elements of the Philosophy of the Human Mind*, London, Thomas Tegg.

Stewart D. 1854, *Collected Works of Dugald Stewart*, ed. by Sir William Hamilton, vol. I, Edinburgh, Thomas Constable.

Stewart D. 1855, *Collected Works of Dugald Stewart*, ed. by Sir William Hamilton, vol. VIII, Edinburgh, Thomas Constable.

Waterman A.M.C. 1991, *Revolution, Economics and Religion. Christian Political Economy, 1798-1833*, Cambridge, Cambridge up.

Waterman A.M.C. 2002, "Economics as Theology: Adam Smith's Wealth of Nations", *Southern Economic Journal*, 68, 4, 907-921.

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