

Malthus *With* Institutions

A Comparative Analysis of Prudential Restraint

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But, though the laws of nature which determine the rate at which population would increase if unchecked, and the very different rate at which the food required to support population could be made to increase in a limited territory, are undoubtedly the causes which render necessary the existence of some great and constant check to population, yet a vast mass of responsibility remains behind on man and the institutions of society. (Malthus 1824, 202)

I. Introduction

My paper expands on a claim Jeff Young makes near the end of his paper for this session:

Population growth under conditions of land scarcity and open access results in an equilibrium of human misery. This is Thomas [Malthus]'s ecological model. The sophisticated model is a general model of a commercial society with traditional Judeo/Christian marriage. This is Robert [Malthus]'s sophisticated model. Malthusian results of population pressing on food yielding subsistence living necessarily follows from the assumptions of Thomas, while Robert yields such results only in the early and rude state or in a commercial society if diminishing returns overbalances technical change and capital accumulation or if a taste for luxury or the ability to think ahead to future consequences fails to emerge in a sufficient percent of the population. In short, the path of population, resources, and standard of living is an empirical matter. (Young 2014, 18)

In the second and subsequent editions of his *Essay on the Principle of Population*, T. Robert Malthus created a more expansive examination of the political economy of population, resources, and the material standard of living, by examining available empirical evidence regarding the various conclusions of the ecological and sophisticated models. While these sections of Malthus' work have been examined in terms of the evidentiary credibility they lend to his population principle (e.g., Avery 1997; Dolan 2000; James 1979; Petersen 1979), they have not been looked at through the lens of this "new institutionalist" account that Jeff Young and I share to examine how Malthus combines his ecological and sophisticated models with empirical investigations to construct a comparative political economy of prudential restraint. Such is my purpose

here.

To set the stage for that investigation, we begin with a look at the brief set of comparative studies included in the first *Essay*. Examining his initial look at how the principle of population could be applied to the study of different societies will not only set the stage for the expansion of his studies in the subsequent editions; it will also enable us to identify the underlying assumptions upon which those studies were built. Following the second section, we turn the main task of this paper: the framework for the comparative political economy of prudential restraint that Malthus built in the subsequent editions of the *Essay*. That investigation will be divided into two sections. The third section of the paper will set out the overall framework of his investigations; the fourth section will provide the textual evidence for the framework defined in the previous section. The paper will conclude with a few remarks regarding the relationship of an institutionalist analysis of Malthus' population principle to considerations of his contributions to classical political economy.

II. The Framework of the First *Essay*

In the first edition of *An Essay on the Principle of Population*, published anonymously in 1798, Malthus provided a five-chapter look at how the principle of population appears to operate across time and space among human populations. These five chapters comprise the middle portion of the *Essay*. They are preceded by a "thought experiment" (Waterman 1991, 264-65; Young 2014, 10) that provides the basic explication of the ecological model in the first two chapters; and followed by his use of that thought experiment as the foundation for criticisms of, first, Wallace's notion that population problems would occur in some distant future, and, subsequently, Condorcet and Godwin's proposals for new forms of human governance. Given that the initial version of the *Essay* was written "on the spur of the occasion" (quoted in James 1979, 69) for the purpose of these criticisms, as well as the fact that the first national census for England was still 3 years away, the cursory examination given to the empirical evidence, drawn primarily from the four sources – Adam Smith (1784), David Hume (1764), Richard Price (1783), and Robert Wallace (1753; 1761) – that Malthus had "within my reach in a country situation" (quoted in James 1979, 69) is perhaps forgivable. It is in these sections that most of Malthus' additions to the text of the *Essay* in the subsequent editions can be found.

But I don't draw our attention to these middle chapters of the first *Essay* for the content and quality of Malthus' empirical investigations. Rather, what brings me to them is the framework within which he places his summary of the evidence. Chapters 3 and 4 set out the basic structure of the framework; the other three chapters look at some specific circumstances, particularly with regard to England. Chapter 3 looks at the two states of humankind that Malthus considered the lowest: the "rudest state" (1798, 20), which is a hunting and gathering society; and the next lowest – the "shepherd state" (1798, 20), which is a nomadic existence, and consequently a constant quest for fresh pasture. In both, the means of subsistence controls population through the misery of bad conditions (famine, pestilence, disease) as well as the vice of war (both that which an external force inflicts on a rude society, and that which a nomadic people inflict on others). Malthus concluded

that, in these rudest states, population has remained relatively constant over hundreds of years.

Civilized nations provide a stark contrast, Malthus suggested, to the rudest states. In chapter 4, he examined the claims that the civilized nations of Europe have experienced population growth at a slow, but steady, pace. The only way this could be happening, he argued, is if the average standard of living were rising; otherwise, the positive checks would increase the mortality rate to bring the population back to equilibrium with the subsistence standard of living. But the rise in the average means of subsistence does not mean that everyone in the civilized nations benefits equally. The benefits are spread unevenly in these nations, with the lower classes benefiting the least, and also being the most susceptible to the operation of the same “positive” checks that afflicted the ruder states. Among the lowest classes, misery and vice certainly played a role in population control. However, even among the lowest classes, and certainly everywhere else, the growth of population in the civilized nations is kept in sync with the growth in the means of subsistence largely by the operation of the preventive check – human prudential decisions, rather than the positive checks. Table 1 captures the basic issues at stake in the division Malthus drew between population growth and the standard of living in the rudest states relative to the civilized nations.

