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SPECIAL ISSUE
IN HONOR OF JULIAN SIMON

Malthus Reconsidered:
Population, Natural Resources, and Markets

By Ross B. Emmett

Roger Meiners
series editor

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Phone: 406-587-9591 Fax: 406-586-7555
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To the Reader

The name Malthus will always be associated with the notion of a population trap, in which population tends to grow faster than food production. But Thomas Robert Malthus did not believe in a population apocalypse, as many of his supposed followers do today. He argued that basic institutions such as property rights, marriage, and free markets would both restrain excessive population and encourage economic growth.

This essay, "Malthus Reconsidered: Population, Natural Resources, and Markets," will end the misunderstanding of Malthus that characterizes his supporters and his critics. The author, Ross B. Emmett, wrote this essay while a Julian Simon Fellow at PERC during the summer of 2005. Julian Simon Fellows explore environmental problems in the tradition of Julian Simon, whose studies challenged conventional wisdom in natural resource and population issues. Simon's views have been increasingly accepted over time.

Ross B. Emmett is an associate professor of political theory and constitutional democracy at James Madison College, Michigan State University. His teaching focuses on the political economy of constitutional democracies. His research emphasizes classical economic thought and the history of economics at the University of Chicago between the 1920s and the 1980s. He has edited four multi-volume collections: *The Biographical Dictionary of American Economists; The Selected Essays of Frank H. Knight; The Chicago Tradition in Economics, 1892-1945;* and *Great Bubbles: Reactions to the South Sea Bubble, the Mississippi Scheme and the Tulip Mania Affair.* He is co-director of the Michigan Center for Innovation and Economic Prosperity and an editor of the research annual *Research in the History of Economic Thought and Methodology.*

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"I have taken man as he is, with all his imperfections."
—Robert Malthus (quoted in Levy 1999, 64)

Malthus Reconsidered:
Population, Natural Resources, and Markets

Ross B. Emmett

Robert Malthus[1] is often reputed to be a Scrooge. Readers will recall that when the miserly merchant from "A Christmas Carol" was asked for a charitable donation for the poor, he replied: "If they [the poor] would rather die . . . they had better do it, and decrease the surplus population" (Dickens 1843/1984, 38–39).

"Surplus population:" That sums up the common perception of Malthus' population principle. The world has too many people and because food production cannot keep up with procreation, people will starve. The name Malthus is frequently invoked in modern environmental debates. Those who believe we are running out of resources and need to act swiftly to prevent an eventual population and environmental apocalypse are often called neo-Malthusians. They acknowledge Malthus as the first spokesman for concern about overpopulation.

Countering this view is a group I call neo-institutionalists. As exemplified by Julian Simon, they believe that human ingenuity and the expansion of free markets have made the world a better place and reduced overpopulation to a minor problem, if it is a problem at all. They often

criticize the neo-Malthusians with a reference to Malthus' Scrooge-like reputation.[2]

However, Malthus was no Scrooge. His concern for the poor and support for policies benefiting all members of society are amply reflected in his work. The reputation he carries today is a distortion of his population theory, a slant created by his nineteenth-century opponents. The re-examination of his ideas in this essay will show that his population principle was the starting point for a policy that promoted economic freedom. His outlook toward human progress was one of cautious optimism, rather than the cynicism we associate with Scrooge. Taken together, his ideas are closer to the neo-institutionalist position in the current debate than they are to the neo-Malthusian view.

The Modern Debate over Population

Since the publication of *The Population Bomb* (Ehrlich 1968), the debate over human population and the environment has been cast as a battle between pessimists, the neo-Malthusians, and optimists, the neo-institutionalists (Huggins and Skandera 2004). Neo-Malthusians fear the "trap" of what they call overpopulation. They believe humanity will fall into it unless we undergo a change in values that will lead us to have fewer children and consume less. In contrast, neo-institutionalists believe that the rules, laws, and customs that enhance markets and economic freedom will improve human welfare and environmental quality making overpopulation a minor problem—if a problem at all (Anderson 2004; Lomborg 2001). Two leading individuals in this debate are Paul Ehrlich, for the neo-Malthusians, and the late Julian Simon, for the neo-institutionalists.

