Publication of the remarkable article, “Garden in the Desert,” offers the reader a fascinating tale illustrating the difficult path that faces a social entrepreneur who undertakes a major project that points to a path for improvement of the state of society. It concerns a dedicated and idealistic entrepreneur, Ibrahim Abouleish, who undertook to transform a strikingly arid location in the Egyptian desert, with the determination to make it bloom and yield valuable crops. Moreover, it was intended from the beginning that the project would prove to be long lived and self-sustaining financially. The heroic undertaking and its eventual success is an exciting tale, superior to fiction both because it describes actual achievement and also because it offers insights of value to other agronomists seeking to bring productivity to deserts of the world elsewhere.

But, implicitly, there are also important lessons in the Sekem story for those crafting economic policy aimed at amelioration of the universal problem of poverty that besets even the most affluent economies of the world and continues to pervade the developing societies. My purpose in this short paper is to draw further attention to, and elaborate upon, the lessons for policy designers embedded in the Sekem case.

INSTITUTIONAL IMPEDIMENTS AND CONTRIBUTIONS TO LIVING STANDARDS

Economic historians, notably such outstanding figures as Douglas North and David Landes, have drawn our attention to the critical role of institutions in determining the magnitude of entrepreneurial effort in an economy and the size of the contribution of such effort to innovation, per capita income and economic growth. The central point here is that the institutions determine the size and nature of the rewards, in terms of wealth, power and prestige, offered by entrepre-
neurial activity. If the rewards are generous, more persons are attracted to careers of innovative entrepreneurship, and the economy will prosper and grow. This, quite convincingly, is a critical part of the story underlying the industrial revolutions that began after the eighteenth century and provided for some areas of the world a degree of prosperity unprecedented in human history.

But institutions can also work the other way. It is not that they will put a stop to all enterprise, but that they will attract enterprising individuals to unproductive or even destructive activities—even some, like piracy, drug dealing or the role of war lord, that undermine prosperity and spread poverty or even famine and death in their wake. In the wealthier economies the undesirable elements of the incentive structure generated by institutions generally are more moderate, but even in those societies they serve as effective handicaps to the general welfare. This observation is important and promising, because if it offers us a hint of the nature of the impediments to productive entrepreneurship, and indicates how these attributes can conceivably be changed, it does indeed suggest the routes to effective progress. Even in developing lands, where the obstacles to progress have proven most intractable in recent eras, this observation offers hope.

**Barriers to Progress in Developing Lands:**

**Three Example from the Sekem Story**

The story of Sekem provides a number of striking examples of barriers to progress in a developing land such as Egypt—barriers that, fortunately, do not appear to be immutable. Let me call attention to three of them, each a special case that is arguably representative of problems of widespread significance.

**A. Bank Financing.** Funding is one of the most difficult and widespread obstacles besetting the creation of enterprise, particularly in developing countries. The Sekem history illustrates this clearly:

….I was happy to have found an Islamic bank where I could work together in a like-minded partnership—or so I hoped….The negotiations were tough….We agreed on the bank having a 40% share in the business…[but then] the state investment authority…found that the estimated value was far higher than the book value. This meant the bank had to pay more for its involvement in the project. But the bank was reluctant to accept this finding, and began to doubt everything and try to get out of the contract. It demanded back the 150,000 pounds it had already paid out…An arbitrator was employed and it took months for our two lawyers to agree on a third party to mediate….One day my lawyer came to me and said, ‘listen, if you give the bank’s lawyer 10,000 pounds he will accept the estimated value.’

When our entrepreneur refused to pay a bribe the problems began in earnest. Other banks, having heard the story, all refused loan applications from Sekem, and the dispute went on for years.
B. Expropriation Vulnerability. In developing lands, as was often ubiquitously true in the more distant past, there was no guarantee that private property would be immune from expropriation, particularly if it had proved promising. In the Sekem case, too, this threatened to become the reality:

...[O]ne morning, when I drove to the farm from Cairo as usual, I could not believe the sight I saw: bulldozers were pulling down thousands of trees. I was met by soldiers with machine guns and suspicious expressions. I found out that a general had ordered our grounds to be made into a military area, even though it was only through our efforts that there was even a water supply on our land.

