



# Mind the Gap

*Joseph Stiglitz*

*In an edited version of his RSA Angus Millar lecture in Edinburgh in August 2014, one of the world's greatest economists Joseph Stiglitz puts Scotland front and centre of a worldwide move towards 'learning societies' replacing an economic system captured by the financial sector.*

The big transformation for Western economies came around 1800, when we learned to do things better than we had in the previous two millennia.

This change appears to have had a far greater impact on human wellbeing than did other factors mentioned by economists, like greater efficiency or saving.

## The Scottish Enlightenment

The critical historical event was the Scottish Enlightenment, and in this city of Edinburgh you have statues to your great heroes, David Hume and Adam Smith, people who played an important role in transforming the entire world for the better. What were the aspects of the Scottish Enlightenment that mattered? The most important was recognising that change was possible at all. Even in the Middle Ages, the very idea of human progress - an idea that we take for granted now - was not even invented.

What caused the Scottish Enlightenment is a deep historical question but one thing is clear: the role of education. There are some remarkable things about Scotland in this period. Even at that early stage, Scotland had been committed to the ideal of widespread education. Even 250 years ago the male literacy rate was 75%. Today, developing countries are not getting anywhere close to this. But it was not just the broad-scale minimum level of literacy that made a difference, it was access to tertiary, university education.

This is an issue that is widely debated in Scotland and the rest of the UK. Scotland has been primed to ensure that there is universal access to education, so no matter how poor you are, you have free tuition. England, for reasons that I do not understand, has been going in the opposition direction, saying that tertiary education should be something for the elite, with the tendency to increase inequality, and they have succeeded very remarkably in achieving an increase in inequality.

The implications of the relationship between widespread education and the Scottish Enlightenment is one that we should focus our analysis on: how we enhance and create a learning society.

In developing countries, the focus is on diffusing knowledge from developed to less developed. What divides these two is as much a gap in knowledge as a gap in resources. This perspective on the nature of development was one that I tried to bring to the World Bank when I served as chief economist there.

## A Learning Society

Creating a learning society is both about moving the frontier of knowledge forward through research, but also how we learn from each other. How we make sure the level of activity of every citizen, every firm in society is the best it can be. In short, successful and sustained growth involves creating a learning society, and this is especially important in the 20th century as we move to a knowledge economy.

There are many aspects of creating a learning society: we learn from what goes on in universities, but we also learn a great deal in the process of production. This "learning by doing" has profound implications. If you don't produce steel, you aren't going to learn how to produce steel. Nobody learns how to do that from a textbook.

The creation of a learning society is affected by our institutions, but not just by the obvious ones, like the patent system and the education system. Markets on their own will not do a good job in creating a learning society. Laissez-faire market economies will not succeed. They will not be the most efficient. There need to be systematic interventions by government.

Adam Smith would have recognised this, but unfortunately his latter-day followers, who have not seriously read his work, often do not recognise this.

The first and perhaps the easiest problem to understand is that markets where innovation is important, tend, for good reasons, to have limited competition. If we think of some of the most innovative places of our time, like the Internet, we have had a succession of monopolies, such as Microsoft. In the learning society there are important spillovers - what economists refer to as "externalities" - where others benefit. Knowledge is, to use the technical economists' term, a "public good". People can benefit without taking it away from other people.

Thomas Jefferson, the third president of the United States, said that knowledge was like a candle: when one candle lights the other, it doesn't diminish from the light of the first candle. But there is a problem. Because knowledge is a public good, it cannot be simultaneously used and produced efficiently. One way or another, efficient production and utilisation of knowledge ought to involve some role for government.

