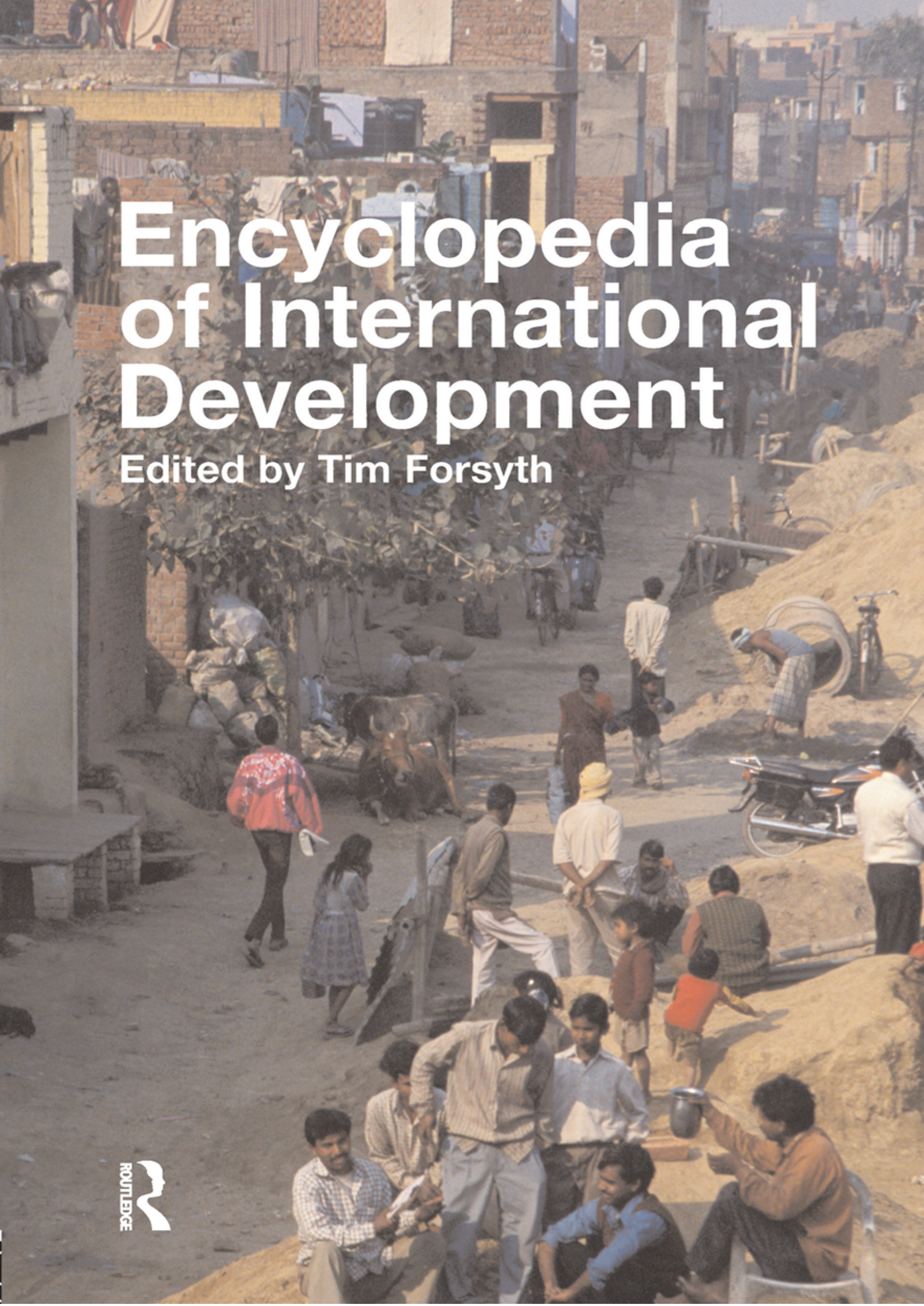
Encyclopedia of International Development

Edited by Tim Forsyth



ENCYCLOPEDIA OF INTERNATIONAL DEVELOPMENT

International development is now a major global activity and the focus of the rapidly growing academic discipline of development studies. The *Encyclopedia of International Development* provides definitions and discussions of the key concepts, controversies, and actors associated with international development for a readership of development workers, teachers and students. With 600 entries, ranging in length from shorter factual studies to more in-depth essays, a comprehensive system of cross references and a full index, it is the most definitive guide to international development yet published.

Development is more than a simple increase in a country's wealth and living conditions. It also implies increasing people's choices and freedoms; it is change that is inclusive and empowering. Development theory and practice has important applications to questions of economic growth, trade, governance, education, health care, gender rights and environmental protection, and it involves issues such as international aid, peacekeeping, famine relief, and strategies against HIV/AIDS. The *Encyclopedia* treats these topics and many more, and provides critical analyses of important actors within development such as the United Nations and World Bank, non-governmental organizations and corporations.

Contributors to this volume reflect the multidisciplinary and international nature of the subject. They come from social science disciplines such as economics, international studies, political science and anthropology, and from specialties such as medicine. This encyclopedia will provide crucial information for universities, students and professional organizations involved with international development, or those interested in related topics such as international studies or other studies of social and economic change today.

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Introduction

International development is best understood as the production of social change that creates conditions where more and more people can achieve their human potential. It is now a major worldwide activity and the focus of the growing academic discipline of development studies. This encyclopedia presents a summary of the key concepts, controversies, and actors associated with international development for a readership of policymakers, development workers, teachers and students worldwide. The volume contains 600 entries written by more than 200 authors, at a length of nearly half a million words. It is the most definitive guide to international development yet published.

For many people, development mostly refers to reducing poverty and improving living conditions in poor countries. But "development" is much more than this. Development implies increasing people's choices, and respecting their ability to choose, within diverse processes of social and economic change. It is change that is inclusive and empowering. Development is usually associated with topics such as economic growth, governance, education, food production, urban management, and healthcare, especially in developing countries. More dramatically, development also includes peacekeeping, aid, famine relief, fighting HIV/AIDS, and environmental protection. But "development" cannot be reduced to any one of these activities, and comprises complex, inter-connected engagement with economic, political, and social structures. Similarly, development is not restricted to the so-called developing world, but involves richer (and postsocialist) countries too, and is affected by global systems of trade and governance. For these reasons, academic development studies are manifestly multidisciplinary, and contain a variety of approaches. Contributors to this volume come from different social science disciplines such as economics and political science, and from specialties such as medicine.

"Development," then, is a fundamentally contested concept. Much debate has concerned the means and measurement of development. During most of the twentieth century, formal development practice sought to modernize economies by investing in industry and infrastructure, and measured "development" through the index of gross national product per capita. This approach, however, has been criticized for overlooking questions of income distribution, the negative impacts of large development projects on environment and marginalized people, and for failing to indicate the longer-term causes of chronic poverty (Arndt, 1981). By contrast, newer approaches of social or human development emphasize factors such as education, health and the creation of livelihoods for poor people. The United Nations' Human Development Index combines economic wealth with life expectancy and adult literacy. The Gender Empowerment Measure is broader still, by considering political empowerment and equality of opportunities. These approaches begin to recognize the diversity of experiences of development between social divisions including women and men, young and old, people with differing disability, or different ethnicities, classes or caste.

A similar tension is in the definition of development objectives. Critics have suggested that development reflects its roots in Western projects of colonialism and hegemony (Cowen and Shenton, 1996). Some have even called development, "anthropology's evil twin" because, in mirror image to anthropology, it threatens to destroy locality, autonomy, and tradition in developing societies in the name of "progress" (Ferguson, 1997). Today, there are broader definitions of what constitutes "progress," with more attention given to the right of local determination, and the qualities of indigenous knowledge and diverse perspectives on socio-economic life. Nonetheless, the right to development through social, political, and economic change has been acknowledged in the 1948 Universal Declaration of Human Rights and later statements. Various approaches of equitable or people-centered development now seek to encourage bottom-up and locally determined means of assistance. Participatory development invites people targeted or affected by development to participate in defining its objectives and methods.

Despite these trends, development is still controversial, and often associated with imbalances in world trade and power. According to many critics, the structural adjustment programs coordinated by the International Monetary Fund in response to the debt crisis of the 1980s have actually reversed development objectives by increasing poverty and inequality. The World Bank has been criticized for funding large-scale dams and road projects that have damaged environments and people's livelihoods. Trade liberalization and economic globalization, as conducted through the World Trade Organization, are also blamed for empowering powerful countries and transnational corporations at the expense of smaller producers. In response, the World Bank and other organizations have adopted various reforms and new initiatives to address world poverty. But radical critics – such as the World Social Forum – point out that the balance of power remains strongly in favor of richer nations. When the World Bank was established in 1944, the USA alone held nearly 30 percent of its total voting rights. Today, the "Big Five" countries (the USA, UK, Germany, France, and Japan) still control approximately 38 percent of the vote. Moreover, 46 African countries have together only 5 percent of the vote and typically only two of the Bank's 24 Executive Directors.

This encyclopedia summarizes these concerns, but also contains optimistic accounts of development. Development has had many successes. Agrarian reform and the green revolution – despite some criticisms – have increased food production in many countries. Primary health care and education have helped reduce infant and maternal mortality and increase prospects in various locations. Civil society and non-governmental organizations provide new opportunities for governance. Opportunities for democracy and state reform are widely increasing. Businesses are now actively involved in development via corporate social responsibility and the United Nations' Global Compact. There is growing global dialogue on human rights. Yet, despite these steps, development remains beset with challenges. In 2001, the United Nations called upon richer countries to donate US$7-10 billion per year to combat HIV/AIDS, but this amount has not been reached, and the topic remains a low priority with many donors. Some analysts say global poverty and inequality are growing, not decreasing. Development also faces challenges from changing attitudes to war, security, and international law. There is a need to engage with new concepts and approaches to development critically, to avoid adopting meaningless "buzzwords."

Today, international development is largely defined by the United Nations' Millennium Development Goals, which identify priorities concerning poverty, education, gender equality, HIV/AIDS, the rights of children, healthcare, environmental protection, and cooperative governance. Yet, development will always be broader than these specific concerns. In the words of Nobel-Prize winning economist, Amartya Sen (1999:3), "development requires the removal of major sources of unfreedom: poverty as well as tyranny, poor economic opportunities as well as systematic social deprivation, neglect of public facilities as well as intolerance or activity of repressive states." Increasing public awareness and debate about these challenges are the first steps towards addressing them. This encyclopedia aims to assist in these processes.

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Note on entries

This encyclopedia contains 600 entries on diverse topics of development. Readers wishing a fast introduction to the subject are advised to turn to the general entries on **economic development**, **participatory development**, and **sociology of development** as starting points before turning to more specific topics.

The encyclopedia entries were selected by the editors to reflect the most important themes in international development. The entries are intended to summarize conceptual debates, rather than present statistical summaries of problems. Readers seeking up-to-date statistical information should access World Bank and United Nations websites as initial sources of information.

Food and Agriculture Organization statistical databases: http://apps.fao.org/

United Nations statistics and databases: http://www.un.org/databases/index.html

United Nations Development Programme Human Development Reports: http://hdr.undp.org/reports/

World Bank data and statistics: http://www.worldbank.org/data/

World Bank World Development Reports: http://econ.worldbank.org/wdr/

The encyclopedia also does not aim to be an inventory or glossary of development organizations, including non-governmental organizations, although many United Nations specialized agencies, international organizations and multilateral development banks are described because they represent important development debates. There is, unfortunately, insufficient space to list all United Nations agencies, or to mention all important development non-governmental organizations.

The words used to define "development" and "developing countries" are also controversial. This encyclopedia uses the terms, "developed" and "developing" countries in general to refer to the usual distinction made between richer and poorer countries. These terms are used in preference to "Third World" or "North" and "South" (see fuller discussion in the entry, **underdevelopment versus LDC versus Third World**). It is, of course, acknowledged that rich and poor people exist in most countries, and that the causes of poverty are not just explained just by national factors.

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Tim Forsyth
London, 2004

A

AARHUS CONVENTION *see* Right to Information Movement

absolute versus relative poverty

The distinction between "absolute" and "relative" concepts of **poverty** refers to whether poverty is measured in terms of specified and normative levels (absolute), or in terms of indices that show how one person's poverty or wealth is related to other people (relative). The dominant concept of poverty in developing countries has been an "absolute" one, based in normative standards related to basic physical needs. Absolute poverty has been described "in terms of some absolute level of minimum needs, below which people are regarded as being poor, for purpose of social and government concern, and which does not change over time" (OECD, 1976:63). Minimum needs are typically defined in terms of biological subsistence, such as calorific intake (see **nutrition**). Such measurements have been used in the past as an indication of when governments or aid agencies may start to intervene to reduce poverty (see also **poverty line**). By contrast, studies of poverty in developed societies have tended to use relative concepts of poverty. Some writers understand this in terms of **inequality**: for example, researchers from the **European Union** have identified poverty as "economic distance" from the mainstream, or average expectancies in a society. Townsend (1979:915) has defined relative poverty as "the absence or inadequacy of those diets, amenities, standards, services and activities which are common or customary in society." The distinction between absolute and relative concepts is questionable, and studies in developing countries have increasingly pointed to the social and relational elements in poverty.

See also: basic needs; indicators of development; measuring development; poverty; poverty line; participatory poverty assessment (PPA); poverty measurement

Further reading

OECD (1976) *Public Expenditure on Income Maintenance Programmes*, Paris: OECD.

Townsend, P. (1979) *Poverty in the United Kingdom*, Harmondsworth: Penguin.

PAUL SPICKER

accountability

Accountability is a political and ethical concept that requires decision-makers to be held responsible, either institutionally or personally, for their decisions to those affected by them. As these parties must know about the decisions, accountability relates to and depends upon the information flow that **transparency** provides. Accountability usually is triggered when an official acts contrary to authority, abuses discretion, or simply makes bad judgments. The exercise of accountability oversight may come from a supervisor, media, watchdog

non-governmental organizations (NGOs), or the public working through politics.

Accountability is commonly applied to the administration of the public sector, but increasingly refers to private-sector businesses. It may be differentiated from command-and-control forms of regulation because it considers actions already taken, whereas control forms of regulation are exercised before action. Accountability may be categorized as vertical (owed to those hierarchically above the decision-maker), horizontal (owed to peer groups), or downward (owed to those subject to the decision-maker's authority).

Development theorists have argued that a lack of political accountability may contribute towards autocracy, authoritarianism and a failed rule of law within governments. A lack of economic accountability may also encourage **corruption**, and the failure of market **institutions**. Administrative bureaucracies that develop where civil institutions and markets are weak tend to institutionalize information in ways that protect officials from risk. Such issues are common in nations lacking well-developed public structures, strong **media** and effective NGO activity. Accepting the principles of accountability helps to break this culture of protection and secrecy, and allows society to influence policy options more freely.

Accountability may operate within a nations formal political systems such as elections or party caucuses or public outcry, if it reminds political leaders of electoral mandates and vulnerability. Legislative investigations, such as the Watergate hearings in the USA in 1974, or legal proceedings, where executive officials are judged for actions exceeding authority, provide other approaches. A sound judicial system is thus fundamental to accountability, provided it has resources adequate to its workload, the poor have decent access, and it reports case decisions. Transparent legislative procedures, including open hearings where the committee or legislative work actually occurs, are essential to legislative accountability at election time.

Articles 19 to 25 of the **Universal Declaration of Human Rights (1948)** sets forth principles of **governance** under which rulers and officials are to be responsive to the needs of the ruled and should be held accountable for them. Accountability can enhance citizens' understanding and acceptance of the role played by government, the constraints under which it operates, and its legitimacy. Thus, accountability is an asset, not a burden, to enlightened governance.

Accountability can also arise from the oversight exercised by powerful non-state actors, including NGOs like Amnesty International, the World Wildlife Fund and Transparency International, who themselves also have accountability to their own supporters. Some other theorists have proposed that global financial markets also present a form of accountability by making organizations and governments responsive to the sometimes-punishing reality of capital flows.

See also: governance; law; participatory development; transparency

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Pillai, P., Pharmy, A., Neoh, K. and Thiruchelvam, K. (eds) (1995) *Managing Trust: Transparency, Accountability and Ethics in Malaysia*, Kuala Lampur: ISIS Malaysia/Goethe Institut.

WILLIAM B. T. MOCK

actor-oriented approaches to development

Actor-oriented approaches were developed in opposition to structuralist and culturalist interpretations of social and **economic development**. They are characterized by an emphasis on social actors and agency; the notions of strategy and negotiation; and a methodological and theoretical focus on interfaces between different realities and "worlds of knowledge." They have been advocated most notably and persistently by Norman Long and colleagues at the University of Wageningen in the Netherlands, but other authors, primarily sociologists and anthropologists of development, have adopted similar or related approaches.

Actor-oriented approaches began to take shape in the mid-1980s. Rejecting structural determinist explanations of "underdevelopment" (see **dependency theory; underdevelopment versus less developed country (LDC) versus Third World**), they support a social constructionist approach grounded in methodological empiricism and "theory from below." This entails deconstructing the notion of intervention to imply not simply the implementation of a plan of action (a unidirectional process), but an ongoing, socially constructed, negotiated process. Hence, understanding and/or evaluating development interventions (programs, projects, policies, etc.) requires paying attention to the meanings they acquire for all the parties involved, and examining how they are constantly reinterpreted and manipulated by differently positioned persons and groups. Two guiding metaphors employed to suggest that development interventions exist as dynamic encounters between different interests and perspectives are "arenas" (of negotiation and/or contestation) and "interfaces" (between different social worlds or logics). Social actors contribute to the production of their social world by engaging in it and unfolding their envisaged trajectories in relation to particular events and institutions. This type of social constructionism is coupled to an emphasis on agency, which is seen, following Giddens, as dependent on the capability of actors to make a difference to a pre-existing state of affairs. Actor-oriented contributions highlight the strategies that actors unfold to develop their own idiosyncratic "projects in the Project." This usually involves attempts to enrol others in one's project and form networks of support in order to improve one's bargaining position. While recognizing hierarchy, actor-oriented analyses tend to emphasize the enabling nature of structure and thereby challenge totalizing interpretations of development as a (hegemonic) discourse (see **power and discourse**). They argue that even the most subordinated actors are capable to exercise some kind of power within the room for maneuver available to them. If in theory this position is defensible, actor-oriented contributions have been criticized for providing over-optimistic accounts of how development works. They run the risk of equating agency with power and understating the constraints imposed upon marginal actors by the hierarchical structures in which they are integrated, sometimes against their will and without their consent. Actor-oriented authors have responded to this criticism by providing illustrations of how apparently powerless actors are constantly manipulating and turning to their own ends processes that are more or less imposed on them. They have also been criticized for paying too little attention to the structural characteristics of action and for reducing social arenas to the sum of individual strategies (methodological individualism). These charges have been convincingly resisted by various authors, who have argued that their writings present actors and their social and material environments as mutually constituted, and that the use of micro-studies does not necessarily imply individualist and/or reductionist assumptions. A case in point of the combination of micro-history and individual strategies with a concern for broader structural and policy frameworks is Arce and Long's study of peasant-bureaucrat relations following the establishment of the Mexican Food Program in the Peasant Community of La Lobera in Mexico (Arce and Long, 1993).

Methodologically, actor oriented approaches are grounded in anthropological fieldwork and empirical social research methods, including, *inter alia*, the use of extended case studies; social network analysis; **livelihoods** analysis; life histories, career histories, and actors' accounts of social events; discourse analysis; and *ad hoc* developed methods such as the rapid collective enquiry for the identification of conflicts and strategic groups, known as ECRIS (see Bierschenk and Olivier de Sardan, 1997).

Although the work of Norman Long and Wageningen-based researchers has acquired an almost paradigmatic status in this field, different authors have adapted actor-oriented approaches to their specific research focus and theoretical inclinations. In particular, a francophone pole of researchers affiliated with the Euro-African Association for the Anthropology of Social Change and Development (APAD) has produced a corpus of empirical studies of development which stands in opposition to discursive and populist approaches, and shares many theoretical and methodological assumptions with those advanced by the Wageningen group. Other authors have consistently advocated actor-oriented approaches, emphasizing a concern with local history; studying development projects as arenas of negotiation; and unraveling the strategies of different categories of actors (see Elwert and Bierschenk, 1988). Actor-oriented approaches have provided and continue to provide relevant contributions to the study of the social dynamics of development contexts, primarily by increasing the base of in-depth, empirical analyses of the interaction between development rationales and local-level perceptions and strategies.

See also: power and discourse; sociology of development

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BENEDETTA ROSSI

adjustment with a human face

Adjustment with a Human Face was a book published by the **United Nations Children's Fund (UNICEF)** in 1987. It argued that countries undertaking **structural adjustment** programs could and ought to take measures to protect the needs of their most vulnerable citizens – namely **children** and women from the poorest families – and that the international **community** should assist them in doing so.

In the three decades following World War II, child welfare improved markedly in many poor parts of the world. However, it began to falter in the 1970s and deteriorate markedly in the 1980s, with the onset of global recession and the **debt** crisis. The effects were especially severe in Africa, Latin America, and the Middle East. As a result, many countries enacted anti-inflation measures and **structural adjustment** programs, which involved wide-scale macro-economic restructuring. The immediate effect was often a protracted decline in national output, with deleterious consequences for the poor in particular, who faced a loss of income and the direct negative effects of certain policies. While many causes of decline were international, the adjustment policies adopted were often seen to worsen the situation.

At the same time, this upheaval notwithstanding, some countries managed to protect their most vulnerable citizens through carefully targeted policies focusing on basic **health**, **education**, **nutrition**, and **employment** generation. Drawing on UNICEF and developing country experience, researchers amassed a range of evidence to show that the plight of poor children particularly need not inevitably worsen during adjustment. Botswana, the Republic of Korea, and Zimbabwe were singled out for having more successfully combined adjustment with **poverty** alleviation and nutritional protection. The book sought to determine what could be learnt from the adjustment experiences of ten countries (presented in full in a second volume).