Neo-Malthusians

Neo-Malthusians do not normally label themselves as such (the label is given by others), but they see themselves as Malthus' intellectual descendants. In their book *Betrayal of Science and Reason*, Paul and Anne Ehrlich state: "Ever

since Reverend Thomas Malthus at the end of the eighteenth century warned about the dangers of overpopulation, analysts have been concerned about maintaining a balance between human numbers and the human food supply. That concern remains valid today" (Ehrlich and Ehrlich 1996, 65).

Humanity must recognize that "exponential growth never can go on very long in a finite space with finite resources" (Meadows, Randers, and Meadows 2004, 24) and therefore that growth must be curbed. On that basis, neo-Malthusians advocate short- and long-term policies.

In the short term, they propose government controls to restrain population and consumption. In *One with Nineveh*, Paul and Anne Ehrlich (2004) favor policies that promote birth control, remove explicit and implicit government incentives to have or maintain larger families, expand access to abortion services, and impose penalties on parents who exceed a mandated family size. They also want governments to bring market prices in line with the cost that, in their view, human consumption imposes on the environment (Ehrlich and Ehrlich 2004).

These policies are designed to intervene directly in markets and private lives to bring incentives in line with sustainable values. Direct intervention is required, neo-Malthusians argue, because fundamental change in priorities takes a long time.

The long-term neo-Malthusian policy goal is a change of heart. Human nature must be reformed by changing people's values. "We are asking for . . . a cultural change," Ehrlich said in an article co-authored with the editor of *Science* (Ehrlich and Kennedy 2005, 563).

In his book *Human Natures*, Ehrlich (2000) amplified his view of cultural change. The underlying genetic makeup provides the palette upon which human nature is formed, but it is given shape and form by culture—different sets of cultural values represent alternative paths of human evolution. Because humans can consciously choose to alter their values, people can change the direction of human evolution. "Conscious cultural evolution," the Ehrlichs call it (Ehrlich and Ehrlich 2004, 259). If humans are to escape the population trap permanently, neo-Malthusians argue, they need to reform human nature by a process of cultural change that will lead us to adopt "sustainable" values.

Neo-Institutionalists

Refusing to accept the pessimism of the neo-Malthusians, neo-institutionalists argue that a market-based free society can balance the growth of population and the economy and continue to improve environmental quality. They are called neo-institutionalists because they focus on the laws, rules, and customs—the institutions—that guide human behavior.[3] Neo-institutionalists believe that we should take humans as we find them and it is preferable to allow people to be free in an institutional framework that encourages market activity. They do not believe that basic human nature changes.

Neo-institutionalists make two arguments that link population growth, economic growth, and environmental quality through institutions.[4] The first is that economic growth, which depends on market institutions, can lower fertility rates and, hence, restrain population growth. Early in the current debate, Julian Simon showed that increases in per capita income, which are a result of economic growth, lead to decreased births per married woman (Simon 1974). Thus, he argued, direct control of population, which is an intrusion on free choice, is unnecessary.

The second neo-institutionalist argument is that human ingenuity will offset the few adverse effects of population growth. Simon argued that people are the "ultimate resource" because of their ingenuity (Simon 1996). The neo-Malthusians underestimate the creative power of humans; technological change will ensure that production keeps pace with population (Simon 1990). The population trap is no trap at all because humans creatively respond to market incentives, expanding the resource base available for productive uses. While population growth means more people to feed, it also means that we have more people to devote their creativity and imagination to solving the problems of transforming resources into useful goods and services. "It is your mind that matters economically, as much as or more than your mouth or hands" (Simon 1996, 367). Echoing Simon, neo-institutionalists point out that the institutions that encourage the use of our ingenuity—free markets and property rights—are the same ones that promote economic growth.

Thus, neo-institutionalist policies focus on institutions and the consequences of reform, rather than on the reform of human nature. When

societies create institutions that allow people to pursue their values freely in markets under a rule of law, decisions about fertility, innovation, and resource use will be balanced in ways that enhance economic growth, moderate population growth, and improve environmental quality. Simon put the consequences succinctly: "The standard of living has risen along with the size of the world's population since the beginning of recorded time. There is no convincing economic reason why these trends toward a better life should not continue indefinitely" (Simon 1996, 12).

Malthus and the Population Principle

In his own day, Malthus kicked off an emotional dispute about human nature and the improvement of society that lasted through the nineteenth century. He was on the opposite side of this debate than we might expect if we focused only on his famous population principle or the Malthusian label. Historian Arnold Toynbee once called this nineteenth-century debate the "bitter dispute between economists and human beings" (Toynbee 1884/1964). Malthus was in the company of the economists, not the "human beings."

