

WHAT'S
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IN THE
1980'S

A Dictionary of Contemporary History,
Literature, Arts, Technology, Medicine,
Music, Cinema, Theatre, Controversies,
Fads, Movements and Events

Edited by Christopher Pick

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Introduction

What's What in the 1980s is intended to fill the gap created by the lack of general reference works on matters of current interest. For while the larger authoritative encyclopaedias may give information in sufficient depth and detail, they are usually ten to twenty years out of date. With the rapid pace of scientific research and technological innovation in the last few decades, there has been a proliferation of information, while at the same time there has also been a significant growth of the mass media. As a result, in all spheres—the arts, current affairs, finance, medicine, science, technology—new information and ideas come at us so fast that it is almost impossible to keep up with developments even in subjects that interest us, whether in the course of our work or our leisure activities. In newspapers and on radio and television new terms are constantly being referred to but are rarely adequately explained: for example, first strike nuclear weapon, minimal cinema, biomass, deconstruction, computer-aided design, amniocentesis, solar energy, quasar.

The purpose of *What's What in the 1980s* is to explain these and to serve as a guide to those bewildered by the complexity of life and ideas in the 1980s. A wide variety of terms in current use are defined; trends and possible developments as well as issues behind current controversies are described. Recent events in a particular country or area and the problems facing them are discussed. There are many articles on the latest scientific and medical research and its likely impact on our lives as well as new developments in technology and how they may change our society. For social questions such as health, education, the environment, industrial relations, crime and race relations, the policy options are outlined. Explanations are given of current economic theories and their applications. Finally, the main modern movements in art, music, literature and cinema are described together with the ideas and theories which have influenced them. The intention has been that each article should be a unit in itself, many of them being 'umbrella' articles covering a number of events, personalities and ideas, which give the reader as much information as possible at this level. For ease of consultation, a number of cross-references have been included to lead readers from something they may look up—a 'buzz' word or other topical term—to the article in which the subject is discussed fully.

Subjects have been selected for their international significance, although, when dealing with the applications of concepts such as monetarism or with social issues such as education or industrial relations, emphasis has been placed on the British experience. A substantial proportion of the book has been devoted to 'geopolitics': background articles on specific countries or areas. The foreign and domestic policies of the superpowers have generally been dealt with individually. The same thematic approach has been adopted with large areas linked by common interests, for example, Latin America or West Africa. The main criteria for including an article on a particular country have been: is that country likely to see significant domestic changes in the decade (for example the effect of change from dictatorship to democracy, rapid industrialization, etc.), or is it likely to be crucial in international relations? Particular attention has been paid to the problems of Third World countries.

It will be evident from the very title that this book sets out to deal with things and events rather than with personalities. Therefore the reader will find that biographies have only been included when the person's life and work embody a particular trend, movement or idea. The articles have been written by contributors who have special

knowledge of a particular field, whether as academics or as journalists; they have also advised on what articles should be included in their particular subject areas. They were commissioned to write articles which would provide analysis as well as explanation of the facts. They have therefore been allowed maximum freedom to express opinions—not necessarily shared by the editor or publisher—with the intention not only of informing the readers but also stimulating them into thinking more deeply about the problems of this decade. It is hoped, then, that *What's What in the 1980s* can provide rapid answers to queries, as well as be a fascinating book for browsing. If it can both inform and intrigue, and if frequent recourse will leave the reader less confused about the world of the 1980s, then the editor feels that it will have done its job.

Christopher Pick

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A

ABM Systems. See NUCLEAR DETERRENCE; THE STRATEGIC BALANCE.

Abortion. See AMNIOCENTESIS; MEDICAL ETHICS; THE NEW RIGHT; PARENTING; WOMEN'S LIBERATION MOVEMENT.

Abstract Expressionism. Although now only one current in the complex and divided stream of modern painting, abstract expressionism remains a dominant influence, a popular style and a widely admired art form some thirty years after its first appearance in the work of painters of the so-called New York School such as Jackson Pollock (1912–56) and Mark Tobey (1890–1976). Its continuing prestige owes a great deal to the writings of two American critics, Harold Rosenberg and Clement Greenberg, who in their books and articles provided for it a convincing and easily understandable rationale.

