Name
Dan Ports
Title
"A Critique of Malthusian Limits to Population Growth" [A workman-like, plain wrapper type of title, but it works very well to establish just what you intend to do, and such anticipatory clarity is to be highly valued in titles of analytical essays.]

Ideas and Argument
It seems to me that you have significantly tightened up your essay and strengthened your arguments. The piece is clearer than the previous version, even though the bulk of the material is the same. Several of the topic sentences are clearer, and the piece develops in a more disciplined, analytical way. It's really quite good and could be used as an introductory commentary for a modern edition of the work. Your tinkering has paid off. Nice work.

Organization

Style and Mechanics

General

Grade
A

Dan Ports

2002/11/15 (revised #2)

21L.448

A Critique of Malthusian Limits to Population Growth ✓ good - nice focus!

Both Thomas Robert Malthus and Adam Smith claim population growth is regulated by the finite capacity of the food supply. Malthus, in his *Essay on the Principle of Population*, describes a system of positive and preventative checks that act to keep the population below the limit. Similarly, Smith claims in *The Wealth of Nations* that scarcity has a regulatory effect on population growth, such that "no species can ever multiply beyond [the means of their subsistence]" (182). However, they reached different conclusions. Whereas Malthus claims that the conflict between the human urge to reproduce and the unavoidable limits on food production will lead to famine and suffering, Smith is optimistic and believes that growth can continue without serious consequence. The reality lies between these two extremes. Smith's famous economic theory about the power of division of labor allows him to claim that an increase in population is also an increase in available labor, which can provide food to support a greater population; Malthus's mathematical arguments about the food supply are flawed because they do not take this into account. However, though the population can continue to reach increasingly higher levels, the Malthusian scarcity of resources implies that poverty and suffering among the lower classes of society cannot be avoided. | good - another statement

Malthus and Smith both view the human population as a regulated system whose growth is controlled by the resources available, and they describe many of the same factors that act to regulate the population increase. However, they disagreed as to the impact of some of these regulating factors. Malthus believes that the primary means by which societies are prevented from multiplying beyond their limits are what he refers to as "positive checks," which slow or reverse a population increase before it reaches the limits of subsistence. The most direct example is famine: when there is not enough food available, starvation and malnutrition slow | Excellent

reproduction and increase mortality. Malthus observes this throughout England as sickness and "mortality among the children of the poor … attributed to a want either of proper or of sufficient nourishment" (36). Since this is not an economic problem but simply the unavailability of sufficient food, Malthus asserts that it cannot be solved by economic policy; to allow one poor man "to live much better than he did before" requires "proportionably depressing others" (38). Smith likewise claims that "the scantiness of subsistence limits the further multiplication of the human species … by destroying a great part of the children" produced; he observes the great increase in infant mortality among the poor (182). In a similar manner, war acts as a positive check. According to Malthus, when a society has grown excessively large, they may find themselves needing to compete violently with their neighbors for natural resources in order to survive. This "struggle for existence" can result in a war that reduces population by causing deaths (29). Though Smith does not discuss war, it follows as a reasonable consequence of the poverty he describes. Both authors agree that these factors can control the population growth. However, Malthus notes that war and famine cause terrible suffering for many people. Smith does appear to be aware of this effect, but he does not consider it extensively. Malthus's considerably more pessimistic viewpoint thus results from his awareness of and focus on the negative impact of these positive checks.

Both Malthus and Smith also describe factors that discourage reproduction before the population reaches the maximum sustainable level; however, the two disagree about the effectiveness of these "preventative checks." Smith is optimistic about their potential, because he takes an economic approach to analyzing the limit on population growth. He views the population as labor and considers its supply and demand. When the population is low, the supply of labor is limited and its value increases, encouraging "the marriage and multiplication of labourers;" when the population is high, the market is "over-stocked with labor," lowering wages to an undesirable state and increasing poverty (183). Thus "the demand for men, like that for any other commodity, necessarily regulates the production of men; quickens it when it goes on too slowly, and stops it when it advances too fast" (183). This analysis leads the optimistic conclusion that population growth will slow before it reaches the limit of maximum subsistence,