At the center of the dispute was the claim made by Adam Smith, Malthus, and other economists such as John Stuart Mill that any real prospects for social improvement depended upon policies that accepted human beings as they are, with all their differences and imperfections, not as idealists hoped they might be. This approach has been called a "constrained vision" by Thomas Sowell (2002).

The economists' opponents, operating under what Sowell calls an "unconstrained vision," and acting as self-declared spokespersons for "human beings," argued that society could only be improved if human nature changed. They assumed that markets could not contribute to a good social order because market interactions allowed selfish interests to control society. These opponents, such as Robert Owen, John Bray, Thomas Carlyle, John Ruskin, and Charles Kingsley, did not favor economic freedom. Instead, they sought to introduce socialist utopias or to hold onto one form or another of feudalism (including, for the likes of Carlyle and Ruskin, the race-based feudalism of the

American South), or to school people in what it meant to be "truly" human. Eventually, as the theory of evolution began to be recognized, some of the nineteenth-century spokespersons for "humanity" even turned to selective breeding and other eugenic practices to improve human nature.

Smith, Malthus, and the other economists believed that the potential for changing human nature was small. But they also thought that more freedom was possible by working within the constraints of human nature than could be accomplished by attempting to overcome the constraints. They wanted to change the incentives people faced, not people's inherent nature. The economists of Malthus' era, therefore, promoted the expansion of property rights, free markets, and customs that enabled free choices.

Malthus' population theory was an important part of the economists' argument. In their view, human societies will overrun their natural resources if they do not have the right kind of institutions. But that will not happen in societies that have property rights, markets, and some means (for example, marriage) of ensuring that fathers are responsible for the costs of rearing their own children. In such societies, economic growth and moderate population growth can be sustained indefinitely, bringing steadily rising real incomes to everyone.[5] The reasons why they thought this will become more clear as this essay progresses.

A Biographical Sketch

Malthus' famous essay was published anonymously when he was 32 years old. The essay was written in relative haste—he apologized for not having all his sources at hand—and provided little by way of empirical examples or case studies. He continued to revise it over the course of his lifetime. Do the revisions show that he changed his views dramatically over time? Some believe they do, but a more accurate statement is that the changes reflect the attention he paid to his critics and to his own analysis of how the population principle worked in different cultures. A brief look at his life will help us understand the development of his thinking.

Born in February 1766, Malthus came from a family of country gentry.

Destined for life as an Anglican clergyman, Malthus attended Cambridge, where he studied mathematics. After graduation in 1788, he was ordained and became curate of a small parish near his family home, where he continued to live with his parents. Five years later, he was elected to a non-residential fellowship at Cambridge, which allowed him to continue his studies while carrying out his church responsibilities.[6] The influence of the Enlightenment views of David Hume and Adam Smith can be seen in Malthus' early writings and sermons, as he resisted his father's more Rousseauian outlook.

In 1798, he anonymously published the short polemical essay in which he organized his disagreements with the radical reformers William Godwin and the Marquis de Condorcet around political economy and population theory. *An Essay on the Principle of Population* (Malthus 1798/1986) was an immediate publishing success, hailed by some as a decisive response to revolutionaries, roundly condemned by others because it failed to blame poverty and inequality on the existing political and economic institutions of England. To bolster the claims made in the first edition of the *Essay*, Malthus traveled to Scandinavia, France, and Switzerland to collect historical and demographic documentation. Five years later he published a second edition, substantially enlarged and revised, and bearing his name as author. He continued to revise the *Essay* through six editions, the last published in 1826.

The publication of the second edition of the *Essay* in 1803 coincided with other significant events in Malthus' life. He became Rector of Walesby in Lincolnshire. His pastoral responsibilities brought with them the promise of stable income for the remainder of his life, which allowed him finally to marry, at the late age of 38, in 1804. His own delayed marriage had the effect his *Essay* predicted: He and Harriet (née Eckersall) had only three children. Marriage required him to give up his fellowship at Cambridge, but the next year he became the first professor of political economy in England, at the newly established East India Company's College (now Haileybury School) in Hertfordshire.