As the name implies, its approach to painting is both abstract and expressionist. Thus it is neither representational nor based on a visual recording of what the eye sees; rather it is concerned with a direct, spontaneous attempt to express, in form and colour, feeling rather than thought, emotional impact rather than objective recording. The historical interpretation of these two terms must, however, be modified slightly, in that the abstraction is non-linear, soft in outline and non-geometric, while the expressionism is pushed to the very limits of spontaneity. It is indeed the latter characteristic that gives abstract expressionism its special quality and explains why Rosenberg suggested for it the alternative name of 'action painting'. The accidental and the uncontrolled in the manipulation of paint on canvas are given a significance that they have never before possessed in the history of western art. Abstract expressionists place great

reliance on the notion that the free motion of the artist's hand as he allows the brush virtually to follow its own path across the canvas indicates a greater contact with the inner resources of the emotions than more deliberate and controlled exercises in rational manipulation. This quest for the accidental used to take exaggerated, even bizarre forms: the haphazard pouring of paint on a canvas laid on the floor or even dragging a paint-smearing human body across the canvas. But among the more successful practitioners of the style, these accidental elements never constituted the finished picture, and there has been an increasing tendency to coax chance into more ordered channels of expression.

The movement has included—and still does—artists of many varying styles, whose individual interpretations of the fundamental ideology of abstract expressionism take different forms, though all share an aggressive belief in the virtues of untrammelled freedom of expression. Among the better known are John Hoyland, Terry Frost, Bert Irving and Adrian Heath in Britain; Philip Guston, Larry Rivers, Sam Francis and Clyfford Still in the USA. B.D.

Acoustic Microscope. See ULTRASONICS.

Action Painting. See ABSTRACT EXPRESSIONISM.

Active Galaxies. See QUASARS.

Advanced Gas-cooled Reactors (AGRs). See NUCLEAR REACTORS.

Advanced Passenger Train (APT). See TRANSPORT POLICY.

Advertising. See PHOTOREALISM; SATELLITE TELEVISION.

Advisory, Conciliation and Arbitration Service (ACAS). See COLLECTIVE BARGAINING; TRADE UNIONS AND GOVERNMENT.

AES

AES. See THE ALTERNATIVE ECONOMIC STRATEGY.

Affirmative Action. See RACE AND EMPLOYMENT.

Afghanistan. Soviet intervention in Afghanistan precipitated one of the most serious recent international crises. Although the USSR had been the major source of economic and military aid to Afghanistan since the 1950s, there is little evidence to suggest that it was involved in the coup of April 1978, known as the Saur Revolution, which overthrew the Republican government of Muhammad Daud and brought to power the leftist People's Democratic Party (PDP), then led by Nur Mohammad Taraki. Nevertheless, twenty months later, in December 1979, Soviet forces entered the country in strength.

The immediate background to intervention appears to have been the deep unpopularity of the new government, led by Hafizullah Amin, notably its land reforms. These led to a growing number of attacks by guerrilla groups which the government was unable to counter effectively, both because of feuding within its own ranks and because of the poor state of its ill-disciplined and ill-trained conscript army.

Intervention seems therefore in the first place to have been motivated by the Soviet Union's concern to maintain stability along its southern borders, about which it has always been highly sensitive. This concern was almost certainly reinforced by two other considerations: the dangerous influence that Islamic fundamentalism (see ISLAMIC REVIVALISM), strong among both the opposition to the PDP government and in neighbouring Iran (see IRANIAN REVOLUTION), might have on the large Muslim population of Soviet Central Asia, and a determination not to allow a leftist government to be overthrown by what were regarded as

reactionary and counter-revolutionary forces.

International reaction was extremely hostile and widespread. It was the first occasion since 1946 that Soviet ground troops had been used in any numbers outside the Communist bloc and the first time that the USSR had invaded a Third World and non-aligned country. Intervention therefore raised serious questions about whether Soviet policy was becoming expansionist. In the UN General Assembly 104 countries, including many Muslim and non-aligned states, voted in January 1980 to call for the withdrawal of foreign troops. In the West, however, concern concentrated primarily on the implications of intervention for *détente* and on the possibility that the Soviet Union might use its position in Afghanistan to exert pressure on the oil states of THE GULF. The USA was sufficiently alarmed for President Carter to warn that 'any attempt by any outside power to gain control of the Persian Gulf region will be regarded as an assault on the vital interests of the United States of America and such an assault will be repelled by any means necessary, including military force.'