The authors of the book argued that adjustment was still needed to restore growth, but that adjustment alone was insufficient to safeguard vulnerable groups. Consequently, there was a need to appropriate macro-, meso- (i.e. governmental) and micro-level policies and agendas to support small-scale producers and low-income activities, improve the equity and efficiency of social services; implement compensatory public works and nutritional support; and monitor social indicators such as the nutritional status of children.

Finally, the authors urged that the international **community** should make the global economic environment more friendly to poor countries, and that it should create mechanisms to compensate them for adverse global shocks, and that it give financial support to those implementing "human face" policies.

This research stressed that the human implications of the reforms were integral to the process of macroeconomic adjustment. Its findings have been extremely influential in shaping the ways in which developing countries have implemented structural reforms, and the international financial **community** has supported them, particularly in ensuring that they do not overlook the basic needs of vulnerable groups during the process, and that they provide targeted assistance to protect them.

See also: children; growth versus holism; nutrition; structural adjustment; vulnerability

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EMMA SAMMAN

advocacy coalitions

Advocacy coalitions are composed of groups and individuals working together to promote a particular cause or set of causes. Target audiences for these advocacy efforts include policy and decision-makers, specific segments of the population, and the public. Advocacy coalitions are often associated with organizations committed to **social justice** or social change goals. However, many public and private sector institutions also participate in advocacy coalitions. Examples include intra- and international governmental bodies, as when agencies at municipal, regional and federal levels jointly advocate particular positions, or when different national authorities coordinate their efforts to pursue specific policies. They may also include industry lobby groups and cooperative initiatives. This expansive definition of advocacy coalitions builds on the similarities in tactics one finds in such efforts across a range of actors, whether in the public, private or **non-governmental organizations (NGOs)** sectors.

Broadly speaking, the purpose of advocacy coalitions is for participants to work collaboratively with others to achieve commonly defined objectives. The idea is to pool resources that are often in limited supply, to share a knowledge and experience base drawn from a variety of contexts, and to form a unified front against common opponents. It is a strategy that, though attractive to governments and business interests, is particularly well suited to social justice and **grassroots organizations**. A prominent example of an advocacy coalition within **civil society** is Jubilee 2000, a campaign aimed at **debt relief** for the developing world which counts among its constituent members Christian charities and churches, social justice advocates, anti-poverty activists, and even popular culture icons.

Participating in an advocacy coalition affords a locally based or single issue-oriented social justice struggle much greater relative strength than embarking upon an advocacy campaign on its own. Advocacy coalitions offer the ability for local groups to learn from the experience of others, to mobilize effectively and respond quickly to emerging situations, and to achieve greater public exposure for the goal being pursued. Being part of an advocacy coalition also allows local concerns to connect to global issues, which operate and must be addressed at multiple levels simultaneously.

Advocacy coalitions are not without their drawbacks, however. One of the primary problems is that of maintaining coherence and cohesion across a wide range of interests and motivations amongst the coalitions' members. While broad objectives may be similar for participants, the end goals are rarely identical. Cracks in the constitution of advocacy coalitions can be seen most prominently in terms of **race and racism**, **gender**, class, and **ethnicity/identity**. For advocacy coalitions active in the field of international development, these differences often coalesce in what is known as the North-South divide, with North-based environmental and social justice organizations often accused of self-interested and insufficiently self-reflective agendas by their South-based counterparts.

See also: governance; grassroots activism; non-governmental organizations (NGOs); social movements

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PABLO SHILADITYA BOSE

African Development Bank (ADB)

The African Development Bank (ADB), founded in 1964, is the leading multilateral development bank in Africa. Its shareholders include 53 regional members and 24 non-regional members. The Bank provides loans, equity investments, and technical assistance to its members. The bank itself runs on a non-concessional basis (i.e. it operates like a commercial bank); the concessional needs of its regional members are addressed through the African Development Fund (ADF), established in 1972 with funds from the Bank and thirteen non-regional members, and the Nigerian Trust Fund (NTF), established in 1976 with funds from the government of Nigeria. The ADB, ADF, and NTF constitute the ADB Group. The Bank's authority resides in its Board of Governors, which issues general directives, elects the president, admits new members, and makes amendment to existing agreements. The Bank is headquartered in Abidjan, with field offices in Cairo, Libreville, Abuja, and Addis Ababa.

See also: multilateral development banks (MDBs)

JOSEPH MENSAH

African Union

The African Union is an organization seeking greater economic integration and political agreement within the states of Africa. It was originally founded as the Organization of African Unity (OAU) in 1963 in Addis Ababa, with just thirty-two members. Its initial Charter urged unity and solidarity of African States; coordination and cooperation for a better life for African peoples; a defense of sovereignty, territorial integrity and independence; an eradication of all forms of colonialism (see **colonialism, history of; colonialism, impacts of**) from Africa; and a promotion of international cooperation, especially in regard to the **Universal Declaration of Human Rights (1948)**. Some important topics addressed by the OAU have included **decolonization**, opposition against racial discrimination in South Africa (under **apartheid**) or in the old Rhodesia (now Zimbabwe), championing African **culture** and politics, and **peacekeeping**. In Durban in 2002, the OAU was replaced by the African Union, with fifty-three member states, and a structure similar to the **European Union** (EU), including an Assembly, an Executive Council, a Commission, and a Court of Justice. However, unlike the EU, the African Union has not significantly reduced trade barriers between member states, and has comparatively little power.

See also: African Development Bank (ADB); Common Market for Eastern and Southern Africa (COMESA); economic federalization; peacekeeping; Southern African Development Community (SADC)

TIM FORSYTH

ageing

Ageing is usually defined as an increase in the percentage of a **population** aged sixty-five years or older. It is long established in developed countries and is now occurring throughout the world. There is often a tendency to see ageing as a threat to the future. Instead, it is one of the great achievements of the past century, albeit with a range of social, economic, political and cultural challenges. Ageing both affects and is influenced by wider processes of development and transformation. The quality of life of elderly populations is conditioned by their capacity to manage opportunities and risks associated with rapid and complex change.

Despite the emphasis upon the age of sixty-five, there is no universally accepted definition of what constitutes old age. Definitions may vary according to chronology; key biological processes and physical appearances; important life events (such as retirement or some other form of disengagement); or social roles (grandparenthood or ceremonial duties). Since old age can cover a span of over three decades, most cultures distinguish between the "old old" and "young old," and it is usually more meaningful to think in terms of a gradual change, rather than a sharp cut-off between adulthood and later life.

Developed countries tend to have older population structures: older people make up more of the total national population than in developing countries. In absolute terms, however, the majority of the world's population aged sixty or over has lived in developing countries since the early 1980s. By 2030, it is estimated that developing countries may have nearly three times as many people aged sixty or more than developed countries. Indeed, these figures may understate the ageing gap, as old age may effectively set in before the age of sixty in many poor countries.

Population ageing is usually associated with the final stage of the **demographic transition**, which involves sustained falls in **fertility** and hence smaller numbers of younger age groups. The timing and intensity of the demographic transition vary. In most of the South, demographic transition has been much more abrupt than in established industrialized economies. It took about a century for the proportion of elders in Western Europe to double. In many developing countries, including India, China and Brazil, this is expected to occur in less than twenty years.

There is mounting concern about the possible impacts of population ageing on economic performance. Some of this may be based on over-generalized notions of old age dependency. The economic contribution of some older people may be understated, and there may be ways to promote participation (see **participatory development**) through policies such as lifelong training and access to credit. In many countries, a combination of economic necessity, changing social attitudes, and the improving **health** profiles of elders, may weaken the link between ageing and a shrinking workforce. Richer countries may be able to sustain the total size of their workforces by attracting large influxes of replacement **migration**.

Much of the debate about ageing and development draws on the view that the middle years of the life course are characterized by high savings rates, and that later life sees a de-accumulation of assets. It is argued that population ageing will therefore lead to a reduction in aggregate savings rates. This view would appear to be borne out by international comparisons. However, micro-economic research has challenged this, observing that many elders continue to save, albeit at a lower rate than previously. One reason for this may be that sustaining the size of future bequests increases the likelihood that younger family members will take an interest in their well-being.

Another conventional wisdom is that ageing holds back development because investment is lost to the mounting costs of social provision. Again, this process is not inevitable, and will be heavily influenced by the ways in which people experience later life. The costs of supporting an elderly population with high levels of protracted chronic disease (see **disease eradication; disease, social constructions of**) and general dependence will be greater than that for a healthy, active population. There are other problems with demographic determinism: for example, the USA spends twice as much of its economic output on health care as the UK does, but contains a similar proportion of elders. Instead, the gap is mainly due to inefficiencies in the US private health insurance market. This suggests that the impact of ageing on social spending is mediated by the ways in which the social sectors are structured. In poorer countries, the social sectors currently fail to meet the basic needs of many people, old and young. In these cases, it is meaningless to project the impact of population ageing on expenditure based on the experiences of other countries.

Debates about public policy for older people have often derived from the experiences of the developed countries of the North, and have been dominated by controversies about **pensions** reform. Yet, in many low-income countries a major challenge is how to factor older people into public policy for the first time. One key area for change in low-income countries might be factoring older people into **primary health care** programs, through targeted interventions.

Older people are a varied group, living in very different circumstances. However, a number of generalizations are possible. Older people tend to be less involved in salaried economic activity. They are exposed to age-related risks, such as physical decline and some kinds of chronic disease. They are exposed to the stereotypes and prejudices of society: and these may become self-fulfilling. These common issues justify the emerging interest among academics and policy-makers into ageing as a global phenomenon. But they do not justify the portrayal of older people as a special interest group, who interests are separate from, and possibly in conflict with, those of other age groups. Older people do not live in isolation, and so their welfare in intimately bound in with that of society as a whole.

See also: pensions; population; welfare state

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PETER LLOYD-SHERLOCK

Agenda 21

Agenda 21 is a broad action plan adopted at the 1992 **Rio Summit** to promote environmentally sound and **sustainable development** in all countries of the world. Agenda 21 was signed on 13 June 1992 by over one hundred heads of state representing 98 percent of the world's population. Agenda 21 is not legally binding; it is a flexible guide towards the achievement of a sustainable world.

Agenda 21 is divided into six themes composed of sub-areas with specified action plans. The first theme, quality of life, addresses areas such as limiting **poverty**, changing consumption patterns, **population** control, and ensuring the availability of adequate **health** care. The second theme, efficient use of **natural resources**, focuses on land use **planning**, **water management** and conservation, energy resources (see **energy policy**), **food** production, forest management, and the protection of **biodiversity**. The third theme, protection of the global commons, discusses management of the atmosphere and the oceans. The fourth theme, management of human settlements, considers urban issues and the provision of adequate **housing**. The fifth theme, **waste management**, focuses on the classification and disposal of chemical, solid, and radioactive wastes. The final theme, sustainable **economic growth**, discusses **trade**, development, and **technology transfer**.

Agenda 21 has been criticized for not including strong positions on transport (see **transport policy**), energy issues, and **tourism**. The action plan has also been criticized for being too focused on increasing trade. Agenda 21 stresses that removing distortions in international trade is essential and that environmental concerns should not restrain trade – positions criticized by many anti-**globalization** groups.

The success of Agenda 21 has been mixed. The action plan has been successful at linking **environment** and **poverty**, and many local working groups have been formed that include the multiple stakeholders such as youth, **indigenous people**, scientists, and farmers called for in the plan. The **Commission on Sustainable Development (CSD)**, which is charged with monitoring the progress of Agenda 21's implementation, has reported positive developments in the areas of controlling population growth, increasing **food** production, and improving local environments. However, they also report an increase in inequity, increasing **water** scarcity, and extensive loss of agricultural land. Implementation in the European countries has been more successful than in other regions.

The action plan's mixed success can be attributed to a lack of commitment of funding for the initiatives in the plan. Every action in Agenda 21 included a projected cost; but no source of funding was secured at the time of signing.

The CSD continues to monitor the implementation of Agenda 21, and follow-up meetings, Rio +5 and Rio +10, were held in 1997 in New York and in 2002 in Johannesburg. In 2002 the **United Nations** General Assembly called the progress of Agenda 21's implementation extremely disappointing, and at Johannesburg a plan was developed to speed the implementation of Agenda 21.

See also: environment; sustainable development; Rio Summit

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LENORE NEWMAN

agrarian reform

Agrarian reform refers to the variety of supportive measures governments may introduce to make **land reform** more effective in enhancing **rural development**. The term agrarian reform is commonly used as a synonym of land reform. However, it is useful to define **land reform** generally as actions that redistribute land ownership, or redefine the terms of land ownership, usually to enhance access of rural poor to land (see **rural poverty**). Agrarian reform, on the other hand, refers to actions that complement land reform such as the supply of adequate credit (see **micro-credit and micro-finance**), technical assistance, marketing facilities and other supportive measures to the reform sector farm enterprises.

The need for agrarian reform – as an addition to land reform – became clear when many land reforms failed to live up to their original expectations and were characterized as "broken promises" by Thiesenhusen (1995), among others. Evaluations of land reforms revealed that in many countries, far less land was redistributed and far fewer peasants and rural workers had benefitted from this process than had been anticipated (Ramachandran and Swaminathan, 2003). Furthermore, the reform sector (the new farms arising from the expropriations) were not performing as well as it was desired and often even faced major economic problems, particularly in the case of collective tenure arrangements (see **communes, collectives and cooperatives; collectivization**). The analysis revealed that one major reason for this poor performance was the lack of government supportive measures. Some classic examples of agrarian reform include the creation of credit facilities (see example of the **Grameen Bank (GB)**); rural agricultural extension offices (see **agriculture**); and coordinated marketing for rural products.

See also: agriculture; collectivization; land reform; land rights; micro-credit and micro-finance; rural development; rural poverty; villages

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CRISTÓBAL KAY

agrarian transformation

Agrarian transformations are major historical shifts in production systems, economic exchange and social relations within **agriculture**, which are often catalyzed by climatic, demographic, political or economic shocks. Tracing agrarian transformations entails an understanding of the changing nature of agrarian agents, their scales of operation and allocation of productive effort between own subsistence and commercial exchange and their land, labor and capital usage.

A schematic juxtapositioning of different agricultural production systems illustrates the dynamic upheavals in agriculture through history. Ancient agrarian civilizations of the Middle East and Far East, associated with the large river basins of the Nile, Tigris and Euphrates, the Ganges, and the Yangtze, tended towards capital investment in **irrigation** organized through a centralized state authority (see **state and state reform**) affording the state a strong position for the appropriation and distribution of peasant producers' surpluses (see **peasantry**). Asian agrarian civilizations are generally considered more technologically advanced than the more diffuse agrarian feudal estates of Europe during the Middle Ages.

Historians widely argue that the drastic population decline arising from repeated plague infections in Europe during the thirteenth and fourteenth centuries undermined agricultural labor control within feudal estates providing economic and political space for the operation of smallholder peasant family agrarian production units responsive to urban commercial demand agricultural products. The fifteenth and sixteenth centuries witnessed the sudden decline in many indigenous self-sufficient rural populations in Latin America as a result of European colonialism (see **colonialism, history of; colonialism, impacts of**), and the subsequent formation of large landed agrarian properties using tenant labor alongside subsistence-based **peasantry**.

In Asia, invading European colonial powers during the seventeenth and eighteenth centuries tended to collaborate with local rulers, sharing taxation powers and pushing agrarian output towards the demands of the international market. These power-sharing exercises tended towards the excessive accumulation of wealth in a view at the expense of growing rural impoverishment and landlessness.

In Sub-Saharan Africa, a sparsely populated continent adversely affected by centuries of slave trading (see **slavery**), colonial powers during the nineteenth and early twentieth century were more apt to implement labor and taxation policies that fostered small peasant household production units, albeit many lacked sufficient labor due to the practice of male **circular migration** labor policies to colonial mines and plantations.

By the mid-twentieth century, European colonialism started to unravel under pressures from **nationalism**. Post-independence nationalist governments, especially in Sub-Saharan Africa, tended to favor small-scale peasant household production units often seeking to bolster their land and labor resources with subsidized improved agricultural inputs to boost yields, thereby encouraging agricultural surpluses that could be marketed. Western donor agencies avidly sought to lend their support with rural **aid** directed primarily at raising living standards and agricultural output of peasant families as a way of eradicating **poverty** and encouraging broad-based national **economic development**.

However, the economic shock of the oil crises of the 1970s marked a turning point in smallholder farming units' fortunes worldwide, particularly in the least developed countries. The small commercial surpluses of peasant producers dispersed in scattered settlements throughout the countryside engendered high transport costs that rose precipitously after the oil crises. Their lower labor costs arising from the use of family labor did not outweigh the increasing transport expense. Peasants' commercial output lost market competitiveness relative to large-scale **agribusiness**es that were streamlining their marketing channels and investing heavily in new production techniques and biotechnology (see **biotechnology and resistance**) to attain ever larger agricultural yields. Increasingly, small-scale producers defensively diversified into non-agricultural income-earning pursuits, while generally retaining food production for home consumption as a subsistence fallback to guard against the risks of their new commercial enterprises. At the outset of the twenty-first century, the world's long history of agrarian transformations seemed destined to be superseded by agro-industrial transformation with the interests of large **transnational corporations (TNCs)** dominating commercial agricultural production and marketing.

See also: agriculture; agrarian reform; rural development

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agribusiness

The term agribusiness originated in the 1950s in the context of the post-World War II rise of largely US transnational agro-**food** industries and the **industrialization** of **agriculture** more generally. Coined by Harvard Business School policy wonks, it referred to the "sum of all operations involved in the manufacture and distribution of farm supplies; production operations on the farm; storage; processing and distribution of farm commodities and items made from them" (Davis and Goldberg, 1957:3). In effect, this statement was a sort of commodity-chain approach (see also **commodification; value chains**) to agriculture at a moment when many elements from the point of production to consumption were being integrated by agro-food companies with a global reach. Agribusiness has come to refer to global agro-food systems increasing dominated by vertically integrated and vertically coordinated forms of transnational capital (the French term "la complex agro-alimentaire" better captures this character of modern agriculture (Allaire and Boyer, 1995). **Transnational corporations (TNCs)** like Cargill, Nestlé or Tysons are exemplary cases of agribusiness as they control key nodes and flows within single or multiple agro-food commodity systems. Agribusiness is not, however, always concerned with the direct control over the point of production through vertically integrated plantations or corporate estates. Indeed, the proliferation of contract farming in which exporters or processes sub-contact to small growers indicates how concerned agribusinesses are to control upstream activities where value and quality are added. The onset of agro-biotechnology including genetically modified organisms (see **genetically modified organisms (GMOs)**), coupled with **intellectual property rights (IPRs)** over seed and **livestock** has meant that agribusiness is being shaped on the one hand by the huge life science industries (such as Monsanto and Novartis), and on the other by a shift from "appropriation" (control of land based activities) to "substitution" (the production of agro-foods and fibers through increasingly artificial and non-land based practices, e.g. synthetic sugars). Transnational agriculture has proliferated in the context of the breakdown of what Harriet Friedmann (1993) has called the "international food regime" of the post-1945 period. **Aid** and **trade** in food was tightly regulated through inter-state arrangements and the disposal of national surpluses. **Neo-liberalism** and the shift from **aid** to "**free trade**," and the assault by the **World Trade Organization/General Agreement on Tariffs and Trade (WTO/GATT)** on agricultural **tariffs**, has meant that the global agro-food system has been radically privatized and dominated by global agribusinesses, some of the most of aggressive being the fastfood companies (McDonalds) and the chemical-pharmaceutical industries. It is nonetheless the case that while developing countries have been under enormous pressure to reduce agricultural trade tariffs, the agribusinesses in the USA and Western Europe have benefitted from enormous subsidies.

See also: agriculture; biotechnology and resistance; Cartagena Protocol on Biosafety; contract farming; food; genetically modified organisms (GMOs); transnational corporations (TNCs); World Trade Organization/General Agreement on Tariffs and Trade (WTO/GATT)

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MICHAEL WATTS

agricultural involution

The concept of agricultural involution has been used in a variety of rural and urban contexts to denote a particular variety of non-evolutionary, non-revolutionary change. Clifford Geertz (1963) coined the term agricultural involution to refer to the process whereby Javanese farmers during the Dutch colonial period reacted to population pressures by increasing labor inputs rather than by adopting new more efficient technologies. In so doing they were able to keep agricultural output per capita constant, but relations of production, rather than changing into more productive ones, were endlessly elaborated becoming more complex and **labor-intensive**, while the accompanying social and economic structures were kept rigid. The endless sharing of access to land and opportunities for wage work resulted in "shared **poverty**" in the agricultural areas, and a dual economy made up of an agricultural sector impoverished by involution, and a more dynamic industrial sector. There is some doubt of whether Geertz was correct in his description of the Javanese economy, but his notion of agricultural involution, and the associated idea of shared poverty, remain important in research on agrarian change in Indonesia and elsewhere.

See also: agriculture; agrarian reform; rural "depressor"; rural development

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CLAUDIO O. DELANG

agriculture

Agriculture refers to the formal cultivation of crops and plants, usually for **food** production, and plays a key role in development, at local, national and international levels. It provides an important part of the **livelihoods** of a large proportion of the world's **population**. Changes in the structure of agriculture and in the contribution of agriculture to the national economy are used as indicators of the level of **economic development**. Farming systems are diverse and dynamic rather than traditional and slow to change. Evidence of harmful environmental and health impacts from intensive farming have prompted new directions in agricultural research and development activity (see **environment**). There are institutional barriers at international level to trade in agricultural products, which raise questions over the ability of countries to maximize the potential of agriculture within their development strategies.

Agriculture is variously portrayed in development theory. Some writers see it as a residual economic activity, engaging people who are not employed in sectors which are driving the economy forward. For others, it plays a more dynamic role by releasing labor for expanding industries, earning foreign exchange to fund investment in imported capital goods and producing raw materials for industrial processing and manufacture (see **industrialization**). Some assert that it can be a driving force for development in its own right. Others point out that countries can develop without a significant agriculture sector, Singapore being a case in point.