Table 1: Basic Structure of Empirical Study in the first *Essay*

Rudest States		Civilized Nations
• Population stable over long period of time		• Slow, steady population growth
• Means of subsistence constant over time		• Average means of subsistence rising
• Relatively equal distribution of the sparse means of subsistence among population		• Benefits unevenly spread across population
• Only positive checks to population in operation: misery and vice		• Positive and preventive checks in operation: prudential reasoning key

The framework provided in chapters 3 and 4 is sufficient to launch Malthus’ criticisms of Condorcet and Godwin in subsequent chapters of the *Essay*. In brief, removal of central features of a civilized nation – property, a centralized political authority, and marriage – could reduce a civilized nation to a rude state. Were such institutions removed, the civilized nation would have removed the means by which prudential reasoning could inform the preventive checks, leaving it in the same position as the hunting or shepherding states. In these rude states, the positive checks are the sole means by which population growth could be contained. Malthus went on to argue that, before the slide into the rude state could advance very far, individuals in the previously civilized nation would perceive “the necessity of some immediate measures to be taken for the general safety. Some kind of convention would then be called,” at which the dangers would be outlined, and a “complete division of land,” with security of property ensured, would be instituted (Malthus 1798, 71). The convention would also re-institute marriage, or at least “some express or implied obligation on every man to support his own children” (Malthus 1798, 72). Thus would a Godwinian society interrupt its inevitable career

downward (see Waterman 1991, 27), and put in place “an administration of property, not very different from that which prevails in civilized states at present ... as the best, though inadequate, remedy, for the evils which were pressing on the society” (Malthus 1798, 72).

As we can see, the framework of chapters 3 and 4 of the first *Essay* are sufficient for Malthus’ critique of Wallace, Condorcet and Godwin. Yet Malthus did not proceed directly from the framework of chapters 3 and 4 to those criticisms. Instead, in the remaining chapters of the middle section of the first *Essay* (chapters 5 to 7), he picked up an assortment of issues regarding the population of England and of new colonies that might be viewed as contradicting his population principle, as well as some interesting data regarding epidemics and their aftermath. A reader familiar with the later editions can see in these chapters the precedent for Malthus’ later empirical investigations of populations around the world. He knew that the nations of the earth don’t fit simply into his two categories of rude and civilized states. How do different circumstances affect both the operation of the population principle and the relative importance of the positive and preventive checks? At this early stage in his investigation of the problem of population, he did not have a lot of empirical evidence to extend the investigation, and had to depend upon what little was available through the research of others. That was shortly to change.

Before moving to Malthus’ extension of the comparative analysis in the subsequent editions of the *Essay*, however, it would behoove us to pause and identify three key assumptions that are apparent in the first *Essay* and underlie his analysis in all the *Essay*’s editions. The first is the population principle itself; that, in the absence of checks, “population is necessarily limited by the means of subsistence” (Malthus 1826, 21). The principle emerges from the two postulata of the first *Essay*, and implies, as Malthus is at pains to emphasize, that fundamentally, population growth is dependent upon the expansion of the means of subsistence. While the possible checks on population – misery, vice, and (in the subsequent editions) moral restraint – may interfere or intervene in the operation of the population principle, their presence does not falsify the principle.

The second assumption is a universal, fixed notion of human nature. Universal, in the sense that all human beings share the same nature; fixed, in the sense that seemingly different behaviors were not the result of differences in human nature, but rather, of the incentives which different institutions and conditions provided to the humans who conducted their affairs within those contexts. In “the practical application of my principles I have taken man as he is, with all his imperfections on his head,” Malthus said in response to critics of his views on moral and prudential restraint (quoted in Levy 1999, 64; Huzel 2006, 29). Taking “man as he is” implied for Malthus both that we should consider the actual situation within which individuals find themselves and their available options, but also that all people, *regardless of caste or class*, respond to incentives making (Waterman 2012). Accepting “all his imperfections” meant for Malthus that all people, *regardless of caste or class*, might choose not to follow the dictates of prudential reason in their response to the incentives provided by their institutional context, for reasons of passion, ignorance, moral failing, or weakness of will.

The assumption of a universal, fixed human nature was unique in his time, and therefore marked Malthus apart. It distinguished him from those who believed in natural hierarchy, as well as those (like Rousseau) who believed that human nature was shaped by the institutional contexts humans created.¹ Malthus' assumption is the basis for the "analytical egalitarianism" that David Levy and Sandra Peart (Peart and Levy 2005) describe as fundamental to classical economics, and is an essential component of what Thomas Sowell (2007) calls Malthus' "constrained vision."

The third assumption is that a society's institutions structure both the incentives to which individuals respond, and the ways in which they do so. Like his second assumption, this assumption is hardly unfamiliar to the modern economist, but its impact on Malthus' thought made his approach to population unfamiliar to his contemporaries. Traditionalists found his incentives-based approach to marriage and family disturbing because it suggested that social benefits arose from delaying the domestic bliss of married life (see Levy 1999), while those advocating social improvements in the conditions of the poor were appalled by his argument that, however well-intentioned, the Poor Law created the wrong kind of incentives. Their response to his rejection of the Poor Law also blinded them to the arguments he made on behalf of the poor for eliminating the obstacles to more integrated labor markets.

Taken together, these three foundational assumptions created the framework for a comparative analysis of population and its checks which focused Malthus' attention on the availability of the means of subsistence, on the one hand, and a number of institutional features on the other. We can see these assumptions at work in Malthus' statement from the first *Essay* of how moral restraint operates. Speaking of an average individual in a civilized society with a functioning labor market, Malthus says:

Impelled to the increase of his species by an equally powerful instinct, reason interrupts his career, and asks him whether he may not bring beings into the world, for whom he cannot provide the means of subsistence. In a state of equality, this would be the simple question. In the present state of society, other considerations occur. Will he not lower his rank in life? Will he not subject himself to greater

¹ One of the ironies of Malthus' reception in his own time is that the hierarchicalists criticized him for denying that the differences between classes were natural; while those seeking social improvement criticized him for believing that the lower classes were naturally unable to control the "passion between the sexes." The Dickensian view of Malthus certainly fits into the latter group, as do, among others, Marx and Engels (Meek 1971). An interesting addition to the list of those with whom Malthus possibly disagreed is Adam Smith. Anthony Waterman (2012) recently argued that, unlike the analytical egalitarianism of Malthus' wage theory, Smith's wage theory accepts the eighteenth century notion that the lower classes only respond to the initiatives of their masters, a view that lies, if you will, half-way between natural hierarchy and analytical egalitarianism. Levy (1999; see also, Levy 1978) has a good discussion of Malthus' responses to his critics that have largely gone ignored; and Huzel (2006) provides a wider discussion of the reaction to Malthus' popularization.

difficulties than he at present feels? Will he not be obliged to labour harder? and if he has a large family, will his utmost exertions enable him to support them? May he not see his offspring in rags and misery, and clamouring for bread that he cannot give them? And may he not be reduced to the grating necessity of forfeiting his independence, and of being obliged to the sparing hand of charity for support? (Malthus 1798, 14)²

The possibility that an individual's reasoned response to incentives like market wages, social standing, and the avoidance of charity could disrupt the inevitable operation of the population principle set the stage for the more detailed empirical investigations of the institutional incentives of a wider range of societies in the second, and subsequent, editions of Malthus' *Essay*.

