

# LIVING ON THE TREADMILL

The treadmill of production is a model that directs attention to the linkage of capital-intensive technology investment, profitability, and employment and income generation. It is a treadmill that has been accelerating at least since 1945, and probably for fifty years before that. The logic of the treadmill is that of an ever-growing need for capital investment in order to generate a given volume of social welfare - a trickle-down model of socioeconomic development. From the environment, it requires growing inputs of energy and materials to create a given level of socioeconomic welfare. When resources are constrained, the treadmill searches for alternative sources rather than conserving and restructuring production.

Allan Schnaiberg, 1980

## PURPOSE

Through the study of video programmes and family history pupils learn about economic and social development over the past sixty years. Statistics and case studies are then used to examine the benefits and costs of the accelerating treadmill of economic production and consumption on which this development was based. In the final part of the activity pupils consider a number of indicators which can be used to assess whether or not development is becoming more sustainable.

KEY QUESTIONS	A4-5, A9, B1-4, B6, D1, E2
KEY IDEAS	2

## PREPARATION

This activity makes use of four programmes in the Yorkshire Television series *How We Used to Live*: programmes 1 and 2 from the series covering 1936 to 1953 and programmes 13 and 16 from the series covering 1954 to 1970. The teacher's booklets provide essential background to these programmes and useful suggestions on supporting materials (Yorkshire Television, The Television Centre, Leeds LS3 1JS). In addition to the programmes you need multiple copies of the four Activity Sheets.



Source: Yorkshire Television

## PROCEDURE

- 1 Explain to pupils that, by developing its system of economic production, a society is able to meet more of people's needs and wants. Economic development can work to eliminate poverty by meeting everyone's basic needs. Alternatively, it may sustain or widen inequalities by failing to meet the needs of the poor and allowing the rich to live in comparative luxury.

Also explain to pupils that environmental problems are closely linked to the nature of economic development. Our present economic systems consume and degrade fixed stocks of non-renewable resources. They also use some renewable resources at a faster rate than they can be renewed and undermine natural processes or services on which economic activity depends. Deposits of precious metals may be exhausted, oil wells pumped dry, seas overfished and grasslands converted to deserts by overgrazing. The capacity of the natural systems to clean air and water and to regulate climate may be damaged.

Sustainable economic development would reduce consumption of non-renewable resources to a minimum. It would limit consumption of renewable resources to amounts less than the sustainable yield or "interest" which nature can provide. It would also



maintain natural systems and services. The earth would be 'mined' as little as possible and would be used and cared for in ways which maintain or increase its long-term yield.

## 2 Ask pupils:

How could we find out whether or not development in Britain over the past sixty years has reduced poverty and inequality?

How could we find out whether or not development in Britain over the past sixty years has been sustainable?

Hopefully pupils will suggest looking at the historical and statistical evidence.

## 3 Now ask pupils what evidence they would need to answer the following questions and what they think the answers might be:

How much economic development has taken place in Britain in the last sixty years (since your grandparents were born)?

What social and environmental changes have been associated with this development?

Do firms, government and households now produce and consume more than they did in the past?

Do they use more natural resources and services and put more waste into the environment?

What are some of the benefits and costs associated with increased production and consumption, both in Britain and elsewhere in the world?

Which of these are environmental benefits and costs?

Has economic development in Britain reduced poverty and social problems?

Has economic development in Britain been sustainable?

Can social and environmental problems, associated with development, be controlled and reduced?

## 4 Introduce pupils to programmes 1 and 2 from the series *How We Used to Live*, 1936 - 1953. Ask them to look for evidence in the programmes of goods and services which were produced for the Hodgkins family and others to consume in 1936/7. Make a list yourself as you watch the programme with the pupils.

What did they eat and drink?

What sort of house did they live in and what forms of energy did they use?

What sort of clothes did they wear?

How was their house furnished and what

consumer durables did they have to help with the housework and provide entertainment?

What services did they make use of?

How did they travel to work and to school?

How were they encouraged to consume more?

You can use the books listed on page 31 to provide additional information and pupils should be encouraged to find answers from their oldest relatives and friends. A number of visitors with strong memories of the 1930s might be invited to talk to the class.