allowing widespread famine to be avoided. However, viewing the human population strictly as an economic quantity is a problematic simplification because of the complexities of human motivation. Malthus takes this into account when he claims that economic concerns can provide an incentive not to reproduce, but it is not necessarily strong enough to overcome the power of instinct. Malthus notes that raising children involves considerable expense, as a worker must provide for the rest of his family as well as himself. This new expense will subject him to a decrease in wealth and social status, and possibly even "the heart rending sensation of seeing his children starve" (35). This provides a motivation from self-interest to resist his natural impulse to reproduce. However, he observes that humans are not entirely rational and "guided either by a stronger passion, or a weaker judgment, [will often] break through these restraints" and follow their urge to reproduce anyway, so this check cannot effectively curb population growth (34). He also refers to "moral restraint" as another possible preventative check that can occur if people rationally recognize the dangers of unchecked population increase and the moral "duty of each individual not to marry till he has a prospect of supporting his children" (132). If this obligation is followed, it will slow the population increase, but Malthus does not believe it can overcome instinct well enough to be effective. He does not even acknowledge the possibility of moral restraint in the first edition of his essay, and he claims that while "vice and misery" may slow the process, the population will nonetheless grow until it reaches the maximum sustainable level. This reveals the flaw in Smith's economic arguments about population: they discount the power of the reproductive instinct, which can overshadow even the strongest economic constraints. Accordingly, while preventative checks regulate population growth to some extent, Smith is overly optimistic about their capability to do so.

The most significant difference between Malthus's and Smith's arguments about population lies in their predictions about the food supply. Malthus asserts that "population, when unchecked, increases in a geometrical ratio," but "subsistence increases only in an arithmetical ratio," so the population will necessarily outgrow its means of subsistence (20). The claim that the food supply can only increase arithmetically is central to this argument, yet it is one of the weaker points of his essay. He claims that it would be "contrary to all our knowledge of the

good point

qualities of land" that agricultural production could double in twenty-five years and then double again in the next twenty-five. "The most enthusiastic speculator cannot suppose a greater increase" than an arithmetical progression (22). However, Malthus does not provide any explanation for why this is the case; he merely assumes it to be true. Similarly, he claims that, even though "we do not exactly know where it is," there must exist a "limit to improvement" for plants and animals: "No man can say that he has seen the largest ear of wheat or the largest oak that could ever grow; but he might easily, and with perfect certainty, name a point of magnitude at which they would not arrive" (63). Again, this reasoning is circular; he merely claims that the existence of a limit to progress is obvious. In reality, the situation is not so simple, because there are many complex factors that contribute to the amount of food available to support a population. For example, an increase in population implies that more laborers are available to harvest more food; technological developments can also increase the rate of food production. It is thus unreasonable to suggest, based on Malthus's unconvincing argument, that the food supply necessarily grows arithmetically, and Smith's famous economic theories provide an argument to the contrary.

good

Excellent transition

Smith presents "the division of labour" as "the greatest improvement in the productive powers of labor," and it provides an explanation for how the food supply can grow faster than Malthus assumes (109). By specializing in one particular area, workers can improve their productivity and efficiency. Smith uses the example of pin-making: a team of pin-makers can be thousands of times more productive than a worker who does not make make pins regularly, because they can be trained in the trade of pin-making, have access to the appropriate machinery, and spend all of their time making pins. This division of labor is naturally encouraged because it allows the society to be collectively more productive, and is therefore in every individual's self-interest. The same reasoning can be applied to agriculture. Smith does note that "the nature of agriculture does not admit of so many subdivisions of labour … the improvement of the productive powers of labour in this art does not always keep pace with their improvement in manufacturers" (111). Nevertheless, the division of labor can still serve to increase food production: "the most opulent nations, indeed, generally excel all their neighbors in

Very critical point

agriculture … Their lands are in general better cultivated, and having more labour and expense bestowed upon them, produce more in proportion to the extent and natural fertility of the ground" (111). Division of labor also makes it possible for a society to support scientists and engineers, who do not directly produce goods but invent technologies that can make production many times more efficient. Malthus does not account for advances in technology that can overcome apparent limits of nature. For example, improved farming machinery allows land to be harvested more efficiently; fertilizers and pesticides make it possible to grow crops in harsher environments. Modern biotechnology promises higher-yield crops with better disease resistance. These factors can cause the food supply to increase even without dedicating new land to farms. Similarly, new building technologies make it possible for more people to live comfortably in the same area, and they can allow previously uninhabitable areas to be developed. As a result of division of labor and technological advancement, overall agricultural production can increase considerably faster than the Malthusian arithmetical progression.