III. The Framework of the Subsequent Editions of the *Essay*

Immediately upon the completion of the first *Essay*, Malthus began an intensive and energetic study of demography, reading everything he could put his hands on, and making the first of several trips to Scandinavia, and then other parts of Europe (James 1979). His trips, studies of other travellers' accounts, and the publication of better population statistics following national censuses in England and elsewhere in the early 19th century, not only expanded and deepened his knowledge of individual cases, but also modified his framework of analysis. Beginning with the second edition of the *Essay*, (Malthus 1803), the volume was divided into four books, with the biggest expansion of material coming, as suggested above, in the first two books. By the sixth edition (Malthus 1826), the comparative material on the political

² In the sixth edition of the *Essay*, this same paragraph is somewhat expanded, and includes elements which reflect his redefinition of moral restraint in the subsequent editions:

The preventive check, as far as it is voluntary, is peculiar to man, and arises from that distinctive superiority in his reasoning faculties, which enables him to calculate distant consequences. The checks to the indefinite increase of plants and irrational animals are all either positive, or, if preventive, involuntary. But man cannot look around him, and see the distress which frequently presses upon those who have large families; he cannot contemplate his present possessions or earnings, which he now nearly consumes himself, and calculate the amount of each share, when with very little addition they must be divided, perhaps, among seven or eight, without feeling a doubt whether, if he follow the bent of his inclinations, he may be able to support the offspring which he will probably bring into the world. In a state of equality, if such can exist, this would be the simple question. In the present state of society other considerations occur. Will he not lower his rank in life, and be obliged to give up in great measure his former habits? Does any mode of employment present itself by which he may reasonably hope to maintain a family? Will he not at any rate subject himself to greater difficulties, and more severe labour, than in his single state? Will he not be unable to transmit to his children the same advantages of education and improvement that he had himself possessed? Does he even feel secure that, should he have a large family, his utmost exertions can save them from rags and squalid poverty, and their consequent degradation in the community? And may he not be reduced to the grating necessity of forfeiting his independence, and of being obliged to the sparing hand of charity for support? (Malthus 1826, 14-15)

economy of population and prudential restraint had grown from five chapters to twenty-five chapters.

Gone is the strict division between rude and civilized states; between the populations of the lowest stage of human society and those of France and England now lies a spectrum along which other populations are placed. The spectrum reflects both the *degree of civilization*, and the *combination of checks to population* at any given point along the spectrum. Toward the lower end, per capita food consumption is equal to subsistence, with only rare exceptions. From the middle of the spectrum to its upper end, however, talk of subsistence largely disappears; incomes can be, stable or even growing, at above subsistence levels. Well before the middle of the spectrum's range, Malthus discusses the operation of preventive checks on individual decision-making; and the positive checks re-appear at points beyond the mid-point of the range, especially in the context of the consequence of wars. Furthermore, the examination of existing nations does not cover all the possibilities along the spectrum. France and England top the degree of civilization among existing nations, but the spectrum extends beyond them. England, Malthus acknowledged, is not at the top of the spectrum because it had not fully extracted itself from dependence upon the positive checks; greater progress toward a higher degree of civilization was possible (Malthus 1826, 314-15). Perhaps some day societies would become dependent solely upon the preventive checks, and thereby reach the top of the spectrum. Remember, however, that even were such a state to be reached, the population principle itself would not thereby be vanquished. Rather, the principle would only have been checked – perfectly perhaps – by a set of institutional incentives that fostered prudential restraint enough to allow steady economic growth into the future with a rising standard of living.

Before turning to Malthus' investigation of nations along the spectrum, we need to pause and consider in more detail the expression "degree of civilization." The term "civilization" was introduced to the English language near the end of the seventeenth century (see the *Oxford English Dictionary*), and generally referred to the process of emerging from a savage, uneducated, and barbarous state. Malthus adopted the term, using it in the same manner as Adam Ferguson, Edmund Burke, and Adam Smith before him; i.e., to refer to a set of institutional features of society that included property, the rule of law, integrated markets, centralized political authority, expansive general education, refined social customs, and formalized obligations for fathers to have financial responsibility for their children (that is, some form of marriage). The more of these features a society possessed, the higher its degree of civilization. While Malthus' use of "civilization" was not unique by the early nineteenth century, his coupling of the degree of civilization with the operation of the positive versus the preventive checks was. According to Malthus, the more features of civilization a society possessed, the greater the extent to which the preventive checks might function in combination with the expansion of the means of subsistence to enable, and control, population growth. Conversely, the fewer features of civilization in a society, the greater the extent to which the

sparseness of the means of subsistence functioned in combination with the positive checks to control population.³

Thus, rather than the simple two-state framework that operated in the first *Essay*, the subsequent editions saw the degree of civilization paired by Malthus with the operation of the positive and preventive checks to create a spectrum along which any society could be placed. Appendix 1 shows the entire spectrum including all the nations that Malthus examined, but the general framework is provided in Figure 1.