Yet, despite UN condemnations, some rather half-hearted Western sanctions, including a partial boycott of the 1980 Olympic games in Moscow, and an American military build-up in the Gulf region, it was soon evident that there was little the world could do. While Afghan insurgents could effectively deny Soviet forces control of the countryside and disrupt communications, they had little chance of defeating a regular army, even one without previous experience of guerrilla warfare. The insurgents were hampered both by rivalry between the various groups and by the reluctance of outside countries to provide sophisticated arms. Despite the diplomatic and other costs to the USSR, and the continued failure of President Babrak Karmal to

establish his political or military authority, the prospect would appear to be a long stalemate in which the Soviet army, while unlikely to achieve a total victory, also refuses to withdraw under the guise of some face-saving diplomatic formula. See also US FOREIGN POLICY; SOVIET MILITARY INSTRUMENT. P.M.

African Nationalist Congress (ANC). See ANGOLA; MOZAMBIQUE; SOUTH AFRICA.

African, Caribbean and Pacific (ACP) States. See EEC AND THE THIRD WORLD; NIGERIA; WEST AFRICA AND BIG POWER INTERESTS.

Afro-American Music. See REPETITIVE MUSIC.

Age of Enlightenment. See EASTERN-BASED RELIGIOUS MOVEMENTS.

Agribusiness. See THE BRANDT COMMISSION REPORT; FAMINE AND 'FOOD AID'; RURAL DEVELOPMENT: AFTER THE 'GREEN REVOLUTION'.

Agriculture. See AGRICULTURE AND WILDLIFE; BIOMASS FUELS; BIOTECHNOLOGY; CARIBBEAN ECONOMIC PROBLEMS; CARIBBEAN TOURISM; COMMON AGRICULTURAL POLICY; CONSERVING WILDLIFE HABITATS; EASTERN EUROPEAN ECONOMIC REFORM; EEC ENLARGEMENT; EEC REGIONAL AND SOCIAL POLICY; FAMINE AND 'FOOD AID'; FARM MECHANIZATION; FARMLAND PRICES AND LAND USE; FOOD SURPLUSES AND FARM WASTE; GENETIC ENGINEERING; GREENHOUSE EFFECT; NITROGEN FIXATION; PASTORAL NOMADISM; PLANNED BREEDING; PLANT POWER; RURAL DEVELOPMENT: AFTER THE 'GREEN REVOLUTION'; SOVIET AGRICULTURE; TANZANIA; WORLD CLIMATE PROGRAMME.

Agriculture and Wildlife. How can wildlife survive in today's intensively farmed

landscape? This is a crucial question now facing both conservationist and farmer.

Until the beginning of the Second World War, most farms in Britain supported an abundance of wildlife. Arable fields, meadows and waysides were full of wild flowers, birds and insects. But since then, and especially since about 1960, agriculture has changed dramatically. Improved farming methods have resulted in the eradication of most wildlife from cultivated land, and at the same time more efficient drainage, pasture improvement and the removal of hedges and ponds have all contributed to a landscape increasingly improved in agricultural terms but at the expense of wildlife. No longer do farmers, as custodians of the countryside, aim to preserve wildlife, whose interests run counter to economic pressures. Modern farming and nature conservation are virtually incompatible. Even the special wildlife areas notified by the Nature Conservancy Council (the so-called Sites of Special Scientific Interest) are being irrevocably damaged.

