

Quotes from E. F. Schumacher, 1973, *Small Is Beautiful. Economics as if People Mattered*, Penguin Perennial,

From Theodore Roszak's preface:

p.7 [...] since their world view is a cultural by-product of industrialism, they automatically endorse the ecological stupidity of industrial man and his love affair with the terrible simplicities of quantification.

From the book:

p.51

It is of course true that quality is much more difficult to 'handle' than quantity, just as the exercise of judgment is a higher function than the ability to count and calculate. Quantitative differences can be more easily grasped and certainly more easily defined than qualitative differences: their concreteness is beguiling and gives them the appearance of scientific precision, even when this precision has been purchased by the suppression of vital differences of quality. The great majority of economists are still pursuing the absurd ideal of making their 'science' as scientific and precise as physics, as if there were no qualitative difference between mindless atoms and men made in the image of God.

p. 61

The ownership and the consumption of goods is a means to an end, and Buddhist economics is the systematic study of how to attain given ends with the minimum means.

Modern economics, on the other hand, considers consumption to be the sole end and purpose of all economic activity, taking the factors of production -- land, labour, and capital -- as the means. The former, in short, tries to maximise human satisfactions by the optimal pattern of consumption, while the latter tries to maximise consumption by the optimal pattern of productive effort

p. 85-86

Lord Snow, it will be recalled, talked about 'The Two Cultures and the Scientific Revolution' and expressed his concern that 'the intellectual life of the whole of western society is increasingly being split into two polar groups.... At one pole we have the literary intellectuals ... at the other the scientists.' He deplores the 'gulf of mutual incomprehension' between these two groups and wants it bridged. It is quite clear how he thinks this 'bridging- operation is to be done; the aims of his educational policy would be, first, to get as many 'alpha-plus scientists as the country can throw up': second, to train 'a much larger stratum of alpha professionals' to do the supporting research, high-class design and development; third, to train 'thousands upon thousands' of other scientists and engineers; and finally, to train 'politicians, administrators, an entire community, who know enough science to have a sense of what the scientists are talking about'. If this fourth and last group can at least be educated enough to 'have a sense' of what the real people, the scientists and engineers, are talking about, so Lord Snow seems to suggest, the gulf of mutual incomprehension between the 'Two Cultures' may be bridged,

These ideas on education, which are by no means unrepresentative of our times, leave one with the uncomfortable feeling that ordinary people, including politicians, administrators, and so forth, are really not much use; they have failed to make the grade: but, at least, they should be educated enough to have a sense of what is going on, and to know what the scientists mean when they talk -- to quote Lord Snow's example -- about the Second Law of Thermodynamics. It is an uncomfortable feeling, because the scientists never tire of telling us that the fruits of their labours are 'neutral': whether they enrich humanity or destroy it depends on how they are used. And who is to decide how they are used? There is nothing in the training of scientists and engineers to enable them to take such decisions, or else, what becomes of the neutrality of science?

If so much reliance is today being placed in the power of education to enable ordinary people to cope with the problems thrown up by scientific and technological progress, then there must be something more to education than Lord Snow suggests. Science and engineering produce 'know-how'; but 'know-how' is nothing by itself; it is a means without an end, a mere potentiality, an unfinished sentence. 'Know-how' is no more a culture than a piano is music. Can education help us to finish the sentence, to turn the potentiality into a reality to the benefit of man?

To do so, the task of education would be, first and foremost, the transmission of ideas of value, of what to do with our lives. There is no doubt also the need to transmit know-how but this must take second place, for it is obviously somewhat foolhardy to put great powers into the hands of people without making sure that they have a reasonable idea of what to do with them. At present, there can be little doubt that the whole of mankind is in mortal danger, not because we are short of scientific and technological know how, but because we tend to use it destructively, without wisdom. More education can help us only if it produces more wisdom.

p. 98-99

'Shall I teach you the meaning of knowledge?' said Confucius. 'When you know a thing to recognise that you know it, and when you do not, to know that you do not know -- that is knowledge.'

What is at fault is not specialisation, but the lack of depth with which the subjects are usually presented, and the absence of meta-physical awareness. The sciences are being taught without any awareness of the presuppositions of science, of the meaning and significance of scientific laws, and of the place occupied by the natural sciences within the whole cosmos of human thought. The result is that the presuppositions of science are normally mistaken for its findings.[...] All subjects, no matter how specialised, are connected with a centre; [...] the centre consists of-metaphysics and ethics, of ideas that -whether we like it or not -- transcend the world of facts.

p. 158-159

The extent to which modern technology has taken over the work of human hands may be illustrated as follows. We may ask how much of 'total social time' -- that is to say, the time all of us have together, twenty-four hours a day each -- is actually engaged in real production, Rather less than one-half of the total population of this country is, as they say, gainfully occupied, and about one-third of these are actual producers in agriculture, mining, construction, and industry. I do mean actual producers, not people who tell other people what to do, or account for the past, or plan for the future, or distribute what other people have produced. In other words, rather less than one-sixth of the total population is engaged in actual production; on average, each of them supports five others beside himself, of which two are gainfully employed on things other than real production and

three are not gainfully employed. Now, a fully employed person, allowing for holidays, sickness, and other absence, spends about one-fifth of his total time on his job. It follows that the proportion of 'total social time' spent on actual production -- in the narrow sense in which I am using the term -- is, roughly, one-fifth of one-third of one-half, i.e. 33 per cent. The other 96 per cent of 'total social time' is spent in other ways, including sleeping, eating, watching television, doing jobs that are not directly productive, or just killing time more or less humanely.

p. 177

a 'process of mutual poisoning', whereby successful industrial development in the cities destroys the economic structure of the hinterland, and the hinterland takes its revenge by mass migration into the cities, poisoning them and making them utterly unmanageable.

p. 230

After all, for mankind as a whole there are no exports. We did not start development by obtaining foreign exchange from Mars or from the moon.

p. 274

That is to say, the capitalist today wishes to deny that the one final aim of all his activities is profit. He says: 'Oh no, we do a lot for our employees which we do not really have to do, we try to preserve the beauty of the countryside; we engage in research that may not pay off,' etc. etc. All these claims are very familiar; sometimes they are justified, sometimes not.