Political economy was Malthus' primary occupation after his appointment at Haileybury. He was the leading interpreter of Adam Smith for his generation, and he helped shape what we now call "classical economics." He

also continued his pastoral work; sermons from late in life confirm that his faith became more orthodox after encounters with British evangelicalism and highlight his compassion for the poor (Pullen and Parry 2004). His name, however, is linked first and foremost to the pessimism about the prospect for social improvement that arises from the standard reading of his famous principle of population. Malthus died at the end of December 1834 after a brief illness, attended by his wife and children, who had gathered for Christmas.

The Population Principle

The population principle stated in Malthus' *Essay* was not an entirely new idea. The author of Ecclesiastes pointed out that "when goods increase, they are increased that eat them" (Eccles 5:11, King James Version); and Adam Smith said: "every species of animals naturally multiplies in proportion to the means of their subsistence, and no species can ever multiply beyond it" (Smith 1776/1976, 97). Malthus' polemical success came from his ability to state ecological facts about humans as an animal population in the language of mathematics and cloak them in the mantle of science. The stark simplicity of his words hold our attention today:

> I think I may fairly make two postulata.
>
> First, that food is necessary to the existence of man.
>
> Secondly, that the passion between the sexes is necessary, and will remain nearly in its present state.
>
> These two laws ever since we have had any knowledge of mankind, appear to have been fixed laws of our nature . . .
>
> Assuming then, my postulata as granted, I say, that the power of population is indefinitely greater than the power in the earth to produce subsistence for man.
>
> Population, when unchecked, increases in a geometrical ratio. Subsistence increases only in an arithmetical ratio. A slight acquaintance with numbers will show the immensity of the first power in comparison to the second. (Malthus 1798/1986, 8–9)

Malthus states two "fixed laws of our nature." The first is that people, like any group of animals, need to eat. The second is that sex is a biological imperative for continuation of the human race.

He puts these laws into mathematical form. He implies that even if people use birth control, delay marriage, or practice abstinence in order not to have children, "the passion between the sexes" remains unchanged. Thus, if unchecked, passion ensures that children will be born. Assuming mortality rates remain roughly constant, and that food production rises along with population, Malthus suggested that population could double at least every twenty-five years.[7] The geometric ratio captures this constant rate of doubling: 2, 4, 8, 16, 32, 64, 128, and so forth.

The production of food requires human labor. Thus, as the number of people increases, the production of food can also increase. But food production increases more slowly than the population increases. Why? Malthus assumed, like other economists of his day, that the amount of land and the techniques used in farming stayed constant. The addition of one more laborer to an existing landmass using the existing technology might increase the output of food, but eventually the amount by which food production would increase would be less than the food laborers would consume. While both population and food production might double in the first twenty-five years, food production would not double during the next period. The arithmetic ratio captures the rate of increase of food production Malthus envisioned: 1, 2, 3, 4, 5, 6, 7, etc.

Putting the geometric and arithmetic ratios together gives us Malthus' population principle**:** "the power of population is indefinitely greater than the power in the earth to produce subsistence for man" (Malthus 1798/1986, 8–9). The consequence is that left unchecked, humans will live at the edge of subsistence, constantly facing starvation and disease, and accompanied by misery and vice.

Constant Collision or Future Limit?

The population principle is usually assumed to mean that population growth will eventually cause us to run out of resources to sustain consump-

tion. We hear it all the time from neo-Malthusians: Unless we control population and curtail our consumption of resource-based goods, we're going to run out of our scarce resources. But the arithmetic ratio described above does not necessarily require an ultimate limit to resources, only the current limit.

The fact is that Malthus did not mean that humans would run out of resources at some point in the future. Unlike the neo-Malthusians, Malthus has no apocalyptic ending embedded in his population principle. Rather, he claimed that food production "may increase for ever and be greater than any assignable quantity" (Malthus 1826/1986, 13). He may have had a constrained vision of human society, but he did not have a limited vision of natural resources. As Malthus says, his analysis places "no limits whatever" on "the produce of the earth" (Malthus 1826/1986, 13).

For Malthus, the population principle showed why population and food production constantly collide. The power of population, when unchecked, exceeds the power of the earth to feed its population. At every point in time, the power of population growth will be greater than the power of the earth to produce more food. Hence, we are always bumping up against the short-term limit of food production. That short-term limit keeps population growth down "to the level of the means of subsistence by the constant operation of the strong law of necessity, acting as a check upon the greater power" (Malthus 1826/1986, 13).