A radical new approach is required to ensure the survival, not only of those areas, but of wildlife in general. Recently, Farming and Wildlife Advisory groups have provided a much-needed link between farmers and specialists in wildlife conservation. But their work will be in vain unless economic incentives are introduced to favour wildlife rather than increased agricultural production. At present, less than £500,000 per annum is spent by the government on the protection of important wildlife areas, compared with £170 million per annum paid in agricultural improvement grants. Sometimes, in addition, government departments are in direct opposition to wildlife conservation, as in the case of the Somerset Levels, where grants have been given for agricultural improvement of areas which are nationally important wildlife habitats. Conservationists have

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long argued that agricultural grants should not be available within such areas, especially since many of the agricultural operations inimical to wildlife would not be carried out without government aid. Landowners, however, argue that if grants are to be withheld they should be compensated. If this were done everywhere the bill would be enormous, and such a policy could therefore only apply to the nationally important wildlife and amenity areas. A significant step was made in 1981 when provision for this kind of compensation was included in the Wildlife and Countryside Bill. Now the Nature Conservancy Council has a duty to compensate owners in cases where agricultural grants have been withheld on Sites of Special Scientific Interest. Additional funds for compensation may be found from the EEC's COMMON AGRICULTURAL POLICY, though experience suggests that this would take many years.

An alternative to incentives is the introduction of planning control over agricultural activities, as advocated by Marion Shoard in her book *The Theft of the Countryside* (1980), which has contributed enormously to debate on this issue.

One thing is certain—in the absence of adequate incentives or legal constraints wildlife will continue to be depleted throughout the British countryside. See also CONSERVING WILDLIFE HABITATS; FARM MECHANIZATION; FARMLAND PRICES AND LAND USE. D.G.

Agricultural Technology. See PLANNED BREEDING; RURAL DEVELOPMENT: AFTER THE 'GREEN REVOLUTION'.

Agrochemicals. See FARMLAND PRICES AND LAND USE.

AI. See ARTIFICIAL INTELLIGENCE.

Aid to the Third World. Given the needs of a growing population and an industrializing economy, and the difficulty of

securing adequate and reliable foreign exchange receipts from the export of primary commodities, many poor countries have experienced a widening gap between import needs and actual export returns. Funds are thus necessary to make good these shortfalls and, since private capital has been unwilling to invest except where a profit could be guaranteed, the rich countries have made finance available to the poor countries on a government-to-government basis, either directly (bilateral 'aid') or indirectly (multilateral 'aid' channelled through the IMF, the World Bank or the various regional development banks). Annual transfers of these kinds have increased from US \$3300 million in 1956 to \$6700 million in 1967 to \$20,700 million in 1980.

Originally, Official Development Assistance (ODA) was given to finance the foreign exchange costs of specific projects. This emphasis on so-called 'project aid' tended to encourage isolated (and often grandiose) schemes which were rarely integrated into a national development plan. Such schemes reinforced the internal division of poor countries' economies between a capital-intensive extractive enclave (of mines and plantations) and the surrounding yet quite unconnected small-scale economy of farming, trading and craft production, and did little to improve general infrastructure and facilities. Finance for this kind of investment—'programme lending'—has been slow to come forth, though its urgency was underlined by both the Pearson Commission in 1969 and in the BRANDT COMMISSION REPORT.

In the early post-war years, almost all ODA was given as grants-in-aid; moreover, donors placed no restrictions on where recipients might spend their foreign exchange. ODA has now lost these characteristics: grants-in-aid have dropped from 87 per cent of ODA in 1961 to 44 per cent in 1980, the bulk of official

'aid' now consisting of concessionary loans (official loans on commercial terms do not count as ODA). Since 1960 official 'aid' has more and more frequently been given on condition that the recipient spends the foreign exchange on goods manufactured in the donor country. This practice of 'tying' aid reduces its value by between 20 per cent and 40 per cent, since the recipient cannot buy in the cheapest (or best) market and, moreover, must repay the restricted funds with unrestricted hard currency. Many Third World countries would do better to accept unrestricted loans on commercial terms than to participate in what is really a means of extending export credits to the industries of the rich nations. If ODA may be regarded as 'aid' in any genuine sense, it is on account of the benefits which it directs to the rich countries (subsidising exports, employment and so on).

These drawbacks are compounded by the way in which ODA is distributed and the purposes to which it is applied. For reasons that are not entirely clear, the smallest countries tend to obtain disproportionately large amounts (in per caput terms) of ODA. Furthermore, a large proportion of ODA is assigned to political allies of the donor and is earmarked for projects within the receiving country judged to reinforce the position of its government (and which may or may not address the country's problems). Even worse, some countries count military assistance as part of official 'aid'; in the case of the USA, such 'assistance' has been admitted to form the bulk of all ODA to all countries in the 1950s and 1960s.