These contrasting positions are reflected in differences in policy towards agriculture. Some governments have ruthlessly exploited agriculture, keeping prices down in the interests of urban consumers and manufacturing industries, and using marketing boards to divert export earnings into non-agricultural investments. Others have seen a thriving agriculture as a way of alleviating **rural poverty** and capturing the potential benefits of **globalization** and international trade. What is common to all theoretical and policy positions is that as **economic development** takes place, agriculture accounts for a declining proportion of **gross domestic product (GDP)** and **employment**.

Differences between theorists and between government policies are mirrored at the household level. For some households, farming is their main source of livelihood and they are continually seeking to improve the return they gain from it. For others, it is a residual activity, providing a basic level of subsistence in hard times and a base for the elderly and young children while other household members earn a living in other activities. Nor is agriculture only a rural activity. **Livestock** keeping and vegetable production are common in urban and peri-urban areas where they pose particular problems and opportunities (see **urban agriculture**).

From a **dependency theory** perspective, commentators argue that a development trajectory based initially on agriculture was forced on countries by the nature of their contact and relationships with developed countries. Political, military and commercial power were used to establish systems of production which served the interests of industrializing countries in Europe. trade in agricultural products continues to be overlaid by unequal relationships: it faces some of the highest tariff and non-tariff barriers imposed by developed countries to protect their own farmers and processing industries (see **tariffs; protectionism**). Barriers are particularly high for more highly processed – and therefore more valuable – products. This makes it difficult for developing countries to take the logical step of concentrating on increasing the value added to agricultural products before they are exported.

Development within the agricultural sector is often portrayed as a progression from subsistence-based systems, where the farm is producing food for the family, through initial engagement with the market, to a fully commercial agriculture in which all or most of the production is sold. For the national economy, this is an essential feature of development, supporting the growth of urban areas and non-agricultural sectors. In the case of Uganda's Plan for Modernization of Agriculture it is the model which guides development **planning**. For the farming household, total reliance on the market brings opportunities for improved standards of living but also new forms of **vulnerability**. Prices of agricultural products are very sensitive to changes in production. A bigger than usual harvest – locally or globally – can lead to a sharp fall in prices and therefore in farm incomes. Similarly, long-term increases in production through improved technology and management can lead to a long-term fall in prices if demand is not increasing at least as fast. Farmers then have to produce even more in order to maintain incomes.

Farming systems are very diverse, reflecting differences in environmental and socio-economic conditions. They are also very dynamic. Agriculture in developing countries is often portrayed as traditional, with farmers reluctant or unable to change to new enterprises and technologies. History tells us this is nonsense. Globally and locally, systems are continually changing in response to pressures, opportunities and new ideas. Products that are now firmly associated with particular countries are in fact relatively recent introductions, from the potato in Europe to maize in Africa (see also **green revolution**).

Until the late nineteenth century, most technical change came from farmers – from local observations and experiments, as well as from ideas brought by travelers or traders from farmers in other places. These processes are still at work, but they are less visible than the large infrastructure now devoted to formal agricultural research in both the public and the commercial sectors. The **Consultative Group on International Agricultural Research (CGIAR)** funds and oversees the work of fifteen international research centers across the world and most countries have their own government funded research institutes. Research by multi-national biotechnology (see **biotechnology and resistance**) companies is increasing rapidly, as the new techniques for genetic manipulation (see **genetically modified organisms (GMOs)**) offer opportunities for capturing the returns on investment through **intellectual property rights (IPRs)**. But there remains tremendous innovation potential among farmers. Current farming systems have come about – and continue to evolve – through local innovation and through adaptation of ideas from further afield. Recent developments in agricultural research methods, such as farming systems research and participatory plant breeding, try to bring together the creative potential of farmers and scientists. On the other hand, proponents of research into **genetically modified organisms (GMOs)** argue that these offer the only way of securing the doubling of agricultural production that will be needed in the next fifty years. They suggest that a second **green revolution** can be achieved by developing crop varieties and animals which are resistant to pests and diseases and which use light, water and nutrients more efficiently. Others caution that the spread of GMOs will reduce **biodiversity** and the genetic variation on which the future vitality of agriculture depends.

There are recurrent debates on the ability of agriculture, at a global scale, to feed the world's increasing **population** given the finite physical resource base on which it depends. The ***Limits to Growth* report (1972)** rekindled the debate in the 1970s. These views have so far been countered by empirical data showing that global per capita food production has risen rather than fallen in the past hundred years. Theorists like Ester Boserup have argued that it is changes in the balance between population and land area which drive changes in agricultural technology and systems, from **shifting cultivation** in virgin forest, through bush fallow systems, to intensive cultivation of permanent plots.

Whatever the merits of these arguments about future global production, its distribution does cause concern. Surplus food production in developed countries leads to the maintenance of barriers to food imports from developing countries (see **European Union; World Trade Organization/General Agreement on Tariffs and Trade (WTO/GATT)**). It also encourages subsidized dumping of surpluses on the world market and their diversion to food aid which can undermine local food production and marketing in developing countries.

The effectiveness of policies and projects in agriculture has suffered in the past from conventional perceptions about farming from developed countries. These see farmers as men, and farming as a full time activity undertaken by family units who own their land. The reality is much more complex. In many countries, women are responsible for most of the work and much of the farm decision-making (see **rural development**). In others there is a clear **gender division of labor**. In some rural societies, it is common for women and men within the household to manage separate plots. In others, looking after **livestock** is the responsibility of women. Projects that provide credit only to men as the notional "head of household," or promote "men's" enterprises, can seriously damage the interests of women. In other cases, men have taken over activities that have in the past been carried out by women when development projects have created a market for what had previously been largely a subsistence enterprise. Increasing attention is now given to **gender** issues in agricultural development and project planning.

Because agricultural production uses land as its basic resource, land tenure arrangements have a big impact on farming systems and on the distribution of the economic benefits from farming. Large estates concentrate the benefits in the hands of a few landholding families or companies, while thriving smallholder agriculture can spread the benefits more widely. The design of agricultural development policy and projects must take prevailing systems of land tenure into account.

As agriculture intensifies, its impact on the environment increases (see **environment; sustainable livelihoods**). This potentially damages the ability of the physical resources of soil and water to continue to support production at current levels (see **soil erosion and soil fertility**). Many **irrigation** systems are affected by the deposition of salts which can eventually make crop production impossible unless corrective action is taken. Continued cultivation on soils that have inherently low levels of essential plant nutrients leads to declines in fertility (see **shifting cultivation**). Compensating through applying mineral **fertilizers** may not be an economically viable option for many small-scale farmers. Regular cultivation of farmland can stimulate soil erosion through the action of wind and rain. There are also concerns about the impact of agriculture on health of producers and consumers. Excessive or indiscriminate use of **agrochemicals** (or fertilizers) to control the pests (weeds, insects, diseases) which accompany intensification already causes thousands of deaths each year among those who apply them. In urban and peri-urban areas, use of industrial and domestic effluent to irrigate vegetables for the urban market is a major **health** hazard.

These concerns have led to greater emphasis on the long-term sustainability of agricultural production. The focus of research effort in the public sector has shifted from increasing **productivity** to systems that maximize the use and recycling of local physical resources and do minimum damage to the environment. These include **rainwater harvesting** and improved management of recycled biomass in the form of animal manures and composted crop residues. Research with farmers into locally effective strategies for managing pests has led to reductions in the reliance on **agrochemicals**. This re-orientation of research has led many scientists to a new respect for the **local knowledge** which underpins most farming systems.

An issue for development planners in national governments and international development agencies in the late 1990s was whether agriculture could provide the basis for **poverty** alleviation. Research suggests that it can do so for some people, but for the majority of the rural poor, moving out of poverty will entail moving out of farming or at least moving some of their human resources into higher-earning non-agricultural activities. A critical question at the start of the twenty-first century was how far the opportunities from **globalization** will spread. Niche markets for high-value products, such as off-season vegetables and flowers, can be supplied more easily by well capitalized entrepreneurs who can invest in systems to comply with stringent food safety, quality and quantity requirements of markets in developed countries. While governments can act to create a supportive infrastructure and policy environment for smallholder production, much depends on whether international institutions and agreements such as WTO/GATT and **trade-related aspects of intellectual property rights (TRIPS)** work in, or at least not against, the interests of developing countries.

See also: agribusiness; agrarian reform; agrarian transformation; agrochemicals; dryland agriculture; Consultative Group on International Agricultural Research (CGIAR); collectivization; commodification; contract farming; environment; food; food security; green revolution; intermediate classes; land reform; land rights; peasantry; rural development; rural poverty; shifting cultivation; sustainable livelihoods; urban agriculture; urban bias; World Trade Organization/General Agreement on Tariffs and Trade (WTO/GATT)

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agrochemicals

Agrochemicals are various types of chemicals used to improve agricultural production. They operate in two key ways: by improving the nutrient availability for crops; or by reducing losses caused by the consumption of environmental resources and/or crops or animals by competitors such as weeds, diseases and parasites. Agrochemicals comprise inorganic **fertilizers**, crop protection chemicals and animal health products. Inorganic fertilizers replace traditional animal manures by enhancing the availability of nutrients such as nitrogen and phosphorus. Crop protection chemicals are synthetic organic chemicals, including several which mimic naturally occurring compounds, which are herbicides and pesticides. There are many types of herbicides, which operate over a broad spectrum: i.e. they kill all plants, or are selective by killing target plants. Pesticides are designed to kill target insects, fungi, nematodes, molluscs and aphids. Animal health chemicals reduce the adverse impact of bacteria, fungi and insects on farm animals, thus improving animal productivity. Agrochemical production is a global business, having intensified and diversified since the 1940s as agricultural **industrialization** has occurred.

See also: agriculture; fertilizers

A. M. MANNION

agroecology

Agroecology is a set of principles and practices that combine ecological science and **local knowledge** to enhance the productivity, sustainability and social benefits of **agriculture**, especially but not exclusively for resource-poor farmers. It approaches farms as dynamic systems "embedded within complex ecologies" (Levins and Vandermeer, 1990) that co-evolve with human communities. Agroecology is carried out by locally based and internationally linked networks of farmers, scientists and **non-governmental organizations (NGOs)** who see it as an alternative to conventional agricultural technologies designed for large-scale farms in temperate climates.

Agroecology responds to the agronomic inefficiencies and social failures of conventional agriculture. Such problems include a heavy dependence on purchased, external inputs (see **agrochemicals**); **vulnerability** of genetically uniform fields to pests and diseases; increased crop losses despite rising pesticide use; soil erosion (see **soil erosion and soil fertility**) and **salinization**; toxic **pollution**; eutrophication; high consumption of energy (see **energy policy**) and non-renewable resources; and the failure of biotechnology to solve productivity and pest problems (see **biotechnology and resistance**). Social failures include increased control of **food**-producing resources by a shrinking number of **agribusiness** enterprises, and the **displacement** of farmers and disintegration of rural society.

Agroecologists analyze agroecosystems in terms of their composition in three dimensions (not just the field) and their dynamics over time (not just one harvest cycle). They study nutrient and energy flow and interactions among organisms (soil biota, pests, beneficial insects, other animals and plants) at a range of spatial and temporal scales. They aim to reduce costs and waste by maintaining more closed systems than in conventional farming and to reduce risk by increasing the stability, resilience and self-regulating capacities of agroecosystems.

Agroecology takes account of "externalities" – the environmental, economic, and social costs that are generated by industrial-farm enterprises but born by the wider ecology and society – and attempts to transform these into net benefits. It promotes crop variety (see **intercropping**) and genetic diversity in food systems, includes domesticated animals and permanent crops in production cycles, and encourages wild species. Indeed, complex agroecosystems often support greater **biodiversity** than **monocultures** or even undisturbed forests.

Agroecology is multidisciplinary, drawing upon **population**, **community**, and landscape ecology, agronomy, entomology, and social sciences such as geography, anthropology, rural sociology, and **political ecology**. For some, although not all, practitioners agroecology is as much a political as a technological project: a means toward greater equity, **empowerment** and local control over food sources and supplies (see **food security**) and a space for multiple, alternative **developments**.

Agroecological principles can be generalized, but ecosystems, communities, and agroecological practices are necessarily place-specific. Agroecology therefore requires collaborative research and experimentation with farmers and other experts and continuing inputs of local intelligence. Although not yet applied and evaluated systematically across regions, agroecology has achieved substantial increases in production in many localities.

See also: agriculture; agroforestry; deep ecology; environment; food; political ecology; sustainable development; sustainable livelihoods

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agroforestry

Agroforestry may be defined generally as an economically viable land-use system that integrates **agriculture** and forest land uses. There are, however, many hundreds of forms of agroforestry within diverse cultures and contexts around the world. Two general characteristics may be identified. First, agroforestry includes the deliberate association of trees and shrubs with crops, pastures,

livestock, and other forms of agricultural production. Second, it aims to increase and diversify the total production of a given area of land by establishing identifiable ecological and economic interactions between woody plants and other components of the production system. Because of these characteristics, agroforestry also aims to provide various service functions, such as increasing soil organic matter and nutrient levels, and reducing runoff and soil loss. These services can increase the productivity of agricultural fields beyond what occurs in fields without trees, as well as provide synergistic aspects of production that result from having these mixes of land uses.

Agroforestry systems can be readily adapted to highly variable site conditions, and present potential savings to **labor-intensive** farming that commonly typify most traditional farming systems. Examples of agroforestry systems include: silvopastoral arrangements involving fodder producing trees; fruit tree systems providing **food** and income; **fuelwood** systems for areas depending on wood for cooking; timber (see **logging/timber trade**) in a wide variety of arrangements; shelterbelt agroforestry providing beneficial biophysical enhancements involving soil and crops; or indeed, any combinations of these. The adoption of agroforestry can result, over time, in decreases in labor, capital and resource use costs, and increases in yield because of greater physical output, and in the concentration of capital and labor costs into the same area. Agroforestry is often most effective in land commonly considered marginal for agriculture, such as **drylands**, stony, steep land, or where there is low soil fertility (see **soil erosion and soil fertility**), high agricultural risk or **unemployment**.

Much successful agroforestry depends, however, on the establishment of effective land tenure systems. Such systems are crucial in making a transition from current land uses to agroforestry, and may be equally diverse as agroforestry itself. Agroforestry tree tenure issues in the developing world must begin with departure from the "fixture presumption" common to Western law: the presumption that a tree belongs to the owner of the land on which it is a fixture. Some other cultures share this presumption, but many do not. The owner of the land is frequently different from the person who planted trees, and the person who receives the produce from the tree. It is important to acknowledge the diversity of access and tenure arrangements.

Indeed, much development intervention using agroforestry attempts to operate within local land tenure arrangements, rather than replace these. Acknowledging such local practices helps make agroforestry an **appropriate technology** for local development, tailored for local circumstances. It is worth noting, however, that much national legislated land ownership and customary tenure systems very frequently do not agree in developing countries. Many rural groups recognize individual or family ownership of land and/or trees based on occupancy and use, but governments can ignore traditional tenure systems and regard such areas as part of the public domain.

Agroforestry has also been highlighted for its potential environmental benefits. Much research has linked agroforestry to decreases in rates of deforestation in nearby natural forests by providing households with woody biomass needs that would have otherwise come from forest; for enhancing soil fertility; and for contributing to local **sustainable livelihoods**. Agroforestry has also been highlighted as an approach that has the potential to sequester a significant amount of atmospheric carbon at the global level, and hence mitigating anthropogenic **climate change**.

See also: agriculture; Consultative Group on International Agricultural Research (CGIAR); community forestry; deforestation; environment; deforestation; non-timber forest products (NTFPs); silviculture; soil erosion and soil fertility; sustainable livelihoods

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aid

The Development Assistance Committee (DAC) of the **Organization for Economic Cooperation and Development (OECD)** defines "aid" as flows to developing countries and multilateral institutions from official agencies that satisfy two criteria. First, it is primarily intended for development purposes (ruling out both military aid and export credits). Second, it is highly concessional, meaning a grant element of at least 25 percent (see below). Aid flows comprise the largest part of official capital flows to developing countries. Other flows (as defined by DAC) include private commercial flows, and grants from **non-governmental organizations (NGOs)**.

The DAC maintains a two-part list of "eligible recipients" for aid. Flows meeting the above criteria to countries on Part I of the list are called *official development assistance* (ODA), and those to countries on Part II, *official aid* (OA). A further category, *official development finance* (ODF), comprises bilateral ODA (see **bilateral aid agencies**), multilateral receipts, and non-trade related official flows. Other official flows (OOF) are official transactions for which the main objective is not development, or if it is, the funds are insufficiently concessional to qualify as ODA/OA.

Trends in aid volume

In nominal terms, aid increased in nearly every year until the early 1990s, when it peaked at US$62.7 billion in 1992. In the next four years, the total fell by US$15 billion, dropping to US$47.9 billion in 1997, recovering slightly and erratically in the following years. These trends are more muted, but still present, for real aid, for which the increase in the 1980s was quite marked, though it has since fluctuated quite substantially with no evident trend.

The trend in aid's share of donor income deteriorated in the 1990s. The average for the whole period is well under one half of one percent: aid is a tiny share of donor income. Having fallen from the 1960s, this average fluctuated between 0.30 and 0.35 percent for two decades, but then fell to its present level of just 0.20 percent. There is a **United Nations** target, adopted by all DAC members other than the USA and Switzerland, that aid should be 0.7 percent of **gross national product (GNP)** (see **Pearson Commission**). But that target is further away than ever from being met.

The fall in aid has been a general phenomenon. Most donors are now contributing less aid – as a percentage of GNP – than in the 1990s. Eleven donors recorded a substantial decline (a fall of more than 0.1 percent of GNP), and five others a small fall. The largest falls have been amongst both good performers, such as Norway and Sweden, but also poor performers, most notably the USA (from 0.21 percent in 1991 to 0.08 percent in 1997, recovered to 0.10 percent by 2000). Only one country, the UK, has experienced no change, in fact being a story of a decline from the mid-1990s, reversed in just the last two years. Four countries have implemented increasing aid ratios: a very substantial one in the case of Luxembourg, and in the case of Denmark bringing it up to the position of "top-ranking donor."

The aid infrastructure and types of aid

About two thirds of aid is bilateral, flowing from the donor government direct to the recipient country (see **bilateral aid agencies**). The bulk of bilateral aid flows are through each country's aid agency such as the UK's Department of International Development (DFID) and the United States Agency for International Development (USAID). Multilateral aid is routed through international bodies, such as the various parts of the UN, the **World Bank** and the regional development banks (e.g. the **African Development Bank (ADB)**). The share of multilateral aid has been rising over time, from around 20 percent at the start of the 1970s, to over a quarter by the end of that decade, and further to its current share of one third. The rising share in the 1970s was accounted for by the growth of the **World Bank** and the **International Monetary Fund (IMF)**, which grew further with the start of the **debt crisis** in the early 1980s. The growing multilateral share is also explained by the growth of the **European Union**'s aid program, which has taken funds that would otherwise have been spent through European bilateral aid budgets.

Aid also comes through **non-governmental organizations (NGOs)** such as Oxfam and CARE. Monies these groups raise from the public to fund their activities does not qualify as ODA, and does not appear in the aid data. These private flows are small compared to official flows, accounting for around 4 percent of developing country receipts compared to the 40–50 percent coming from ODA. But much NGO activity is financed by official agencies. About 1.5 percent of ODA is direct support to NGOs for the latter's own programs. In addition, official agencies have increasingly used NGOs as implementing agencies for their projects.

Most aid is project aid. The donor and recipient agree to spend the funds for a particular project, such as road building, supplies for schools or institutional development for the Ministry of Finance. Program aid is funds not linked to a specific project, making resources freely available to the government budget. Previously designated as import support, program aid is today called budget support (also known as **sector-wide approaches (SWAps)**). **Debt relief** can also be seen as a type of program aid. Technical assistance is expatriate experts or training courses for local staff.

The allocation of aid

In 1973, just over half of all aid went to low-income countries. Nearly a fifth went to high and upper middle-income countries – but this fell to 5 percent by 1990. The share to low-income countries rose to around 70 percent for bilateral donors and 80 percent for multilateral aid. But in the 1990s, the share of low-income countries has fallen back by around 10 percent, the amount going to lower middle-income countries rising by a similar amount. This trend is partly explained by aid recipients graduating from the low-income country category. But it also reflects increased aid to European countries. For example, the Federal Republic of Yugoslavia and Bosnia-Herzegovina are now among the top recipients of aid from Norway, Sweden and Switzerland, whereas they did not feature ten years ago. A result has been a declining share of aid for Sub-Saharan Africa. In real terms, aid per person to Africa has fallen considerably since the region has been getting a falling share of a declining aid budget.

Analysis of why aid goes from particular donors to specific recipients reveals a number of patterns. First, there is a small country bias, whereby smaller countries get more aid per person than do larger ones. Second, models distinguish measures of recipient need (such as low income, poor social indicators and macroeconomic deficits) from donor interest (commercial and political relations). For bilateral donors the latter factors play a large role in explaining aid allocation, whereas for multilateral agencies recipient need dominates. For ex-colonial powers, their former colonies are particularly favored. However, the overall pattern of aid is generally progressive: more goes to poorer countries. The extent of this progressiveness varies. A historical exception has been the USA, which has given a very large share of its aid to Israel (which is no longer a Part I country).

The terms and conditions of aid

The grant equivalent of a loan is the face value of the loan minus the present value of repayments. The grant element is the grant equivalent divided by the loan's face value. There has been a historical trend toward improved terms of aid. Rising concessionality has historically been associated with a rising grant share. By 1989–90, the aid of six bilateral donors was entirely grant finance and so had a grant element of 100 percent, and another six donors had a grant element of close to 100 percent (five over 99 percent and the USA at 98.3 percent). Since then, there have been continued increases in the grant element of DAC ODA from improvements in the terms of the remaining donors.