Because of the division of labor, technological advancement, and other factors, the growth in population does not exceed the increase in the food supply as rapidly as Malthus suggests. This explains the obvious fact that the world population has grown many times larger since Malthus wrote his essay, and it still continues to increase. However, this does not invalidate his argument. Famine is clearly present today in many areas of the world. At any given time, there exists a limit on the maximum sustainable population, though this limit may be continuously increasing. As Malthus ~~describes~~ argues, the population will always have a tendency to expand to fill this limit, and as it approaches the limit, the positive checks of famine and war will be applied. These positive checks, as they slow the growth, will cause suffering and misery. Because of the unequal distribution of wealth, this suffering is felt primarily among the less wealthy people of the world. When workers are plentiful and food is not, "the price of labor must tend toward a decrease, while the price of provisions must at the same time tend to rise," causing the poor to sharply feel the effects of overpopulation (24). Malthus observes that "the histories of mankind that we possess are histories only of the higher classes," so this suffering does not always receive as much attention as it should, but it is no less present (25). Smith makes the

same observation when he notes that the "great mortality" of infants is "found chiefly among the children of the common people, who cannot afford to tend them with the same care as those of better station" (182). Similarly, wealth is distributed unequally among nations; the less prosperous nations of the world suffer far more. This effect is particularly dramatic because they must apply the majority of their labor toward the goal of reducing famine, which means they have only limited division of labor. They are also at a technological disadvantage because their poverty prevents effective technological development. Thus the food supply will grow more slowly in less-developed nations than it does in industrialized ones, while the urge to reproduce is just as strong. Even though Smith's division of labor allows the world's food supply to grow to support increasingly large populations, it hardly prevents misery due to poverty and scarcity. Indeed, the lower-class workers in the factories that epitomize Smith's division of labor are often among those who suffer the most.

Though Malthus's prediction that misery and famine are the inevitable results of population growth is diametrically opposed by Smith's optimistic prediction of "continually increasing demand [for men] by a continually increasing population," their arguments have several similarities. Both view population as a self-regulating system that, when it grows too large, will be forced to decrease by the "positive checks" of war and famine. Each also considers the potential for economic factors to slow population growth in accordance with scarcity of resources, but whereas Smith believes that they can effectively regulate the population, Malthus's understanding of human instinct reveals the limited capability of these "preventative checks". Because Malthus neglects the power of the division of labor and assumes that population growth will necessarily substantially outgrow the food supply, he reaches an overly pessimistic conclusion. However, Smith's belief that population can be regulated as an economic system in spite of human instinct and his lack of consideration of the suffering of the lower classes lead him to an overly optimistic conclusion. A combination of the two theories is required to explain the reality observed today: that the population continues to increase to ever-greater limits, yet poverty and suffering are still as present as ever.

A very potent and convincing conclusion

Name
Dan Ports

Title
Malthus and Smith: Two Views on Population Growth [Your title could be a little more suggestive of where your argument is heading. That would help the reader follow the paper.]

Ideas and Argument
Your paper has a certain reticence in developing the thesis you set out to explore in the first paragraph. I take it that you want to make the argument that Malthusian ratios don't really fully describe the human condition, because there is an economy and a level of technological development that counteract the limits that Malthus claimed determined the human condition. This is a good argument to develop. But your initial 3+ pages are spent in establishing what the positions of Malthus and Smith are. You are excellent at summarizing these positions, using very thoughtful quotations and integrating them into a fine exposition of the respective arguments. This paraphrasing, however, effectively precludes any rigorous thesis development on your part. So, by the time you get to developing your thesis on p. 4, the paper is very far along. If you tried writing topic sentences that emphasized the contrast between Smith and Malthus's positions, your paper would develop more analytically.

Having said this, on p. 4, middle paragraph, you begin to develop a very good analysis of the limits to Smith's position. On p. 5, you use the division of labor argument effectively to counter the Malthusian positon. At the same time, division of labor has its clear limits, as contrasted to the potential for biological reproduction. Also, the division of labor and the technological growth arguments clearly hold more for industrial societies than for less developed ones.

Organization
Your organization is much improved over your earlier draft, although you still have the tendency to want to establish the position of each writer perhaps too elaborately. You can summarize their relative positions with greater economy and get into the contrasts more quickly.

Style and Mechanics
Generally, your prose is clear. It is a little plodding and too extensive in places like p. 2, where it threatens to bog down in establishing the respective positions of Malthus and Smith. These could be summarized more briefly. I very much like the use of quotations, but you may be including too many of them.

--Be sure to number the pages of your paper.

General
Much improved over the original piece. Could be made to dive more quickly into the contrasting analysis you set out to pursue in the first thesis paragraph.