Despite the unmistakable benefits to donors, the industrialized nations have given an ever smaller proportion of their GNP as 'aid'. In 1960 the OECD countries gave an average 0.89 per cent; in 1968 0.77 per cent; and in 1978 0.35 per cent. Other countries have, however,

joined the ranks of donors, often giving more generously than the original donors. OPEC members have given an average of 1.59 per cent of their GNP during the 1970s, their total disbursements amounting to 20 per cent of all ODA during the decade.

Within the total flow of finance to Third World countries, the relative proportion of official 'aid' has been declining. In 1960 60 per cent of the total flow was concessionary or consisted of grants; by 1977 over two-thirds was commercial (private bank loans, direct foreign investment and export credits). The commercial flows are markedly concentrated in middle-income countries (those with a per caput GNP of over \$360 a year). Thus 70 per cent of direct foreign private investment is in just 15 such countries. Correspondingly, 77 per cent of the accumulated debt of middle-income countries was owed to private sources in 1980, but just 2 per cent in low-income countries. This is likely to continue, since private finance is not attracted to basic, long-term investment in infrastructure and services.

The accumulated debt of Third World countries has risen from \$10,000 million in 1950 to \$287,500 million in 1980, and annual debt-service payments have risen accordingly from \$800 million to \$46,900 million. By the 1960s the major part of new loans was going to finance debt-service, as more and more countries were forced to incur new debts in order to pay the interest on the old ones. In the case of a number of middle-income countries, debt-service obligations exceed potential export earnings; re-schedulings of the debt follow one another and will eventually amount to an effective cancellation. A large part of the debt burden which Third World countries carry derives from their willingness to accept so-called 'recycled' OPEC funds which are loaned out to them by Western commercial banks and which the poor countries use to finance yet more imports from the rich

Air Travel

countries. According to the Brandt Commission, between 1973 and 1977 900,000 jobs in the OECD countries were created through the poor countries' willingness to take on this debt. Given that the rich nations combine this recycling with a highly protectionist stance towards their domestic markets, it is difficult not to accuse them of taking double advantage of the poor. However, the Western international banks have so over-extended themselves in their eagerness to on-lend petrodollars wherever possible that several large middle-income countries are in a position to use the threat of their own bankruptcy to extract yet more funds. The reasons for this leverage are entirely political, as the case of POLAND most clearly demonstrates.

Such are the bare statistics which reflect a financial view of development. There is a human view, the trends of which are not so elegantly documented as the flow of funds or the increases in output. According to this, 35 years of development have resulted in growing inequality between nations and, within nations, among regions and classes. A very large section of humanity has experienced progressive underdevelopment as capital-intensive industrialization, whether in manufacturing, processing or agriculture, has expropriated increasing numbers of people of their livelihood. Probably a thousand million people are utterly destitute, the majority of them either starving or constantly threatened with starvation.

The numbers of destitute and the sum total of misery will continue to increase, since too many people have a vested interest in these trends for it to be otherwise. This is where the legacy of colonialism has been most devastating, in the establishment of élites whose interests are largely congruent with those of the rich nations' élites. Given that the present economic order is international, questions of national interest are in many ways

secondary to questions of class interest in both rich and poor nations. There is therefore a tendency for international capitalism to undermine national solidarity, a tendency only reinforced by the effect of rivalry between the USSR and the USA, under which internal conflict in Third World countries becomes internationalized. Outside interference in these states' affairs is thus legitimated. Under these circumstances it is difficult for genuine nationalist leaders to arise, and even more difficult for nationalist movements to remain free of the 'support' and interference of either superpower. However, neither achievement is impossible and for that reason the course of development since the Second World War, wretched as it has generally been, does afford some grounds for hoping that things need not continue as they are. See also EEC AND THE THIRD WORLD; A NEW INTERNATIONAL ECONOMIC ORDER?; THIRD WORLD TRADE AND INDUSTRIALIZATION. M.R.S.

Air Travel. See TRANSPORT POLICY.