The conditions attached to aid are called aid tying, which has various meanings. The most common refers to the practice of linking aid to the procurement of goods and services from the donor country. Many donors have made considerable progress with untying. By 2000, over 90 percent of aid was untied for seven donors, and over

80 percent for over five more. In that year, the UK announced an end to tied aid. In every case, these figures represent a considerable move toward untying compared to the situation in 1980. However, the case of the UK notwithstanding, this does not mean that untying is here to stay. The values attained in 2000 are *not* a peak for nearly all countries. The reversal has been greatest amongst northern European donors (Austria, Norway, Finland, Denmark and Germany), which saw big increases in untying in the first part of 1990s which have since been partially reversed.

Aid tying has also been taken to mean (1) linking the use of aid to particular projects, and (2) making aid conditional on implementing agreed policy changes. The bulk of aid has always had, and continues to have, its intended use specified by the donor. Program aid usually has policy conditions.

Changes in aid management

Aid has traditionally been project aid. A large part of project budgets are taken with technical assistance. Program aid is around 10 percent of total ODA. This proportion has fallen since the 1970s, since US **food aid** was largely program aid with the funds raised from the sale of the **food** available to the recipient government to use as it wished. But food aid has fallen from 15 percent in the 1970s to less than 5 percent today. During the 1980s financial program, aid became more important and was increasingly linked to policy change (see **structural adjustment**). By the 1990s, most bilateral donors were also giving program aid linked to policy reform. The scope of these reforms has spread over time, from macro stabilization to market liberalization and then onto the allocation of government spending. Since the late 1990s, the conditions relate explicitly to the recipient's **poverty** reduction strategy. In addition, **governance** has become an established part of **conditionality**.

Despite the use of conditionality, the donor **community** emphasizes ownership and partnership. Aid should finance activities planned in full collaboration with the recipient government and the intended beneficiaries. Various trends manifest these sentiments, such as the increased focus on **participatory development** and the emergence of **sector-wide approaches (SWAps)**, in which donor funds are provided in an overall strategic framework led by government. The apparent contradiction between partnership and conditionality (see **partnerships**) is side-stepped by use of selectivity, focusing aid relationships on countries whose governments are genuinely committed to reform. However, this approach raises problems such as detecting commitment and deciding what are the "right policies" in the first place. Aid effectiveness has always been questioned, and it is not clear to what extent these changes in aid management will increase that effectiveness.

See also: aid effectiveness and aid evaluation; bilateral aid agencies; charities; debt relief; emergency assistance; food aid; Live Aid/Band Aid; Pearson Commission; sector-wide approaches (SWAps)

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aid effectiveness and aid evaluation

Aid effectiveness can be assessed either at the project level, through evaluations, or at the macroeconomic level using econometric approaches or case studies. Donor agency project evaluations find that the majority of **aid** projects are successful, although there remain areas of concern such as reaching the poorest, **gender** differentials, and impacts on **environment**. Assessment at the macroeconomic level is more contentious. A dominant view in this literature has been that aid does not increase **economic growth**, with a recent variant being that it will only do so if the policy environment is right. However, others argue for a more positive view of aid's impact.

Project evaluations

The **World Bank** reports that just over 80 percent of its projects perform satisfactorily. This figure is based on reviews of completed projects by the organization's evaluation department. Other agencies report similar figures. What do these numbers mean?

Evaluation is a post-project review of project performance. In the 1970s, evaluation was dominated by the economic methodology of **cost-benefit analysis (CBA)**. But, partly because of a sectoral shift of aid into the social sectors, and partly because of a broadening of objectives to issues such as participation and gender equality, evaluations during the 1980s became less focused on a formal statement of costs and benefits and more on the process behind the project. Process evaluation is important for understanding why projects work or not, but may provide little information on the welfare impact of the intervention.

However, producing firm evidence of welfare impact has proved problematic, usually because the rigorous data requirements of a baseline survey and a good control group (i.e. a similar population which does not benefit from the project) are not addressed in project design. Even where there is a control group, the results can be biased by unobservable differences between the beneficiary and control populations. Randomized project design – implementing the project amongst a random sample of potential beneficiaries – overcomes these problems, but is not applicable for a great many projects for both practical and political reasons.

But overall assessments of agency performance are not based on these in-depth studies. The number of projects subject to a full-scale evaluation is very limited in comparison to the total number of projects being financed. So project ratings are generally based on a more superficial assessment of whether a project met its objectives, largely based on observing if activities were implemented or not. Where **welfare indicators** are available, data are not usually available to address the issue of attribution, that is being able to attribute observed changes to the project intervention.

However, the evidence supports the argument that projects achieve at least their intermediate objectives, though there are important reservations. Historically some projects have supported interventions that had adverse effects on both many people and the **environment**, such as large **dams**. Support to such activities has been greatly reduced and more effort made to listen directly to intended beneficiaries. A second important caveat is that whilst some aid undoubtedly benefits the poor, much of it does not, especially the very poor (see **chronic poverty**).

Failure to benefit the poor results in large part from the fact that most aid is not directly intended to help them. For example the UK's Department for International Development (DFID) distinguishes three different approaches to helping the poor: enabling (policy issues); inclusive (projects benefitting both poor and non-poor); and focused (targeted at the poor). The majority of activities supported fall into the first two categories. Looking across all donors, it is estimated that only around 10–15 percent of aid directly helps the poor. There are good reasons for aid that indirectly supports **poverty** reduction, such as by **capacity building** for a sound economic and legal framework (see **law**). But if the vast majority of aid is at best indirectly supporting poverty reduction, then it is to be expected that the observed impact of aid on poverty will be slight.

Macroeconomic perspectives

In the 1960s, aid's macroeconomic impact was framed in the context of the two-gap model, in which aid supplements domestic savings to increase investment and export earnings to pay for imports. According to this model, aid necessarily increases **economic growth**, but econometric studies showed this was not so. Some high aid recipients had very poor growth performance, whilst other countries had grown rapidly without aid. This finding was explained by the savings displacement hypothesis. Higher aid resulted in lower savings and so a less than one-for-one increase in investment, as had been predicted by the two-gap model. Later analysis argued that public savings were particularly affected in this way, as recipient governments reduced taxes when receiving aid. It was also argued that aid can have "**Dutch disease**" effects, causing an appreciation of the real exchange rate (see **exchange rates**), and so a reduction in imports, meaning that aid is a less than one-to-one increment to export earnings.

Rather than model these channels affecting aid's impact on growth, most studies are econometric analyses of the aid-growth relationship. Using this approach, the **World Bank** (1998) report *Assessing Aid* argued that aid would only increase growth if the policy environment was right, meaning that the country was pursuing **structural adjustment** policies. These findings have led to support for selectivity, allocating most aid to those countries' good policies. But academic critics argue that aid-growth regressions started showing positive coefficients in the 1990s. This finding does not depend on policy stance: academic studies show that the interactive term, on which the World Bank's argument depends, is not significant in many model specifications. An alternative approach consists of case studies, which support the view that aid has beneficial impacts at the macro level and facilitates policy reform's beneficial effects rather than *vice versa*.

See also: aid; food aid; cost-benefit analysis (CBA); indicators of development; measuring development; project appraisal; sector-wide approaches (SWAps); welfare indicators

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HOWARD WHITE

AIDS *see* HIV/AIDS (definition and treatment); HIV/AIDS (policy issues)

amniocentesis (sex-selection)

Amniocentesis is the removal of amniotic fluid through a needle inserted into the maternal uterus, from which various fetal abnormalities and the sex of the fetus can be identified. Amongst some cultural groups and regions, the technique has been used to selectively abort females. The practice has become increasingly prevalent in China in the context of the one child policy and strong son preference; while in the north Indian state of Haryana, mobile amniocentesis clinics used to carry the slogan "Pay 500 rupees now and save 50,000 rupees later" (referring to the cost of dowry). Often upwardly mobile higher-class households are the worst offenders. Although sex-selective amniocentesis is now illegal in India, it is widely practiced with little enforcement of the law. Sex-selective amniocentesis is one factor contributing to the many millions of "missing" women in the world, with **gender** discrimination now possible from before birth.

See also: fertility; infant and child mortality; population

EMMA E. MAWDSLEY

ANTI-DEVELOPMENT CRITICISMS *see* post-modernism and postdevelopment

anti-politics

The term "anti-politics" refers to the deliberate restriction of development decisions within bureaucracies or development agencies as a means of reducing political debate or **transparency** about how decisions are made (see **politics**). It is an influential part of the "anti" or "post-development" debate (see **postmodernism and postdevelopment**), which question the inherent politics in the project of development.

Anti-politics entered development discourse through a path-breaking and widely cited book by James Ferguson (1990) entitled *The Anti-Politics Machine: ''Development,'' Depoliticization, and Bureaucratic Power in Lesotho*. The study offers a critical analysis of the institutional logic of planned development, including its characteristic forms of knowledge, its practices and its effects. Its influence on academic debate may be considered to be greater than on development practice, perhaps because the implications of Ferguson's argument touch the very core of the development enterprise and require that its premises be radically rethought.

For Ferguson, the anti-politics of development has two components. First, development discourse consistently reposes political issues concerning resource access, power and **inequality** as technical problems amenable to technical solutions. In his example, development "experts" characterized rural Lesotho as a "traditional subsistence peasant society" in which rapid **population** growth, land pressure, deteriorating soil and declining agricultural yields were causing a **food** crisis, **poverty** and outmigration. Proposed solutions focused on soils, seeds, credit, **livestock** improvement, market access and other technical matters. What institutionalized development discourse precluded, according to Ferguson, was a historically grounded, political economic analysis of the emergence of Lesotho as a labor reserve for South African gold mines; the undermining of **agriculture** by the annexation of productive farmland; and the role of cattle not as an economic enterprise but as a social place-holder for migrants who would return home old or sick after decades of absence. These are not the kinds of problems the development apparatus is designed to explore or resolve, and it misrecognizes them in order to proffer its customary repertoire of technical fixes.

The second component of anti-politics concerns the expansion of bureaucratic state power. Ferguson argues that "development" problems requiring technical solutions serve as a point of entry for services that "serve to govern," bringing the state (see **state and state reform**) apparatus closer to peoples' lives and tying them up in new rules, procedures and forms of surveillance. This "pre-eminently political operation" is not planned but occurs rather as a consistent "side effect" of development interventions. Even projects that fail to meet their technical goals create new bureaucratic pathways and facilities such as roads and administrative offices.

The concept of anti-politics draws researchers' attention to development discourse and its lacunae, and to the (often unintended) effects of development interventions. For development practitioners the implications of Ferguson's argument are far reaching: diligent efforts to improve development projects, learning from mistakes in order to reduce "failure" and enhance success merely oil the "anti-politics machine." They cannot solve underlying problems and may exacerbate them by strengthening the position of rapacious **elites** and authoritarian regimes (see **authoritarianism**). Ferguson argues that technical "development" interventions cannot improve peoples' lives: the fundamental problems can only be solved through political mobilization. His critics respond that technical interventions can help to reduce poverty, and "development," despite its flaws, is still an important vehicle for doing good. Some point to participatory methods and **community**-based initiatives as remedies, but it can be argued that these, too, have anti-political effects.

See also: accountability; governmentality; democracy; narratives of development; politics; postmodernism and postdevelopment; power and discourse; transparency

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apartheid

Apartheid was a system of racial segregation unique to the Republic of South Africa that lasted throughout most of the twentieth century. The word, "apartheid" literally means "apartness" in Afrikaans. The purpose of apartheid was separation of racial groups at different levels: Whites (of European ancestry) from non-Whites, non-Whites from each other; and among the indigenous African populations, one group from another on the basis of tribal affiliation. Non-Whites were made up of Africans (who constitute about 75 percent of the total **population**), Coloureds (people of mixed descent) and Asians (mainly of Indian ancestry). The Department of Home Affairs (a government bureau) was responsible for the classification of South Africans into different racial groups.

The 1913 Land Act, the 1936 Native Land and Trust Act, the 1952 Native Law Amendment Act and later amendments aimed to create a cheap, rural African labor force. The 1913 Land Act delimited specific areas for Black occupation and established the framework for segregation and later apartheid. The birth of apartheid policies in 1948, which was the extension of colonial practices by a Nationalist Government dominated by Afrikaans-speaking Whites, lead to the institutionalization of racial discrimination in South Africa that consolidated White domination and extended statutory racial separation.

The Population Registration Act and the Group Areas Act legislated in 1950 were central to forced removals in the urban areas that saw Africans as "temporary sojourners" in the cities and which ensured that past their useful working life they returned to the rural reserves. The Group Areas Act ensured urban segregation based on the specified population groups defined by the Population Registration Act. People residing in an area designated for a population group other than their own were forced to leave. Thus, the Group Areas Act promoted total segregation, the elimination of competition for space and resources, and the minimization of social contacts between the different racial groups. Other aspects of apartheid laws affecting social life included the prohibition of marriage between non-Whites and Whites; racially segregated facilities and social service provision; and the endorsement of White-only jobs. Also, several Acts (such as the Public Safety Act passed in 1953) were enacted to empower the government to declare stringent states of emergency and repress anti-apartheid protests and movements.

Another major component of apartheid's separate development policy was the Bantu Authorities Act passed in 1951, which established the foundation for ethnic government in African reserves, known as Homelands or Bantustans. These Homelands were independent states to which each African was assigned by the government according to their ethnic/tribal origin. All political rights, including voting, held by Africans were restricted to the designated Homeland. Only Africans with permits were allowed to reside in restricted areas demarcated for Whites. Such permits generally did not include the spouse or family of a permit holder. All Blacks were required to carry "passbooks" which contained fingerprints, photo and information on access to non-Black areas. Furthermore, Africans living in the Homelands needed passports to enter South Africa, making them foreigners in their own country. This system of encouraging predominantly male cyclical **migration** contributed to the break-up of family life among many Africans.

Both internal and external pressures were exerted on the South African government to repeal its apartheid laws. Some of the international pressures included socio-economic and political sanctions and restrictions. Together with domestic opposition and struggles, these pressures led to the eventual demise of apartheid's legal basis in 1990.

See also: authoritarianism; ethnicity/identity; politics; race and racism; state and state reform

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URMILLA BOB

appropriate technology

Appropriate technology (AT) is technology that is designed with the needs, values, and capabilities of the user in mind. As such, AT can mean many things to many people, partly because by definition it involves the idea that a technology "appropriate" to one set of circumstances is not necessarily appropriate for another. Usually AT refers to technologies and processes that are appropriate to the resources and needs of low-income communities, and therefore have the following characteristics: simple to apply; not **capital intensive**; not energy intensive; use local resources and labor; and nurture the environment and human health.

See also: intermediate technology; technological capability; technology policy; technology transfer

CLAUDIO O. DELANG

AQUACULTURE *see* fisheries

Arab League

The Arab League, or the League of Arab States, is a voluntary association of countries whose people mainly speak Arabic. Its aims are to strengthen ties between members and coordinate policies. The League was formed in 1945 by seven states: Egypt, Iraq, Lebanon, Saudi Arabia, Syria, Transjordan (Jordan since 1950), and Yemen. It now has twenty-two members, including the Palestine Liberation Organization (admitted in 1976). Egypt was excluded as a member in 1979 after it signed a peace treaty with Israel, and the League's headquarters was moved from Cairo to Tunis. Diplomatic ties with Egypt were renewed in 1987, and in 1989, Egypt was readmitted as a member and the headquarters returned to Cairo. The League is dissimilar to the international unions such as the **European Union** because the League does not aim for any significant level of regional integration, and the organization does not influence laws of individual states. The League's charter focuses instead on commercial relations, communications, **health** and cultural affairs. The League's charter also forbids members from using force against each other. The League was influential in limiting the Lebanese civil wars of 1954, and in creating the Joint Arab Economic Action Charter, which set out principles for economic activities.

See also: economic federalization

TIM FORSYTH

arms sales and controls

Arms sales and controls are relevant to development because of their influence on the incidence of **war** and **violence**; the international politics of **security**; and their impact on government spending. There is a growing tendency to classify arms into three categories: nuclear, chemical/biological, and conventional. The commonly heard name of Weapons of Mass Destruction (WMD) may include nuclear, chemical and biological weapons capable of killing many people at one time.

Efforts to control nuclear proliferation since the **Cold War** are directed in two directions: first, restricting the number of states (see **state and state reform**) having a nuclear capacity; and, second, limiting the size and strength of those nuclear arsenals. The USA, Russia, China, France and the UK are nuclear powers; India and Pakistan joined this group during the late 1990s. Other states suspected of developing nuclear capacity include Iran, Israel, North Korea and Algeria. Iraq's nuclear program was halted and dismantled after the 1991 Gulf War.

During the Iran-Iraq war of the 1980s, chemical weapons were used and Iraq also used poison gas against its Kurdish minority in 1988. Since the attacks against the USA on 11 September 2001, fear of terrorist activity has grown and there are concerns about the use of chemical and/or biological weapons from groups such as Al Qaeda. As the component materials of such weapons have commercial uses, however, it is difficult to implement controls and monitor activity effectively.

By contrast, conventional weapons are widespread. By the late 1990s, weapons production was in excess of states' defense procurement and this, coupled with sales of surplus weapons by states in need of hard currency, has led to a glut of weaponry for sale. **Oxfam** (2001) estimates around 500 million small arms alone in circulation. The prevalence of arms sales to differing factions in civil **wars**, or to oppressive states (see **authoritarianism**) are crucial contributory factors to **famine**, and the emergence of short-term **food** shortages and movements of **refugees** may result from the conflicts that occur partly because of the supply of arms from abroad. **Landmines** used in conflicts such as in Cambodia and Vietnam have claimed thousands of innocent lives years after the formal end of conflict. Classically, some governments in developed countries would face political pressure at home by being tempted to make arms sales to governments overseas, and hence support the domestic arms industries, while also being criticized for allowing the spread of weapons.

Treaties and conventions, both bilateral and multilateral, have been used to control arms transfers and limit stocks of WMD and conventional weapons. The 1968 Nuclear Non-Proliferation Treaty was revised in 1995 and almost all states are signatories. The problem of landmines is the subject of the Ottawa Treaty of 1999. A number of **non-governmental organizations (NGOs)**, such as Campaign Against the Arms Trade, campaign for states to adopt international agreements on arms sales and controls which can then be used as a basis for measuring compliance.

The United Nations' Register of Conventional Weapons was created to promote **transparency** on arms transfers and holdings, being a voluntary disclosure procedure in which states register their annual sales and acquisitions. The Register only has information about imports and exports and does not include acquisition from domestic producers. Furthermore, there has been little participation, particularly by states from the Middle East (see **United Nations**).

States have traditionally been the purchasers of weapons but, since the end of the Cold War, other groups have found it easier to buy arms. Despite export controls, the market for arms has become more open, in part because of overcapacity. Also, until export controls are universally adopted and applied, the potential for unrestricted sales remains.

See also: complex emergencies; famine; landmines; military and security; post-conflict violence; torture; war

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CLARE MILLS

ASEAN *see* Association of Southeast Asian Nations (ASEAN)

Asian crises

In the second half of 1997 and throughout 1998, most Asian economies were struggling to contain their worst-ever economic crisis. The crisis came just about four years after the **World Bank** praised the spectacular **economic development** in East Asia as a "miracle." In July 1997, Thailand became the first casualty of the crisis when its finance minister declared that its fixed foreign exchange regime (see **exchange rates**) could no longer be maintained. In the ensuring months, the currencies of most Asian economies fell drastically in their value against the US dollar. What started as currency speculation in Thailand spread rapidly throughout Asia to bring down the foreign exchange regimes of Indonesia and South Korea. All three economies subsequently turned to the

International Monetary Fund (IMF) for financial assistance. Other Asian economies witnessed the downward dwindling of their currencies, stock markets and real estate prices within a very short period. By the end of 1997, most Asian economies suffered from severe interruptions to their industrial production and domestic consumption and economic recessions followed.

Like the Great Depression in the 1930s, different explanations have been offered to unravel the complex origins of the Asian economic crisis. On the one hand, neo-liberal market followers (see **neo-liberalism**) have argued fiercely that for decades Asian governments have engaged in an interventionist form of **economic development** that disables the market mechanism. This so-called "crony **capitalism**" perspective seeks to explain the origins of the crisis in relation to government interventions that breed cronies through personal favors of powerful politicians and increase the likelihood of "moral hazard" – a term used by such economists as Paul Krugman to describe the fact that governments in developing economies often bail out failed businesses by favored cronies. As a result of these government interventions, so the argument goes, most cronies in Asian economies engaged in excessive borrowing of foreign debts denominated in US dollars that in turn put tremendous pressures on domestic currencies and eventually triggered the currency speculation and the financial crisis.

Defenders of the **developmental state** in Asia, however, have counteracted the neo-liberal argument by asserting the fact that government interventions had already existed throughout the three decades preceding the crisis and, yet, the crisis broke out only in 1997. They have argued that government interventions cannot be the cause of the crisis. Instead, the global financial architecture and the unhelpful prescriptions of the IMF have been blamed. Robert Wade – a highly vocal proponent in this genre of explanation – put the blame what he calls the "Wall Street-Treasury-IMF complex" (also see **Washington consensus**) that sought relentlessly to expand their corporate and political interests throughout the world by forcing Asian economies to liberalize prematurely their financial markets (e.g. full capital account convertibility). This process greatly increased the **vulnerability** of Asian financial markets and exchange regimes to speculations by global investors. Jeffrey Sachs, another highly visible figure from Harvard, pointed the finger at the ways in which the IMF prescriptions in the form of **structural adjustment** programs had aggravated the situation and deepened the crisis. Whatever perspective one takes, it is clear that the crisis has enormous impacts on the life of ordinary citizens in most Asian economies.

See also: contagion effect; economic development; exchange rates; international economic order; International Monetary Fund (IMF); neo-liberalism; stock markets; Washington consensus

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Asian Development Bank (ADB)

The Asian Development Bank (ADB) is a multilateral development finance institution with a pledge to reduce **poverty** in Asia and the Pacific. It aims to help improve the quality of people's lives by providing loans and technical assistance for development activities in countries in the region. Its charter calls on ADB to favor small, vulnerable economies, while encouraging regional and subregional cooperation. The ADB was established in 1966 with 31 member countries. By 2003, this had risen to 61 members, mostly from the region, with the ADB headquarters located in Manila, Philippines. The ADB maintains close working relationships with other **international organizations and associations** such as the **World Bank**,

International Monetary Fund (IMF), and the **United Nations**, yet remains independent from them. The President of ADB is elected by a Board of Governors, ADB's highest policy-making body, which meets annually and is composed of one representative from each member country.