Figure 1: Institutions and the Population Checks in the 2nd – 6th editions of the *Essay*



Malthus begins his comparative analysis in the subsequent editions with the “wretched inhabitants of Tierra del Fuego,” who live in a “barren” land that renders their population entirely dependent solely upon the “miserable state” of its provisions. The bottom end of the spectrum, therefore, is marked by a population that scratches out its existence in a manner closest to the ecological model of the thought experiment found in *Essay*’s opening chapters. The only checks on population available in such a society are the positive ones, and they operate with a vengeance (Malthus 1826, 22). Close to the same end of the spectrum are the inhabitants of Tasmania (Van Dieman’s land), Australia (New Holland), and New Zealand. From there, Malthus proceeds to an examination of native populations in the Americas, the South Sea islands, and the “ancient inhabitants” of northern Europe (including the shepherd states he had placed among the rude states in the first *Essay*). In all these societies, the positive checks are the dominant form of population control, and the population is only that which can be sufficiently sustained at a subsistence level.

The remaining chapters of Book I cover the operation of the positive and preventive checks in nations ranging from the spread of nomadic societies in Europe to Africa, Siberia, Turkey, Persia, India, Tibet, China, Japan, and ancient Greece and Rome, in that order. Contemporary and historical societies are placed side-by-side

³ We should also note that, in the first *Essay*, the word “barbarous” was used in regards to both the actions of those in the shepherd state – i.e., one of the “rude” states – and the actions of those in Godwin’s ideal world – suggesting that Godwin’s ideal would return us to a savage state. In subsequent editions of the *Essay*, the words “savage” and “barbarous” continue to appear along the spectrum past the lowest end, but primarily in reference to the consequences of war and vice. In other words, Malthus distinguishes in those societies with a lower degree of civilization between the consequences of famine, disease, and pestilence, whatever their origin, and the consequences of human actions. The former are named misery; the latter, vice or moral restraint. At the higher end of the spectrum, misery occurs primarily among the lower classes, and prudential decision-making plays a larger role. Vice takes on additional meanings at the upper end of the spectrum as well because prudential actions may include immorality (see Levy 1978; 1999).

on the spectrum; affirming the universality of his fixed notion of human nature, the operation of the population principle, and the possibility of checks, both positive and preventive. The division of countries into Books I and II of the subsequent editions is perhaps a remnant of the sharp division made between rude state and civilized societies in Malthus' discussion of the first *Essay*, for the expanded text reveals much less of a division. While the peoples of Book I are primarily checked by misery and vice, and those in Book II primarily by prudential restraint, the preventive checks appear before the end of Book I. The peoples who appear in the latter chapters of Book I have some centralized political structures and markets, and their cultural mores also play a role in controlling their population. But their institutions are insufficient to allow these societies regularly to provide a standard of living that exceeds subsistence for more than a small fraction of the society. While they have some stability with agricultural production and may have years of plenty, their institutions cannot protect them in times of natural disaster, famine, and pestilence. As well, these nations tend to be warring peoples, and hence experience population fluctuations around periods of intense warfare. In the absence of institutions that ensure a greater degree of political, economic and social stability, these peoples over the long term experience little more than a subsistence existence. Rather than seeing a sharp division, therefore, the increasing "degree of civilization" makes more sense of Malthus' arrangement of the nations across both Books and I and II than his earlier binary organization does.

Table 2. Chapters on Population Checks in Different Nations (1826)

Book I	
Chapter III	Of the checks to population in the lowest stage of human society
Chapter IV	Of the checks to population among the American Indians
Chapter V	Of the checks to population in the islands of the South Sea
Chapter VI	Of the checks to population among the ancient inhabitants of the north of Europe
Chapter VII	Of the checks to population among modern pastoral nations
Chapter VIII	Of the checks to population in different parts of Africa
Chapter IX	Of the checks to population in Siberia, northern and southern
Chapter X	Of the checks to population in the Turkish dominions and Persia
Chapter XI	Of the checks to population in Hindustan and Tibet
Chapter XII	Of the checks to population in China and Japan
Chapter XIII	Of the checks to population among the Greeks
Chapter XIV	Of the checks to population among the Romans
Book II	
Chapter I	Of the checks to population in Norway
Chapter II	Of the checks to population in Sweden
Chapter III	Of the checks to population in Russia
Chapter IV	Of the checks to population in the middle parts of Europe
Chapter V	Of the checks to population in Switzerland
Chapters VI& VII	Of the checks to population in France
Chapters VIII & IX	Of the checks to population in England
Chapter X	Of the checks to population in Scotland and Ireland

Yet, in one regard, the division into Books I and II makes sense because of an obvious difference between their members that Malthus' readers would no doubt have understood. All the nations in Book II were contemporary countries in Europe, and hence participants in European civilization. But even among the European societies of Book II, there were significant institutional differences that mattered for population control and economic growth. The differences between the modern pastoral nation of Norway and the more industrial, modernizing nation of Sweden will be pointed out in the fourth section of this paper. But throughout Book II, themes that had not appeared in Book I make regular appearance: the degree of industrialization, which acted both to increase the standard of living and to increase the risk of an early mortality; the role of integrated markets, especially those for labor, and the resultant increase in mobility among the population; and the role of centralized political institutions.

These economic and political institutions play crucial roles in enabling economic growth and the control of population among the civilized nations of Europe: "... it appears that in modern Europe the positive checks to population prevail less, and the preventive checks more than in past times, and in the more uncivilized parts of the world" (Malthus 1826, 315). The absence of the institutions that incentivizes prudential restraint among the less civilized populations of Book I made those societies more susceptible to misery, war, and vice. But the presence of such institutions in Book II has not, Malthus believed, allowed the nations of Europe to escape entirely the grasp of war and vice, and for the lower classes, even misery. By the time he reaches France and England (especially England!), Malthus allows that the civilizing institutions have enabled these nations to experience a rising standard of living along with a rising population. That is, average population is no longer bound by the average quantity of food available. Population is controlled primarily, therefore, by the prudential decision-making of individuals. Marriage-related births are delayed, either by late marriage or "the gift of continence," which Malthus thought few couples (and esp. men, in his mind) could countenance. Delayed marriage, of course, bore the possibility for various vices, and hence he usually said that, in civilized nations, population was controlled by moral restraint and vice. Moral restraint captured those prudential actions that delayed marriage and did not result in vice.