Akerman, Chantal. See MINIMAL CINEMA.

Albania, Europe's most isolated country since 1945, has increased trade and diplomatic links with a number of (mainly smaller) Western countries in the wake of its quarrel with China, its erstwhile big protector, in 1977. But at the beginning of the 1980s its relations remained strained with both the USSR and its allies on the one hand and China on the other. Its stance towards the 'imperialist' USA, Britain and West Germany remained totally hostile.

Albania's relations with its neighbour to the north, Yugoslavia, deteriorated sharply in 1981 (see YUGOSLAVIA AFTER TITO). When Albania expressed moral support for its fellow-Albanians in the Yugoslav province of Kosovo across the border, who were demanding that their

province be upgraded to the status of a federal republic, Yugoslavia broke off cultural and educational (but not diplomatic) relations. The Albanian press described the Yugoslav security organs' behaviour against Albanian demonstrators in Kosovo as a 'massacre' and claimed that the reason for the rioting was the discrimination practised against Albanians in Yugoslavia (see EASTERN EUROPEAN NATIONALISM).

As long as the present leader, Enver Hoxha (b. 1908), is alive and in charge, Albania is unlikely to swerve from its path of total Stalinist orthodoxy and sturdy independence. But after his death economic necessity may force Albania to seek foreign credits (now forbidden under the Albanian constitution) to help it to develop its considerable mineral wealth. It is unlikely that the totally isolationist policy Hoxha has practised since 1977 will survive him. Albania will either move a little closer to the West or, more likely, to the USSR. For the USSR, a *rapprochement* with Albania would represent a large strategic gain, especially if it were allowed to repossess its old submarine base in Vlorë (Valona) which it was forced to evacuate after its quarrel with Albania in 1961. See also MARXISM AND THE WORLD COMMUNIST MOVEMENT. C.F.C.

Aleatoric Notations. See INDETERMINACY.

Algorithms. An algorithm is an explicit, step-by-step procedure that is guaranteed to lead to a required result. When children are taught multiplication or long division, they learn an algorithm. An algorithm for playing noughts and crosses, guaranteeing at least a draw, is easily written. An example of a rule from such an algorithm could be: 'if you are the first to play, occupy a corner square; if you are the second to play, occupy the centre if possible, or a corner square if not.'

On the other hand, there are no known

algorithms for winning at chess, simply because it is a much more complicated game. There are rules of thumb such as 'try to control the centre squares', but they have to be overridden in certain circumstances and it is hard to specify exactly which circumstances.

An important advance in the theory of algorithms in the late 1970s promises to find applications in science, industry and warfare.

One of the most important algorithms known to mathematicians is the simplex algorithm, devised by George B. Dantzig of Stanford University in 1947. It is a general procedure for solving a class of problems of great practical importance in industry. A typical such problem might be how to decide the best allocation of plant and personnel to different types of product in order to maximize profit and minimize costs. The algorithm represents the variables of the problem, for example, cost, times and quantities, and then evaluates possible solutions in turn, until it finds the optimum one.

In general, the simplex algorithm does not have to evaluate all the possible solutions before it arrives at the optimum solution. But in some cases it must evaluate all solutions, and these are so numerous that to find the optimum solution takes an excessive amount of time. Nevertheless, in most practical situations the simplex algorithm is very valuable, and many applications have been developed.

In October 1978 a Soviet mathematician, L. G. Khachian, published a new algorithm for the same class of problems to which the simplex algorithm is applied. The new procedure can be guaranteed to find the optimum solution in a 'reasonable' time ('reasonable', that is, in relation to the number of variables involved). From the theoretician's viewpoint, it is more satisfying in this respect than the simplex algorithm, and its implications for the theory of algorithms are profound.

Allergies

But this is not to say that it will be more effective in the majority of practical uses, where the older procedure is well tried. The question of the practical value of Khachian's algorithm will attract a great deal of mathematical effort in the 1980s.

C.R.C.

Allergies. Allergy is the term used to describe an individual's 'supersensitivity' to some substance in the air, in food or on an inert surface. Typical allergy-producing substances are pollen, animal fur and milk. Most commonly, an allergy shows itself in the form of a runny nose, a skin rash or wheezing; at its worst, the patient may go into a coma. These visible symptoms are caused by chemicals released from the so-called 'mast cells' throughout the body. When the sufferer comes into contact with the substance the chemicals start off a chain of events that causes disruption in the lungs, skin or stomach and culminates in the appearance of the symptoms.