C. Superstition as Competitive Weapon. The Sekem enterprise was run on principles of organic farming, but this made it a financial threat to the pesticide manufacturers, as other growers seemed apt to follow the Sekem example:

The chemical industry could no longer deposit 35,000 tons of pesticides on the fields each season. The people involved had opposed organic cultivation and had gotten the press involved....We were able to cope with all the attacks until one day an extensive article appeared in the local paper with the title “The Sun-Worshippers,” [a label created by a reporter who had visited the area]....For Muslims, worshiping the sun is like worshiping Satan for Europeans....Based on this article, the prayer leaders in the mosques around started to stir up animosity toward us, spreading the word that we did not worship Allah, but the sun [thereby threatening the entire enterprise].

Impediments to Productive Entrepreneurship in Prosperous Nations: Two Examples

The three examples from the Sekem story surely illustrate the point: that institutional arrangements can constitute a major impediment to productive entrepreneurship and that institutional impediments can handicap and even prevent developments of the sort that promise to contain poverty. But it is important to emphasize that such counterproductive institutions are not present only in developing economies. We in the prosperous nations also have much room for institutional improvement. Indeed, the most promising institutional arrangements, if they are inappropriate, even if only in their details, are capable of impeding or even preventing entrepreneurial activities from delivering their potential benefits.

A. Some Missteps in the Early British Patent System and Resulting Impediments to Invention. The history of the patent system in Great Britain provides one clear example of institutional impediments in prosperous countries.

As we all know, Great Britain has been accorded by historians the distinction of having inaugurated the eighteenth century industrial revolution. It is an accomplishment so great that its magnitude is difficult to comprehend. In just one century the purchasing power of an average inhabitant of Great Britain grew five-fold;
Britain may indeed have initiated of the institution of patents and been its earliest user about four centuries before the beginning of the industrial revolution. But those early grants of patents by the English king were not given as a reward for the invention of new products or improved productive techniques. 

was given a monopoly on the production of silk in England as a reward for his theft—or rather his secondary theft; for as we know, France, too, had not acquired its knowledge of silk production by innocent means. It was fully three centuries later, that the English decreed that the temporary monopoly provided by a patent could only be granted to the contributor of an original invention

But this amendment to the British patent system hardly marked an end to the era in which the system was characterized by a set of effective impediments to invention and associated entrepreneurial efforts. In her superb book The Democratization of Invention, Professor B. Zorina Khan provides a description of the early British practices in this field. The government charged a fee for the grant of a patent that was about four times as large as the average income of an Englishman: “...[P]atent applications in England alone had to pass through seven offices, from the Home Secretary to the Lord Chancellor, and twice required the signature of the sovereign[!]. If the patent were extended to Scotland and Ireland it was necessary to negotiate another five offices in each country.” (p. 32). The purpose of these arrangements seems clear. First, it was believed that only wealthy
aristocrats could be expected to have the knowledge, intelligence, and creativity to make an inventive contribution of any value to the King and country. To avoid cluttering the activities of government with the pointless intrusions of “the lower classes,” such obstacles were adopted for the purpose of their exclusion. Second, the system was designed to contribute to the wealth and comfort of government officials, and this it seems to have done effectively, so much so that when the rules were at last changed and improved after the middle of the nineteenth century, the affected government employees had to be offered financial compensation for the losses they would suffer as a result.

In addition, the view of British law in the earlier period was that the grant of a patent was a gift from the king, so that when the monarch deemed it to be appropriate he could, in effect, re-appropriate a patented invention for his own use, without compensation to the inventor. This was rarely, if ever, done in nineteenth century England, so that it does not seem to have been a significant issue there, but it is reminiscent of the dangers of similar arrangements elsewhere, as in China when the Emperor’s Confucian oriented government is reported to have confiscated printing from its Buddhist inventors.

The result of these British restrictions upon its patent system was, of course, an impediment to its invention process. For nearly three decades until 1855 the number of patented inventions per million persons in its population was about one third the level of patents in the United States, where none of the obstacles just described were present. The relative inventive performance of the Americans was demonstrated dramatically at the Crystal Palace Exhibit in London in 1853, and this frightened the British into reconsidering their patent rules, though the resulting changes were far from immediate.

All this does tell us that there is much that is useful to be learned from our own past mistakes and those of others about effective and ineffective ways to encourage the productive contribution of the entrepreneur.

Next, I will provide one more more recent example that deals with the United States.