The neo-institutionalists frequently start their argument about technology with a reference to Malthus' error in discounting technology's potential. Julian Simon documented the changes in farm productivity from approximately 1800 to the late 1960s. Up to about 1940, the increase in productivity had the linear feature commonly associated with Malthus' theory. But starting in the 1940s, agricultural productivity exploded, more than doubling every decade. Technical change played a large part in the exponential growth of farm productivity. Malthus, Simon tells us, was wrong or at least misled in his expectations regarding the role of technology (Simon 1996). But he was not ignorant of or opposed to technology. Rather, he was skeptical about its prospects under existing institutional frameworks.

The assumption that Malthus discounted technology is based in part on the difference between the way he stated his population principle and

the way he discussed the means by which humans escape its consequences. While the principle is stated with elegant, mathematical precision, the means of escaping its consequences are identified in "conditional" statements: "If" humans find more arable land, or "if" they adopt new technologies, "then" food production can increase enough to feed the ever-increasing population. Conditional statements are weaker than positive statements such as "the power of population is indefinitely greater than the power in the earth to produce subsistence for man" (Malthus 1798/1986, 9). But they have the same force if the author thinks the condition will be satisfied.

Malthus put the impact of technology in conditional statements because he believed that society's laws, rules, and customs set the conditions for the exercise of human ingenuity. If the incentives provided by society's laws and customs are right, technical change will occur. If the right incentive structure is absent, technical change will not occur.

In his own time, Malthus thought the conditions were only partly right. Some market-enhancing institutions, such as private property, did exist in the England of his day, but others, such as rules allowing labor mobility, were not as advanced. Malthus focused his attention on the laws, rules, and customs that detracted from the expansion of markets, arguing that moderate institutional reform would help check population growth.

Malthus' Preventive Check

Malthus claimed that if population rose above the available food, the natural or "positive" consequences would be starvation, increased risk of disease, and increased mortality, but he also thought that population could be prevented from rising that high. This more benign "preventive" check emerges from the use of reason, which separates humans from other animals. Humans, Malthus contended, are "peculiar" among the animals because our foresight allows us to restrain ourselves voluntarily by anticipating the consequences of various actions and acting accordingly.[8] In other words, humans have the ability to exercise "prudential restraint" (Malthus 1826/1986, 16, n1).

For example, people often delay marriage until they can afford to raise a family. And parents may consider the economic consequences on members of the family before having another child. Malthus puts it this way: "reason interrupts [a man's] career, and asks him whether he may not bring beings into the world, for whom he cannot provide the means of support" (Malthus 1826/1986, 8).

The importance of the preventive check for Malthus lay in its encouragement of delayed marriage. As an Anglican clergyman, Malthus knew well the first command God gave Adam and Eve in the Garden: "Be fruitful and multiply" (Gen. 1:28, King James Version). He had occasion to speak the words of the matrimonial liturgy in the 1662 Book of Common Prayer, which told those assembled that marriage was ordained first for the procreation and rearing of children, secondly as a protection against sin (specifically fornication), and thirdly for mutual comfort.[9]

Knowing that the first duty of marriage was procreation, but recognizing that many could not afford to support a family at a young age, Malthus argued that delaying marriage was the prudent course to follow. But, as the prayer book says, marriage also allows those who "have not the gift of continency" to exercise their sexual passions without defiling themselves through fornication. Hence, when he introduced prudential restraint, Malthus carefully separated prudence from morality. People may choose to delay marriage and practice abstinence. In this case, he said, they were exercising moral restraint, the "gift of continency." He distinguished between "moral restraint" and "prudential restraint." Abstinence was the exercise of "moral restraint," although he observed that "moral restraint does not at present prevail much among the male part of society" (Malthus 1826/1986, 315).

Prudential Restraint

Malthus also recognized that some practices would help delay marriage without requiring abstinence: Contraception is one and prostitution is another. Malthus' list also included "unnatural passions . . . and improper arts to conceal the consequences of irregular connections" (Malthus 1826/1986, 16) (presumably references to homosexuality and abortion). These would fall

under the category of prudential restraint because they delayed marriage.

Whether individuals exercised moral restraint or not, Malthus argued, delaying marriage provided benefits to society. In his estimation, the consequences of the private vices that enabled people to delay marriage were far less harmful for society than the consequences of excessive population growth. Private vices may threaten one's morality; excessive population threatens one's existence. God alone can judge the moral harm, and may temper justice with mercy in the end.