See also: multilateral development banks (MDBs)

SARAH TURNER

Association of Southeast Asian Nations (ASEAN)

The Association of Southeast Asian Nations (ASEAN) was established on 8 August 1967 in Bangkok by five original member countries: Indonesia, Malaysia, Philippines, Singapore, and Thailand. Brunei Darussalam was to join in 1984, Vietnam in 1995, Laos and Myanmar in 1997, and Cambodia in 1999. The aims of ASEAN, spelt out in the ASEAN Declaration, are to accelerate **economic growth**, social progress and cultural development in the region, and to promote peace and stability. The highest decision-making body within ASEAN is the Meeting of the ASEAN Heads of State and Government, held on an annual basis. The Secretary-General of ASEAN, mandated to initiate, advise, coordinate, and implement ASEAN activities, is appointed on merit and serves a five-year term. In 1994, ASEAN established the ASEAN Regional Forum drawing together twenty-three countries to maintain peace and stability in the region and to promote regional development and prosperity.

See also: economic federalization

SARAH TURNER

asylum seeking

An asylum seeker is an individual who crosses an internationally recognized border and makes an application to be granted refugee status. The words "asylum" and "refugee" (see **refugees**) are often used interchangeably, but have different outcomes. A refugee may be an individual who has experienced **displacement** or who has been forced to leave their usual site of residence. An asylum seeker, however, can only apply for refugee status in a country that is signatory to the 1951 United Nations Convention on the Status of Refugees (and its 1967 Protocol). If the person's application is accepted under the terms of the Refugee Convention, the person becomes a refugee. Whereas a refugee can apply for refugee status prior to arrival, the asylum seeker has to be physically present in the country where asylum is being sought.

Asylum seekers and host governments have different obligations under the 1951 Convention. Seekers have to show that the application is based on a well-founded fear of persecution under the conditions set out in the Convention. State (see **state and state reform**) parties to the Convention are also committed to certain rules when considering asylum applications. The most important rule is *non-foulement*, meaning not returning a person to a country or place where the person's life would be in danger or at risk. This rule has acquired the principle of customary **international law** and hence is applicable to non-state parties to the Refugee Convention. When a person's refugee status is recognized, there is an entitlement under the Convention to a travel document and protection against discrimination on grounds of race (see **race and racism**), **religion** or country of origin. The person is also entitled to other rights concerning **education**, **employment**, state benefits and **health** care.

There is considerable variation between states in how asylum applications are processed. In general, illegal entry into a country should not be used by a state party to the Convention as a reason for not considering the merits of the asylum application. In some countries, all asylum seekers are held in detention while their applications are processed. The detention of asylum-seekers is controversial and one which is discouraged by the **United Nations High Commissioner for Refugees (UNHCR)**. Most states use detention in certain circumstances, most commonly where states seek to protect national **security** and public order, or where asylum-seekers arrive without documentation and time is needed to establish their identity.

Under the Convention, certain categories of people need not be afforded international protection. These categories include people who have committed certain types of **crime** specified in the Convention, including crimes against peace, war crimes, crimes against humanity, or serious non-political crimes outside the country of refuge. Crimes committed in the country of refuge are the subject of **domestic law**, though some may give cause for removal.

See also: citizenship; displacement; international law; international migration; refugees; stateless people

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ATOMIC ENERGY *see* nuclear energy

authoritarianism

Authoritarianism applies to a broad range of non-democratic forms of government, from brutally oppressive regimes, personal dictatorships and one-party systems, to varieties of oligarchic forms of institutionalized, or "soft" authoritarianism. All share an effective lack of popular political participation or participatory **governance**. As a form of government, authoritarianism is inherently unstable and requires any or all of the following to support it: a charismatic and politically adept leader; a monopolization of the routes to power; control of such key institutions as the military (see **military and security; politics**) and the support of **elites**. The decline of authoritarianism, whether initiated internally as in the case of Brazil, or through gradual change and compromise, as in the case of South Africa, often ushers in a process of democratization (see **democracy**). As with colonialism however (see **colonialism, history of; colonialism, impacts of**, the profound reach of authoritarianism into all parts of a country's social and political life, which likely includes structural changes to the constitution, the politicization of key institutions, and a restructuring of social relations, leaves a powerful legacy that continues to shape life in the post-authoritarian society.

Importantly, authoritarianism differs from "totalitarianism," famously characterized by Friedrich and Brzezinski (1965) as involving a totalist ideology; a single party committed to this ideology; and having control of the **media**, armed forces and institutions and therefore involving a planned economy. While totalitarianism was used specifically to delineate forms of governance within states allied to the former Soviet Union in the context of the **Cold War**, authoritarianism covers many different geographical settings. In all these settings, however, modern authoritarianism has characteristically been instantiated after the breakdown of traditional legitimacy. Definitions therefore tend to exclude the exercise of monarchical power as a more traditional form of governance.

Given this wide variation between different instances of modern authoritarianism, there have been many attempts to categorize "types" of authoritarian regimes. Linz (2000:54), for example, distinguishes between "the degree or type of limited political pluralism," and "the degree to which such regimes are based on political apathy and demobilization of the population or limited and controlled mobilizations." On this basis, there are five ideal types: bureaucratic-military authoritarian regimes; organic statism (institutionalized forms of authoritarianism); mobilizational authoritarian regimes in post-democratic societies; post-independence mobilizational authoritarian regimes; and post-totalitarian regimes. Huntington (1991) (see also **clash of civilizations**) more simply divides authoritarianism into three varieties: cases where the party monopolizes power and access to power must be through the party organs (such as the Soviet Union); military regimes that exercise power on an institutional basis (such as Peron's

Argentina); or personal dictatorships (such as Franco's Spain). Such characterizations fail to account for many experiences, however. Malaysia, for example, or Batista's Cuba (1952–9), can be better characterized as "authoritarian populist," with the formal institutions of democracy in place but tight media control and voter interference. It is more useful, therefore, to establish how authoritarianism operates as a particular arrangement of **politics**, and how this arrangement is socially constructed.

An instructive example of the relationship between authoritarianism and development is found in Latin America, where authoritarianism has dominated much of the continent's post-independence history. Based on this experience, O'Donnell (1973) characterized a number of Latin American non-democratic regimes as "Bureaucratic Authoritarian." Unlike the above characterizations, O'Donnell's model sought to link authoritarian forms of governance with their social and economic contexts. O'Donnell's thesis sparked a renewed wave of interest on what has come to be called the "new" authoritarianism, and while this characterization has subsequently been critiqued for implying an overly strong causal relationship between political economy and regime type, the attention it has drawn to the institutional structuring of authoritarianism remains pertinent.

There are at least four ways in which the form and function of authoritarianism intersects with the political economy of domestic and international modes of production, and the social and cultural milieu in which such relations may be constituted: institutions, ideology and identity, nationalism, and resistance. First, while authoritarianism usually involves a charismatic and politically adept leader, such individuals also rely crucially on the support of key **institutions**, such as the military and the church, which may have to become politicized in order to remain socially relevant. Second, authoritarian regimes invariably sanction a particular form of cultural identity that serves to support the official state ideology as well as the formation of an apparatus of political and cultural control. Third, authoritarianism therefore often has an important relationship to **nationalism**, which can provide the cohesive material required to fill the vacuum of popular consensus. The role of nationalism is particularly important in mobilizational authoritarian regimes such as Cuba under Castro. Finally, authoritarianism also begs the question of resistance and how transitions to more egalitarian forms of governance might take place. An authoritarian regime may be undermined internally or externally by a decline in the ruling power's support base, for example by the death of a leader, or through poor economic performance. Most usually, such changes lead to processes of democratization.

As with the experience of the transition from colonialism to **postcolonialism**, authoritarianism continues to affect post-authoritarian societies and therefore has a lasting impact on the development policies of many developing nations, from the poorest to the most dynamic. As a result, post-authoritarian democracies are noted for being particularly fragile. Authoritarianism therefore poses highly specific developmental challenges that must be taken in to account long after the formal collapse of an authoritarian regime.

See also: apartheid; democracy; elites; governance; military and security; politics

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SIMON REID-HENRY

auto industry

The auto industry specializes in the manufacture and assembly of passenger cars. Since the late nineteenth century it has played a key role in global economic development, not least because the auto industry is a major source of employment, value-added and technological learning. Even today, it remains the world's largest manufacturing industry.

Automobile production is predominantly located in Europe, North America and Japan, reflecting the industry's market-oriented character. Yet, the majority of recent growth in production capacity has taken place in a number of **newly industrialized economies (NIEs)** in Asia, Eastern Europe and Latin America. In part, this can be explained by the emergence of a handful of indigenous volume manufacturers, such as Hyundai, Proton and Tata (see **transnational corporations (TNCs) from developing economies**). Of far greater significance, however, have been the activities of large, transnational vehicle manufacturers headquartered in industrialized countries. Particularly since the early 1990s corporations such as Ford, Fiat and Toyota have invested heavily in creating and/or expanding production capacity in so-called "emerging markets."

One of the principal motives for these investments has been to establish a presence in local markets. Consumer demand for automobiles in developed countries has more or less stagnated. Exploiting market growth in rapidly industrializing economies, therefore, has become an important strategy for global majors such as General Motors (GM) and Nissan. What is more, by increasing production and sales of similar models across a larger number of countries, expansion into emerging markets has allowed vehicle manufacturers to secure economies of scale. Typically, this has gone hand-in-hand with a broader trend towards "commonalization," whereby firms share principal components between several markets in which they operate.

Most of the early plants established by **transnational corporations (TNCs)** in developing countries were little more than stand-alone, assembly operations. More recently, vehicle manufacturers have sought to integrate their foreign operations into regional networks, where they perform specialist functions as part of a spatial division of labor. An oft-cited example here is the regional integration of Japanese and US owned plants in Mexico into their wider North American production systems. This approach permits economies of scale by concentrating production in particular facilities and, moreover, for manufacturers to organize production systems in a way that best exploits the specific advantages of different locations.

Aside from shifts in the geography of production, one of the most far-reaching changes in the auto industry over the past decade has been the relationship between outside suppliers and vehicle manufacturers. Until recently, a large share of the components that go into making a car were purchased from numerous small-scale firms, manufacturing parts according to designs supplied by auto producers. Driven by the requirements of flexibility and cost competitiveness, auto manufacturers are increasingly sourcing components, sub-assemblies and entire modules from a smaller number of companies. The result has been the emergence of large, increasingly transnational "tier-one" suppliers, who not only take on greater responsibility for product development, but also the management and coordination of component supply chains comprising second- and third-tier suppliers.

See also: export-led growth; Fordism versus Toyotaism; iron and steel; transnational corporations (TNCs); transnational corporations (TNCs) from developing economies

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B

BABYMILK *see* corporate social responsibility (CSR); nutrition

BALANCE OF PAYMENTS *see* trade; World Trade Organization/General Agreement on Tariffs and Trade (WTO/GATT)

BAMAKO INITIATIVE *see* United Nations Children's Fund (UNICEF)

Bandung conference (1955)

The 1955 Bandung Conference in Indonesia was a meeting between representatives of twenty-nine African and Asian nations, with the aim of promoting economic and cultural cooperation (see **South-South cooperation**), opposing colonialism (see **colonialism, history of; colonialism, impacts of**), and urging neutrality between East and West during the **Cold War**. The meeting was organized by Indonesia, Myanmar (Burma), Sri Lanka, India and Pakistan. The meeting is seen to be the inspiration for the **non-aligned movement** in 1961, and eventually the **Group of 77 (G-77)**. Some notable speakers included Dr Mohammed Natsir, former prime minister of Indonesia and at the time head of Indonesia's largest political party, Masjumi, who called for "Pan-Islam" as a socialist and Islamic alternative to communism. Gamal Abdel Nasser of Egypt also laid the foundations for both Pan-Arabism and Pan-Africanism, and denounced the **United Nations** and the West for complicity in the **displacement** of the Palestinians from their homeland. Lebanese, Algerian, Tunisian and Moroccan delegates denounced French colonialism at the conference. China used the event to strengthen friendly relations with other Asian nations. Not invited to the conference were South Africa, Israel, Taiwan, South Korea, and North Korea.

See also: Cold War; Group of 77 (G-77); non-aligned movement; South-South cooperation

TIM FORSYTH

Basel Convention on hazardous waste

The Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal was adopted in 1989 and entered into force on 5 May 1992, under the auspices of the **United Nations** Environment Programme (UNEP). The main objectives of the Basel Convention are: transboundary movements of **hazardous waste**s should be reduced to a minimum consistent with their environmentally sound management; hazardous wastes should be treated and disposed of as close as possible to their source of generation; and hazardous waste generation should be reduced and minimized at source. In order to achieve these objectives, the Convention aims to control the transboundary movement of hazardous wastes; monitor and prevent illegal traffic; provide assistance for the environmentally sound management of hazardous wastes; promote cooperation between parties in this field; and develop technical guidelines for the management of hazardous wastes. As of July 2004, the Convention had 162 parties.

See also: environment; hazardous waste; trade

JONATHAN KRUEGER

basic needs

A "basic needs" approach to development focuses on providing access to the minimum income or items necessary to ensure the continuation of healthy life. Early social research on **poverty** sought to identify the idea of poverty with the concept of subsistence, understood as the minimum income necessary to ensure basic physical efficiency, such as **food**, fuel (see **energy policy**) and shelter (see **housing**). The idea of "basic needs" was extended in the 1970s to include a broader range of minimum needs. Basic needs were said to include not only the minimum needed to support a household's private consumption, but also a infrastructure of essential public and social services, such as **drinking water**, **education** and **primary health care**. The effect of including communal activities placed basic needs in the context of **social development**. The International Fund for Agricultural Development uses a Basic Needs Index to refer to social development, including access to education and **health**. The factors taken into account include adult literacy (see **illiteracy**); primary school enrolment; **population** for each doctor; **infant and child mortality**; access to health (see **primary health care**); access to safe water; and **sanitation**.

Needs are generally defined in the context of the society in which they occur. Even if needs are basic and universal, the processes through which they are recognized and met are necessarily social ones. The needs for food, clothing or shelter are determined only in part by physical circumstances; they also depend on the norms and standards that apply in different societies. Homelessness, for example, depends not only on access to housing, but on the alternatives to housing: squatting (see **squatters**) is permitted in some societies, and not in others. Moreover, some needs are relational. Educational attainment, for example, is essential to achieve the resources and opportunities that other people have, but levels of educational attainment depend on the levels of education elsewhere in society. (Literacy ceases to be a key indicator in a society where the test is possession of a high school diploma.) This means that the tests for basic needs shift as societies change.

The purpose of arguments about "basic needs" has been to extend the narrow focus on "absolute poverty" to include some of the social concepts favored by advocates of "relative poverty" (see **absolute versus relative poverty**). However, there are conceptual problems with the approach. Although the idea of basic extends a minimalist concept of subsistence, it does so only on a restricted basis. Some needs, like education and health, are treated as "basic;" others, like **security**, transport (see **transport policy**), or political **empowerment** are not. This seems arbitrary. A common approach to defining poverty is the

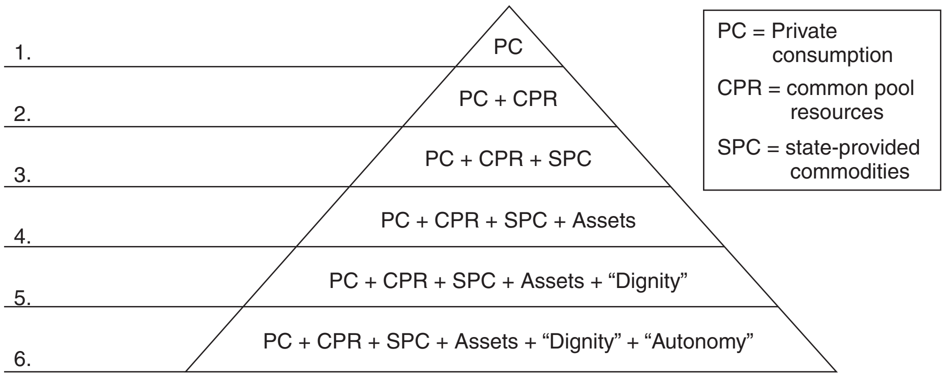

Figure 1 A pyramid of poverty concepts (after Baulch, 1996).

"poverty pyramid" (Baulch, 1996), which shows a variety of means of defining poverty according to diversifying the criteria from simple measurements of income, to concepts including social **empowerment**, **citizenship**, and support networks. See Figure 1. There are further problems in using the concept of basic needs for **poverty measurement**. Boltvinik (1998) argues, based on applications made in Latin America, that the numbers of people in poverty, and the severity of problems, appear to vary directly with the number and type of basic needs that are included in the assessment.

See also: absolute versus relative poverty; chronic poverty; human rights; measuring development; poverty; participatory poverty assessment (PPA); poverty measurement

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PAUL SPICKER

big push

The notion of the big push goes back to the work of Rosenstein-Rodan in 1943 concerning the **industrialization** of the relatively backward Eastern Europe. The term emphasizes the multisectoral nature of the economy and the links between different sectors. The concept argues that full industrialization may only take place when there is sufficient demand for traditional forms of manufacturing to be replaced by more efficient, highly industrialized forms of production. The "big push" refers to the efforts by the state both to invest in industrialization, and educate and encourage citizens to buy products, and become involved in assisting industrialization.

Murphy, Shleifer and Vishny (1989) present a modern version of this theory that acknowledges the creation of demand, but also includes coordination problems between various sectors in the economy; the role of intermediate inputs (services); and the possibility of multiple outcomes (or equilibria). The economy can come to a rest at a variety of points between an underdevelopment trap and full-fledged industrialization.

Other analysts have proposed two further distinctions. First, more attention should be given to **human capital** (or labor) as a means of generating growth; and second that a distinction must be made between a non-traded sector in the economy (purely for domestic consumption); a traded-good sector (e.g. manufacturing); and a purely exportable natural resource (see **natural resources**) or mineral sector. Human capital accumulation, in the form of an externality or indirect effect, takes place because of traded goods/manufacturing production only. Temporary rises in the price of exportable minerals – or so-called "resource booms" – retard the growth of the economy because it discourages or crowds out production in the traded sector. The stock of human capital is diminished as **employment** in tradable declines; this in turn hampers future production of all goods, and hence **economic growth**.

To illustrate this, Sachs and Warner (1999) examined a case where increasing returns to scale is permitted in either one of the two sectors of the economy (traded or non-traded), but not in both. They found that overall returns were increased when a range of intermediate inputs were made, which could then be employed in final production. They then questioned whether resource booms contribute towards big-push type industrialization, and found that they unambiguously expand the non-tradable sector, while at the same time shrinking the traded sector. If the expanding (non-traded) sector uses these intermediate inputs, it may contribute to a successful big push. However, if the traded sector uses the intermediate inputs, big-pushes are less likely.

See also: developmental state economic development; industrialization; modernization theory; natural resources; stages of economic growth

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bilateral aid agencies

Bilateral aid agencies are the official government organizations that coordinate Official Development Assistance (ODA), or **aid**, on behalf of donor countries in collaboration with host countries. About 70 percent of ODA is bilateral. Agencies can be ministries, but also local governments or executive agencies of donor states. In the 1990s, bilateral aid amounted to between US$35 and US$41 billion net. There are major differences between the donors. The largest donors in absolute terms are the USA ($11 billion in 2001) and Japan ($9.8 billion). The smallest donors of the OECD-countries are Greece, Luxemburg and New Zealand. Luxemburg though belongs to the largest donors (with Denmark, Norway, the Netherlands and Sweden) in relative terms. These five donors are the only ones to have reached the **United Nations** target (adopted in October 1970 on advice of the **Pearson Commission**) of 0.7 percent of **gross national product (GNP)**. Small donors (in relative terms) often have to spend a large part of their budget on multilateral aid (i.e. aid coordinated by more than one country), due to obligatory contributions. Large donors (in relative terms) often spend a large proportion of their budget through **non-governmental organizations (NGOs)**.

There are several motives for bilateral aid. Development assistance is not only determined by humanitarian motives such as compassion for victims of **famine** (see **humanitarianism**), or visions of a more equitable world; it is also determined by political, economic and environmental motives (see **conditionality**). Behind the political/strategic motive is the idea to bring or keep aid-recipients in the donor's sphere of influence or in its (military) alliances. Under this motive, aid can also be used to gain influence or, in its softest form, to make friends all over the globe. Politico-strategic motives obviously play a prominent role in the aid programs from the superpowers, but they can also play a role in the aid policy of smaller nations at times. The political/strategic motive is best reflected in donors' choices of aid-receiving countries.

A second motive is economic/commercial, especially relating to the expansion of trade or export markets from the donor country, or safeguarding the supply of raw materials for the donor. Aid can also be used to establish shipping or air treaties. In addition, aid can be applied to help reduce the impacts of downturns in cyclical economies when used to combat recession by providing goods and services from severely hit industrial sectors (for example transport (see **transport policy**), **iron and steel**, ship yards). Most donors have specific programs to promote investments from their national firms in developing countries, often organized via special financing corporations via mechanisms such as investment guarantees or pilot projects. The existence of this economic motive can be most easily identified by analyzing the back flow of aid, or the percentage of aid spent in the donor country itself on goods and services delivered to the aid recipients. This figure is not officially reported. Sometimes this motivation for aid can also be indicated by the types of aid program initiated within specific types of country.

The third determinant of aid programs is ethical/humanitarian. Various ethical considerations may be relevant here. The Christian commandment to "love thy neighbor," (see **Christianity; religion**) or socio-democratic or socialist solidarity with the poor and the oppressed are common motivations. In particular, Christian Democrat and Social Democrat Parties in the **European Union** are the bearers of these ideas, dubbed "humane internationalism" by some authors and seen as connected to the Rhineland-model of economic development.