Grade: B

Dan Ports

2002/10/08 (revised 2002/10/27)

21L.448

Malthus and Smith: Two Views on Population Growth

Both Thomas Robert Malthus and Adam Smith claim population growth is regulated by the finite capacity of the food supply. Malthus, in his *Essay on the Principle of Population*, describes a system of positive and preventative checks that act to keep the population below the limit. Similarly, Smith claims in *The Wealth of Nations* that scarcity has a regulatory effect on population growth, such that "no species can ever multiply beyond [the means of their subsistence]" (182). However, they reached different conclusions. Whereas Malthus claims that the conflict between the human urge to reproduce and the unavoidable limits on food production will lead to famine and suffering, Smith is optimistic and believes that growth can continue without serious consequence. The reality lies between these two extremes. Smith's famous economic theory about the power of division of labor allows him to claim that an increase in population is also an increase in available labor, which can provide food to support a greater population; Malthus's mathematical arguments about the food supply are flawed because they do not take this into account. However, though the population can continue to reach increasingly higher levels, the Malthusian scarcity of resources nonetheless results in suffering among the lower classes of society.

This is much better → you are preparing to synthesize the two thinkers

Malthus's *Essay on the Principle of Population* makes the controversial assertion that there are limits to human progress because natural resources have a finite capacity. The foundations for his argument are the unremarkable claims that "food is necessary to the existence of man" and that "the passion between the sexes is necessary and will remain nearly in its present state" (19). That is, the population has a natural tendency to increase, but if the food supply does not grow correspondingly, it will impose a limit on population growth. Malthus believes that the population grows at a higher rate than the food supply can: "population, when unchecked, increases in a geometrical ratio. Subsistence increases only in an arithmetical ratio. A slight acquaintance with

Good development of Malthus's position

numbers will shew the immensity of the first power in comparison of the second" (20). Once the population grows to the maximum level that can supported by the food supply, any further increases will result in some part of the population suffering from inadequate subsistence: "The food therefore which before supported seven millions must now be divided among seven millions and a half or eight millions. The poor consequently must live much worse, and many of them be reduced to severe distress" (24). This distress will necessarily continue until it is offset by either an increase in agricultural output or a decrease in population.

Both Malthus and Smith claim that ~~there exist~~ factors ~~that act to~~ slow or reverse population growth as it reaches the limits of subsistence. Malthus believes that these factors, which he refers to as "positive checks," are the primary means for preventing societies from growing beyond their limits. The most direct example is famine: when there is not enough food available, starvation and malnutrition cause an increase in mortality, which acts against the population increase. Malthus observes throughout England an increase in "mortality among the children of the poor" and sickness among the lower classes "which can only be attributed to a want either of proper or of sufficient nourishment" (36). He does not believe that this problem can be solved by any type of economic policy, because there simply is not enough food to sustain everyone adequately: "I cannot by means of money raise a poor man and enable him to live much better than he did before, without proportionably depressing others" (38). Like Malthus, Smith also observes the increase in mortality that results from scarcity, claiming that "poverty, though it does not prevent the generation, is extremely unfavourable to the rearing of children" (182). He notes that "it is not uncommon … in the Highlands of Scotland for a mother who has borne twenty children not to have two alive," and uses this to support his claim that "the scantiness of subsistence can set limits to the further multiplication of the human species … by destroying a great part of the children which their fruitful marriages produce" (182). Similarly, war is another "positive check" that can take place when the population outgrows its means of subsistence. Malthus demonstrates this using the example of a nation of shepherds that have exhausted all the pasture lands available to them. When "want pinched the less fortunate members of the society, and at length the impossibility of supporting such a number together became too evident to be resisted," some of the

less fortunate members set out "to explore fresh regions and to gain happier seats for themselves by the sword" (29). The result is a war for natural resources, a "struggle for existence … fought with a desperate courage" (29). By causing deaths, war, like famine, can act to reduce population when it reaches the subsistence limit. Smith does not specifically discuss war as a result of scarcity, but it certainly follows as a reasonable consequence of the poverty he describes. In regard to the capability of positive checks to restrict population growth, Malthus and Smith are in agreement.