On earth, the "vice" of practicing birth control does not compare with the "misery" of children starving or dying of disease. Hence, a society in which people could exercise prudential restraint, even if it implied private vice, was preferable for Malthus to one that relied upon the positive checks of starvation, increased risk of disease, and thus high mortality rates to manage population. "I have not the slightest hesitation in saying that the prudential check to marriage is better than premature mortality" (Malthus, quoted in Levy 1999, 64).

Fundamental Rule

Malthus' observations on population growth and prudential restraint led to what David Collard has called Malthus' "fundamental rule:" Parents (especially fathers) should be responsible for the costs of rearing their children.[10] All Malthus' considerations of social policy were guided by this fundamental rule.

For example, in his own day Malthus opposed the English Poor Laws, a hot topic of political debate at several points during his lifetime. These social welfare policies provided assistance to the unemployed and those without sustenance. His opposition was a logical application of his fundamental rule. Providing public support for families, however needy, would only encourage other families to have more children because they would assume that public support would be available. The Poor Laws, Malthus claimed, tended "to increase population without increasing the means for its support, and thus . . . to create more poor" (Malthus 1798/1986, 36).

Instead of public support for the poor, he argued for the removal of all

laws that restricted the mobility of the poor and regulated the labor markets. Once the poor were truly at liberty to respond to market incentives, their incomes could rise, and the rate of population growth would slow down (Malthus 1798/1986, 36–37).

Malthus, Neo-Institutionalist

Today, even the neo-Malthusians are willing to apply Malthus' fundamental rule of parental responsibility to interventionist policies. For example, economist Lawrence Goulder convinced Paul Ehrlich that population policies should be guided by the rule that parents should pay the social cost of their children (Ehrlich, Daily, and Goulder 1992). Malthus' point, however, went beyond the application of the fundamental rule to specific policies. He was more interested in how laws, rules, and customs created incentives that promoted or discouraged delayed marriage and small families. Malthus' rejection of the Poor Laws was not only a rejection of a policy that violated the fundamental rule, but also the rejection of the institutional framework within which the debate was taking place.

His real focus was on institutions: Create free labor markets and give people the right to mobility—eliminate the tyranny that ties them to their localities (in England, their parishes)—and the prudential decisions of individuals will lead to the appropriate balance between population and sustenance.

Malthus vs. Godwin

The dispute that led Malthus to write the *Essay* in the first place, his disagreement with William Godwin, further illustrates Malthus' recognition of the importance of institutions. Godwin was a philosophical anarchist who supported the English publication of Thomas Paine's *Rights of Man* and wrote novels extolling the benefits of a society ruled by reason.[11] In 1793, he published *An Enquiry Concerning Political Justice and Its Influence on Morals and Happiness*. In this book, Godwin argued in favor of eliminating the

existing institutional framework of English society.

Godwin wanted to do away with private property rights, all government operations, guilds and other monopolies, the Anglican Church, and even marriage. He thought that this would lead to a communal society of liberty and equality in which each person contributed what he or she could to produce goods and services and drew upon the production as needed. If his argument sounds like the French Revolution, it should; Godwin was after the same goal—a society of liberty, equality and communal benevolence, although he did not advocate the violent overthrow of the English constitution (Godwin 1793/1971).

Malthus agreed with Godwin (and Adam Smith and the American revolutionaries, for that matter) that the current institutions of Great Britain were only partially free and sometimes repressive, restricting output and limiting freedom. Unlike Edmund Burke, who believed that abolition of the status quo would plunge England back into tyranny (Burke 1790/2003), Malthus was willing to concede to Godwin the argument that gradual elimination of the English constitution would *initially* allow greater freedom and increase output.

But the elimination of those same institutions would, Malthus thought, have another, more harmful, set of consequences. The institutions Godwin wished to eliminate, Malthus argued, were the ones that ensured that parents, especially fathers, had to take responsibility for the care and maintenance of their children. Without those institutions, parents would not have to care for their children because "provisions and assistance would spontaneously flow from the quarter in which they abounded, to the quarter that was deficient" (Malthus 1798/1986, 67).