In 1969, when Intal (see DRUG RESEARCH) was introduced, research into drug treatment of allergies moved from attempts simply to relieve the symptoms to attempts to correct the cellular changes that are at the root of the problem. The latest experiments suggest a link between the basic mechanisms that go wrong and those at fault in inflammatory conditions such as arthritis. Drugs that control the underlying abnormality in patients with inflammatory diseases may therefore also be of value in treating and preventing allergies.

One of the substances released by the mast cells when they come into contact with something to which they are allergic is called slow releasing substance of anaphylaxis (SRS-A). The structure of this chemical has now been identified as the main element in a whole family of similar chemicals with similar functions, named leukotrienes. The leukotrienes themselves come from the same chemical

as another group of substances, the prostaglandins, which play an important role in inflammatory responses to injury. Arthritic sufferers experience an over-reaction of their defence mechanisms which aggravates the initial inflammation, just as happens in allergic people when the leukotrienes over-react to a substance such as pollen to give an over-active allergic response.

Drug companies are now developing drugs that will block the activity of the leukotrienes and are investigating whether some of the drugs used to relieve arthritis will work for allergic patients. Even aspirin, the best known of these, is being tested for its ability to stop wheezes, sneezes and skin rashes.

J.B.

The Alternative Economic Strategy (AES) is not yet a single well-defined policy programme but a set of proposals for discussion to be augmented by further contributions. It is intended to provide a basis for the production of a coherent alternative to the economic policies of the UK Conservative Government and the last Labour Government, behind which many sections of the Labour movement can unite. The proposals have emerged from the meetings and conferences of a large number of groups and from the writings of a number of individuals on the left of the political spectrum in Britain. Among those contributing are Labour and Communist Party groups, trade unions and the Trades Union Congress. Some major individual contributions have come from LABOUR PARTY MPs, most notably Tony Benn.

The emphasis given to individual proposals varies a good deal, but several broad features now appear to be common to the thinking of a number of groups. The need for a policy of expansion aimed at restoring full employment is widely supported. Most thinking is along orthodox Keynesian lines: expansion should be stimulated by increased government

spending, particularly on major capital investment projects in the public sector, for example the electrification of the railways. Some degree of control of imports is another central plank of the emerging alternative economic policy. Import controls are desired partly to prevent the expansionary policy being undermined by balance-of-payments (the difference between value of goods and services we buy and sell overseas) difficulties resulting from a rising demand for imports as the economy expands and partly to halt the DE-INDUSTRIALIZATION of the United Kingdom economy.

Import controls carry the implication of withdrawal from the EEC (see BRITAIN AND THE EEC). Trade with the EEC amounts to more than 40 per cent of all UK trade, and, although imports from the EEC are substantially greater than exports to the EEC, any reduction in trade would cause significant disruption, particularly to export industries. The hope of the proponents of the AES is that other nations would acknowledge the UK's need to rebuild its economy and accept import controls without retaliation, reasoning that, in the long run, when the economy is restored to health and the controls are withdrawn, a larger market for their goods will be available. Withdrawal from the EEC, it is argued, would also save the considerable financial contributions made to the COMMON AGRICULTURAL POLICY and allow foodstuffs to be bought at lower prices in world markets.

Other proposals in the AES debate include moves towards more formal planning, particularly of the industrial sector of the economy, linked with a limited extension of public ownership and an increase in resources for health and welfare services, with greater say in the running of these services being given to the recipients of the services. Some mechanism of price control to help to restrain inflation is widely canvassed, and less

enthusiastically there is mention of a trade-union-operated incomes policy (see TRADE UNIONS), which would include an attempt to redistribute income in favour of the lower paid.