Excellent use of quotations to present the positions of Smith + Malthus

Both Malthus and Smith also consider the possibility that population growth can be slowed by factors that act to discourage reproduction before it reaches the maximum level supported by the food supply. Malthus refers to these factors as "preventative checks," but he is not optimistic about their effectiveness. Specifically, he claims that economic concerns can provide an incentive not to reproduce. Both marriage and raising children involve considerable expense, as a worker must provide not just for himself but for the rest of his family as well. As a result, he will not enjoy as much wealth or social status, and thus can be motivated by self-interest to resist his natural impulse to reproduce. This effect is even more extreme among the lower classes, for a poor laborer may realize that "no degree of frugality, no possible exertion of his manual strength could preserve him from the heart rending sensation of seeing his children starve" (35). This provides an even stronger incentive not to have children. Malthus refers to these motivations as "vice" and claims that they explain how many nations can have a "slow progress in population" in spite of the ever-present "passion between the sexes" (33). However, Malthus asserts that this check cannot effectively curb population growth because humans are not entirely rational and "guided either by a stronger passion, or a weaker judgment, [will] break through these restraints" and follow their urge to reproduce anyway (34). He also refers to "moral restraint" as another type of preventative check that occurs when people are aware of the dangers of unchecked population increase, though he is not certain that it can have a significant impact. Just as overeating results in poor health, "if we multiply too fast, we die miserably of poverty and contagious diseases. The laws of nature … indicate to us that we have followed these impulses too far" (131). Accordingly, he claims that it is a moral "duty of each individual not to marry till he has a prospect of supporting his children" (132). If this obligation is followed, it will reduce the rate of population increase. However,

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Malthus is not very optimistic about the effectiveness of these preventative checks. He does not even acknowledge the possibility of moral restraint in the first edition of his essay, and he claims that while "vice and misery" may slow the process, the population will nonetheless grow until it reaches the maximum sustainable level.

True

Smith's arguments in *The Wealth of Nations* resemble Malthus's theory of preventative checks, but he is more optimistic about their potential. He takes an economic approach to analyzing this limit, viewing the population as labor and considering its supply and demand. When the population is low, the supply of labor is limited and its value increases, encouraging "the marriage and multiplication of labourers;" when the population is high, the market is "over-stocked with labor," lowering wages to an undesirable state and increasing poverty (183). Thus "the demand for men, like that for any other commodity, necessarily regulates the production of men; quickens it when it goes on too slowly, and stops it when it advances too fast" (183). This analysis leads to a much more optimistic conclusion than Malthus's theories, because it suggests that population growth will slow before it reaches the limit of maximum subsistence, allowing widespread famine to be avoided. However, viewing the human population strictly as an economic quantity is a problematic simplification because it discounts the power of the instinctual motivation to reproduce. As Malthus describes, even the strongest economic constraints will often be overshadowed by the reproductive instinct; Smith does not adequately account for this in his model. Accordingly, Smith is more optimistic about the capability of these preventative checks to regulate population growth.

Good

Good

Good

The most significant difference between Malthus's and Smith's arguments about population lies in their predictions about the food supply. Malthus's assertion that the food supply can only increase arithmetically is central to his argument, yet it is one of the weaker points of his essay. He claims that it would be "contrary to all our knowledge of the qualities of land" that agricultural production could double in twenty-five years and then double again in the next twenty-five. "The most enthusiastic speculator cannot suppose a greater increase" than an arithmetical progression (22). However, Malthus does not provide any explanation for why this is the case; he merely assumes it to be true. Similarly, he claims that, even though "we do not exactly know where

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it is," there must exist a "limit to improvement" for plants and animals: "No man can say that he has seen the largest ear of wheat or the largest oak that could ever grow; but he might easily, and with perfect certainty, name a point of magnitude at which they would not arrive" (63). Again, this reasoning is circular; he merely claims that the existence of a limit to progress is obvious. In reality, the situation is not so simple, because there are many complex factors that contribute to the amount of food available to support a population. It is thus unreasonable to suggest, based on this unconvincing argument, that the food supply necessarily grows arithmetically.

True, but you should try to say a little more by suggesting a counter-example.

Smith presents "the division of labour" as "the greatest improvement in the productive powers of labor," and it provides an explanation for how the food supply can grow faster than Malthus assumes (109). By specializing in one particular area, workers can improve their productivity and efficiency. Smith uses the example of pin-making: a team of pin-makers can be thousands of times more productive than a worker who does not make make pins regularly, because they can be trained in the trade of pin-making, have access to the appropriate machinery, and spend all of their time making pins. This division of labor is naturally encouraged because it allows the society to be collectively more productive, and is therefore in every individual's self-interest. The same reasoning can be applied to agriculture. Smith does note that "the nature of agriculture does not admit of so many subdivisions of labour … the improvement of the productive powers of labour in this art does not always keep pace with their improvement in manufacturers" (111). Nevertheless, the division of labor can still serve to increase food production: "the most opulent nations, indeed, generally excel all their neighbors in agriculture … Their lands are in general better cultivated, and having more labour and expense bestowed upon them, produce more in proportion to the extent and natural fertility of the ground" (111). Division of labor also makes it possible for a society to support scientists and engineers, who do not directly produce goods but invent technologies that can make production many times more efficient. Malthus does not account for advances in agricultural technology. For example, improved farming machinery allows land to be harvested more efficiently; fertilizers and pesticides make it possible to grow crops in harsher environments. Modern biotechnology promises higher-yield crops with better disease resistance. These factors can cause the food supply to increase even without dedicating new land to farms. As a result of division of labor, overall agricultural