B. Distortions of Incentives Caused by Employee Stock Options. In the U.S. a particularly important role in the compensation of business executives is played by the employee stock options (ESOs) that are often a substantial proportion of the financial compensation of members of management in American business firms. If the rules under which they are provided are well designed, they can serve as a powerful incentive for innovative entrepreneurship and growth of the business firm, as success in these areas will drive up the price of the company’s securities and, thereby, the market value of the ESOs. However, in practice the current rules have invited abuse in ways that, if anything, inhibit productive entrepreneurial activity within the firm and hold back its overall performance.

An employee stock option is a grant by a company to the members of its management or other employees of the right to purchase a specified quantity of the stock of the company at some future date of the recipient’s choosing, but paying
for those stocks only the market price that prevailed on the date that the options were granted. This would seem to provide a powerful incentive for management to work hard for the productivity and profits of its firm as a way to raise the value of those ESO grants. Recent events, however, have illustrated all too dramatically the possibilities for abuse—and indeed the actual abuse—of stock options by some entrenched managements. These opportunities for abuse include manifestly undesirable incentives for artificial exaggeration of the short-term earnings of the firm so that misled investors will increase their demand for the company’s stocks, thereby raising the value of management’s stock options. Management does this instead of undertaking the harder and riskier task of providing more enduring earnings for the company by means of entrepreneurial effort and innovation.

Even worse, it has been observed that large rewards of stock options have often been given to managers of the companies who have accomplished little or nothing for their firms, but who have benefited greatly when the stock price of the firm has risen in a period of generally rising stock market prices. In other words, this has proven to be an incentive for management to do little or nothing for the firm, the investors or society, because without undertaking any of the risk or effort this requires, they would still be richly paid, often in hundreds of millions of dollars.

This problem of divergence between the interests of society and those of management is inherent in the corporate form of organization of the large business firm. The large amounts of money needed to create the business can only be obtained from a large number of investors—the corporation’s many stockholders. But the resulting dispersion of corporate ownership among many stockholders, with no stockholder owning enough stocks to enable it to control the company, makes management by the stockholder-owners unworkable and necessitates giving the task of management to an essentially separate group, the hired management of the enterprise. The result is what is described as the separation of ownership from management that is typical of the modern corporation. But since an effective program of innovation in the firm’s products and production methods is likely to require very hard work and the undertaking of great risks, management is likely to be reluctant to undertake such a course.

[O]bstacles imposed by nature are not all that success in a war on poverty must overcome. Here, as in many other problems that beset the economy, the lesson is summed up by the old comic strip observation: “We have met the enemy and he is us!”
As just indicated, stock options can be a method to achieve the goal of reconciling the interests of managers and shareholders and society. For under the stock option form of compensation, managements gain most if they can do their utmost to raise the market value of the company’s securities, and that is presumably what good profit and sales performance will achieve. Moreover, a simple change in the way employee stock options are provided to management promises to remedy the problems just described.

The problem can at least be alleviated if the quantity of options granted to the individual executive is based on the performance of the firm’s securities in comparison to that of the firm’s industry as a whole. That is to say, more options are offered in proportion to the extent that growth in the firm’s output or sales exceed those of related firms.

But the rules for taxation of firms in the U.S. have all but prevented this solution. Those rules permitted a reduction in the amount of the tax that would otherwise have to be paid for the provision of the stock options, but only if the quantity of options granted to management was not based on its performance! In other words, the arrangement was completely perverse; it was an incentive for continuation of the temptation of management to pursue its own interests at the expense of stockholders and the community as a whole.

CONCLUSION

It should be clear from these and an abundance of other experiences that all societies still have much to learn about how to most effectively promote economic growth which alone can ultimately terminate the poverty that has plagued humanity throughout the ages. In particular, amelioration of the universal problem of poverty will require reexamination of our institutions; determination of what institutional arrangements promote general prosperity rather than impeding it; and action to carry out the modifications that experience, observation, and systematic research tell us are required.

I return, in conclusion, to Sekem, to the Egyptian tale in which a remarkable and determined exercise of entrepreneurship succeeded in making the desert bloom, overcoming obstacles that would have lead weaker individuals to surrender. Its ultimate victory has many lessons for all societies. It illustrates dramatically that the obstacles imposed by nature are not all that success in a war on poverty must overcome. Here, as in many other problems that beset the economy, the lesson is summed up by the old comic strip observation: “We have met the enemy and he is us!” The story of Sekem shows that these problems do occur in developing lands as well as ours. More importantly, it demonstrates that in such places, too, institutional impediments can be overcome and, with sufficient determination and thought, they can even be removed.