The proposals do have stern critics. The right wing of the Labour Party (which is opposed to any further extension of public ownership and to import controls) believes them to be too radical to gain the support of the electorate, while many left-wing groups within the Labour Party argue that the proposals do not go far enough (in particular there is little mention of worker control or co-operatives) (see INDUSTRIAL DEMOCRACY) and simply patch up capitalism, while leaving capital with effective power to obstruct any further progress toward a socialist society. See also INFLATION; INDUSTRY POLICY; MONETARISM; PUBLIC EXPENDITURE PLANNING AND CONTROL; RECESSION AND THE PRICE OF OIL; SMALL BUSINESS AND JOB CREATION; TAXATION POLICY; UNEMPLOYMENT. A.W.

Alternative Energies. One result of the NUCLEAR DEBATE has been the attention given to the so-called 'alternative energy sources'. An important part of the anti-nuclear argument is that, given adequate investment in energy conservation, there are enough renewable energy sources to maintain perfectly adequate living standards.

Apart from nuclear and geothermal power, all energy sources derive ultimately from the sun. The fossil fuels are the combined product of solar radiation, photosynthesis and the passage of time, while wind, wave and hydroelectric power are the gifts of the world's sun-driven weather machine. Biomass, the cellulose in plants, is also sun-derived; each year 17 times more energy is stored in plants by photosynthesis than the world now consumes (see BIOMASS FUELS; PLANT POWER). The sun is also partially responsible for tidal power.

Althusser, Louis

Britain lacks the most readily available forms of geothermal energy (see **GEO-THERMAL POWER**), although it does have some potential, now being investigated, for exploiting hot, dry rocks. A more promising 'alternative' is wave power. Britain leads the world in wave-power research (with Japan close behind), having a long, largely oceanic coast-line, on which the largest waves roll in winter, when energy is most in demand.

Direct solar power comes in two forms, thermal and photoelectric. The heat of sunlight can be trapped in solar panels and used as extra input to space-heating systems, thus reducing (though not normally eliminating) the need for fossil fuels. Unlike wave power, terrestrial solar power fits less well with seasonal energy demand. Photoelectric solar power depends on a characteristic of certain materials such as silicon, cadmium sulphide and gallium arsenide which makes them become electrically active when exposed to light. Spacecraft have been partially powered in this way, and space is the location for the most ambitious dreams for photoelectric energy. It has been suggested that huge arrays of photoelectric material, many square miles in extent, could be put into geosynchronous orbit (i.e. an orbit which is synchronized with the Earth so that the orbiting object is fixed relative to the surface of the Earth) round the Earth and could then beam the electricity they capture to a ground station via micro-waves. The so-called 'Orbiting Solar Power Station' is being taken quite seriously by a number of Western governments, including Britain's. It is doubtful, however, whether the idea can be realized this side of the millenium.

The potential of wind power is constrained by the availability of suitable sites. It is a long-established source of energy, particularly in flat countries like the Netherlands, and a good deal of work is being done to modernize its technology.

More efficient generators are being developed and novel aerofoil designs are being experimented with. Wind power is being increasingly seen as a very promising source of electricity for small, isolated communities which at present depend on diesel generators.

Tidal power potential is restricted even more by site availability, but a study by Britain's Central Electricity Generating Board (CEGB) in the mid-1970s concluded that a tidal barrage across the Bristol Channel could conceivably supply about 12 per cent of Britain's current electricity demand. Similar ideas have also been worked on by the French at La Rance on the Brittany coast, by the Americans at Passamaquoddy Bay, by the Canadians at the Bay of Fundy and by the Russians at Kislaya Guba, near Murmansk.

The report of the International Workshop on Alternative Energy Strategies, published in 1977, concluded that alternative energy sources are unlikely to be able, for the foreseeable future, to contribute more than a few percentage points to meeting world energy demand. This estimate is, of course, based on the assumption that historic rates of growth in energy demand will be more or less maintained. If moves were made towards a low-energy world economy (see **ENERGY FUTURES**), alternative energy sources might be expected to account for a much larger proportion of total energy demand. T.L.

Althusser, Louis. See **STRUCTURALISM**.

Amin, President Idi. See **UGANDA**.

Amino-Acid Racemization. See **ARCHAEOLOGICAL DATING TECHNIQUES**.

Amniocentesis involves taking a small sample of the fluid surrounding the foetus in the womb and analysing its cells to see if the developing child is likely to be born