## 5 Now repeat stage 2 using programmes 13 and 16 from *How We Used to Live*, 1954 - 1970. Pupils ask their grandparents and parents about the 1960s and suitable visitors are again invited into the classroom.

## 6 Provide pupils, in groups, with large sheets of poster paper and ask them to draw up a table four columns wide by eight rows deep. Get them to list the seven questions (stage 4) in column one and summarize answers for the 1930s and 1960s in columns two and three. Then ask them to suggest answers for the 1990s in column four, concentrating on goods and services we consume which they consider typical of the times.

Discuss the groups' entries in column four and the overall trends which the completed table reveals:

Did the average family (firm, government department) consume more goods and



Source: Yorkshire Television





Source: Yorkshire Television

services (energy and materials) in the 1960s than it did in the 1930s? In the 1990s than it did in the 1960s?

What were the advantages or benefits associated with increased consumption?

What were the disadvantages or costs associated with increased consumption?

What do you think enabled these increases to take place?

What was happening to allow households (as well as firms and governments) to consume more?

Did increased production and consumption reduce poverty?

Was the average family (firm, government department) requiring more natural resources to support it in the 1960s compared with the 1930s? In the 1990s compared with the 1960s? Do you think this form of economic development is sustainable?

In discussing these questions with pupils, examine the idea that increasing levels of population and affluence have put greater demands on natural systems. Shifts in production technology have also been a key factor. The trend away from natural products (rubber, cotton, wood) and labour intensive techniques, in favour of synthetic products and more capital/energy intensive methods, has generally increased pollution. Get the pupils to suggest examples.

While the overall picture was one of economic growth putting increased pressure on natural resources and services, economic development also involved changes which

resulted in resource savings and reductions in waste and pollution. Again, get the pupils to suggest examples.

- 7 Give out copies of Activity Sheet 3.2.1 which summarises some of the key economic, social and environmental changes in Britain between 1945 and 1980. This can be used to help pupils expand the answers they developed in stage 6. Discussion will indicate their levels of economic awareness which should guide your delivery of stages 8 and 9.
- 8 Use Figure 3.2.1 and Activity Sheet 3.2.1 to illustrate the economic development and growth which took place between 1945 and 1980. Explain the workings of the capitalist treadmill of production and consumption and the reasons why firms, governments and workers all gave it their support. (For firms it provided increased profits. For workers it provided full employment and rising material living standards. For governments it provided increased tax revenues and political stability.)
- 9 Now introduce pupils to the three people featured on Activity Sheet 3.2.2.

How did Lord Sainsbury and Elton John become rich?

Do they deserve to have so much money?

Are we encouraged to admire rich people like these?

How much do you have to earn or own before you are "rich"?

Why may Sharon feel insecure and afraid of the future?



Source: Yorkshire Television



**FIGURE 3.2.1**

**ECONOMIC, SOCIAL AND ENVIRONMENTAL CHANGE IN BRITAIN, 1935 - 1984  
NATIONAL INCOME AND ITEMS OF EXPENDITURE AT CONSTANT 1984 PRICES (£ million)**

	1935	1965	1984
Gross Domestic Product at factor cost	82,992	173,531	274,573
Gross domestic fixed capital formation	13,382	40,480	55,319
Central government current expenditure	7,692	31,611	42,892
Local government current expenditure	10,085	7,267	26,762
Consumer expenditure	79,089	134,291	194,673

**SELECTED ITEMS OF CONSUMER EXPENDITURE AT CONSTANT 1984 PRICES (£ million)**

	1935	1965	1984
Food	22,733	33,274	28,448
Drink	5,248	7,776	14,416
Tobacco	4,674	8,414	6,621
Housing	9,289	19,061	29,269
Fuel and light	4,124	8,572	9,574
Clothing	4,239	6,881	13,189
Durables	3,129	7,392	19,241
Total	81,409	138,231	194,673

Gross Domestic Product is the total value of all the goods and services produced in a country in a particular year. GDP at factor cost excludes subsidies and taxes imposed on any goods or services. It is in fact the cost of total output to producers. Gross domestic capital formation is roughly the amount of money invested in producer goods, plant and machinery to enable more production.

Source: *British Social Trends since 1900*, A H Halsey (ed), Macmillan, 1988

What does the writer mean by Sharon's "heroic efforts"?

What explanations can you suggest for Sharon's poverty?