The costs of rearing children would shift to society at large: "It would be of little consequence how many children a woman had . . . or to whom they belonged" (Malthus 1798/1986, 67). Such a society would unleash the exponential power of population growth and the face of Godwin's world would begin to change: The "beautiful fabric of imagination vanishes at the severe touch of truth. The spirit of benevolence, cherished and invigorated by plenty, [would be] repressed by the chilling breath of want" (Malthus 1798/1986, 69).

The usual response to Malthus' critique of Godwin today is simply to point to birth control as an alternative, and say that "Parson Malthus" (Karl Marx's derisory term) could not bring himself to advocate such practices because of his religion. The Scrooge-like reputation Malthus has been assigned is based on the lack of compassion he seems to show at this point toward the poor—opposing the policies that would give them more income.

However, we have already seen that Malthus supported prudential family choices, even when they involve "vice." The real point of Malthus' criticism of Godwin is not that the poor are doomed to existence on the edge of subsistence, but rather that Godwin's proposed society provided the wrong kind of incentives for individuals making procreative decisions.

Malthus believed that human nature does not change under different institutional settings. Behavior, however, does change when different incentives are put into effect. In societies with appropriate institutions, prudential considerations "certainly do prevent a great number of persons . . . from pursuing the dictate of nature" (Malthus 1826/1986, 15).

The Return of Marriage

One other aspect of Malthus' treatment of institutions emerges from his debate with Godwin. Malthus believed that Godwin's world of "liberty, equality, and fraternity" would create a rather dismal future because the elimination of property rights and marriage would open the door to the operation of the positive checks (starvation and disease). But he did not believe that humans would stay in such a dismal state. Instead, he believed that people would voluntarily create institutions that would provide stability and protect people from worst-case scenarios.

Two institutions in particular would return: property rights and marriage. Once the inhabitants of Godwin's world realized the operation of the population principle, Malthus believed that they would consider whether some "mediate measure [should] be taken for the general safety." The problem would be solved by the calling of "some kind of convention," which would find it "advisable to make a more complete division of land, and to secure every man's stock against violation by the most powerful sanctions" (Malthus

1798/1986, 71). In other words, people would voluntarily contract together to create a system of property rights.

Marriage, "or some express or implied obligation on every man to support his own children" (Malthus 1798/1986, 72), would re-emerge in a similar fashion. As population grew, people would want to assign blame to those who were bringing too many children into the world and thereby taking for their own uses the limited common resources available to all.

Because children are more easily identified with their mothers than with their fathers, women would be targeted for such blame. However, because everyone knew that men were also to blame, some enforceable custom—called marriage—would eventually emerge to oblige men to support their children. As with property rights, the re-establishment of marriage brings with it the prospect of both benefits and harms. Prudential restraint would often be exercised, allowing families in most cases to enjoy higher incomes.

Thus, the re-establishment of property rights and marriage would create an institutional framework for society no different in any essential way from the institutional framework that Godwin sought to dissolve. But Malthus did not assume that the institutions of British society in his own time were the best possible. Institutional reform could create a setting in which prudential restraint would operate even better than it did in his contemporary England.

Conclusion

Malthus' opposition to the reform proposals of his day (and ours) led his opponents to say that he "condemned the worker to death from starvation, and to celibacy" (Marx 1862–3/1968). Those with unconstrained visions of human nature have been unable to see how his ideas could translate into anything more than "gloomy presentiments" (Heilbroner 1999). The fact that Malthus emphasized the constraints of human nature and the "black train of distresses" avoided by the exercise of restraint have distracted attention away from his interest in institutional reform.

Yet he was right about many things, even though he is not appreciated for them today. He recognized that institutions such as marriage, property

rights, and markets lead people to practice prudential restraint, lowering fertility rates and yielding the prospect of steadily rising real incomes. These institutions—property rights, free markets, and marriage—ensure that individuals make wise decisions regarding their resources. Production will be sufficient to meet the effective demands of the population.

Malthus opposed interventionist policies that restricted freedom. Improving society was tricky business. For the most part, he trusted institutions that people voluntarily created to encourage their exercise of prudential restraint. He saw reform of government policies as possible, especially through the elimination of rules and laws that restricted market activity, mobility, and access.

Assuming that the institutions of property rights and marriage were in place, market-enhancing reforms would create an institutional framework in which people's free choices could be trusted to have positive social consequences. "If . . . we come to the conclusion, not to interfere in any respect, but to leave every man to his own free choice, and responsible only to God for the evil he does . . .; this is all I contend for," he wrote. "I would on no account do more; but I contend, that at present we are very far from doing this" (Malthus 1826/1986, 497–98).