Good point

Good points

production can increase considerably faster than the Malthusian arithmetical progression.

Because of the division of labor, technological advancement, and other factors, the growth in population does not exceed the increase in the food supply as rapidly as Malthus suggests. This explains the obvious fact that the world population is now several times greater than it was when Malthus wrote his essay, and famine, while present, is not as widespread as Malthus's essay might imply. However, this does not invalidate his argument. At any time, there exists a limit on the maximum sustainable population, though this limit may be continuously increasing. As Malthus describes, the population will always have a tendency to expand to fill this limit, and as it approaches the limit, the positive checks of famine and war will be applied. Though these positive checks will control the population growth, they will also cause suffering and misery. Because of the unequal distribution of wealth, this suffering is felt primarily among the poorer classes. When workers are plentiful and food is not, "the price of labor must tend toward a decrease, while the price of provisions must at the same time tend to rise," causing the poor to sharply feel the effects of overpopulation (24). Malthus observes that "the histories of mankind that we possess are histories only of the higher classes," so this suffering does not always receive as much attention as it should, but it is no less present (25). Smith makes the same observation when he notes that the "great mortality" of infants is "found chiefly among the children of the common people, who cannot afford to tend them with the same care as those of better station" (182). However, while Smith recognizes the regulatory effect this has on population, he seems to neglect the importance of the suffering it causes. Even though Smith's division of labor allows increasingly large populations to be supported, it does not prevent misery due to poverty and scarcity. Indeed, the lower-class workers in the factories that make possible Smith's division of labor are often among those who suffer the most.

This could use a little more evidence, since the number of people on the verge of starvation today is in the millions.

Though Malthus's prediction that misery and famine are the inevitable results of population growth is diametrically opposed by Smith's optimistic prediction of "continually increasing demand [for men] by a continually increasing population," their arguments have several similarities. Both view population as a self-regulating system that, when it grows too large, will be

forced to decrease by the "positive checks" of war and famine. Each also considers the potential for economic factors to slow population growth in accordance with scarcity of resources, but only Smith believes that this can effectively regulate the population, while Malthus claims that human instinct makes these "preventative checks" ineffective. Because Malthus neglects the power of the division of labor and assumes that population growth will necessarily substantially outgrow the food supply, he reaches an overly pessimistic conclusion. However, Smith's belief that population can be regulated as an economic system in spite of human instinct and his lack of consideration of the suffering of the lower classes leads him to an overly optimistic conclusion. A combination of the two theories is required to explain the reality observed today: that the population continues to increase to ever-greater limits, yet poverty and suffering are still as present as ever.

The question is: will we eventually reach the limits to this growth?

Name Dan Portes
Title

Ideas and Argument

- Although, as you set out to show, Malthus and Smith reached different conclusions, that isn't too surprising or, indeed, too helpful. Can you push this blend Thesis a little to give more interest to your otherwise very well developed paper. There is far too much inert description - summary in your draft.

Organization

- you do Malthus first, then Smith: not a very interesting organization. Try mixing the material on Malthus and Smith up more.

Style and Mechanics

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General

Dan Ports

2002/10/08

21L.448

Malthus and Smith: Two Views on Population Growth

Thomas Robert Malthus and Adam Smith both studied human population growth, yet they reached different conclusions. Malthus, in his *Essay on the Principle of Population*, claims that the population growth resulting from the human urge to reproduce, combined with unavoidable limits on food production, will eventually lead to famine and suffering. Like Malthus, Adam Smith claims in *The Wealth of Nations* that scarcity has a regulatory effect on population growth, such that "no species can ever multiply beyond [the means of their subsistence]" (182). However, he also introduces his famous economic theories about the power of division of labor and enlightened self-interest. These theories allow him to predict that an increase in population can also provide an increase in available labor, preventing the Malthusian famine and potentially leading to greater prosperity.

Well written, but you could use a sharper, more interesting Thesis.

