Human in his essay "an essay on

Human population is a key elementin political ecology, because human beings have a direct influence and impactto the environment. Overpopulation to be specific have been a core topic fordebate in these past years. The impacts of population growth are perceiveddifferently by different people whether it is good or bad for natural resourceand the environment, and this is with an underlying concept of the earth’scarrying capacity. At the core of the relationship debate between population, scarcity and innovation, lies the question: can earth sustain 7. 6 billion ormore people? How one answers this question depends greatly on whether one seespopulation as a problem or not. Two main theories have stood the test of time, oneby Thomas Malthus in his essay “ An essay on the principles of population” published in 1798 offers a pessimistic view about the relationship.

While analternative argument coming from Ester Boserup in 1965 through her book “ Theconditions of Agricultural Growth: The economics of agrarian changes underpopulation pressure” is an optimistic view about population growth, seeing itas the mother of all invention. Malthus’ view is that thecapacity of population to grow is greater than the carrying capacity of theearth resulting to scarcity (Robbins, Hintz & Moore, 2014). His argument was since human beings/animalshave the desire to reproduce naturally, therefore, he proposes that humanpopulation grows exponentially by doubling with each cycle while foodproduction is fixed or grows at an arithmetic rate by the repeated addition ofa uniform inclement of a natural resource in each uniform interval of time forexample addition of agricultural lands. Hence to Malthus population growth andthe provision of food will never meet and be balanced. His belief is that sinceearth’s resources are

finite population growth will always out paces foodproduction resulting to scarcity of natural resources.

A growing population leading todepletion of natural resources, Malthus believed it could be addressed byincreasing land to plow (Robbins, Hintz , 2014, p. 15), this meant for every birth there should be conversly anincrease in agricultural lands. However, Malthus also argued that ifearth’s resources are constrained mother nature retaliates.

Given such ascenario he saw Earth’s resources as a provider of the most definitive andpowerful limits for human growth and expansion such as such as wars, faminedisease and destitution. These natural limits act to provide checks andbalances to human exponential growth. Moreover, Malthus argued thatpolicies that promote the poor’s welfare are counter productive since hebelieved that the poor have the high fertility rate and that they encourageunnecessary reproduction. Hence self-control and restraint are a solution toresource scarcity.

China with its one child policy in the 1970s is one goodexample of this Malthusian belief. China implemented this radical preventativecheck to control its demography effectively from a fertility rate of 2. 9 in1979 to 1.

6 in 2012 (Robbins, Hintz & Moore, 2014, p. 20), however this isassociated with its on present day challenges that I will not mention in thisanswer. Taking all into account Malthus’ view is that scarcity limits growth, In contradiction Ester Boseruphad a counter argument for Malthus. Boserup “ 1981” believed that “ necessity isthe mother of invention” (Rogers, 2008).

She supported this view by making aclaim that this reaction can be depicted from earlier periods of history, theneed to feed a larger population let to technological changes from one societyto another or to the invention of new technologies and tools. She further arguesthat carrying capacity of an area expands due to autonomously occurringinventions, to achieve this she suggested agricultural/induced intensification (Robbins, P., Hintz, J., Moore, S. A., 2014). This view meansthat with the rise of population there is a rise in demand for food productionand this would lead to innovation or a search for alternatives to produce morewith less. This is historically and presentday evident as more food is produced from less land for example the greenrevolution.

Robbins et al. (2014) defines the green revolution as technologicalinnovations. To Boserup the green revolution is the answer to scarcity. Thepractice of the green revolution in the past and present day using geneticallymodified seed and sophisticated machinery demonstrates Boserup’s theory thatadvances/ innovations will be made to increase food supply. Demographicpressures such as population density promotes innovation and higherproductivity in use of land e. g. irrigation, weeding, crop intensification, better seeds and labour e.

g. tools and better techniques. Hence an increase inpopulation will stimulated humanity to look for alternatives to come up withideas to increase food production to meet the demand rather than to be limitedby natural limits to growth as argued by Malthus. Several papers, based ondifferent case studies around the world, provide empirical evidence that bothMalthus and Boserup theories processes co-exist. Malthus’s solution to

scarcityis by avoiding population growth while Boserup suggest taking advantage of thegrowth by intelligence that comes with every birth. However, to me these twotheories are not antagonistic theories rather they compliment each other. Iargue that the Malthusian theory predicts that the size and growth of apopulation poses some constrains to natural resources and this contrarywise presentssome limitations to necessities/resources for human survival and Boserup ispresenting a solution to these limits. Hence Malthus predicts scarcity andBoserup presents induced intensification as a solution to scarcity ofresources.