At the conclusion of Book II, Malthus remarks:

That the checks which have been mentioned [misery, vice, and moral restraint] are the immediate causes of the slow increase in population, and that these checks result principally from an insufficiency of subsistence, will be evident from the comparatively repaid increase which has invariably taken place, whenever, by some sudden enlargement in the means of subsistence, these checks have in any considerable degree been removed. (Malthus 1826, 304)

Two things, he says, we can depend upon. First, that the passion between the sexes will operate as a given in all societies. If births in a period exceed deaths, then

deaths will soon enough exceed births, and an equilibration will necessarily occur. “If the preventive check did not operate very strongly, every country would without doubt be subject to periodical plagues and famines.” And secondly, that “The only true criterion of a real and permanent increase in the population of any country, is the increase of the means of subsistence” (Malthus 1826, 313). As we see in our closer examination of his discussion in Book II, the means of producing a rising standard of living and a rising population reside in the institutional depth and stability of a country.

In Malthus’ fully developed framework for the analysis of population, then, the principle of population was simply the starting point. The two postulata of the first *Essay* disappear by the sixth edition, and the ecological model becomes simply one end of a spectrum delineating the degree of civilization away from that near-animal-like state. Nations further along the spectrum possess features of civilization missing at lower levels. Institutions like property rights, rule of law, centralized political authority, strong social custom around marriage, and integrated markets not only provide protections from some of the positive checks on population. They also provide a context in which prudential decisions about marriage and fertility can occur. While the lower end of the spectrum can only survive at the edge of subsistence because any population growth is curtailed by the positive checks, the upper end of the spectrum would feature sustained economic growth with a growing population, and even a rising standard of living.

III. The Evidence

The purpose of this section is to provide the textual evidence for the framework developed in the previous section of the paper. The key passages that identify the framework itself are covered in other sections. My focus here, then, will be on the textual evidence from the chapters in which Malthus examined the operation of the positive and preventive checks in various states and nations. I will follow Malthus’ lead, and move from societies with a low degree of civilization to those with a higher degree. Rather than include key passages from each chapter, I will follow the divisions provided in Appendix 1, which group the nations in accordance with the changes in the language Malthus deploys in describing them.

Group 1: Almost No Institutions, Misery checks Population

Malthus’ descriptions of life in the places that occupy “the bottom of the scale of human beings,” and coincidentally are all arranged around the bottom of the southern hemisphere, are brutally brief. With few accounts to draw upon, and those which he did have suggesting miserable conditions and no stable institutions, he told his readers that “we cannot be at a loss to conceive the checks to population among a race of savages” (Malthus 1826, 22). The lack of quality food sources, and the labor required to obtain the better quality food among those sources high, rendered the population small relative to the space available. Exposure to nature’s risks – “unfavorable weather,” natural disasters, diseases, and the like – caused swings in population that were quite independent of any human action. The best

people could expect was to be “nearly on a level with the average supply of food” (Malthus 1826, 27).

The latter expression, equating consumption per person with the average supply of food, is common to Malthus’ discussion of the initial set of groups along his spectrum. One might be tempted to think of this as simply an expression of market clearing – quantity demanded equals quantity supplied at equilibrium, but Malthus makes it clear that these societies do not have well-developed or integrated markets for food. Of the South Sea islands, he says:

... in whatever abundance the productions of these islands may be found at certain periods, or however they may be checked by ignorance, wars and other causes, the average population, generally speaking, presses hard against the limits of the average food. In a state of society, where the lives of the inferior orders of the people seem to be considered by their superiors as [of little or] no value, it is evident that we are very liable to be deceived with regard to the appearances of the abundance; and we may easily conceive that hogs and vegetables might be exchanged in great profusion for European commodities by the principal proprietors, while their vassals and slaves were suffering severely from want. (Malthus 1826, 58-59)

The reality, Malthus tells us, was different: the superiors were simply taking from their vassals, and there was little to no exchange going on. Absent markets, the meaning of Malthus’ equation of average population with average food supply seems to mean something close to the modern ecologist’s notion of “carrying capacity”: the maximum, equilibrium number of people that a territory’s ecology will support indefinitely. The similarity between Malthus’ notion and the modern ecologist’s is also supported by the nature of the checks that operate, according to Malthus, in this first group. All the checks come from the natural order, with the one exception of constant warring among small groups in these territories, and all, including the warring, are the consequence of the miserable and risky conditions in which the peoples in this group live.

Three other aspects of Malthus’ discussion of the nations in Group 1 deserves some attention here because they reinforce the argument made here about his general framework. The first of these is in the chapter on the peoples of the Americas, where Malthus makes two arguments. First, he argues that the evidence suggests the population of the Americas prior to European contact was spread across the two continents in equal proportion to the average supply of food.

In a general view of the American continent, as described by historians, the population seems to have been spread over the surface very nearly in proportion to the quantity of food which the inhabitants of the different parts, in the actual state of their industry and improvement, could obtain; and that, with few exceptions, it pressed hard against this limit, rather than fell short of it, appears from the frequent recurrence of distress for want of feed in all parts of America. (Malthus 1826, 40)

Hence, the various causes of population changes in the Americas,

... are principally regulated by the plenty or scarcity of subsistence, is sufficiently

evinced from the greater frequency of the tribes, and the greater number in each, throughout all those parts of the country, where, from the vicinity of lakes or rivers, the superior fertility of the soil, or further advances in improvements, food becomes more abundant. (Malthus 1826, 39)

Here, of course, we see that Malthus placed the Americas correctly in his comparative analysis, given the knowledge base he was drawing upon. But then he makes a more interesting argument about the consequences of the depopulation of the Americas in the period of European contact. Some, he says, argue that the recent history of American Indian life contradicted the population principle. But, after a review of the evidence available, he concludes that “even now, in spite of all the powerful causes of destruction that have been mentioned, the average population of the American nations is, with few exceptions, on a level with the average quantity of food, which in the present state of their industry they can obtain” (Malthus 1826, 45). His argument is simply that the disruptions to their social customs, their lands, and their technological knowledge have rendered them incapable of greater food output, and hence, since they remain in a near-savage state, their average population again is in equilibrium with their average food supply.