Obviously we recognise that. No-one really thinks that the private sector should be engaged in producing basic knowledge. Where did the discovery of DNA, the basis of so many advances in our understanding occur? Was it a private company? No, it was government-funded. Even the decoding of the human genome was a public enterprise. There are many examples where the social return is much less than the private return. The obvious example is innovation in the financial sector, where the private returns have nothing to do with the social returns. One of the important historical events in Scotland was the enclosure movement. The US benefited because a lot of Scottish people were thrown off their land and they came to America and made important contributions to our country. But in terms of the wellbeing of the people, they weren't very happy, at least at the time. It was probably profitable for some of the landlords who were able to privatise the land but it was not, you might say, a welfare maximising movement.

Knowledge is the same. By reducing the size of the knowledge pool and access to knowledge, you reduce the flow of knowledge and the flow of innovation. When you have a society like the US that spends more on lawyers than on researchers, you obviously have a distorted economy - but even worse than that, you are not creating a learning society, you are impeding the flow of knowledge.

Universities are successful because they have an open architecture, people talk to each other all the time. Yes, people worry that others will steal their ideas, and are interested in getting credit for their work, but it's basically a very open society. The current patent system works to the opposite, and through various abuses encourages a closed society, discouraging the sharing of ideas.

### The Invisible Hand

The most significant single theorem and insight in economics was that of Adam Smith: that the pursuit of self-interest would lead as if by an invisible hand to the wellbeing of society - a very important idea. Unfortunately it's not true.

The reason the invisible hand often seems invisible is that it's not there.

We have to understand that governments do have an important role, and we have to understand the limits when they don't work as well as when they do.

If it is the case that the increases in standards of living are the results of learning, then the focus of policy ought to be how to create a learning society. What can we do to facilitate learning? What do we do that impedes learning?

The phrase "industrial policy" is not just about industry as we normally understand it - you could have it to encourage renewable energy, or education. I use it to mean the government taking an active role to shape the economy.

It used to be that some market fundamentalist views looked upon industrial policy with a great deal of criticism and scepticism. One of my predecessors as chairman of the US Council of Economic Advisers was quoted as saying it didn't matter if a company produced potato chips or computer chips: let the market determine what it produces, don't interfere.

But when you don't have open discussion about the direction in which you are shifting the economy, it becomes pressured by special interests.

If we take the example of the US: we had an industrial policy, but it was a policy of encouraging a reckless financial sector. We can ask why would a country choose to have that, but we didn't choose. We just have a political process which allows the financial sector undue political influence.

We have shifted resources into this sector, which had such a devastating effect on our economy and the world economy. The best, most talented people of our universities - I saw it

every day when I was teaching and it broke my heart - were going into finance rather than business or real research or other activities where they would actually create something.

But the bottom line is that industrial policies can help shape the economy, can help move it towards a learning society.

In Scotland, there is a real concern about shifting the economy to creating a learning society; to develop renewable energy, to make use of tidal energy. These are examples of what may turn out to be very successful industrial policies.

The problem is that innovation in advanced industrial countries has been directed to saving labour, but in many countries the problem today is unemployment, and saving labour creates more unemployment. We need a new model of innovation that focuses more on protecting the environment, less on saving labour. More broadly as I have said many times what matters is not GDP but quality of life, wellbeing and individual capability.

There is an important economic dimension. Government needs to play an important role in an economy in which learning is central, correcting market failures and creating a learning society, and in a society where the only role is to provide collective goals and the role of government is circumscribed.

Let me return to the theme I raised at the beginning. The role of the Scottish Enlightenment in launching the changes in mindsets essential in creating the learning society that, in turn, was essential to increases in standards of living that sets apart the last two centuries from the millennia that preceded it.

I have explained that creating a learning society in increasing standards of living and how markets won't do this on their own. Some governments have recognised this more than others. Some governments have set forth policies to create inclusive societies. Scotland is one of those; the direction it is taking stands in marked contrast to those further south. Free university education for all Scottish citizens, industrial policies to address the pivotal issues of global warming - and this leads me to the final observation: an optimism about the possibility of a new era for Scotland that has been opening what might come to be called the new Scottish Enlightenment.

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