A fourth motive is environmental. The rise of transboundary environmental problems and international environmental agreements (see **environment; Basel Convention on hazardous waste; climate change**) prompt some donors to invest in schemes of international **technology transfer** or environmental assistance.

In the 1990s, the question of **refugees** became a fifth determinant of ODA. Growing numbers of refugees, and governments' fear of receiving asylum seekers (see **asylum seeking**) in European and North American countries, began to influence aid to reduce the flow of refugees. In the early 1990s, this trend was seen in a shift of aid from Western European countries to countries of Eastern and Central Europe (see **postsocialism; shock therapy**). Haiti has also become more prominent in USA aid. The decision of the 1995 European Summit in Cannes to enter a major Mediterranean cooperation program reflected the desire to manage the flow of refugees, and to help stabilize domestic politics in partner countries.

The value given to different motives for aid is influenced more by the power relations in the donor countries themselves than by international relations, or socio-economic developments in the aid-receiving countries. The ideologies and socio-economic influence of various agents within the donor country (such as diplomats, international firms, NGOs, churches) will shape the regulation of the aid program.

There are also questions of how different bilateral aid agencies are organized. Some countries such as the UK have a minister for International Development with a specific government department. Others countries, such as the Netherlands and Denmark, have a minister and a directorate for international cooperation within the ministry of foreign affairs. Sweden and Norway have a minister, a directorate for international cooperation within the ministry of foreign affairs and an executing agency to implement the program. The Southern European countries generally have a secretary of state for international cooperation and an implementing agency, but aid is disbursed via several ministries, chiefly including the ministry of finance or the ministry of economic affairs and finance. In the USA, there is no cabinet post for development cooperation. The National Security Council and State Department take all important policy decisions. USAID (the United States Agency for International Development) is the implementing agency, although this organization carries relatively less power than some of the European departments.

Since the 1970s, most bilateral aid agencies have evaluated their work. The Northern European and Anglophone countries are most open in their evaluation policy (see **accountability; transparency**). Different aid programs can be evaluated on various grounds. But critics agree generally that, if largely the donor's interests determine aid, then major failures can be found easily.

See also: aid; aid effectiveness and aid evaluation; accountability; conditionality; emergency assistance; European Union; food aid; humanitarianism

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biodiversity

The word biodiversity is a contraction of "biological diversity," meaning the variety of life on Earth, ranging from genes and bacteria to ecosystems and landscapes. On one hand, biodiversity has stimulated attempts to measure and conserve landscapes around the world. On the other, it has been written off as a buzzword, and a biological form of modern-day imperialism.

Concern about the accelerating loss of global species and **habitats** was voiced throughout the late 1970s. In the 1980s, conservation biology emerged as a discipline that explicitly addressed the conservation of biological diversity. While the exact number of species being lost was unknown, it was generally accepted that human-induced (rather than natural or background) extinctions were occurring, due to the increasingly visible destruction of natural habitats on a global scale. The **deforestation** of equatorial regions (the Earth's most biodiverse habitats) was the major cause for concern. By 1989, rainforests were reduced to 55 percent of their maximum extent during the Holocene era (i.e. 10,000 years ago to present), with annual rates of loss doubling between 1979 and 1989, to as much as 2 percent a year. Similarly, extinctions of plant species, although limited, were unprecedented in the geological record.

In response, the US National Academy for Science organized a forum for leading conservation biologists on biological diversity in Washington in 1986, coining the word "biodiversity" for its title. The forum attracted a huge amount of scientific and popular attention, and Edward Wilson, a leading evolutionary biologist and one of *Time* magazine's twenty-five most influential Americans in 1996, edited the forum's proceedings that appeared in 1989 under the title *Biodiversity*. In it, the world's leading biologists set out a comprehensive case for biodiversity conservation, arguing that great losses have already occurred, which will have drastic consequences if they continue unchecked. They suggest that the human race has an obligation to conserve biodiversity on moral grounds (as our living companions), economic grounds (for the potential benefits to agriculture, medicine and industry), and survivalist grounds (because the atmosphere, soils, food chains and so forth that we depend upon are maintained by ecosystems of diverse species).

The forum provided a springboard for further negotiations at the Rio **Earth Summit (1992) (United Nations Conference on Environment and Development)**, and the presentation of the **Convention on Biological Diversity (CBD)**, which received 168 signatures during the year following the summit. The CBD constitutes a legally binding agreement between signatories to protect their biodiversity, defined in Article Two as the "variability among living organisms from all sources including, *inter alia*, terrestrial, marine and other aquatic ecosystems and the ecological complexes of which they are part; this includes diversity within species, between species and of ecosystems." This definition was intentionally inclusive, reflecting the global dimensions of ecological change. However, its inclusiveness raised questions about how best to conceptualize, measure and conserve biodiversity.

Biodiversity can be conceived of ecologically, organismally, and genetically, with each comprising a series of scaled elements (Gaston and Spicer, 1998). Ecological diversity covers biomes, bioregions, landscapes, ecosystems, habitats, niches and populations; genetic diversity includes genes, chromosomes, populations and individuals; while organismal diversity covers the taxonomic divisions of kingdoms, phyla, families, genera, and species. However, some of these terms are more easily defined than others. While genetic material such as chromosomes form discrete units that are readily identifiable, ecological concepts like populations defy clear definition in either spatial or temporal terms. Furthermore, exact definitions of elements such as species, habitats and ecosystems do not exist. Habitats and ecosystems are as much conceptual tools as observable units in reality, while species can be defined variously by evolutionary lineage, morphological similarity, biological compatibility and so forth.

Each criterion produces different classifications, which affect how biodiversity is measured and conserved. Discerning the absolute biodiversity of an area is impossible, because theoretically there are an infinite number of potential measures. Accordingly, surrogates are adopted as being representative of overall diversity. Species richness is the most commonly used surrogate measure, because large numbers of species indicate genetic, organismal and ecological diversity. Furthermore, large amounts of data already exist about the distribution of species, as they are relatively easy to measure compared to, say, chromosomes or landscapes.

However, while approximately 1.4 million species have been given scientific names, global taxonomy remains in an elementary state, and this figure represents little more than a scratch on the surface of overall species diversity. The best estimates of evolutionary biologists place the number of tropical insect species alone at between 10 and 80 million, and the number of species on the planet is not known even to the order of magnitude (current knowledge places it at between 10 and 100 million). As a result, the exact rate of biodiversity loss is unknown (according to the World Conservation Monitoring Center, estimates vary between 1 and 11 percent per year since 1975), and the amount of biodiversity already lost is a matter of speculation, as opposed to scientific fact.

Similarly, the actual effects of biodiversity loss upon ecosystem processes are not fully known, and a number of potential relationships exist. Biodiversity conservation assumes that stable ecosystems are typified by increasing diversity, and that a reduction in species diversity will cause a corresponding reduction in ecosystem productivity. However, species can also act like rivets holding an ecosystem together, and while some are expendable with little effect, the loss or removal of others can be catastrophic. Along similar lines, the redundant species hypothesis suggests that some species reduction may have little effect, as many functions are performed by more than one species. Non-equilibrium concepts have gained ground in ecology over the 1990s (see **environment**), with competition displacement theories arguing that because ecosystems become ossified under hyper-stable conditions, low-level disturbance may actually maintain or increase species diversity by displacing dominant species, creating new niches and introducing new competitors.

While the term's flexibility has lent it popular and political appeal, the considerable uncertainties surrounding its definition and measurement of biodiversity have led some to criticize its scientific credentials. Perhaps because of this, the CBD has applied the **precautionary principle** to conservation, focusing upon the creation of proactive policies across a range of political and economic activities that extend well beyond the realm of science. Article One of the CBD states that its objectives are to conserve biological diversity, and to pursue "the fair and equitable sharing of the benefits arising out of the utilization of genetic resources." The policy framework for conserving biodiversity consists of a hierarchy of species and habitat action plans drawn up at the national, regional and local levels. These action plans are now being implemented in signatory countries, and translate the global aims of the CBD into local actions designed to effect change across the political, economic and social arenas, in accordance with the **Agenda 21** blueprint. However, the emphasis of the CBD upon conserving biodiversity through the utilization of genetic resources has provoked controversy.

The CBD emphasized the need for a legal, political and economic framework for patenting and trading genetic material (see **intellectual property rights (IPRs)**). This aspect of biodiversity has serious developmental implications, because the vast majority of the world's remaining biodiversity (both known and unknown) is concentrated in developing countries (due to the latitudinal rule, whereby biodiversity increases towards the equator). By creating a market for biodiversity, **transnational corporations (TNCs)** from richer developed countries are able to procure environmental resources through **bioprospecting**, at the expense of **indigenous peoples**. Organisms from the developing world can be patented as **biomedicines** and biotechnologies (see **biotechnology and resistance**), and marketed in the West with no benefit accruing to the country of its origin, while agricultural plants can be patented, modified and then sold back to economically disadvantaged farmers at a profit.

These practices constitute a form of **biopiracy**, or biological imperialism, with many commentators claiming that the CBD represents a form of green developmentalism, extending existing global economic and political inequalities into the ecological sphere. While the USA did not sign the CBD, claiming that there was insufficient provision for genetic resource patenting and trading, these debates are increasingly implicated in political and popular disputes over global **terms of trade**.

See also: Cartagena protocol on Biosafety; Convention on Biological Diversity (CBD);

deforestation; biopiracy; bioprospecting; environment; sustainable development

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BIOGAS *see* renewable energy

biomedicine

Biomedicine is concerned with alleviating human suffering, **disease eradication**, and countering **mortality**, as commonly practiced in hospitals worldwide. Biomedicine is based on the conception of the body being a complex biological machine. Practices involve a diagnosis and treatment of patient's symptoms (both in mental and physical health), within settings that implement professional rules of conduct and international health policy guidelines. However, cross-cultural studies clearly demonstrate that biomedicine is not objective or universal as claimed, and they acknowledge the hegemonic character of biomedicine and its foundations in Western knowledge. For instance, disease is perceived as a biologically defined symptom of abnormality in the body, however the social construction of disease (see **disease, social constructions of**) establishes the subjectivity involved therein. A very political critique of biomedicine had emerged in the 1960s, and it involved the recognition of the linkages between **health** and development, and **health and poverty**. These simultaneously recognized the diversity and efficacy of **indigenous medicine** as alternatives.

See also: disease eradication; disease, social constructions of; health; health and poverty; indigenous medicine; nutrition; pharmaceuticals

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biopiracy

Biopiracy is an expression used to denounce **bioprospecting**. The term "biopiracy" articulates the perspective that **transnational corporations (TNCs)** and research institutions are "stealing" or "plundering" genetic material found in biodiverse regions in the developing world and leaving source countries and communities (see **community**) without benefits (see **biodiversity** and **Convention on Biological Diversity (CBD)**). Patents taken out in industrialized countries on plant resources traditionally used for food and medicine such as basmati rice, turmeric, and the neem tree in South Asia; and Ayahuasca, Cunani, and Tipir in the Amazons have been accused of biopiracy. Bioprospecting projects carried out without proper informed consent of the local inhabitants, traditional healers, and source country government or without a mutual agreement on equitable benefit sharing have also been strongly resisted as biopiracy. The movements to prevent biopiracy, led by **non-governmental organizations (NGOs)**, developing country governments, **indigenous people**, and traditional healers around the globe, have succeeded in revoking patents, halting bioprospecting projects, and installing strict research protocols for bioprospectors.

See also: biotechnology and resistance; biodiversity; bioprospecting; Convention on Biological Diversity (CBD)

CHIKAKO TAKESHITA

bioprospecting

Bioprospecting is a contraction of **biodiversity** prospecting, and refers to the endeavor to discover valuable chemical compounds and genetic material for pharmaceutical, agricultural, and industrial use from biological resources found in biodiverse regions. Proponents present bioprospecting as a desirable project that returns economic compensation to developing nations for providing biological resources and generates incentives to conserve biodiversity as a reservoir of genetic resources. Critics, however, regard bioprospecting as an exploitation of developing country resources or **biopiracy**. One of the first showcase bioprospecting projects is the 1991 agreement between Costa Rica's National Biodiversity Institute (INBio) and the pharmaceutical company Merck and Co., in which part of the commission paid by Merck to INBio for biological samples was allocated specifically to nature conservation efforts. The largest public initiative on bioprospecting is known as the International Cooperative Diversity Group funded by US government agencies and conducted by multiple institutions from the US and host developing countries.

See also: biodiversity; biopiracy; Convention on Biological Diversity (CBD); environment

CHIKAKO TAKESHITA

biotechnology and resistance

Biotechnology usually refers to modern biological techniques, especially genetic engineering, and their products. Agricultural biotechnology now almost exclusively refers to **genetically modified organisms (GMOs)**. In popular debates, however, it is sometimes used to refer to the entire human history of biological intervention – including such practices as yoghurt fermentation, beer brewing, and bread-making. In that vein, a widespread definition of biotechnology may be "any technique that uses living organisms (or parts of organisms) to make or modify products, to improve plants or animals, or to develop microorganisms for specific uses." A more apt definition, however, may also acknowledge the recent commercial impetus behind biotechnology: "the application of organisms, biological systems or biological processes to manufacturing and service industries."

Many genetically modificed (GM) products in **agriculture** entered commercial cultivation during the 1990s, mainly in North America, Canada and Argentina. Long before **commercialization** began, the entire technological trajectory provoked a wide-ranging debate, and GM products have not always been seen as legitimate or socially acceptable. According to supporters, GM crops offer essential tools for environmentally-friendly products, greater productivity and the means to increase **food** production, especially in developing countries; therefore society faces the risk of foregoing these benefits. According to critics, however, biotechnology will aggravate the problems of intensive **monoculture**, as well as imposing new hazards; therefore the technology poses the risk of precluding beneficial alternatives.

The controversy has been further fuelled by the decisions of the USA and EU that patents can be authorised for genes inserted into GM crops. Patent-holders can charge farmers royalties (or sue them) for re-sowing seeds; indeed, they have sought to extend such controls to some traditional varieties (such as basmati rice or the neem tree in India) which produce substances similar to GM ones. For advocates of greater patent rights, "**biopiracy**" means violations of those rights, and hence rights are essential for protecting the investment in "biological inventions." For opponents of these rights, however, the patents themselves are seen as biopiracy, because they privatize mere discoveries and common resources, while deterring potentially beneficial innovations.

GM crops have become a focus for the wider debate over **sustainable development**. Proponents within industry have promoted GM crops as "high-input sustainable agriculture," offering chances to increase food production, decrease agrochemical usage (see **agrochemicals**), and preserve soil fertility (see **soil erosion and soil fertility**). Such actions also use less energy, help protect habitats, and make previously marginal environments (such as **drylands** or areas affected by **salinization**) more productive. Furthermore, proponents of GM crops point out the apparently degrading impacts of existing agricultural techniques especially through the use of **agrochemicals**.

Critics, however, argue that world hunger and environmental degradation do not result from the existence of marginal land or inefficient agriculture, but from other causes such as unjust forms of land use, maldistribution of food, and **war** disrupting cultivation. Environmentalists have also feared that **genetically modified organisms (GMOs)** may impact negatively on native flora and fauna via so-called "gene flow," or the transfer of GMO DNA via the spread of pollen. Similarly, GM crops that are herbicide or disease resistant may become persistent weeds if their seeds spread to unwanted locations. Local **biodiversity** may also be affected by the impacts of toxins within GMOs on non-target insect species, or by the need to use extra amounts of herbicide against GMOs when they are seen as weeds.

In recent years, more and more land has been converted from staple food crops to cash crops such as bulk commodities used as animal feed. Under pressures of **structural adjustment** policies, imposed by the **International Monetary Fund (IMF)** and **World Bank**, many developing countries have changed land use to ehance exports, including "higher-yield" seeds which have frequently remained vulnerable to pests or **drought**, and have reduced agricultural subsidies – thus allowing cheap imports to undermine their own production systems (see **green revolution**). GM seeds are consequently seen by some critics to assist the movement towards cultivating high-volume export crops, and hence exacerbate rather than alleviate problems of food sovereignty. For example, critics have claimed that the famous "Golden Rice" – a GM variety promising to overcome children's deficiency of vitamin A – is addressing a problem that emerged only since the adoption of industrialized agriculture, and the replacement of previous multi-cropping methods. Critics also point out that industrialized **agriculture**, including GM cropping, may extend the area of land under monoculture, and cheapen weed control, and hence undermine both **biodiversity** and **livelihoods** in places where weeds were formerly controlled by hand.

In Mexico, maize yields have been increased by using green revolution-type "modern varieties" with more purchased inputs. Moreover, under the **North American Free Trade Agreement (NAFTA)**, Mexico must accept imports of US maize which generally sells at lower prices, thanks to more favorable conditions and export-credit subsidies. Together, these developments threaten traditional methods of maize cultivation, including such practices as crop rotations, which help to control pests. An estimated 2.5 million households still cultivate maize on small-scale, low-input, rainfed farms. Market competition increases the pressures on peasants to abandon agriculture or else adopt intensive methods in order to survive economically. Critics claim GM crops embody such methods and thus threatens their livelihoods.

It is not surprising, then, that GM crops have encountered much resistance worldwide. When the transnational corporation, Monsanto (see **transnational corporations (TNCs)**), started shipping GM soya beans from the USA to Europe, European **non-governmental organizations (NGOs)** began catalyzing mass opposition against GM food. GM products were turned into a symbol of corporate control over the agro-food chain and its further **industrialization**. Public protest had diverse sources – for example, many French farmers counterposed their own skills in less-intensive cultivation methods; Italian smallholders regarded GM crops as a threat to local specialty crops; and British nature conservationists argued that broad-spectrum herbicides could harm wildlife habitats near farmland.

In response to the protest, European supermarket chains decided to exclude GM grain from their own-brand products. This commercial blockage, coinciding with greater scientific debate over agro-environmental hazards (see **science and technology**), led to more stringent regulation and long delays in decisions on further products. This situation also opened up opportunities for more extensive cultivation methods.

Several countries of the South also developed opposition movements against GM crops in the late 1990s. Long before then, some Indian farmers' organizations had been campaigning against hybrid seeds as a threat to farmers' control over their livelihoods. They opposed Monsanto's GM insecticidal cotton as a further step towards privatizing seeds; farmers in Andhra Pradesh symbolically "cremated" field trials. They also counterposed alternative means for farmers to improve seeds, to control pests and to remain independent of agrochemicals.

When the Brazilian government sought to approve commercial cultivation of Monsanto's herbicide-tolerant GM soya in the late 1990s, this was blocked by a broad coalition. Opponents include farmers who regarded GM crops as contrary to sustainable agriculture, as well as those seeking to preserve non-GM grain markets in Europe. A prime mover there has been the landless movement, Movimento de Trabalhadores Sem Terra, especially in Rio Grande del Sur. On occupied land they initially imitated chemical-intensive methods but have begun shifting to organic methods of cultivation. In all these ways, resistance to GM crops makes links with alternative agricultural models for sustainable development (see **agroecology**).

See also: agriculture; agrochemicals; Cartagena Protocol on Biosafety; environment; genetically modified organisms (GMOs); green revolution; science and technology; World Trade Organization/General Agreement on Tariffs and Trade (WTO/GATT)

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LES LEVIDOW

BIRTH CONTROL *see* family planning

BIRTH RATE *see* fertility

boreholes

Boreholes are deep wells sunk with small diameter drills to tap underground sources of water for use by people, **livestock** and **agriculture**. They are lined, and require a pump to bring up the water. They are sometimes referred to as "bores." The advantages of boreholes are to supply water to areas with few surface water sources, thus allowing settlement, livestock raising, and agriculture in areas where they would not have been possible. The disadvantages include: overcrowding of cattle, compacting soils, and degradation around boreholes in semi-arid and arid areas; disruptive changes in seasonal patterns of herding and associated conflict between groups; excessive draw-down from underground sources of water, leading to diminished supply of water in boreholes and other wells, and problems of **salinization**.

See also: agriculture; desertification; drinking water; drylands; irrigation; livestock; water management

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BOTTOM-UP DEVELOPMENT *see* participatory development; people-centered development

brain drain

A brain drain is said to occur when skilled and educated people migrate to more developed areas and the resultant loss is seen as being detrimental to the development prospects of countries or areas of origin. Such a situation may apply where the supply of the educated is small, and the economy is stagnant in origin areas. Where economies are more dynamic, as in parts of East Asia, the loss of the educated may have little impact on overall development and the later return of even relatively small numbers with enhanced skills and ideas is a contributory factor in promoting economic, social and political development. Consequently, brain gains and brain exchanges are critical in fostering development and, globally, are as important as brain drains. Even where the latter do occur, they can be offset by **remittances** sent back to home areas.

See also: education; human capital; international migration

RONALD SKELDON

Brandt Commission

The Brandt Commission (or Independent Commission on International Development Issues) was established in 1977 to "present recommendations which could improve the climate for further deliberations on North-South relations." Chaired by Willy Brandt, the former West German Chancellor, it produced the books *North-South: A Programme for Survival* (1980) and *Common Crisis* (1983). Their central theme was interdependence - the mutual international economic and political benefits of development and growth in developing countries. The reports therefore proposed greater financial and **technology transfer**s from the richer nations. Few would object to the sentiments expressed by the Commission, and some argue that it initiated positive changes and became a useful tool for those challenging world **inequality**. However, critics argue that the Brandt Commission had no powers to promote the implementation of its recommendations, and that it was merely a gesture in order to help neutralize the **Organization of Petroleum Exporting Countries (OPEC)** – and led demands for a new **international economic order**.

See also: inequality; inequality and poverty, world trends; international economic order; technology transfer

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Bretton Woods

Forty-four nations, led by the USA and Great Britain, met at Bretton Woods, New Hampshire between 1 and 22 July 1944 to discuss economic plans for the post-war peace. In reaction to the anarchy of the inter-war period, governments sought to secure world peace and prosperity through international economic cooperation. While the form in which this was proposed was based on neo-classical economic principles of a world market, in which capital and goods would move freely, it also encompassed Keynesian notions of regulation by global **institutions** in the interest of greater stability and predictability. Member governments signed a series of agreements that culminated in two regulatory institutions: the **International Monetary Fund (IMF)** and the International Bank for Reconstruction and Development, later known as the **World Bank**; The IMF dealt with **exchange rates** and balance of payments problems, while the IBRD at first gave loans for the reconstruction of Western Europe, and later switched focus toward developing countries in the South. The term "Bretton Woods" often refers to the entire system of institutions, agreements and regulations that governed the emerging global economy of the second half of the twentieth century.