Malthus's *Essay on the Principle of Population* is a controversial work because it expresses such a pessimistic outlook for the future. Malthus asserts that there are limits to human progress because natural resources have a finite capacity. The foundations for his argument are two claims, both unobjectionable, that "food is necessary to the existence of man" and that "the passion between the sexes is necessary and will remain nearly in its present state" (19). That is, the population has a natural tendency to increase, but if the food supply does not grow correspondingly, it will impose a limit on population growth. Malthus believes that the population grows at a higher rate than the food supply can. Specifically, he writes that "population, when unchecked, increases in a geometrical ratio. Subsistence increases only in an arithmetical ratio. A slight acquaintance with numbers will shew the immensity of the first power in comparison of the

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second" (20). Once the population grows to the maximum level that can supported by the food supply, any further increases will result in some part of the population suffering from inadequate subsistence: "The food therefore which before supported seven millions must now be divided among seven millions and a half or eight millions. The poor consequently must live much worse, and many of them be reduced to severe distress" (24). This distress will necessarily continue until it is offset by either an increase in agricultural output or a decrease in population.

Malthus claims that there is a "great check on population" that prevents societies from growing beyond their limits, and it results from a combination of three factors: "moral restraint, vice, and misery" (131). Some of these act as "positive checks," slowing or reversing a population growth that has already begun. The most direct example is famine: when there is not enough food available, starvation and malnutrition cause an increase in mortality, which acts against the population increase. Malthus observes throughout England an increase in "mortality among the children of the poor" and sickness among the lower classes "which can only be attributed to a want either of proper or of sufficient nourishment" (36). He notes that such cases of famine are more common than they appear, because they affect the poor disproportionately. When workers are plentiful and food is not, "the price of labor must tend toward a decrease, while the price of provisions must at the same time tend to rise" (24). As a result, the poor feel the effects of the shortage much more greatly than the rich. Since "the histories of mankind that we possess are histories only of the higher classes," this suffering is "less obvious and less decidedly confirmed by experience than might naturally be expected," but no less present (25). War is another "positive check" that can take place when the population outgrows its means of subsistence. Malthus demonstrates this using the example of a nation of shepherds that have exhausted all the pasture lands available to them. When "want pinched the less fortunate members of the society, and at length the impossibility of supporting such a number together became too evident to be resisted," some of the less fortunate members set out "to explore fresh regions and to gain happier seats for themselves by the sword" (29). The result is a war for natural resources, a "struggle for existence

Very good description and summary, but you aren't advancing an argument.

… fought with a desperate courage" (29). By causing deaths, war, like famine, can act to reduce population when it reaches the subsistence limit. However, war and famine are hardly desirable states, to say the least. Both result in considerable suffering for the people they affect. Malthus claims that "the commission of war is vice, and the effect of it misery, and none can doubt the misery of want of food" (35). This accounts for his argument that "further population was checked, and the actual population kept equal to the ~~mans~~ means of subsistence by misery and vice" (34).

Malthus also describes "preventative checks" that can act to slow population growth before it reaches the maximum level supported by the food supply. Specifically, he claims that economic concerns can provide a powerful incentive not to reproduce. Both marriage and raising children involve considerable expense, as a worker must provide not just for himself but for the rest of his family as well. As a result, he will not enjoy as much wealth or social status: "a man … with an income only just sufficient to enable him to associate in the rank of gentlemen, must feel absolutely certain that if he marries and has a family he shall be obliged … to rank himself with moderate farmers and the lower class of tradesmen" (34). An individual aware of this effect will be motivated by self-interest to resist his natural impulse to reproduce. While this preventative check affects "all the ranks of society in England," its effects on the lower classes are particularly dramatic (34). A laborer who earns low wages may realize that if he has multiple children, it is possible that "no degree of frugality, no possible exertion of his manual strength could preserve him from the heart rending sensation of seeing his children starve" (35). This provides an even stronger incentive not to have children. Malthus refers to these motivations as "vice" and claims that they explain how many nations can have a "slow progress in population" in spite of the ever-present "passion between the sexes" (33). Because people can be discouraged from multiplying, the population increase that actually takes place is slower than geometric doubling that Malthus proposes. He also refers to "moral restraint" as another type of preventative check that occurs when people are aware of the dangers of unchecked population increase. Just as overeating results in poor health, "if we multiply too fast, we die miserably of poverty and contagious diseases. The

laws of nature … indicate to us that we have followed these impulses too far" (131). Accordingly, he claims that it is a moral "duty of each individual not to marry till he has a prospect of supporting his children" (132). If this obligation is followed, it will reduce the rate of population increase. However, Malthus is not very optimistic about the power of these preventative checks. He does not even acknowledge the possibility of moral restraint in the first edition of his essay, and he claims that while "vice and misery" may slow the process, the population will nonetheless grow until it reaches the maximum sustainable level.