The second item to note occurs at the end of the chapter on the South Sea islands. Here, Malthus compares the conditions of the South Sea islanders, which arise from the natural order in which they live, with the conditions of the residents of ancient Sparta. In the stories of ancient Sparta, whose “preposterous system of Spartan discipline” and “incessant wars” rendered their conditions similar to those of Group 1 (Malthus 1826, 59-60), we see, Malthus argues, that human institutions can replicate the miserable conditions of societies at lower degrees of civilization in contexts where they might otherwise be more advanced.

Finally, one “institutional” form of human social interaction among members of the societies in Group 1 is mentioned – marriage. But from the reports he had gathered, Malthus heard only of early marriages, frequent sexual violence, and generally brutal treatment of women. These consequences he considered to be key features of the vices that miserable conditions, as well as the wars which resulted from those conditions, produced.

Group 2: Poor Institutions, Misery and Vice checks Population

In the first group of nations along Malthus’ spectrum, the principal check on population was scantiness of the means of subsistence; all of the misery and much of the vice emanated from that principal source. In the second group, running from the pastoral nations to China along his scale, the press of the population against the food supply is as much to blame on the customs and governance of the nations as it is the scantiness of its provisions. Throughout his consideration of this group, then, there is a tension at play between the roles of culture, institutions, and the population principle.

Among Malthus’ modern pastoral nations, a category that covers a wide range of groups from central Asia (including the western parts of modern day China) to the Middle East and into Africa, warfare has been a constant cause of depleted population. But focusing solely on the impact of the culture of war on

population would lead the analyst to miss its impact on another important habit – that of the industrious pursuit of improving the means of subsistence:

The waste of life from such habits [of war] might alone appear sufficient to repress their population; but probably their effect is still greater in the fatal check which they give to every species of industry, and particularly, to that, the object of which is to enlarge the means of subsistence.... The evils seem mutually to produce each other. A scarcity of subsistence might at first perhaps give rise to occasion to the habits of war; and the habits of war in return powerfully contribute to narrow the means of subsistence. (Malthus 1826, 81)

The tension between the population principle and the role of cultural norms is even more pronounced in Malthus' discussion of marriage, and the cultural demand among nomadic tribes to have big families.

It may be said, however, of the shepherd, as of the hunter, that if want alone could effect a change of habits, there would be a few pastoral tribes remaining. Notwithstanding the constant wars of the Bedouin Arabs, and the other checks to their increase from the hardships of their mode of life, their population presses so hard against the limits of their food, that they are compelled from necessity to a degree of abstinence, which nothing but early and constant habit could enable the human constitution to support....

The power and riches of a sheikh consists in the number of his tribe. He considers it therefore as his interest to encourage population, without reflecting on how it may be supported. His own consequence greatly depends on a numerous progeny and kindred; and in a state of society where power generally procures subsistence, each individual family derives strength and importance from its numbers. These ideas act strongly as a bounty upon population; and, co-operating with a spirit of generosity which almost produces a community of goods, contribute to push it to its utmost verge, and to depress the body of the people in the most rigid poverty. (Malthus 1826, 82)

In all the pastoral and nomadic nations of this group, the average population remains at, or near, the average level of subsistence. But they differ in how that equilibrium is maintained, not only in terms of the means of subsistence available to them, but also in the nature of their cultural norms, and the variations in natural disasters that befall them. The “principal checks which keep the population down to the level of the means of subsistence are, restraint from inability to obtain a wife, vicious customs with respect to women, epidemics, wars, famine, and the diseases arising from extreme poverty” (Malthus 1826, 88). The main differences between the nations of this group and those pastoral nations in the previous group are the enhanced roles that cultural norms regarding marriage and women play in controlling population. In other words, with different cultural norms, these societies might see an increased standard of living, even in the presence of a culture of war and scanty resources.

Another major theme in Malthus' consideration of the nations in this group is their cultural norms regarding the industriousness they apply to producing the

means of subsistence. But rather than blaming a cultural norm for which there is no particular explanation, he usually connects the peoples' poor habits to the insecurity of property; the small size of the plots of land people are allowed to hold; patterns of excessive regulation, taxation and other extractive activity by elites; and marriage customs.

Insecurity of property comes from three sources: the constant presence of slavery in Africa, the vagaries of war across all these nations, and the threat of excessive taxation. In Africa, for example, Malthus cites the long-term presence of slavery, saying, "the insecurity of property arising from this constant exposure to plunder, must necessarily have a most baneful effect on industry" (Malthus 1826, 89). In his discussion of the Turkish dominions, he points out the "bad laws and worse administration of them" increases the insecurity of property, and throws such obstacles in the way of agriculture that the means of subsistence are necessarily decreasing yearly, and with them, of course, the number of people" (Malthus 1826, 110).

Excessive laws affect more than the insecurity of property, of course. Speaking of the Turkish dominions again, Malthus says that the "burdensome conditions" of excessive taxation, regulation and administration hurt industry, as well as the extraordinary extraction of any surplus production by the elites. He also mentions "a thousand accidental extortions" as part of the institutional context which threatens any independent industriousness on the part of the people in producing food (Malthus 1826, 110-115).

In China and Japan, it is the smallness of the plots of land allocated to families to produce their food, and the marriage customs that have arisen, which account for a very populous nation relative to its capacity to produce the means of subsistence. Despite the fertility of the soil, the excessive subdivision of land and the encouragements to marriage have "not only been an addition of so much pure misery in itself, but has completely interrupted the happiness which the rest might have enjoyed" (Malthus 1826, 131). Furthermore, China's cultural tendency to encourage early marriage has resulted in the family distress that accompanies the vice of infanticide.