Would Sharon be "better off" if she did not live in a consumer society?

Why do so few people protest about the inequalities between the rich and the poor?

In your view, is it rich or poor people who are "the problem"?

In what ways has development "damaged" the rich and the poor?

Would it be preferable to adopt a form of development which reduced inequalities and provided everyone with a modest amount of wealth?

Discussion of these questions is likely to introduce some of the ideas about poverty outlined in the background notes.

- 10 Conclude the activity by returning to sustainable development. Give out Activity Sheet 3.2.3 and use this to revise and extend the pupils' grasp of the concept. Sustainable development is essentially about living on the "interest" rather than the "capital" which

nature provides and analogies with living on interest from a savings account in the bank can be used to advantage.

## EXTENSION

Conventional measures of economic production and development are of little use in assessing whether or not a country is moving towards sustainable development. Introduce pupils to the measures outlined on Activity Sheet 3.2.4 and ask them to prepare an imaginary budget speech or newspaper article for the year 2040 (link with Activity 10.9). This should summarize the state of the British economy and what has been achieved through economic development in the years since 1990.

## BACKGROUND

### Development and inequality

Despite continued growth in levels of economic activity, Britain remains an unequal society with significant levels of poverty. In what Halsey terms a "class-ridden prosperity", power and advantage remain unequally distributed across class, status and party groups.



Between 1900 and 1980 the UK's national product and the average real incomes of its people increased at least threefold in real terms. A revolution in the living standards of most ordinary people took place which transformed their non-working lives and brought significant new freedoms. Despite this the old poverties persisted: lack of property; low pay; poor health; inadequate education; bad housing. Inequalities in the distribution of wealth and income narrowed, particularly with the rise of the welfare state after 1945, but both remained high around rising averages.

In his analysis of inequality in the present century, Halsey describes how political pressure increased state intervention to modify the outcomes of the market. Income was increasingly redistributed through tax and welfare policies which increased most workers' real and social incomes. The welfare state provided an increased range of goods and services free or at subsidized prices but was not "hugely redistributive". It did not tackle the causes of inequality - generated mainly within the labour market - and inequalities of wealth remained entrenched with significant redistribution prior to 1980 taking place only amongst the richest 5%. Increased post-war affluence was largely the spread of property for use, particularly consumer durables. Property which

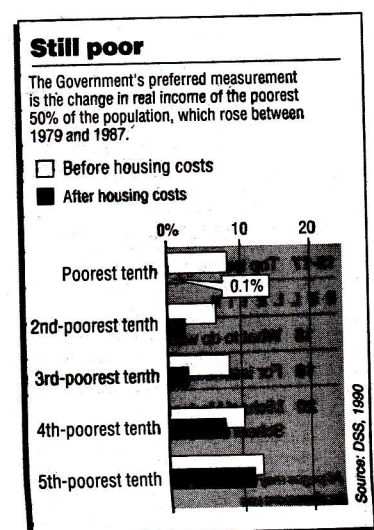
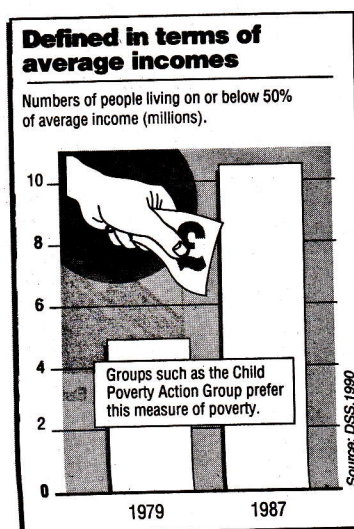
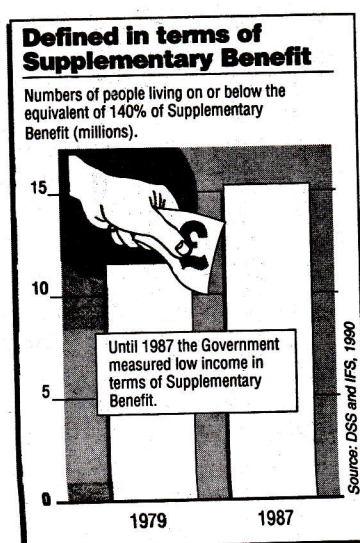
gives control over the lives of other people - property for power - remained the possession of a small minority.