See also: International Monetary Fund (IMF); neo-liberalism; World Bank; world economic conference (London, 1933)

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RICHARD PEET

brown environmental agenda

The "brown" environmental agenda refers to environmental problems associated with urban or industrial locations such as **pollution**, poor **sanitation**, and **waste management**. The term is used in contrast to the "green" environmental agenda, which describes environmental problems associated with vegetation and wildlife such as **biodiversity** and **deforestation**. The brown environmental agenda is also closely linked to debates in environmental health (see **environment and health**).

There is a consensus that "brown" environmental problems have received inadequate attention. According to **United Nations** statistics, 90 percent of global **population** growth occurs in cities, and by 2025, the urban population will be 5.2 billion, of which 77 percent will live in developing countries (see **urbanization; urban development**). **Mega-cities** such as Lagos, Mexico City, Shanghai and Cairo are set to contain tens of millions of people by 2010. This rapid growth has been associated with a variety of environmental health problems. In 1994, at least 220 million people still lacked a source of **drinking water** near their homes. There are some 1.8 billion episodes of diarrheal illness annually, causing the deaths of some three million (**World Health Organization (WHO)**, 1999). Pollution of both air and water is a growing problem within cities and factories, as the result of rapid urban growth and **industrialization**. One common hazard is indoor air pollution, caused by burning of dirty fuel, which is often not measured in macro-indications of air pollution at the city or national scale, and is often inhaled by the most vulnerable in society, including the very young and the very old.

Some analysts have proposed that the lack of attention to the brown agenda is because many environmental problems of cities and industrial districts (see **industrial district model**) are relatively new and hence poorly understood. Others have argued that the lack of attention reflects the class-based nature of environmentalism, and that much environmental concern (in the developed world at least) emerged contemporaneously with middle-class urban **elites**, who emphasized green concerns such as threats to wilderness and wildlife. This latter concern is added to by the general focus, to date, of environmental policy from **international organizations and associations** and international environmental **non-governmental organizations (NGOs)** on green issues during the 1970s and 1980s. Such organizations may also form alliances with elites in developing countries, who may also share these concerns, or even be industrialists, and hence may resist regulation of factories. The people most affected by brown environmental problems tend to be among the poorest inhabitants of developing countries, such as shanty town dwellers (see **shantytowns**), migrant workers, and **street children**, and therefore have little direct influence on the direction of environmental policy. Consequently, the important attention to the "green" agenda may not be matched by an equally powerful lobbying for the "brown" environmental agenda.

Analysts believe environmental problems in cities undergo two main stages over time. First, hazards include pathogens from human waste or bacteria- and insect-borne infections such as dysentery and cholera caused by poor **sanitation**, overcrowding and inadequate **water management** (see **water-borne diseases**). The second stage includes hazards resulting from **industrialization** and technological advancement, such as traffic fumes, heavy metal poisoning (such as from lead and cadmium), or threats inside factories such as solvent poisoning (solvents are highly toxic fluids used for cleaning, and if inhaled in sufficient quantity can kill within seconds). The World Health Organization estimated in the late 1990s that suspended particulate matter from vehicles and others sources in Mexico City contributes to 6,400 deaths each year, and unhealthy blood lead levels in 29 percent of all children. **World Bank** figures estimate that if particulate levels alone were reduced to WHO guidelines, between 300,000 and 700,000 premature deaths per year could be avoided globally.

Yet, the threat from such risks are also affected by institutional factors that increase **vulnerability** among **population**s such as **education** or the availability of **primary health care** and ambulances. For example, one major cause of infant mortality (see **infant and child mortality**) in developing countries is scalding from hot water. Better emergency care would radically decrease this number. Risks are also experienced disproportionately between social groups: many electronics factories employ a majority of women, for example (see **gender and industrialization**). Indoor air pollution may affect women and **children** more as mothers tending children often spend more time indoors. Some optimists have suggested that environmental problems in cities will decline over time as the result of increasing wealth leading to greater provision of infrastructure, transport (see **transport policy**), health care and regulations (see, for example, the arguments associated with the **Kuznets curve**). Yet, critics have suggested that attention to the institutional factors underlying **vulnerability** suggest that optimistic predictions about pollution overlook how risks are distributed socially, and hence that the elimination of hazards can only occur if social vulnerability is addressed first.

The incidence of brown environmental problems also changes over space as cities grow and become more developed. As pollution grows, many authorities are tempted to transport waste elsewhere by physically moving it in containers, waste pipelines, or by using high stack chimneys that can spread pollution in the atmosphere. Acid rain in Germany and New England, for example, has been blamed in part on industrial emissions in Britain. Waste dumps are often again based in land inhabited by poor and politically powerless people. Local authorities often lack the infrastructure, training or funding to collect all urban and industrial waste created under rapid **urbanization**, leading to such inadequate and dangerous dumping (see **waste management**). Other spatially related implications of the brown agenda include the emergence of **pollution havens** (or locations in developing countries that attract polluting industries because of comparatively less stringent environmental regulations and lower costs), and the international trade in **hazardous waste**.

International responses to brown environmental problems are increasing. The **Basel Convention on hazardous waste** of 1989 provided the first international restrictions on the transport of **hazardous waste**. The **United Nations** created a Sustainable Cities program in 1990, and the Habitat II conference (UN Second Conference on Human Settlements) in 1996 (see **Habitat I and II**) highlighted environmental problems. Some analysts are also optimistic that economic globalization – or increasing investment in developing countries by **transnational corporations (TNCs)** – will also decrease environmental problems. TNCs have often proved stricter than local manufacturers in implementing international standards, or may introduce new technologies that reduce certain forms of **pollution**, such as photovoltaic energy sources. Critics, however, have suggested that the success of these ventures depend on the measurement of hazards. Measurement of greenhouse gas emissions from factories may enable factories to adhere to some international standards, but it may not benefit local populations if the factories also emit water-borne waste that is not measured, or if **shantytowns** develop around factories with poor **sanitation** or health care. The **World Summit on Sustainable Development (Johannesburg, 2002)** also sought to address brown environmental problems such as **sanitation** and **water management**, yet set no formal targets. The WSSD also discussed the provision of environmental infrastructures through **public-private partnerships**, which has worried some environmentalists as this may mean depending on companies who – at other times – may also be responsible for pollution.

See also: environment; Habitat I and II; hazardous waste; environment and health; Kuznets curve; pollution; pollution havens; sanitation; shantytowns; sustainable development; transport policy; urban development; urbanization; vulnerability; waste management; water-borne diseases; water management

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TIM FORSYTH

Brundtland Commission

The World Commission on Environment and Development, more commonly known as the Brundtland Commission after its chair Gro Harlem Brundtland, the former Norwegian prime minister, was established in 1983 on the recommendations of the United Nations General Assembly (UNGAS) and charged with outlining a new agenda for development in the twenty-first century. This body was put together in response to the development and environmental crises of the latter part of the twentieth century, and asked to provide a broad policy framework to strengthen the ability of international political and economic **institutions** to promote development worldwide. The commission included development and environment experts, politicians and civil servants from twenty-one countries, over half of whom were from developing nations. After three years of work, the commission produced its now famous report, *Our Common Future*, which brought the term **sustainable development** to the forefront of the global environmental agenda.

See also: environment; sustainable development

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FIROOZA PAVRI

Bucharest world population conference (1974)

The United Nations World Population Conference was the first major international meeting to discuss **population** growth, and produced an important division between states that sought to control population growth by direct intervention in **fertility** trends, and those who urged longer-term **poverty** alleviation and **education** because "development is the best contraceptive." At the conference, the USA delegation (headed by Casper Weinberger, who later became President Reagan's Defense Secretary), proposed a "World Population Plan of Action," which urged population control on the grounds of environmental protection, **food** security, and **maternal mortality**. Many developing countries, however, opposed this plan, alleging it violated the sovereignty of developing states, infringed civil and religious rights, and would hinder **economic development**. The conference eventually adopted the World Population Programme of Action, which recognized that "all couples and individuals have the basic right to decide freely and responsibly the number and spacing of their children and to have the information, education and means to do so." Later conferences on population, such as Mexico 1984, and Cairo 1994 (see **Cairo conference on population and development**), urged the achievement of holistic development objectives and **reproductive rights** as well as contraceptives (**family planning**), thus recognizing that questions of population are best addressed by understanding individuals' (especially mothers') circumstances and rights, rather than through state directives (see **state and state reform**) without attention to the contexts in which individuals make decisions.

See also: Cairo conference on population and development; family planning; population; reproductive rights

TIM FORSYTH

build-operate-transfer (BOT) projects

Build-operate-transfer (BOT) projects are popular variants of **public-private partnerships** to deliver infrastructure facilities. They gained favor in the early 1980s in developing countries as a way to mobilize private investment into infrastructure sectors that remain under public ownership for political or structural reasons. Sometimes called a policy "soft option," they are a form of privatization that avoids politically controversial or impossible privatization of a whole public sector, enterprise or utility. Other variants include build-transfer-operate (BTO) and rehabilitate-operate-transfer (ROT). In some countries, the politically less palatable term build-own-operate-transfer (BOOT), which explicitly indicates a **property rights** relation is used instead of BOT.

BOT involves the private developer financing, building and operating an infrastructure facility for a concessionary period of between 10 and 30 years. During the concession period, the developer is given the right of ownership, charging users a fee for its product at a rate high enough to repay debt and to generate internal rates of return of up to 20–30 percent in high-risk developing countries. At the end of the concession period, the facility is transferred to government ownership at no cost to the government. Common BOT infrastructure projects include power stations (see **electrification and power-sector reform**), water treatment plants (see **water management; sanitation**), roads, railways, seaports, and airports. Less common are social infrastructure such as **housing** projects, **education** facilities, and hospitals.

In the developing world, the proponents of BOT include the international financial institutions (IFIs) and the BOT industry comprising international financiers and banks, large engineering corporations and consultants with specialist expertise on the complexities of BOT. Proponents argue that the approach brings private sector efficiency to public infrastructure provision. Under competitive tenders, which are not always the case, creative solutions to financing and technology result. Ostensibly, BOT also allows the **public sector** to transfer risks to the party best able to manage that risk. For example, in BOT projects the risk of construction cost and time overruns are assumed by the constructor. Ultimately, proponents hold that BOT allows governments to avoid greater levels of public debt in the provision of infrastructure.

However, critics hold that BOT projects contain significant, sometimes hidden, costs and risks for sponsor governments. Infrastructure projects involve large sunk costs that restrict developers' ability to move equity out of investments. The result is that both developers and financiers seek a range of onerous guarantees from the sponsor governments, leaving the latter with the bulk of the risks. Governments have provided guarantees on fuel supply, power and water off-take, and protection against foreign exchange movements. Governments providing such guarantees take on contingent liabilities that, in most cases, are not accounted for. These are potential liabilities with significant negative implications not only for national budgets, but also for intergenerational equity. For example, the 1997–8 **Asian crises** left the governments of Indonesia and the Philippines bearing the costs of power purchase guarantees denominated in US dollars for power which it could not sell as power market demand collapsed. The devaluation of their currencies escalated these costs and public power utilities such as the Philippines National Power Corporation have incurred unsustainable **debt**, forcing the government to sell off the Corporation in a bid to stem the losses.

An important category of risk in developing countries is sovereign or political risk. In the late 1990s, in order to catalyze greater levels of private investment and to protect developers and financiers against these risks, IFIs such as the **World Bank** began to provide subsidized guarantees called Partial Risk Guarantees (PRGs) in International Development Association countries considered by international credit rating agencies and financiers to have poorly developed regulatory and legal systems and less than transparent decision-making processes. However, critics argue that PRGs may in fact create a moral hazard by allowing governments to avoid the establishment of legal and regulatory systems that foster investor confidence under normal circumstances. Furthermore, BOT projects have reduced **transparency** and public oversight in comparison to publicly funded and built infrastructure because of the frequent claims by private-sector developers to commercial-in-confidence negotiations and concession contracts including government guarantees.

See also: electrification and power-sector reform; privatization and liberalization; public-private partnerships; public management; public sector; water management

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BUREAUCRACY *see* public management; public sector; state and state reform

Butler's model of tourism development

Butler's model of **tourism** development is a model that hypothesizes the development of tourist areas using an S curve, two axes of time and number of tourists. The model proposes five stages to tourism development over time and space: First, an *exploration stage* with few visitors and no tourism facilities. Second, an *involvement stage* with the establishment of facilities, and greater interaction between locals and increasing numbers of visitors. Third, a *development stage* of more control exerted by external organizations that impact on the area's physical appearance. Fourth, a *consolidation stage* when the rate of increase in tourist arrivals declines and influential economic franchises prompt opposition from locals. Fifth, a *stagnation stage* occurs during peak visitation, and when capacity levels are reached or exceeded causing environmental and/or socio-economic problems. Finally, tourist areas face four potential outcomes ranging from *rejuvenation* if they can overhaul or reinvent existing attraction(s) to *decline* if they cannot compete with newer attractions elsewhere. The model has been widely quoted in literature about tourism development, although academics and policy-makers have been keen to seek ways to avoid the prediction of tourism decline.

See also: ecotourism; tourism

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C

Cairo conference on population and development

The Cairo conference is the popular name given to the **United Nations** International Conference on Population and Development (ICPD) held 5–13 September 1994 in Cairo, Egypt. At the conference, delegates from 179 states, plus some **non-governmental organizations (NGOs)** and United Nations agencies gathered to negotiate an action plan on **population** for the next twenty years. The Cairo conference had a broad agenda on developmental issues, and considered the interconnectedness of population, **poverty**, **gender**, patterns of production and consumption (see **indicators of development**), and **environment**. The ratification of the ICPD Program of Action marked a turning point in the history of population studies, bringing reproductive health (see **reproductive rights**) and women's rights to the forefront of debate. The resulting 115-page conference statement emphasized the linkages between population and development and focused on meeting the needs of individual women and men rather than on achieving demographic targets.

See also: population

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capability approach

The capability approach consists of the concepts and framework developed by the Nobel Prize winning economist Amartya Sen for discussing **well-being** and **human development**. The approach underlies the United Nations Development Programme's work on human development (see also **Human Development Index (HDI)**). "Capability" refers to the range of valued life-options (including life-paths over time) that a given person can attain. The accompanying approach by the philosopher Martha Nussbaum uses the title "capabilities approach" since it emphasizes human skills and abilities and the priority of having a specific set of abilities and life-options.

A key theme in Sen's approach is that in addition to the types of information that are discussed in conventional **welfare economics** (notably: income, consumption, preference fulfillment, utility/satisfaction) various other types are important in normative discussions about **well-being**. In particular, the capability approach refers also to valued **functionings** and the capabilities to achieve those functionings (the "beings and doings" that constitute life-options). It refers to functionings because resource inputs, preference fulfillment and felt satisfaction are identified as unreliable proxies for the actual content of people's lives. The emphasis on capability reflects a belief that people should be able to achieve things of importance, and yet be free to pursue any or none of these, according to their wishes. Narrow versions of the capability approach add only these two categories (capability and functionings), or even consider them only; and the narrowest version considers capability alone, as in the slogan "development is the enlargement of the range of human choices" (see **freedom versus choice**).

Table 1 Different approaches to capability

Different concepts of capability, and alternative labels	An undeveloped human potential, skill, capacity	A developed human potential, skill, capacity	An attainable (set of) functioning(s), given a person's skills and the external conditions	A priority for attainable (and/or achieved) functioning
Sen's label		Capability (*de facto* usage)	Capability	Basic capability (occasional usage)
Nussbaum's label	Basic capability; innate	Internal capability	Combined capability (earlier: external capability)	Central capability, or (occasional usage) basic capability
Alternative label	P-capability (P for potential)	S-capability (S for skill)	O-capability, or option (O for option)	Priority capability/Basic need or basic right

Broad versions, including Sen's own work, acknowledge many other normatively relevant aspects.

The emphasis on capability may be described as liberal, but Sen goes beyond pure liberalism by insisting that priority capabilities and functionings are those which "people have *reason* to value." He holds further that in public prioritization, these reasons must be publicly shared and debated, and he leaves the listing of priority capabilities or functionings to these public procedures. In practice, all his policy work tacitly assumes a standard set of development priority areas, and of minimum levels to be achieved in them (e.g. literacy (see **illiteracy**), for the priority capability of understanding). Nussbaum, in contrast, presents an explicit priority list of relatively broadly stated capabilities, proposed as of universal relevance and comparable to universal **human rights**. The list needs to be interpreted and elaborated in particular contexts, but would set some limits to the operation of power in each context.

The capability and capabilities approaches offer one type of intellectual basis for human rights and for systematic answers to "rights to what?" human rights language provides appropriately strong terms for trying to ensure basic entitlements for people, and to convey that a person both has a right to a priority capability, *and* a right not to use that capability.

Sen adopted the term "capability" for a person's set of attainable life-paths, seen as a measure of the person's "positive freedom." This opportunity-oriented concept of capability differs from a more common everyday usage, of a capability as a skill or aptitude. Nussbaum helpfully distinguishes different meanings of capability, although other labels might be clearer than those she chose, as indicated in Table 1.

See also: capacity building; ethics; freedom versus choice; functionings; human development; human rights; technological capability; well-being

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DES GASPER

capacity building

Capacity building encompasses a variety of strategies that improve the effectiveness, efficiency and responsiveness of various development agents. Initially, it was used to refer to the upgrading of government and **public sector** institutions. More recently, the term has also included strengthening local organizational capacities of intermediary **non-governmental organizations (NGOs)**, service providers, **community**-based organizations (CBOs), and development **aid** recipients. When referring to the local organizational capacity of CBOs and aid recipients, the term connotes reinforcing the ability of people to trust one another, mobilize resources, resolve conflicts, and work together on common problems (see also **social capital**). Capacity building is about enabling people to rediscover their strengths and limitations, and empowering them to take control of their lives and develop their fullest potential. The **United Nations Development Programme (UNDP)**, for example, defines capacity building as "the process by which individuals, organizations, institutions and societies develop abilities (individually and collectively) to perform functions, solve problems and set and achieve objectives" (UNDP, 1997:3). Hence, capacity building is seen as closely related to the concepts of **civil society**, local participation (see **participatory development**), **empowerment**, good **governance**, and **social capital**.

Some development experts prefer the term capacity development or capacity enhancement instead of capacity building, suggesting that the challenge is one of strengthening existing capacities rather than creating new ones. More generally, development practitioners tend to use capacity development, capacity building and capacity enhancement interchangeably when tasks may include supporting, reforming, or creating activities that result in better governance and organizational abilities. Others, however, view capacity building to occur more at the meso- (institutional) and micro- (project) levels, while capacity development implies changes at the macro-level systems and structures of **institutions** and **environment**s. Capacity building and capacity development therefore emphasize complex learning (see **social learning**); long-term changes in human behavior, attitudes, values and relationships; adaptation and organizational change at all levels of society to support systemic sustainable improvement and meet new development challenges. They are generally seen as forms of **people-centered development** and tailored to the needs of recipient countries or organizations to plan and manage their own affairs, rather than serve the agenda of external donor agencies.

Widespread interest in capacity building grew out of neo-liberal economic reforms (see **neo-liberalism**) and discourse of **sustainable development** during the l980s, and the post-**Washington consensus** in the 1990s that accompanied public discontent with dominant approaches to development aid. The historical origins of the term, however, are deeper and reflect a complex synthesis of management, political and economic approaches. They can be traced historically to the 1950s and 1960s emphasis on nation-, state- and institution-building (see **state and state reform; institutions**) that accompanied the **decolonization** period. In the late 1960s and early 1970s, development practitioners realized that **institutions** were falling short of expected performance. The idea of **development management** emerged in the late 1970s to stress the government's and state sector's developmental responsibilities, especially towards the poor. In the early 1980s, the concept of institutional development was resurrected to show concern for the broader activities and contributions of the private sector and NGOs to development efforts (see **public-private partnerships**). International organizations such as the **World Bank**, **bilateral aid agencies** under the **Organization for Economic Cooperation and Development (OECD)**-DAC and the **United Nations Development Programme (UNDP)** since the 1990s have pushed for "capacity development" and/or "capacity building" as a new orientation in development assistance linked to the concept of good **governance**, and aiming to increase **accountability** of aid.

Capacity building, however, has had its critics. Some observers have claimed the term is used too universally and rhetorically, and hence is all encompassing, a slogan empty of meaning, and thus analytically and practically useless. Others reject some assumptions as patronizing: e.g. that the capacities of the poor, local NGOs and developing countries in general have yet to be built or developed. Capacity building also raises a number of questions about what exactly governments and the **public sector** should be responsible for, *vis-à-vis* the private sector, NGOs and CBOs. For example, whose capacities are to be built, which capacities, where and at what level, who will develop them, and how? Consequently, proponents of capacity building often find themselves needing to define the term. Other organizations (e.g. World Neighbors, 2000) produce guidebooks, indicators, measurements, and training manuals on capacity building using **participatory development** approaches.

See also: aid; civil society; empowerment; institutions; participatory development; public-private partnerships; social capital; social learning

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capital flight

Capital flight commonly refers to the outflow of private funds from a country on a scale that negatively impacts on the vitality and stability of its national financial market. In broader terms, capital flight may also describe any outflow of wealth-producing resources (i.e. capital) that is sufficiently large to detrimentally affect a country's rate of **economic growth** and development.

Much research on capital flight has tended to focus on developing countries, especially following the 1980s **debt** crisis. But capital flight has also occurred in developed countries, and hence is not necessarily associated with general levels of **economic development**. A fuller and more correct understanding of capital flight in its financial form associates it with investors' perceptions of domestic economic, political, and social conditions which lead them to remove their capital to more financially attractive foreign markets. Usually, such destinations are "safe havens" for capital where they are promised low or zero taxation on their investment earning (see **offshore finance; fiscal and monetary policy**).