In the case of India, the Hindu cultural admonition to live a chaste life and the blessing that is promised to those who bear no offspring at all would seem to have put moral restraint into effect when considering population control. However, Malthus argues, the preference for male offspring, as well as the role of the caste system, have had a strong bearing on fertility.

... from the prevailing habits and opinions of the people, there is reason to believe that the tendency to early marriages was still always predominant, and in general prompted every person to enter into this state, who could look forward to the slightest chance of being able to maintain a family. The natural consequence of this was, that the lower classes of people were reduced to extreme poverty, and were compelled to adopt the most frugal and scanty mode of subsistence. This frugality was still further increased, and extended in some degree to the higher classes of society, by its being considered as an eminent virtue. The population would thus be pressed hard against the limits of the means of subsistence, and the food of the

country would be meted out to the major part of the people in the smallest shares that could support life. (Malthus 1826, 119-20)

In most of the nations of this second group, the mix of natural and cultural aspects to the control of population continues to leave their people susceptible to the vagaries of natural disasters, and hence they experience population swings. Yet, like the group below them on the spectrum, their average population almost always remains close to the average means of subsistence. But in this group, the vices that arise from poor institutions, and the miseries that accompany them, play a role alongside the natural miseries that arise from the positive checks.

Group 3: Institutional Mix; All 3 Checks Operate, with Prudence Playing a Small Role

In this group, the interplay between law, custom, and industriousness that Malthus saw against the backdrop of the population principle begins to make itself clear. Consider, for example, his comments about the nations of central Europe. The region was reasonably well settled, which meant that the number of births would probably be about the same as the number of deaths, unless there was an increase in the region's means of subsistence, which had not occurred. Because national institutions did not discourage marriage, there "are few counties in which the common people have so much foresight, as to defer marriage till they have a fair prospect of being able to support properly all their children." Nevertheless, mortality was high. After considering the region's growth of "manufactories" and the unhealthy conditions in the towns and cities that accompanied their growth (Malthus 1826, 192-93), Malthus decides that the increase in deaths resulted from a combination of custom and industry operating against the backdrop of the population principle. "The great mortality probably arose," he tells us, "partly from the harshness of the soil and partly from the very great proportion of the people engaged in sedentary occupations," as well as "the very small number in the healthy employments of agriculture" (Malthus 1826, 194).

In Russia, Malthus' attention focuses on the role of orphanages and foundling hospitals. By law, these institutions were required to take anyone, which meant they provided an outlet for surplus population that prevented the natural operation of the positive checks as well as the feedback necessary for prudential restraint by individuals. Institutionalization of children at an early age also meant that they reached adulthood without gaining habits of industriousness or moral restraint. The unintended consequences of these institutions, therefore, were "habits of licentiousness" and the discouragement of marriage, which further "weaken the mainspring of population" (Malthus 1826, 186).

And yet, Malthus tells us, these institutions were not the primary obstacle to healthy population and economic growth in Russia. For that, the place of privilege was reserved for Russia's "vassalage" – the inheritance of its feudal system. The vast natural resources of Russia would suggest that it could easily follow a path of rapid economic growth with a steadily rising population who experienced an increasing standard of living. But it was not to be, Malthus said:

The principle obstacle to this, is the vassalage, or rather the slavery, of the peasants,

and the ignorance and indolence which almost necessarily accompany such a state. ... The consequence [of the Russian system] is, that the lands in the country are left half cultivated, and the genuine spring of population impaired at its source. (Malthus 1826, 188)

Norway and Sweden provide a contrast between pastoral and industrial that Malthus seems to relish the opportunity to explore. His well-known preference for agricultural production is obvious in his clear preference for Norway over Sweden. But the differences between them emerge, he clearly argues, from other differences as well. In terms of natural conditions, Norway was the perfect candidate for population growth. It experienced few epidemic sicknesses, was largely untouched by war for several centuries, and its people lived long lives. And yet, “the population of Norway never seems to have increased with great rapidity” (Malthus 1826, 157). He ruled out the operation of the positive checks, largely on the basis of the agricultural sector’s strength, and the spread of the population across the countryside. The source of population control, then, must lie in a preventive check that encouraged prudential restraint. That preventive check, Malthus tells us, is twofold: the combination of military conscription, and the employment of unmarried individuals as household servants.

In Norway, every male who was a farmer or laborer was a member of the army. Conscripted for 10 years of service in the army, they usually entered around the age of 25. Once in the army, a man could not get married without a marriage certificate, affirming that the man had sufficient means to sustain a family. He also had to obtain permission of his commanding officer. These costs, Malthus argued, “generally deterred those who were not in very good circumstances, from thinking of marriage till their service of ten years was expired” (Malthus 1826, 158). If you entered the army in your late twenties, you’d be almost forty before you could marry. Norway’s constraint on marriage did not extend to those who did not join the army, but social custom seems to have carried over as a “discretionary power” (Malthus 1826, 158), reinforced by the church’s requirement that a couple have means to sustain themselves before marrying them. Household servants often remained unmarried until later in life, following the military’s example.

While Sweden is similar to Norway in many ways, Malthus saw several key ways in which its institutional context differed, leading to a different alignment of prudential incentives when it came to marriage and children. Like Norwegians, the Swedes had an agricultural economic base, and unmarried children in the countryside often, like their peers in Norway, worked as servants in the households of both farmers and country gentlemen. But Sweden had a larger and more varied population than Norway. Sweden’s towns provided a greater variety of employment opportunities than just the agricultural sector, with rising industrialization, and the concomitant increase in secondary and service sector jobs. Malthus’ conclusion is ironic: modern Sweden has an institutional context that does not provide as strong a prudential restraint on population growth as pastoral Norway has. Hence, in Sweden the positive checks have greater force, and mortality rates are higher than in Norway (Malthus 1826, 167).