While the distribution of income became more equal between 1945 and 1975 this trend was reversed in the 1980s. The effects of recession and government policies on taxation, social security and minimum wages meant that by 1985 incomes were as unequally divided, both before and after tax, as they had been in 1949. With the state now less prepared to mitigate the effects of market forces in generating inequality, poverty increased significantly amongst those in full-time work and within an "underclass" consisting of unemployed, part-time and low paid workers (see Figure 3.2.2). A report from Bristol University, published in March 1991, claimed that between 1979 and 1989 the income of the poorest fifth of the population had fallen by 4.6%, while that of the richest fifth had risen by almost 40%. In *Britain in 2010* the Policy Studies Institute forecast growing social tensions if the trends which Chris Pond describes continued.

*"... by the end of the 1980s Britain was undoubtedly a more polarized society than that of either the 1940s or 1970s. This social and economic polarization registered as an increase in poverty and a decline in*

FIGURE 3.2.2

## WHO IS POOR?



Source: *The Guardian*, 2 July 1991



the incomes of the poor, alongside an enhancement of the wealth enjoyed by the rich. It was a society marked by increased homelessness, alongside a flourishing property market, by sharply increased problems of debt amidst a credit boom, and by increasing divisions in the living standards of different groups and different part of the country." Chris Pond, 1988, p 76

### The poor and sustainable development

In his powerful critique of consumer society, *The Race for Riches*, Jeremy Seabrook suggests that conventional development is unable to cure poverty. Inequality is an inevitable outcome of capitalism or the operation of the market and it serves a functional role. The poor are necessary to remind us continually of the costs of not co-operating with the treadmill. At the same time, the rich serve to promote envy and provide a model of the "happiness" to which we can all aspire.

While it is poverty and the poor which are generally perceived as problems, Seabrook urges us to view wealth and the rich as the real problems. They require the continuing exploitation of the poor and the continued plundering of nature. Therefore "the rich", who in his view include the majority of people in the countries of the North, should be deplored rather than admired.

As the treadmill of production and consumption accelerates it generates capital by capturing more of people's needs and wants with things that only money can buy (see Activity 3.9). In this way people become more dependent upon the treadmill and poverty is modernised. The old poverty of back-breaking work, the means test, premature ageing and poor health has not entirely disappeared, but what remains has been joined by a new poverty. A large minority cannot buy the satisfactions which the majority now take for granted and its relative poverty is made worse by the breakdown of neighbourhoods and community networks of mutual aid and support. Relative poverty and the erosion of human contact and solidarity induce a sense of inadequacy and alienation which contributes to such social problems as stress, loneliness, violence, crime, alcoholism and drug addiction. The new poverty embraces these problems and the lack of meaningful and satisfying work generally makes a key contribution.

Seabrook believes that growing dependency on the treadmill damages the rich, the poor and

the natural environment. Our common interest now lies in sustainable development or what he calls the "Green project":

It is clear to many people that the model of industrial society, both capitalist and existing socialist, involves the most systematic squandering of human resources as it mounts its predatory assault on the resources of the earth. Indeed they are part of a single, symbiotic process. In order to pave the way for the latter, the human resources - the creativity, ingenuity, hopeful effort and self-reliance - must first be depleted, used up and extinguished. The forms of poverty thus produced will then appear to be remedied by an industrial expansion that, in turn, uses up, depletes and exhausts the natural riches of the world. To prise apart this powerful dynamic is the most urgent task for any politics that is serious about contesting the present immobilism and impotence of most contemporary moral and political discussion. The Green project is the only one that even takes cognizance of these forms of violence to the world. If it fails to illuminate our understanding of processes that simultaneously gut human beings and eviscerate the planet itself, no other politics will.