Adam Smith, in his Wealth of Nations, also mentions the population problem. His arguments resemble Malthus's theory of preventative checks. Smith also claims that "every species of animals naturally multiplies in proportion to the means of their subsistence, and no species can ever multiply beyond it" (182). He takes an economic approach to analyzing this limit, viewing the population as labor and considering its supply and demand. When the population is low, the supply of labor is limited and its value increases, encouraging "the marriage and multiplication of labourers;" when the population is high, the market is "over-stocked with labor," lowering wages and increasing poverty (183). Thus "the demand for men, like that for any other commodity, necessarily regulates the production of men; quickens it when it goes on too slowly, and stops it when it advances too fast" (183). This theory is very similar to Malthus's notion of preventative checks, though Smith makes the simplification of treating men as an economic quantity and neglecting the human instinct to reproduce. As a result, Smith is more optimistic about the capability of these preventative checks to regulate population growth and prevent famine.

Malthus's and Smith's arguments about population differ most significantly in their predictions about the food supply. Malthus's assertion that the food supply can only increase arithmetically is one of the weaker points of his essay. He claims that it would be "contrary to all our knowledge of the qualities of land" that agricultural production could double in twenty-five years and then double again in the next twenty-five. "The most enthusiastic speculator cannot

suppose a greater increase" than an arithmetical progression (22). However, Malthus does not provide any explanation for why this is the case; he merely assumes it to be true. Similarly, he claims that, even though "we do not exactly know where it is," there must exist a "limit to improvement" for plants and animals: "No man can say that he has seen the largest ear of wheat or the largest oak that could ever grow; but he might easily, and with perfect certainty, name a point of magnitude at which they would not arrive" (63). Again, this reasoning is circular; he merely claims that the existence of a limit to progress is obvious. In reality, the situation is not so simple, because there are many complex factors that contribute to the amount of food available to support a population. It is thus unreasonable to suggest, based on this argument, that the food supply necessarily grows arithmetically.

Several of the principles Smith presents in *The Wealth of Nations* explain why the food supply can grow more rapidly than Malthus assumes. Smith describes "the division of labour" as "the greatest improvement in the productive powers of labor" (109). By specializing in one particular area, a worker can improve his or her productivity and efficiency. Smith uses the example of pin-making: a worker who does not regularly make pins will lack the skill to make more than one pin per day. However, a team of workers will be able to manufacture many thousands of pins if they are skilled in the trade of pin-making, have access to the appropriate machinery. and spend all of their time making pins. This division of labor is naturally encouraged because it allows the society to be collectively more productive, and is therefore in every individual's self-interest. The same reasoning can be applied to agriculture. Smith does note that "the nature of agriculture does not admit of so many subdivisions of labour, nor of so complete a separation of one business from another … the improvement of the productive powers of labour in this art does not always keep pace with their improvement in manufacturers" (111). Nevertheless, the division of labor can still serve to increase food production: "the most opulent nations, indeed, generally excel all their neighbors in agriculture as well as in manufactures … Their lands are in general better cultivated, and having more labour and expense bestowed upon them, produce more

in proportion to the extent and natural fertility of the ground" (111). Division of labor also makes it possible for a society to support scientists and engineers, who do not directly produce goods but invent technologies that can make production many times more efficient. Malthus does not account for advances in agricultural technology. For example, improved farming machinery allows land to be harvested more efficiently; fertilizers and pesticides make it possible to grow crops in harsher environments. Modern biotechnology promises higher-yield crops with better disease resistance. These factors can cause the food supply to increase faster than the Malthusian arithmetical progression.

Both Malthus and Smith consider the effects of population growth, and both conclude that famine and suffering will result if the population grows so large that it cannot be sustained by the food supply. Malthus claims that this suffering is inevitable because the population grows geometrically, and will therefore always exceed the food supply, which only grows arithmetically. However, the reality is far more complex, because the preventative and positive checks that Malthus describes act to slow population growth, and the growth of the food supply is not necessarily arithmetic. Adam Smith is able to avoid such a pessimistic conclusion because he recognizes that the population has a tendency to be self-regulating and slow its growth as it approaches the limits of sustainability, and that the division of labor and technological advances allow increases in agricultural production.