Switzerland is the last country in the third group, and shares a lot of

characteristics with Norway. Both are pastoral, and have institutions that promote late marriage. The biggest difference between them regards emigration. Malthus uses the opportunity of discussing Switzerland to reinforce the message of this group: when emigration is not a vent for surplus, and the habits of the people are not licentious,

the absolute necessity of the preventive check will be forced so strongly on their attention, that they must adopt it or starve; and consequently the marriages being very late, the number annually contracted will not only be small in proportion to the population, but each individual marriage will be less prolific. (Malthus 1826, 206)

Although the chapter in which Malthus discusses Scotland and Ireland comes after his discussion of the countries in Group 4, these other parts of the British Isles are more appropriately placed with Group 3. As Malthus suggested, Scotland, at least, has become more like Switzerland or even France in the recent years, largely because of the combination of emigration to North America and fact that more marriages are being delayed. With these two prudential actions, the situation of the lower classes in Scotland has improved significantly (Malthus 1826, 269).

Group 4: Prudential Restraint; Population Growth with Rising Real Incomes

While Malthus places both France and England at the top of his scale of existing societies along the spectrum, he uses the two chapters on France largely as an opportunity to discuss the inexplicable continuity of the country's population in the wake of a several decades of lost lives through the aftermath of the French Revolution and the Napoleonic Wars. France's new institutions provide opportunities for prudential restraint, and the state of the lower classes has certainly improved. The country has also seen an overall increase in the healthiness of its people, which should also decrease mortality rates. But Malthus cannot construct meaningful sense out of the population reports available for France. After two chapters of trying, he moves on to England.

In England, he tells us, the preventive checks prevail (Malthus 1826, 236). To prove the point, he examines the operation of prudential restraint along the income scale, starting from the top:

Those among the higher classes, who live principally in towns, often want the inclination to marry, from the facility with which they can indulge themselves in an illicit intercourse with the sex. And others are deterred from marrying by the idea of the expenses that they must retrench, and the pleasures of which they must deprive themselves, on the supposition of having a family. When the fortune is large, these considerations are certainly trivial; but a preventive foresight of this kind has objects of much greater weight for its contemplation as we go lower. (Malthus 1826, 236)

Next along the scale are gentlemen of liberal education with income sufficient to keep them in their rank. Will they consider early marriage, if that deprives their future spouse from the living to which she is accustomed? And what if marriage were to force the couple down the social scale a step or two? "These considerations,"

Malthus says, “certainly prevent many in this rank of life from following the bent of their inclinations in an early attachment” (Malthus 1826, 236).

The sons of tradesmen and farmers are “exhorted not to marry,” and often comply. They delay marriage until “they are far advanced in life,” Malthus tells us. Indeed, “... it is probable that the preventive check to population prevails more [among this class] than in any other department of society” (Malthus 1826, 237), although the servants of the rich have an even stronger reason to delay marriage. The servants the necessities and even many of the conveniences of life, so why should they give them up and drop down the social scale just to raise children? “The greater number of them, therefore, deterred by this uninviting view of their future situation, content themselves with remaining single where they are” (Malthus 1826, 237-38).

“If this sketch of the state of society of England be near the truth, it will be allowed that the preventive check to population operates with considerable force throughout all the classes of the community.” (p. 238) And so it has, as Malthus shows from the available data in the first of the two chapters devoted to England. But he ends that chapter with the warning that much can happen to change things, and the second chapter goes on to investigate the stunning change that was revealed by the censuses of 1811 and 1821. Population was growing much more rapidly than previously, and even the expansion of manufacturing and the migration to towns (both of which Malthus associated with greater mortality) have not stopped it. All this he saw as a vindication of the population principle: when greater resources become available, population rises to meet it (Malthus 1826, 252 and 216).

Along with the institutions and social customs he associated with the preventive checks throughout the *Essay*, in this final chapter on England he adds another: the general health of the population. Previously he had healthiness as a dependent variable: rising real incomes led to increased healthiness. But now he suggests a feedback loop on the proportion of births to marriages as well: increased healthiness allows more infants to survive, and lowers the rate of births per marriage (Malthus 1826, 266).

IV. Malthus With Institutions

It perhaps goes without saying that Malthus wrote his *Essay* during a period of intense debate over institutions and social improvement. The *Essay* shaped that debate; Donald Winch (1996) has convinced us that Malthus is central to the development of classical economic theory and policy as it moved into the 19th century. But it also the case that our interpretation of the *Essay* has been shaped by the common response to it in that same century; when people call economics the dismal science they usually make some passing reference to Malthus and his *Essay* (for the real story, see Levy 2002). And most of us cannot think of Malthus without hearing Scrooge in the background – “If [the poor] would rather die, ... they had better do it, and decrease the surplus population” (Dickens 1843). Malthus’ refusal to oppose the Corn Laws, long a touchstone of laissez-faire orthodoxy, only hardens the evidence of his “gloomy presentiments” (Heilbroner 1999). Malthus himself

seems to take away any hope of positive change. At the outset of Book IV of the sixth edition of the *Essay*, he says:

As it appears that, in the actual state of every society which has come within our review, the natural progress of population has been constantly and powerfully checked; and as it seems evident that no improved form of government, no plans of emigration, no benevolent institutions, and no degree or direction of national industry, can prevent the continued action of a great check to population in some form or other; it follows that we must submit to it as an inevitable law of nature; and the only inquiry that remains is how it may take place with the least possible prejudice to the virtue and happiness of human society. (Malthus 1826, 465)

Perhaps his argument that improvements in government policy were largely futile in improving the lot of the lower classes led us to miss his argument that changes in the basic institutions of society were less futile, if they moved a nation in the right direction. Although they operated in a more gradual fashion, the basic institutions of a free society – property rights, the rule of law, expanded markets, and a traditional conception of marriage – provided a set of institutional incentives that promoted individual responsibility, and hence, prudential restraint of fertility for most of the population. Indeed, he was reasonably optimistic that steady growth could be achieved in per capita income could eventually be accomplished along with a rising population. Biology could never be conquered, but within the right institutional context, reason could interrupt its career.

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Appendix 1 Institutions and Population Checks in the Sixth Edition of Malthus' *Essay on the Principle of Population*