Jeremy Seabrook, 1988

## READING

The environmental impact of the treadmill of production and consumption is explored in:

*The Environment from Surplus to Scarcity*, A Snaiberg, OUP, 1980

*Britain in Our Century*, A Marwick, Thames & Hudson, 1984

*British Social Trends since 1900*, A H Halsey (ed), Macmillan, 1988

*Life in Britain between the Wars*, L Seaman, Batsford, 1970

*A World Still to Win: The Reconstruction of the Post-War Working Class*, T Blackwell & J Seabrook, Faber & Faber, 1985

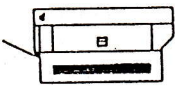
*A Socialist Anatomy of Britain*, D Coates, G Johnston & R Bush (eds), Polity Press, 1985

*The Poor are Poorer*, Statistical Monitoring Unit, Department of Social Policy and Social Planning, University of Bristol, 1991

Chapter 2 "The changing distribution of income, wealth and poverty", by Chris Pond, in *Restructuring Britain: the Changing Social Structure*, C Hammett, L McDowell & P Sarre (eds.), Sage, 1989

"Poverty", *Education Guardian* EG, 2.7.91.

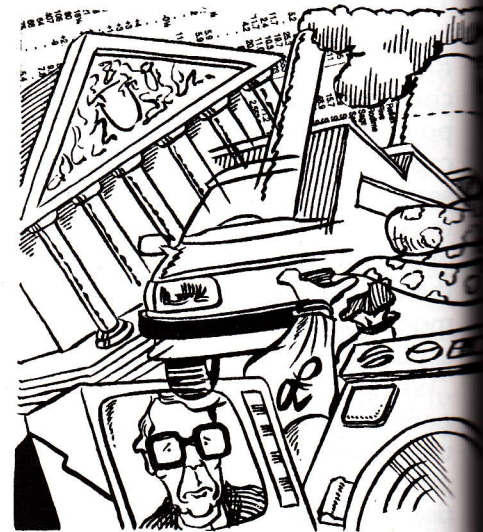




## BETWEEN 1945 AND 1980

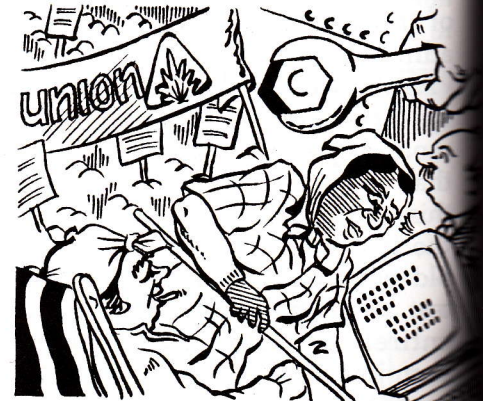
### THE ECONOMY

- \* Gross Domestic Product per capita (at constant 1975 prices) doubled.
- \* Total energy consumption increased by around 40%.
- \* Energy use per capita increased by 25%.
- \* The use of private cars increased by 560% and use of air transport by 950% (measured in passenger kilometres).
- \* Home production of beef increased by 104%.
- \* Production of canned vegetables increased by 207%.
- \* Consumption of sulphuric acid increased by 140%.
- \* Production of plastics increased by around 1,300%.
- \* Consumption of cotton fell by 80% and production of artificial fibres increased by 150%.
- \* Production of soap decreased by 97% and sales of synthetic detergents increased by 680%.
- \* In 1980 79 million LP records, 1.75 million colour tv sets and 1.29 million washing machines were made.



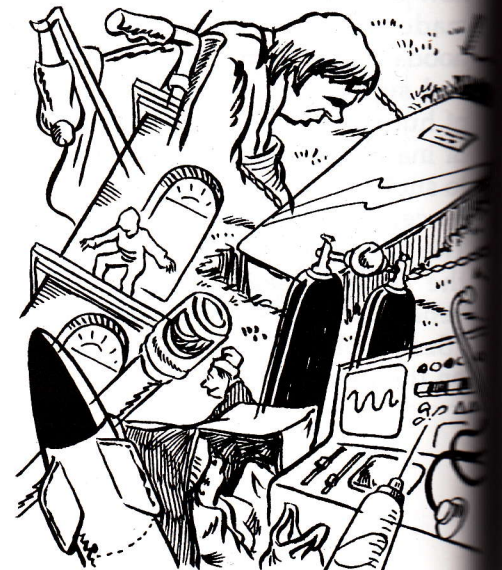
### THE WORKERS

- \* The population of Britain increased by around 10%.
- \* The number of workers employed in the public sector increased by 20%.
- \* The percentage of married women going out to work more than doubled.
- \* Trade union membership increased by around 10% with around half of all workers belonging to a union in 1980.
- \* Real disposable incomes increased by 140% and the purchasing power of the pound fell by 86%.
- \* The total number of holidays taken by workers increased by 78%.
- \* In 1980 19% of households had tumble driers, 59% had central heating and 3% had dishwashers.