Not surprisingly, capital flight is most frequent when **exchange rates** are unstable and a country's currency undergoes devaluation, the two conditions combining to reduce returns on investment. If investors, both domestic and foreign, perceive that their investments in a country's economy will earn them less than they get elsewhere, they will remove those investments to more profitable and stable foreign markets. It is because developing countries tend to be more prone to experiencing periods of economic and financial instability that can arise from a broad variety of domestic and international economic, political, and social conditions that capital flight looms as a greater problem for them than for developed countries.

There are many economic, political, and social consequences arising to a country from capital flight. The most noteworthy of these is a decline in tax revenue, which can severely constrain the financial resources that a government has available for the implementation of policies needed to address the domestic conditions which gave rise to the capital flight in the first place.

Even the mere threat of capital flight can be used to pressure a government to adopt taxation polices more conducive to the interests of large investors (such as consumption or sales taxes), and reduce its reliance on taxes on interest and profits for fear of losing substantial amounts of investment capital. Indeed, this threat of moving investments has been used extensively by **transnational corporations**

(TNCs). The adoption of such policies, particularly in developing countries, may not be consistent with the overall long-term welfare of the national economy and the bulk of the people.

See also: Asian crises; capital markets; computable general equilibrium (CGE) models; contagion effect; debt; fiscal and monetary policy; offshore finance; stock markets; transnational corporations (TNCs)

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capital intensive

The term, capital intensive, refers to industries, technologies or sectors that – when compared with others – use relatively higher proportions of capital inputs than labor in production. Existing levels of skills and technology, the cost of labor (often unskilled), and overall macroeconomic performance (which determines cost capital) generally influence capital-intensive production. In most developing countries, access to foreign exchange is critical in securing imports of capital goods. Many countries pursuing **export-led growth** depend on agricultural exports as the main source of foreign exchange. However, poor **terms of trade** and unstable commodity prices in world markets pose significant risks to this strategy. Collateral incentives for industrial development such as subsidies for imports of machinery and equipment, **exchange rates** regulations, **import substitution** strategies and **technology transfer** via **foreign direct investment** also significantly contribute to capital-intensive production processes.

See also: industrialization; labor-intensive

MOSES A. OSIRO

capital markets

Capital markets are markets where long-term **debt** (maturity of one year or longer) and equity instruments are traded. Specific instruments include stocks, mortgages, corporate bonds, central and local government bonds, government agency securities, and consumer and commercial bank loans.

Capital markets constitute one of the basic components of the financial system. Another component is money markets where short-term debt instruments are traded. Distinctions in debt finance can be made between primary and secondary markets. The primary market creates new securities. Through public issues, a group (or a syndicate) of investment banks purchases (or underwrites) a new issue of bonds from a borrower and resells it to investors at large. New securities can also be issued through private placements where new issues are sold to a small number of investors. The difference is that issues in the public issue market are subject to more stringent scrutiny through registration and sale-regulations than in the private placement market. In secondary markets, existing securities are traded. The secondary market itself is divided into auction and over-the-counter markets. In auction markets, securities prices are set by competitive bidding of a large number of traders acting on behalf of buyers and sellers. The most common auction markets are organized stock exchanges, each of which uses a physical location as the trading floor. Over-the-counter markets do not have a central trading floor. Instead, they operate through a computer or telephone network of securities brokers and dealers that matches buyers and sellers. A distinction can also be made between direct and indirect finance. In direct finance, securities such as bonds and stocks are normally held directly by investors. Funds can also be transferred to the final users through financial intermediaries such as banks, leading to indirect finance or financial intermediation. Finally, according to how settlement is made, there are cash markets and derivatives markets. In cash markets, securities are traded for immediate settlement and cash transfer. In derivatives markets, trades are made now, but settlements and cash transfers are made later.

Although the financial press pays great attention to national capital markets, sub-national markets do exist. A clear example is within the banking markets of the USA. During the nineteenth century, the "free banking movement" and subsequent national banking movement significantly lowered barrier to entry in banking, resulting in the mushrooming of local **community**-based banks. Many states subsequently banned branch banking outright, which was further reinforced by federal banking legislation. Locally based banking existed well into the 1970s. Since then, many states gave banks a greater freedom to forge integrated banking until the late 1990s when federal legislation legalized nationwide banking institutions. However, up until the early twenty-first century, metropolitan areas were still treated as bank markets for antitrust purposes, and banking institutions were required by law to issue mortgages and small business loans in local markets where they obtain their funds.

Local and regional capital markets notwithstanding, national capital markets have long transferred funds to large corporations from wealthy individuals, and increasingly, from institutional investors such as pension funds and insurance companies. Many national economies have a dominant stock market (see **stock markets**) that trades shares, and serves as a symbol of the country's financial center and, through shares prices, the indicator of their financial health. Development of national capital markets has led to the rise of powerful investment banks and securities trading firms, which, along with capital markets, are seen by many as a symbol of Western **capitalism**. In many instances, financial intermediaries are active in both local and national capital markets as they hold both locally based assets and national securities. Many large banks also have subsidiaries in investment banking. The late twentieth century saw major changes in the intermediate finance market, where mortgages and even commercial loans are repackaged and sold as securities in secondary markets. Such securitization increases the liquidity of the mortgage markets and bank lending, and enables mortgage and bank lending to tap the national market for funds. Amid volatile and fluctuating interest rates, the late twentieth century witnessed the rise of derivatives markets where contracts tied to some underlying securities are traded to hedge against potential loss or gain advantage brought on by uncertainties. Unlike goods and services, where prices mostly undergo gradual changes, financial markets are strongly influenced by expectations and uncertainty. The regulations of financial markets by government or by trade organizations become inevitable to ensure information **transparency**, liquidity, and stability.

The international dimension has been an important component from the earliest days of capital markets. Cross-border foreign bond lending, equity investing, and banking began as early as the seventeenth century in Europe. Between 1870 and 1914, capital flows from industrialized Western European countries led by the UK were financed by expanding colonialism (see **colonialism, history of; colonialism, impacts of**). London emerged as dominant international financial center. Since the 1920s, the USA has become a major world financer. Wars and the Great Depression caused cross-border capital flows to dwindle. Between 1945 and the early 1970s, nations instituted capital controls and cross-border capital flows were limited to official lending, trade finance, and **foreign direct investment**. Euromoney and Eurobonds (or **offshore finance**, since credits are denominated in currencies other than those of host countries) rose to meet the need for private international finance. Over-borrowing and sudden changes in international macroeconomic conditions led to the **debt** crisis of many developing countries in the 1980s. Many countries dismantled their capital controls in the last quarter of the twentieth century, leading to an explosive growth of international finance. However, these developments were overshadowed by the Mexican "Peso Crisis" in 1994–5, the Asian financial crisis in 1997, and Russian default on their government bonds in 1998. Regulation of international capital markets to ensure information **transparency**, liquidity, and stability is still a major issue facing the world financial **community**.

See also: contagion effect; fiscal and monetary policy; inflation and its effects; multilateral development banks (MDBs); offshore finance

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BIN ZHOU

capitalism

Capitalism is the mother lode of "development." As such, capitalism has four significant dynamics. First, capitalism has always involved a world-scale political economy. Second, the colonial division of labor originating in the expansion of European states into the non-European world generated a global political-economic hierarchy forcing colonial subjects to specialize in primary goods production for European industries and consumers ("underdevelopment"). Third, the decolonization movements across the nineteenth and twentieth centuries successfully deployed the capitalist discourse of rights against their European masters. And fourth, the twentieth-century postcolonial order derived from the political and technological relations of capitalism, whereby postcolonial states (see **state and state reform**) sought to reduce the effect of the colonial division of labor through **industrialization** and economic nationalism, known at the time as "development" (see **colonialism, history of; colonialism, impacts of**).

Debates about the origins of capitalism remain unresolved, since the definition of capitalism is a matter of interpretation. Adam Smith associated capitalism with exchange, arguing that this was a natural propensity of humans, maturing in the eighteenth century. Max Weber viewed capitalism as a **culture** of rationality, understood in terms of individual and institutional practices, and stemming from the sixteenth-century protestant rebellion (see **Protestant work ethic**). Karl Marx viewed capitalism as a form of social organization, presaged in the European mercantile empires and their commodity-producing slave labor forces (**slavery**), and maturing in the nineteenth century as machine production spawned a wage labor force in Europe. For Marx, the key to the rise of capitalism was the transformation of property relations, whereby peasant land was expropriated through state-sanctioned enclosures by increasingly commercial landlords, and an urban bourgeoisie emerged at the expense of the traditional craftsman/apprentice relationship.

Central to the debates on the rise of capitalism is the transition from feudalism to capitalism, involving the transformation of feudal relations of fealty and bonded labor, into capitalist relations governed by the cash nexus, where access to material livelihood (see **livelihoods**) depends upon labor and commodity markets. Interpretations as to what triggered the transformation divide between emphases on market expansion or on the transformation of the labor relation. The former argues that markets eroded the traditional order, fostering the circulation of goods and money, the rise of a consequential merchant capitalist class, and a general **commercialization** of material life. The latter position argues that feudalism only disappeared when serf labor yielded to wage labor, as a consequence of peasant resistance to super-exploitation by their financially pressed feudal masters, and the substitution over time of hired labor in increasingly commercial landed relations.

World systems theory, championed by Immanuel Wallerstein, sought to transcend this debate by arguing that capitalism originated in the formation of a world economy in the sixteenth century (also see the related debate of **dependency theory**). Expanding markets were structured by global relations of production, related hierarchically to a division of labor comprising wage labor in the European core, sharecropping in the Eastern European semi-periphery, and slave and bonded labor in the Americas, as periphery. Unlike Marx, who argued that the *differentia specifica* of capitalism was wage labor, Wallerstein argued that the secret of capitalism lay in the inability of one state to monopolize trading profits deriving from the **international division of labor**. This inability led to cycles of rivalry and hegemony as the political expression of an interstate system in which states and their firms create, and compete for, markets. With this definition of capitalism, which does not distinguish wage labor as the key form of labor under capitalism, Wallerstein has been identified with the neo-Smithian emphasis on markets. This binarist debate regarding the definition of capitalism offers one-sided interpretations that lose sight of the methodological question of how to view capitalism as a historical social form that includes a mutual conditioning of circulation and production spheres. Machine production, based in wage labor, could not have arisen without substantial markets for both inputs (labor and raw materials) and outputs (commodities), and vice-versa.

Further, there is an important political dimension to capitalism, which concerns its organization of global markets. As Marx and Karl Polanyi remind us, markets are profoundly political **institutions**. The emergence of modern, bureaucratic states coincided with, and conditioned, the rise of a capitalist world economy. Initially, early modern states sponsored a world market built on mercantilist principles, by capturing existing long-distance trading networks through alliances with merchants. States came to depend on financial resources from merchants, as merchants in turn came to depend on state protection of their commercial activity. Commercial policy institutionalized the monopolizing tendencies of merchant capital, as a means of enlarging national wealth. This policy suited the division of the world among competing colonial empires. And it laid the foundations of industry by building national markets and intensifying the commercial plunder of the colonies. Marx viewed slave labor as the pedestal of wage labor. With the rise of industrial capital in the nineteenth century, states competed increasingly through an informal empire of **free trade** imposed by the British state through its naval, commercial, and financial supremacy.

Industrial capitalism depended on the subordination of wage labor to machine production, through the application of a technical division of labor in the production process. Traditional craft skills became redundant as machine production fragmented the labor process, assigning workers specialized tasks that devalued the individual laborer at the same time as it recombined those specializations as social labor overall. This was the source of the immense **productivity** of modern industry, and its boundless demand for inputs from a world market increasingly organized by the railway, the steamship, and the telegraph. As Marx noted, whereas manufacture simply concentrated artisans in one place, modern industry revolutionized production, exchange, and consumption relations.

In an exemplary account, Sidney Mintz documents the expansion of sugar production by slaves for the emerging industrial proletariat in nineteenth-century England. Once a luxury item, sugar became a strategic commodity for the working class, since its consumption satisfied caloric needs in an impoverished diet while it allowed a cultural identification with consumption habits associated with the aristocracy. In the construction of this consumer identity, the consumption relation involved identification with both empire and social hierarchy, mediated by the market. Twentieth-century corporate capitalism has refined this relation through advertising strategies involving subliminal associations with status, sex and global power.

The story of sugar is a trace not only on the integral role of colonialism (see **colonialism, history of; colonialism, impacts of**) in the rise of industrial capitalism, but also on the importance of the consumption relation as a dynamic integral to the realization of capitalist profits. Certainly, in the nineteenth century, the basic goal was reproduction of the work force, and sugar was vital as a fuel. But the fact of a working population needing to purchase its material needs in the market, and the infinite potential for profit through a market culture of consumption would not be lost on today's social observer. In the nineteenth century, capitalists sought to expand profits by reducing labor costs, through **deskilling** in the workplace and through access to cheap inputs and wage goods. Accordingly, labor organized in Europe and the USA to establish its rights in the workplace and to a living wage. The power of organized labor underwrote a rising demand for social rights in the state, and Western states responded eventually by elaborating welfare systems in the mid-twentieth century (see **welfare economics; welfare state**). Meanwhile, the Fordist model of accumulation, deriving from Henry Ford's strategy of paying his workers enough to allow them to purchase automobiles, incorporated consumption as central to profitability. Both of these adjustments by states (see **state and state reform**) and capital would undergird a resurgent capitalism in the era of American hegemony.

In the USA, the post-World War II era was marked by an explosion and endless differentiation of consumer goods, nurtured by new patterns of suburbanization and increasingly sophisticated forms of consumer credit. As part of the construction of US hegemony, this form of consumer capitalism was universalized and became the model of development to the world, even though emulation of the American consumer remains confined to roughly 20 percent of the world's **population**.

The American model of capitalism arose in the wake of a world depression in the 1930s marked by political extremism and intense economic **nationalism**, marking the unraveling of the British-centered world market. The American model, based in a domestic agro-industrial dynamic of "inner-directed" capitalist expansion, contrasted with the "outer-directed" form of capitalism associated with the British "workshop of the world" model. The US model, of a coherent national economy, informed the understanding of the framework of post-World War II development. Through the institutional complex of **Bretton Woods** (see **World Bank; International Monetary Fund (IMF)**) and the **United Nations**, American new dealism was writ large in the world via an international project of development. These institutions complemented US financial disbursements to redistribute liquidity and subsidize the infrastructures of development. The development project targeted new, postcolonial states, as the US sought access to their raw materials and markets, and sought to incorporate them within the empire of free world capitalism ranged against the empires of communism in Europe and East Asia. While development was represented as a national goal, each national case served to stabilize and extend capitalism, and US power, via the **international organizations and associations**, both private (**transnational corporations (TNCs)**) and public (**Bretton Woods** institutions, foreign **aid** programs). As corporations extended their reach, so a global unregulated (stateless) money market formed, which eventually undermined the Bretton Woods order, based as it was on the international reserve role of the American dollar. Subsequent global deregulation of financial markets and heightened capital mobility has reduced the regulatory powers of all states and nurtured the "virtual" or "networked" corporation that operates globally through flexible, strategic alliances facilitated by informational technologies.

Arguably, development was an ideological representation of a power relation elaborated as a hegemonic project for American capitalism. Some have argued that while the rhetoric of development was universal, its goal was never more than to benefit a relatively small segment of the world's population, known as the "fast world" and inhabiting all countries (including now ex-communist Eastern Europe), but concentrated in the North. The management of the **debt crisis** of the 1980s and beyond is a measure of this, since indebted states have been instructed to adhere to **International Monetary Fund (IMF)/World Bank** conditions (of austerity, **privatization and liberalization**) in order to obtain funds to service their **debt** (see **conditionality**). Sharply reduced wages and increased exports have not only destabilized southern working and rural **population**s, but through the global market, labor in developed countries has been progressively demobilized by cheap labor competition from offshore.

Liberalization was universalized, in 1994, in the institution of the **World Trade Organization/General Agreement on Tariffs and Trade (WTO/GATT)**, arguably a surrogate for the USA in prosecuting a **free trade** regime to open commodity and financial markets. This is the **globalization** project: an increasingly contested attempt to impose market rule across the world, largely by dismantling public capacities built up during the developmentalist era, but also by opening new frontiers of capitalist ownership in genetic materials and services (**health**, **education**, infrastructures like water, transport (see **transport policy**), banking, etc). The incorporation of labor forces from developing countries into world capitalism, via **export processing zones (EPZs)**, sweatshops, and in-migration to factories and harvest circuits in developed countries, accelerated since the implementation of the debt regime. Labor forces find themselves in competitive relation with one another as capital scours the world to source its labor and raw material inputs.

Under these conditions, development has become increasingly a private matter, an exclusionary ethic based on rhetoric of "**comparative advantage**," where labor rights (see **labor rights and standards**) evaporate and communities (see **community**) are compelled to compete for access to the global economy with no guarantee of enduring success. In becoming truly global, through such abstraction of place, dismissal of public protections and **casualization of work**, capitalism has reverted to a predatory form. Arguably, the contradictions of capitalism are clearer now than ever, including, but broadening beyond the capital/labor relation identified by Marx as the principal contradiction. The measure of this is the global counter-movement, constituting an array of labor, peasant, environmental, consumer, indigenous, feminist, gay, and other social justice movements represented in the **World Social Forum (WSF)**.

See also: debt crisis; dependency theory; globalization; International Monetary Fund (IMF); international economic order; marginalization; Marxism; neo-liberalism; peasantry; primitive accumulation; terms of trade; trade; transnational capitalist class (TCC); World Bank; World Social Forum (WSF); world systems theory

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carrying capacity

Carrying capacity is the maximum population of a species that can be supported indefinitely in a defined habitat allowing for seasonal and random changes without damaging that habitat's ecosystem. The concept of carrying capacity (K) originates in biology. It is not a constant, as carrying capacity can change over the long term; the carrying capacity of a species will rise for example if that species develops the ability to utilize a new **food** source, and it will fall if that species causes permanent environmental degradation. External effects such as **climate change** may affect a carrying capacity beneficially or adversely.

Applying the concept of carrying capacity to human **population** is both common and problematic. Human populations can raise their carrying capacity dramatically through innovation and through the appropriation of resources from other species. Human populations can change an area's carrying capacity in a number of ways, including **deforestation** and **agriculture**. Human populations also trade, and are thus not dependent on their immediate geographical area in the same way as other species. Estimates of the Earth's carrying capacity with respect to human population vary wildly; many of the deep ecologists (see **deep ecology**) argue for a maximum **population** of no more than a few hundred million, and many neoliberal economists feel our power to innovate renders human carrying capacity so large as to be meaningless.

Thomas Robert Malthus is often credited as a key early writer on the concept of human carrying capacity, largely due to his 1798 work, *An Essay on the Principle of Population*. He believed human populations would always rise to their carrying capacity and would overrun their ability to innovate due to their high rate of reproduction (see **Malthusian demography**). In the twentieth century, those who caution against **population** growth, such as Garret Hardin and Paul Ehrlich, mirror his arguments. Their arguments focus heavily on population growth in the developing world, and largely ignore consumption rates in the developed countries, or the political debates concerning technological innovations (see **population**).

Adjusting human carrying capacity calculations to account for trade can alleviate the bias against developing nations present in most discussions of human carrying capacity. Developed by Mathis Wackernagel and William Rees, the ecological footprint model considers human settlements independent of geographical location. Instead, settlements are seen in terms of resource and waste flows, regardless of where those flows originate. The ecological footprint measures the land needed to provide a **community**'s needs in the categories of **food** production, **housing**, transport (see **transport policy**), consumer goods, and services. This total "footprint" is compared to the population's share of the total available land on Earth, or Earthshare. If a **community**'s footprint is equal to its Earthshare, it is at its carrying capacity. By calculating ecological footprints instead of geographical carrying capacities, one finds that the residents of the developed countries are using the bulk of the Earth's resources, even though they represent a minority of the world's population. Critics of the ecological footprint concept, however, argue that it places too much emphasis on the presumed physical limits of land or ecosystems, and insufficient attention onto the ability or requirement for people to avoid reaching such limits.

See also: environment; Malthusian demography; natural resources; overpopulation; population; trade

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Cartagena Protocol on Biosafety

The Cartagena Protocol on Biosafety is an international agreement seeking to govern transboundary shipments of living modified organisms (LMOs), including **genetically modified organisms (GMOs)**. It was finalized at Cartagena in Colombia in 2000. The protocol followed a decision at the 1995 Conference of Parties to the **Convention on Biological Diversity (CBD)** to develop a protocol on biosafety, in order to regulate movements on any LMOs or GMOs that may have adverse effects on **biodiversity**.

A variety of political actors campaigned in favor of a protocol. Sustained pressure came from an international network of **non-governmental organizations (NGOs)** such as the Third World Network, which mobilized their own experts to raise uncertainties about the safety of GMOs. In the late 1990s, stronger support came from the Like-Minded Group. This group represented developing countries that would face decisions about permitting imports of GM grain or seeds, and sought to establish legal guidelines for restricting imports, especially in countries with poorly developed regulatory systems. Public protests in Europe also added strength to the campaign for an effective protocol on GMOs.

A protocol on biosafety, however, was initially opposed by the Global Industry Coalition, an alliance of countries seeking to export genetically modified (GM) grain. These countries later became known as the Miami Group (including the USA, Argentina, Australia, Canada, Chile, Uruguay). The **European Union** (EU) also led efforts to promote voluntary guidelines, widely seen as an attempt to avert a statutory protocol.

Eventually European public protest against GM crops led the EU to support more stringent regulation there and an international protocol, thus overcoming resistance by the Miami Group. The main impacts of the Cartagena Protocol are to guarantee "advance informed agreement" (AIA) about LMOs and GMOs through risk-assessment information from the exporting to the importing country. It also requires that each grain shipment be labeled according to any GM varieties which it may contain. These rules are to be implemented systematically through the Biotechnology Clearing