In the nineteenth-century debate between economists and the spokespersons for removing the chains that constrained human nature, Malthus' name was invoked in the same breath as those of Adam Smith, John Stuart Mill, and the other great economists. In the modern debate, Malthus' namesakes are, ironically, the ones urging us to reject the neo-institutionalist view that institutions underlie the economic freedom that has brought prosperity and better environmental quality. It is time to put Malthus back in his rightful place in the modern debate.

Notes

1. Malthus went by his middle name Robert, rather than his first name Thomas (Winch 1987).

2. Dickens was mistaken about Ebenezer Scrooge (actually Ebenezer

Scroggie), who was in fact a jovial merchant related, appropriately enough, to Adam Smith. Online: news.scotsman.com/scotland.cfm?id=1462612004 (cited October 19, 2006).

3. Neo-institutionalists inherit their name from American Institutionalism, a school of thought in the early 20th century that rejected the belief that free trade would be beneficial for all. They argued that the historical, cultural and legal factors of countries determined their economic outcomes. Today's neo-institutionalists accept the assumption of universal economic rationality, but argue that outcomes are the result of incentives created by varying institutional frameworks.

4. Seth Norton, a former Julian Simon fellow at PERC, provides a clear statement of the neo-institutionalist policy program in his *PERC Policy Series* paper "Population Growth, Economic Freedom, and the Rule of Law" (Norton 2004). His framework is adopted here and filled in with the insights of Julian Simon.

5. The history of this earlier debate is told in Levy (2001); Levy and Peart (2001, 2005); Waterman (1991); and Winch (1996). The interpretation of Malthus presented here is also drawn from recent scholarship on Malthus in Hollander (1997); Winch (1987); Levy (1978, 1999).

6. Biographical information about Malthus comes from James (1979); and Winch (1987).

7. Malthus initially based this estimate of a doubling every 25 years on observations about population growth on the American frontier. Later editions of the *Essay* refine and modify the basis for the estimate, without changing it.

8. Much is made of Darwin's debt to Malthus, but many fail to recognize that Darwin's theory of natural selection denies biological agents, the "peculiar" attribute Malthus thinks humans possess; the use of reason and foresight that leads to prudential restraint (Levy and Peart 2005). Natural selection, Darwin says, "is the doctrine of Malthus applied with manifold force to the whole animal and vegetable kingdom; for in this case there can be no artificial increase of food, and no prudential restraint from marriage" (Darwin 1859/1964, 63).

9. Modern Anglican prayer books have eliminated the second reason and

put mutual comfort first. David Levy has argued that changes such as these within Christianity emerge from its accommodation to the moral challenge posed by Malthus' arguments in Levy (1999).

10. The rule specified here is a variation of the one identified in Collard (2001).

11. He was also the husband of Mary Wollstonecraft, author of *Vindication of the Rights of Women*, and father of Mary Shelley, author of *Frankenstein.*

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"I have taken man as he is, with all his imperfections."
—Robert Malthus (quoted in Levy 1999, 64)

Malthus will always be associated with the idea of a social and economic trap, in which population grows faster than food production. But Malthus did not believe in a population apocalypse, as many of his followers do today. He argued that basic institutions such as property rights, marriage, and free markets would restrain excessive population and encourage economic growth.

This essay, "Malthus Reconsidered: Population, Natural Resources, and Markets," will end the misunderstanding Malthus suffers from his supporters and his critics. The author, Ross B. Emmett, wrote this essay while a Julian Simon Fellow at PERC in 2005. Julian Simon Fellows explore environmental problems in the tradition of Julian Simon, whose studies challenged conventional wisdom, especially in natural resource and population issues. Simon's views have been increasingly accepted over time. This essay is part of the *PERC Policy Series* of papers on timely environmental topics.

ROSS B. EMMETT is associate professor of political theory and constitutional democracy at Michigan State University. His teaching focuses on the political economy of constitutional democracies. His research concerns economic thought and the history of economics at the University of Chicago between the 1920s and the 1980s. He is co-director of the Michigan Center for Innovation and Economic Prosperity and an editor of the research annual, *Research in the History of Economic Thought and Methodology*.