### HEALTH AND WELFARE

- \* Public (government) expenditure on health and welfare increased by 240% in real terms.
- \* The life expectancy of men increased by 3 years and that of women by 5 years.
- \* The number of babies dying in their first year of life fell by 70%.
- \* Deaths from tuberculosis fell by 95% and those from diphtheria by 100%.
- \* Deaths from cancer increased by 55% and those from road accidents by 60%.
- \* Public expenditure on defence increased by 80% in real terms.
- \* The percentage of 14 year olds receiving full-time education increased by 163% and the number of university students by 240%.
- \* The number of people supported by local authorities in institutions increased by around 90% to 177, 437.
- \* Suicides increased by 12% and divorces by 339%.
- \* Serious crime increased by 350%.





## ACTIVITY SHEET 3.2.1 CONTINUED

### WEALTH AND POVERTY

- \* The number of people receiving financial assistance from the state more than doubled to 4.9 million.
- \* The number of children in public care increased by around a third to 100,200.
- \* In 1949 the richest 10% of the population received 27% of all income after tax. In 1979 it received 23%.
- \* In 1945 the richest 5% of the population owned around 75% of the marketable wealth. In 1980 it owned 40%.
- \* In 1980 the poorest half of the population owned just 5% of UK personal wealth.
- \* Around a quarter of the people in Britain in 1980 were estimated to have incomes at or below the poverty level (at or below 140% of supplementary benefit level).



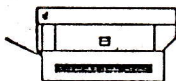
### THE ENVIRONMENT

- \* Economic growth made use of an increasing amount of natural resources and services obtained from Britain and elsewhere in the world.
- \* Much rural land was used for new housing estates, shopping centres, factories, car parks and motorways.
- \* Habitats such as broad-leaved woodlands, chalk downlands, heathlands and wetlands were reduced in area. More plants and animals were threatened with extinction.
- \* New forms of agriculture and industry produced new types of pollution such as fertilizer runoff, animal slurry, chemical and nuclear wastes.
- \* Fish stocks in coastal water began to decline.
- \* The quality of many rivers and beaches deteriorated.
- \* Some industries showed that it was worth their while to cut energy use, recycle materials and reduce pollution.
- \* Governments passed more laws and spent more money trying to protect the environment.
- \* Many new environmental pressure groups were formed and their memberships increased.



Sources include *Social Trends*, *Annual Abstract of Statistics*



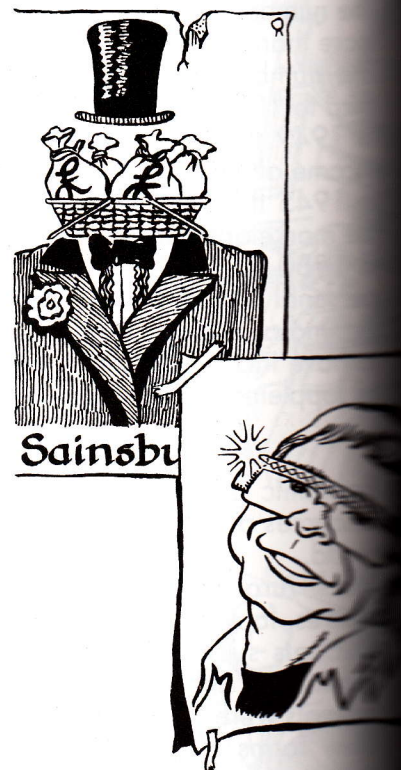


## ACTIVITY SHEET 3.2.2

# RICH AND POOR IN 1980's BRITAIN

### LORD SAINSBURY and FAMILY

In 1989 *The Sunday Times* suggested that the Sainsbury family owned assets worth £1,967 million. In 1869 John Sainsbury opened a shop in Drury Lane, London, selling milk, butter and eggs. One hundred and thirty years later 6.5 million customers used the 286 Sainsbury supermarkets every week, producing sales of over £5 billion a year. In 1989 the Sainsbury family controlled 55% of the company's shares. Lord Sainsbury, great grandson of the founder, was company chairman and his cousin David was finance director. Lord Sainsbury is a patron of the arts and the family funded the £50 million extension to the National Gallery in London. David was a keen supporter and benefactor of the Social Democratic Party. In 1989 Tim Sainsbury, the younger brother, was Conservative MP for Hove.



