

## **DOES CONSERVATION SAVE OR SQUANDER?**

**By**

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There is virtual unanimous agreement across all sectors of society, from government to environmental pressure group, that measures should be taken to conserve scarce resources. Energy is a prime example of a scarce resource. Governments encourage conservation in this area by subsidising citizens who use energy more efficiently (remember the subsidy to defray the installation costs of back-boiler home central heating systems?) and by exhorting technologists to develop machinery that is energy efficient.

All of this seems to be sensible and also accords well with our traditional sense of thrifty behaviour - 'A penny saved is a penny earned'. However, some economists argue that the basic nature of the economic system ensures that conservation measures designed to spare scarce resources frequently do not work, and sometimes have the opposite effect, leading to increased use of these resources. Such analysis is useful, but some prescriptions offered by economists call for unwarranted acts of faith in economic models. Also, on the issue of world population control, the advice offered by the economists is completely opposite to the advice of biological scientists.

The American experience with the motor car over recent decades is cited as a case where seemingly sensible conservation measures did not work. Throughout the 1950s and 1960s, the average milage per gallon achieved by the American motor car was 14 miles. When OPEC quadrupled the price of petrol as a result of the 1973 Arab/Israeli War, the American Congress passed an Energy Conservation Act. Among other provisions, the Act called for the energy efficiency of American cars to rise gradually to 27.5 miles per gallon. As a result American cars gradually improved in efficiency and, by 1989, the average milage per gallon had increased to 20.5 miles - a 45% increase since the early 1970s.

All other factors remaining equal, petrol consumption should have dropped to 65% of its original use. This did not happen however. Between 1973 and 1992 the average volume of petrol used per day in American cars remained remarkably constant. The reason for this was that, despite an increase in the price of petrol, the improved efficiency of the engine made cars cheaper to run. Sales of motor cars increased, as did the average number of miles travelled per year by a motor car. The improved efficiency of the motor car lead to its greater use and therefore the overall consumption of petrol did not drop. Interestingly, efforts at conservation lead to increased economic activity.

The free market, with its primary variables of supply and demand, the interaction of which determine commodity price, is a primary model of economic analysis. This type of analysis neatly explains the various interactions that lead to the final outcome in the American attempt to conserve petrol. Economists view the free market mechanism as a thing of beauty which, if left to its own devices, is self-regulating. Some economists have such deep faith in the benign self-regulatory powers of the free market that they believe other independent parts of nature will cooperate with it in order to bring about a positive result.

Take for example the opinion of many influential economists on the best approach to conserve valuable metals. These metals are valuable because they are vital components in the manufacture of various essential products - e.g. the use of chromium in the manufacture of steel.

It is argued that no artificial intervention should be made to conserve limited stocks of metal. The economic model predicts that if stocks become scarce, the price will rise and this will automatically reduce the use of the precious metal and will provide an incentive to discover new stocks of metal elsewhere. Even more importantly, the economists argue that the market place will now provide powerful incentives that will spur scientists and technologists to discover cheaper and widely available substitutes for the metal.

In my opinion, this analysis takes far too little account of the part that serendipity plays both in the discovery of new ore bodies and in the process of scientific discovery. Scientists cannot produce discoveries to order. If they could, the Black Death would never have been the scourge of Europe, because inoculations would have been invented. Also, we would no longer fear cancer, because a cure would have been found 25 years ago. The economic analysis is flawed because important elements of it rely on chance. No matter how many past examples the economists may cite where new discoveries saved the day, there is no guarantee that this will happen in the future.

Many economists oppose the introduction of population control measures to stabilise burgeoning population numbers in Third World countries whose economies cannot even support present numbers. Their economic analysis predicts that economic development will solve the problems. Biologists, on the other hand, call for population control measures as a first step claiming that further increase in population numbers will produce unacceptable environmental degradation. The economists accuse the biologists of making catastrophic predictions that have not been accurate in the past. The biologists, on the other hand, liken the environment to an airplane. The airplane is held together by thousands of rivets. You can remove some rivets and the airplane will still work. However, remove too many and it falls apart. The environment has already lost a lot of rivets.

George Bernard Shaw once remarked - 'If you laid all economists in the world end to end, they would not reach a conclusion'. However, today, many economists are reaching many conclusions about the best way to deal with the environment. Some of these conclusions are good, some are not. There is urgent need for economists and scientists to come together to discuss conservation and environmental matters. Each discipline can offer enlightening insights to the other and an emerging consensus would prevent either side independently proposing incomplete and naive solutions to Government.

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