### ELTON JOHN

Reginald Dwight, from Pinner in West London, began work as a teaboy in Denmark Street, in the heart of London's music business. He became a pub pianist and changed his name to Elton John after two famous musicians he had played with. In the 1970s and 1980s he was a world superstar with hits including the classic "Candle in the Wind". In 1989 he lived in a Windsor mansion complete with six Bentleys, a 100 seat theatre and a chandelier over the swimming pool. He was chairman of Watford Football Club and had seen it move from the fourth to the first division. The *Sunday Times* estimated his assets to be worth £40 million.

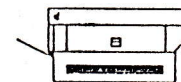
### SHARON

Sharon is on her own with four children, a girl of eight, a boy of seven and the twins who are three. A thin young woman, still only in her early twenties, she sits on the sofa with her knees up to her chin as though cold, even though the gas fire is at full heat. The twins have a care order on them. Sharon resents the policing role of the Social Services, but at the same time she feels insecure as a mother. She is afraid of Christmas because she won't be able to give them what they want; she is afraid of the future because as they grow bigger she may not be able to control them. What doesn't show is the heroic efforts that have gone into surviving, into keeping together families that might so easily have been split up. The battle against chaos is almost, yet not quite, lost each day. Yet at the end of the evening, Sharon sits back; the children are quiet. By eleven o'clock the estate is silent and almost deserted. The habits of a working lifetime are not broken, even here, where unemployment is over a third in places.



Source: "Britain's Rich: the top 200", *The Sunday Times Magazine*, 2 April, 1989 and *The Race for Riches*, Jeremy Seabrook, Green print, 1988, pp.





## ACTIVITY SHEET 3.2.3

# AN INTRODUCTION TO SUSTAINABLE DEVELOPMENT

Nature supplies the services and resources which make human life and economic development possible. We depend on nature to supply and clean our air and water, to grow our food and recycle our waste. Nature provides the energy and materials which our economic system turns into the goods and services we use. Economic development may result in greater demands being made on the services and resources which nature provides.

On planet Earth there are limits to what nature can provide. There is only a certain amount of natural and ecological "capital" in the form of metal ores, fossil fuels, fertile soils, clean water, ecological systems and species of plants and animals. This "capital" produces an annual amount of "interest" in the form of new growth and recycled materials. Economic development can only be sustained in the long term if it respects nature's limits. It should draw on the "interest" which nature provides on ecological "capital" and not on the "capital" itself.

In 1980 the *World Conservation Strategy* urged governments and industrialists to adopt sustainable forms of development. It suggested that sustainable development should:

- **MAINTAIN ECOLOGICAL CAPITAL.** It should maintain such **ecological processes and life support systems** as those which build our soils, recycle our wastes and stabilize our climate. It should also preserve **genetic diversity** or the range of genetic material found in the world's plants and animals. This supplies many of the goods and services on which we depend.
- **DEPEND ON INTEREST RATHER THAN CAPITAL.** Development should use ecological "capital" (species and ecosystems) in a sustainable way.

In 1987 the *World Commission on Environment and Development* again urged world leaders to adopt sustainable forms of development. It suggested that **sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs.** In other words it depends on "interest" and does not leave future generations a reduced amount of ecological "capital".

The Commission linked sustainable development to the elimination of poverty. **The basic needs of humanity - for food, clothing, shelter and jobs - must be met. This involves, first of all, paying attention to the largely unmet needs of the world's poor, which should be given overriding priority.**

It also suggested that nature's limits are not absolute. New technologies could increase the amount of "interest" which nature supplies and new ways of organizing society could enable us to make better use of this "interest". **The limits to development are not absolute but are imposed by present states of technology and social organisation and by their impacts upon environmental resources and upon the biosphere's ability to absorb the effect of human activities. But technology and social organisation can be both managed and improved to make way for a new era of economic growth.**

In 1991 a new *World Conservation Strategy, Caring for the Earth*, was published. Try to find out what it had to say about sustainable development.